

# SCHOOL OF NATURAL RESOURCES AND ENVIRONMENT

## Contributing to Florida, the Nation and the World Accomplishments for 2005-06

Florida is experiencing a progressively unfolding dilemma as a consequence of booming population growth and development in a context of limited natural resources. Our population is projected to increase by 72 percent to 27.5 million over the next twenty-five years, and double in fifty years. Urban development, suburban sprawl, transportation pressures, coastal densities, habitat fragmentation, water allocation and quality issues and reduced acreages of agricultural lands will become even more contentious issues than they are today. However, we have the opportunity to come together as citizens and create innovative ways to build more efficient buildings, towns and communities, conserve natural areas and keep agricultural lands in productivity. It will be a challenge and it will not be easy. A recent popular news article speculated that by 2050, or even earlier, the rest of the nation would be just like Florida is today, with its population pressures, mix of cultures, and natural resource pressures. In effect, Florida is a bellwether state, and any solutions we find for our problems “at home” can be applied nationally.

The School of Natural Resources and Environment (SNRE) is responding with academic, research, outreach and Extension programs designed to solve problems and create opportunities in Florida and beyond. We are training students who will be leading our companies, teaching in our universities, managing our resources and directing our agencies. We are conducting mission critical research and outreach programs to put current information in the hands and minds of those who need it. And, we are responding to statewide, national and international needs for help and assistance through a large number of partnerships. This is our annual accomplishments and accountability report for 2005-06. It is designed to provide you with a snapshot of our new strategic plan, our sources of funding and how the funds are used, highlights of our academic and research and outreach/Extension programs and our key advisors.

Read about SNRE online at  
[snre.ufl.edu](http://snre.ufl.edu)

## SNRE Advisory Groups

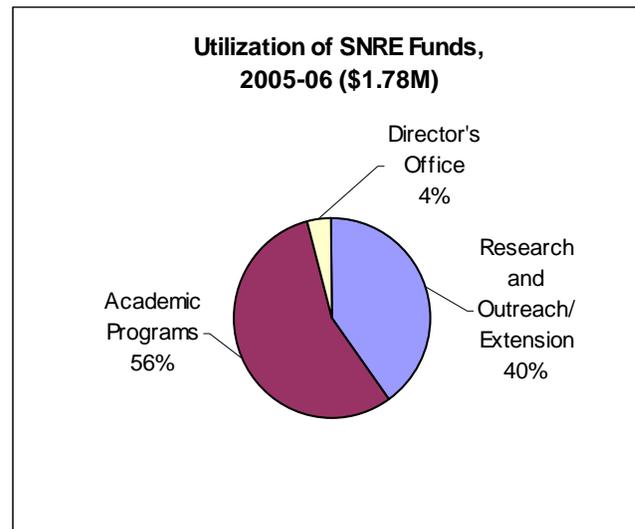
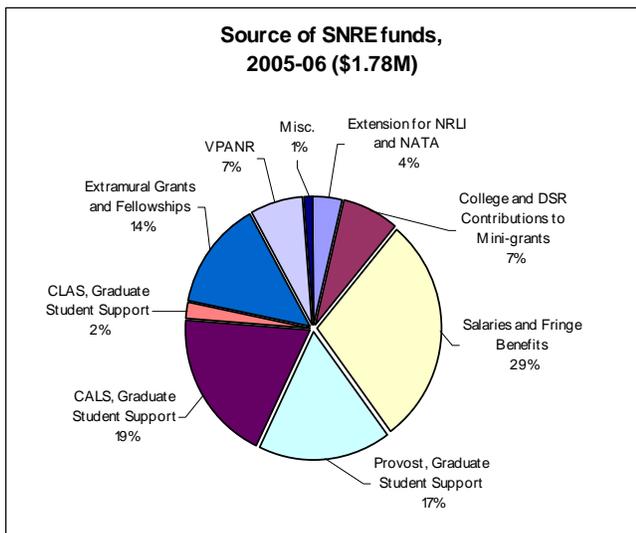
SNRE engages 11 academic colleges and units that participate through about 295 affiliated faculty. These faculty members serve as advisors to the graduate students and participate widely in research and outreach/Extension programs. During 2005-06, about 80 affiliated faculty members from 8 of the 11 units advised graduate students.

The Advisory Board (AB) met four times during the year to provide guidance to the SNRE management team. The AB includes the Senior Vice President for Agriculture and Natural Resources, the Provost/Senior Vice President for Academic Affairs, the Vice President for Research, and the Deans of the Colleges of Engineering (COE), Liberal Arts and Sciences (CLAS) and Agricultural and Life Sciences (CAL S). The External Advisory Council (EAC) met twice and includes representatives from industry, government, non-governmental organizations and academia. The Faculty Advisory Council (FAC) met three times. The FAC has 11 members, with 3 each elected from the affiliate faculty in COE, CLAS and CAL S, and 2 at-large from other units, appointed by the 9 elected members. Each group is dedicated to assisting SNRE grow and prosper. The members are listed on the back cover of this report.

### Key Participating Units

Agricultural and Life Sciences  
 Business Administration  
 Design, Construction and Planning  
 Engineering  
 Health and Human Performance  
 Liberal Arts and Sciences  
 Journalism and Communication  
 Law  
 Medicine  
 Veterinary Medicine  
 Florida Museum of Natural History

## FUNDING SOURCES



## Strategic Planning

SNRE's first strategic plan, "Action Plan 2006-2011," was completed in spring 2006. It defines our mission to provide interdisciplinary science through teaching, research and outreach to integrate sustainable environmental and human resources for today's complex challenges and tomorrow's scientists, managers and industry leaders. The plan identifies four strategic areas of work for immediate attention and two areas for longer-term attention.

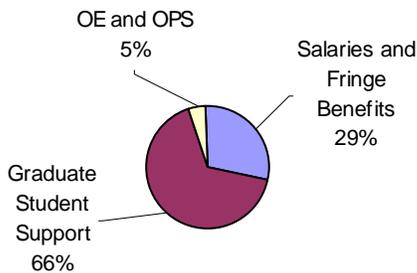
Within academic programs and research and outreach/Extension, specific goals are laid out and the actions needed to achieve the goals are specified. The action plan is ambitious and will require substantial additional resources to implement. Current and longer-term plans to develop the resource base includes seeking funds from the state legislature, developing federal funding initiatives, preparing extramural interdisciplinary grant proposals, working with the UF Foundation to create privately funded programs and endowments and developing partnerships with departments and colleges for joint faculty appointments.

### Immediate Strategic Goals

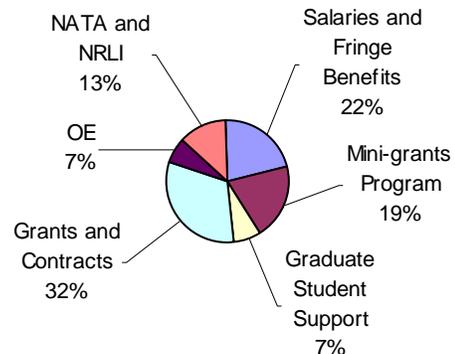
- Land use dynamics, including
  - land use ecology
  - planning, design, construction and management of the built environment
  - natural resource evaluation
  - energy systems and energy distribution
  - policy, institutional and legal processes
- Coastal development and management, including
  - coastal wetlands and estuaries
  - ecological restoration
  - growth management and sustainable practices
  - environmental education
- International programs in sustainability, including
  - a focus on existing UF programs that support sustainability abroad
- Environmental managers, including
  - training for leaders to apply scientific knowledge in policy and management practices

## AND UTILIZATION

**Utilization of SNRE Academic Program Funds 2005-06 (\$996K)**



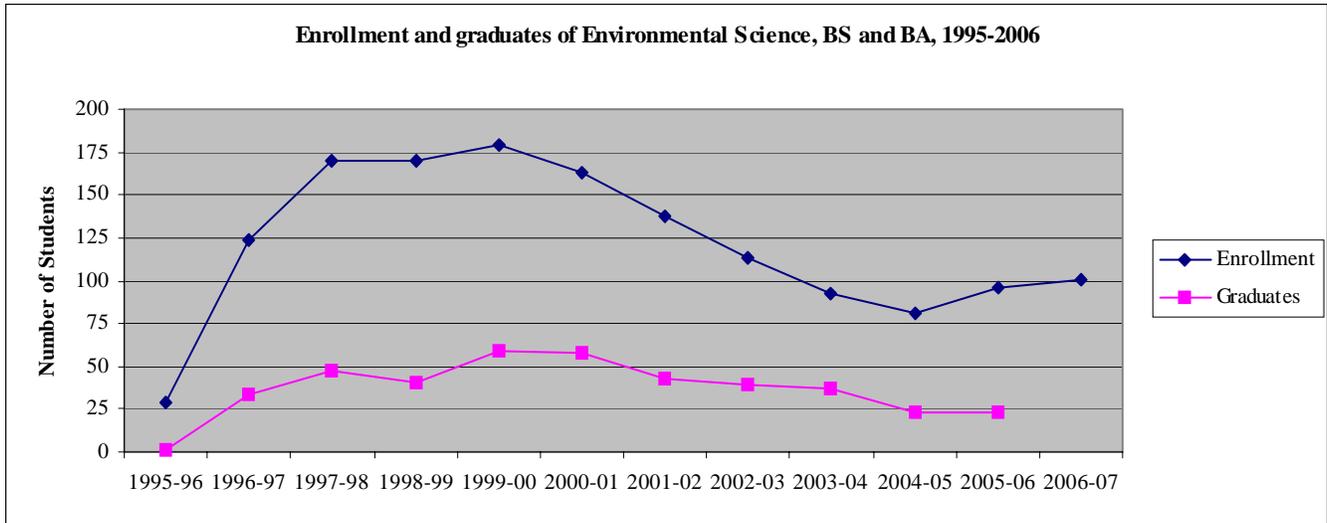
**Utilization of SNRE Research and Outreach/Extension Program Funds, 2005-06 (\$726K)**



## BS/BA in Environmental Science

Twenty-three students graduated from the undergraduate degree program in Environmental Science in 2005 - 06. Enrollment was 96 in Fall 2005

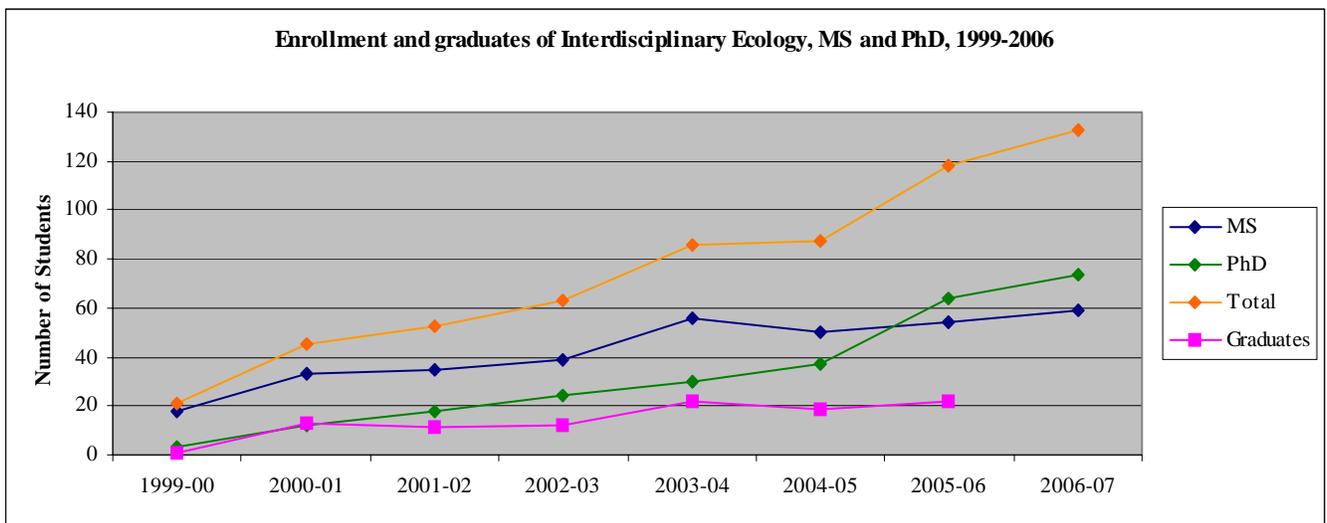
and 101 in Fall 2006, growing 5% year-over-year. SNRE lecturers teach the foundation and capstone Environmental Science courses, taking responsibility for the first and last courses in the major. All other courses are taught in other departments.



## MS/PhD in Interdisciplinary Ecology

Twenty-two students (21 master's and 1 doctoral) graduated from the graduate degree program in Interdisciplinary Ecology in 2005-06. Enrollment was 118 in Fall 2005 and 133 in Fall 2006, growing 13%

year-over-year. About 56% are PhD students, and 26% are international students. Forty-nine of the 118 graduate students were provided fellowships or assistantships and tuition through the SNRE-AP budget during 2005-06. A similar number was supported by faculty groups and extramural fellowships.

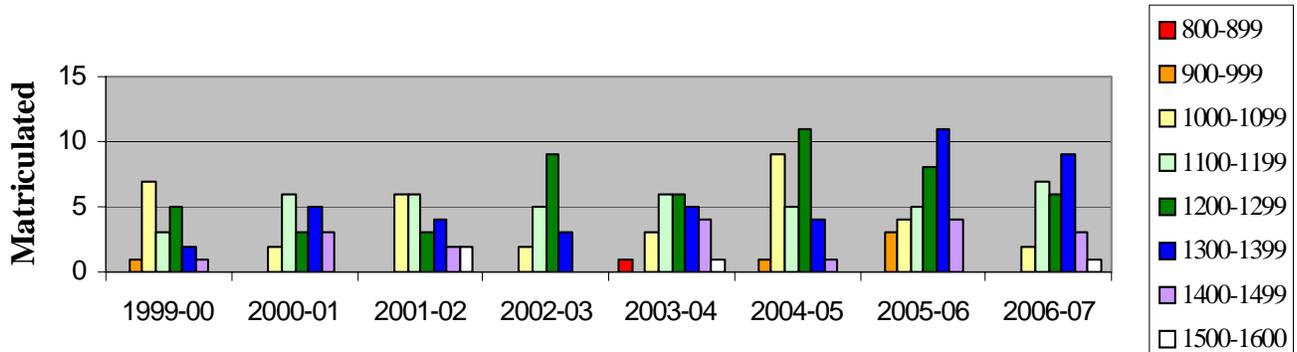


Growth in the number of Interdisciplinary Ecology graduate students is likely to slow to zero in the next year or two, as the number graduating catches up with the number matriculating.

SNRE continued to encourage the faculty to recruit the best graduate applicants by allocating funds accordingly. Results of this selectivity are apparent in the GRE scores of domestic applicants admitted for 2005-06 and 2006-07.

# PROGRAMS

GRE scores of incoming Interdisciplinary Students, MS and PhD, 1999-2006.

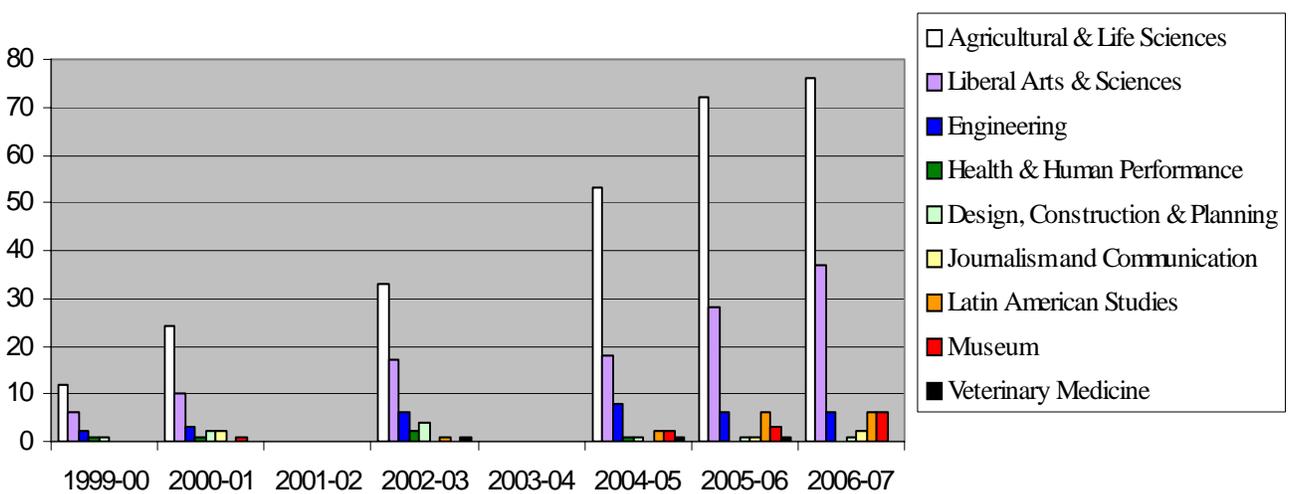


The deans of CALS and CLAS were generous in providing fellowships and assistantships to enable SNRE to recruit graduate students for 2006-07. The joint-funding partnership of CALS and CLAS for students advised in CLAS grew to 5 assistantships (from 4 last year), and CLAS also provided a Graduate Alumni Fellowship. This cooperation is crucial to achieving the university-wide scope of the School, because it rewards the faculty and their unit administrators for working through the School.

## Current Mentors of Graduate Students by College

As indicated earlier, affiliate faculty in CALS, CLAS, and COE serve as the majority of advisors for MS and PhD Interdisciplinary Ecology students in addition to teaching courses, working on faculty committees and helping administer the school. These faculty have their tenure and personnel appointments in other discipline-centered departments in other colleges.

IE Registrants by Advisor's College.



### Natural Areas Training Academy (NATA)

NATA (<http://nata.snre.ufl.edu/>) is a training program for managers of natural areas jointly operated by The Nature Conservancy and SNRE. NATA instructors represent county, state, and federal agencies, academic institutions, not-for profit organizations, private companies, and independent researchers. Over 1,000 people have participated in NATA workshops since the program's inception six years ago. Seven workshops were held during the last year with the 103 participants coming from 30 different organizations (9 county governments, 5 state agencies, 5 federal agencies, 3 academic institutions, 5 not-for-profit organizations and 2 private companies). To date, 55 people have earned a Certificate in Natural Areas Management by successfully completing the 5 required workshops. The Florida Fish and Wildlife Conservation Commission extended its financial support for the program for an additional 5 years.

### Florida Natural Resources Leadership Institute (NRLI)

NRLI (<http://nrli.ifas.ufl.edu/>) is conducted jointly with UF/IFAS Extension and the Food and Resource Economic Department. It helps rising leaders in agencies, agriculture, elected office, academia, resource-based industries and NGOs develop skills in conflict management and collaborative leadership. During October 2005, NRLI Class V graduated 15 Fellows who participated in the ten-month program that focused on the impacts of development on Florida's coastal communities and techniques to mitigate those impacts. NRLI's Class VI of 19 Fellows, began in January 2006. Class VI is focusing on growth management in Florida. There are now more than 100 NRLI alumni around the state. The NRLI project team also assisted Extension by leading a facilitation effort involving Martin County government, conducted a Florida Sea Grant Extension In-Service Training, and facilitated the Upland Habitat Conservation Partnership Summit. During the first half of 2006, a faculty position was created that will be jointly held between the Food and Resources Economics Department and SNRE with a portion of the responsibility to lead NRLI activities. A nationwide search is underway to fill the position.

### Program for Resource Efficient Communities (PREC)

PREC (<http://www.energy.ufl.edu/>) is an interdisciplinary program, conducted jointly with UF/IFAS Extension, designed to promote the adoption of best design, construction, and management practices in new residential community developments that measurably reduce energy, water consumption, and environmental degradation. During 2005-06, 8 grants totaling \$576,460 were obtained. Three key projects were initiated. A site visit and charette was held at the Starkey Ranch to integrate resource efficiency into a development plan for a 3,000 acre project in south Pasco County. A summit was co-sponsored with Audubon International on resource efficient land development for developers, planners and government agencies resulting in a new partnership between PREC and Glatting Jackson, a community planning and design firm. The city of Winter Park was assisted to manage the community's impact on Lake Baldwin. On-going projects include assisting Triaga, a proposed low-density, equestrian residential community with special concern for wildlife preservation; Madera, an 88-home community with concern for houses built to very high energy-efficiency standards; and Community Environmental Education which has engaged homeowners in natural resource conservation strategies.

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# OUTREACH/EXTENSION

## Century Commission

The Century Commission for a Sustainable Florida was created by the 2005 legislature. The Commission is required to envision the future for Florida using a 25 to 50 year time scale and develop and recommend policies, plans, action steps or strategies to assist in achieving the vision. During spring, 2006, representatives of the Commission called upon SNRE to organize a one-day discussion among faculty and administrators at UF to learn about UF programs and capabilities relating to natural resources and environment. This discussion led to a subsequent request for SNRE to organize and produce a series of 16 vision papers relating to environmental, social and economic concepts for sustainable development in Florida. Twenty-three faculty from seven different colleges responded. This not only has assisted the state with its “visioning” process, it has placed UF in a tremendous position to be of assistance to Florida as its future unfolds.

## Mini-grants Program

The Mini-grants program advances UF interdisciplinary research and program development. Effective evaluation of the program takes several years since time is necessary for results to be achieved and follow-on grants to be received. Impacts from the \$200,000 awarded during 2004-05 to 17 projects were finalized during 2005-06. Thirty new follow-on proposals were created and 15 were funded, generating about \$8M in new and leveraged funds. The funded projects involved 118 collaborators; 76 were at UF across 42 academic departments and 38 were external agency, university or industry partners. A large number of publications, presentations and other products also were generated. During 2005-06, an additional \$140,000 was awarded to 12 projects which are now in progress. A full report is available.

## People and Land Use Strategies (PLUS)

One of SNRE’s goals is to energize groups of interdisciplinary faculty across colleges to work in areas of common interest and to position these faculty groups to create interdisciplinary extramural proposals for funding. The PLUS group of about 70 faculty was organized and was highly instrumental in providing input to the Century Commission. The group brings diverse academic enterprises to work on complex issues including land use ecology; planning, design, construction and management of the built environment; energy systems and energy distribution; natural resource valuation; policy, institutional and legal processes; human demographics and social organization; and emerging technologies and their associated business applications.

## Partnerships

SNRE has entered into an agreement with New College of Florida (NCF) to jointly raise funds that would support assistantships for NCF undergraduates to enter SNRE’s graduate Interdisciplinary Ecology Program. NCF is Florida’s public honors undergraduate liberal arts college with a highly selective admissions policy. NCF’s programs in social science, natural science and an interdisciplinary program in environmental studies provide excellent training for students to continue their education at the graduate level at UF. SNRE is also working with NCF and its development foundation and the UF Foundation on a proposed program to focus on land use. SNRE’s role is to generate support for endowments that would ultimately fund SNRE graduate students and UF faculty to work on issues of land utilization as defined in the SNRE strategic plan.

SNRE’s agreement with the Conservancy of Southwest Florida (CSWF) is also centered on jointly raising funds to enable UF faculty and students and CSWF scientists to work on projects of common interest. Areas of potential collaboration include protection and restoration of coastal wetlands and estuaries; restoration ecology; growth management and sustainable practices; and environmental education. This effort will receive priority in the coming year.

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## Our Advisors for 2005-06

### Advisory Board

Jimmy G. Cheek, Chair, Senior Vice President for Agriculture and Natural Resources  
Kirby Barrick, Dean, College of Agricultural and Life Sciences  
Janie Fouke, Provost and Senior Vice President for Academic Affairs (ex-officio)  
Pramod Khargonekar, Dean, College of Engineering  
Win Phillip, Vice President for Research  
Neil Sullivan, Dean, College of Liberal Arts and Sciences



Jimmy Cheek

### Faculty Advisory Council

Mike Binford, Chair, Geography  
Mark Brenner, Geological Sciences  
Joe Delfino, Environmental Engineering Sciences  
Wendy Graham, Agricultural and Biological Engineering  
Kirk Hatfield, Environmental Engineering Sciences  
James Heaney, Environmental Engineering Sciences  
Robert Holt, Zoology  
Eric Jokela, Vice-chair, School of Forest Resources and Conservation  
Ramesh Reddy, Soil and Water Science  
Stephen Roberts, Veterinary Medicine  
Marianne Schmink, Center for Latin American Studies



Mike Binford

### External Advisory Council

Ronnie Best, Chair, US Geological Survey, Miami  
Nick Aumen, National Park Service, Boynton Beach  
Pat Brezonik, National Science Foundation, Washington, D.C.  
Rich Budell, Florida Department of Agriculture and Consumer Services, Tallahassee  
Alan Covich, University of Georgia, Athens  
Bill Crispin, Crispin Law, Tavernier  
Ken Haddad, Florida Fish and Wildlife Conservation Commission,  
Deno Hicks, England-Thims & Miller, Jacksonville  
Don Ross, Earth Balance, Inc., North Port  
Hillary Swain, Archbold Biological Station, Lake Placid  
Victoria Tshcnkel, The Nature Conservancy, Altamonte Springs  
Robert Walker, Michigan State University, East Lansing  
George Willson, Environmental Consultant, Tallahassee



Ronnie Best

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