

A. Center/Institute/Program

Environmental Sciences Division/Oak Ridge National Laboratory

P.O. Box 2008
Building 1505, MS-6036
Oak Ridge, TN 37831-6036

Phone: 865-576-7756
Fax: 865-576-3989
E-mail: grahamrl@ornl.gov
Web Page: <http://www.esd.ornl.gov/>

Director/Chairperson: Dr. Gary K. Jacobs
Representative to AERC: Dr. Robin L. Graham

B. Major objectives of the Center/Institute/Program

1. Understand the impacts of energy development and use on the environment.
2. Basic and applied R&D on environmental systems and processes.
3. Environmental resource analysis and assessment.

C. Major ecosystem research emphases

1. Ecosystem analyses (hierarchy, resiliency, and recovery).
2. Global element cycling and impacts of climate change on terrestrial ecosystems.
3. Environmental and ecological risk assessment.
4. Regional environmental analysis.
5. National Environmental Research Park/Southern Appalachian Biosphere Reserve.

D. Staff

Permanent scientific staff: PhD: 99, MS: 15
Scientific support staff: Postdocs: 43, Technicians: 26
Other support staff: Clerical: 18, Administrative: 7
Student interns: 120

E. Approximate annual funding (recent year)

Core funding: None
Grants: \$50,000,000/yr, Major sources: DOE, NASA, DOD

F. Areas and facilities for ecosystem research studies

1. Walker Branch Watershed, Anderson County, TN, 90 ha.
2. Oak Ridge National Environmental Research Park, Roane County, TN, 5500 ha.

G. Research staff directly involved in ecosystem research (names and specialty areas)

Adams, S. Marshall - reservoir and marine ecology
Baskaran, Latha – landscape ecology
Bevelhimer, Mark S. - fisheries, aquatic ecology
Brandt, Craig E. - quantitative ecology
Cada, Glen F. - aquatic ecology impact assessment
Christensen, Sigurd W. - quantitative ecology, graphic dynamics
Cook, Robert B. - aqueous geochemistry, chemical limnology
Coutant, Charles C. - aquatic ecology, impact assessment
Dale, Virginia H. – landscape ecology, mathematical ecology
Efroymson, Rebecca A. - ecological risk assessment
Garten, Charles T., Jr. - biogeochemical cycling
Graham, Robin L. – Bioenergy, landscape ecology
Greeley, Mark S. - aquatic ecology, physiology
Gu, Lianhong - soil, water, atmosphere transport modeling
Gunter, Lee E. - Tree genomics and physiology
Hanson, Paul J. - forest ecology
Jager, Y. - quantitative ecology
King, Anthony W. - systems ecology
Marland, Gregg - global carbon cycle
Mayes, Melanie – subsurface chemistry and processes
Mulholland, Patrick J. - wetland ecology
Norby, Richard J. - forest tree physiology
Peterson, Mark J. - aquatic ecology
Phelps, T.J. - microbial ecology
Post, Wilfred M. III - population biology, community ecology
Ryon, Michael G. - aquatic ecology
Southworth, George R. - aquatic ecology
Tuskan, Jerry A. - tree genomics and physiology
Tschaplinski, Timothy J. - plant physiology
West, Tristram O. - agronomy, soil carbon sequestration
Westin, David – Forest genomics
Wullschleger, Stan D. - plant physiology

H. Long-term data sets (code name, number of years of data, computer accessibility)

Oak Ridge Reservation Data Bases, 1958-present; ecosystem inventories; plant, animal and microbial population studies; element cycling and analyses; climatic data, archaeological surveys; environmental monitoring. Some of this can be downloaded from:

<http://mercury.ornl.gov/edora/> - general data for the Oak Ridge Reservation including mapped information.

<http://walkerbranch.ornl.gov/> - Walker Branch Watershed data.

<http://tde.ornl.gov/> - Data from the throughfall displacement experiment.

<http://www.esd.ornl.gov/facilities/ORNL-FACE/data.html> - Data from the sweetgum FACE experiment.