

# **Scripps Howard Institute on the Environment**

*Continuing education for journalists*

*2008 Program*



May 12 - 17, 2008  
Jupiter, Florida

Coordinated by:

**FAU**

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**FLORIDA ATLANTIC UNIVERSITY**  
Dorothy F. Schmidt College of Arts and Letters



# Our Sponsor

**T**he **Scripps Howard Foundation** is the corporate foundation of The E.W. Scripps Company. Its mission is to advance the cause of a free press through support of excellence in journalism, quality journalism education and professional development. The Foundation helps build healthy communities and improve the quality of life through support of sound educational programs, strong families, vital social services, enriching arts and culture, and inclusive civic affairs, with a special commitment to the communities in which Scripps does business.



**SCRIPPS HOWARD  
FOUNDATION**

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# Director's Note



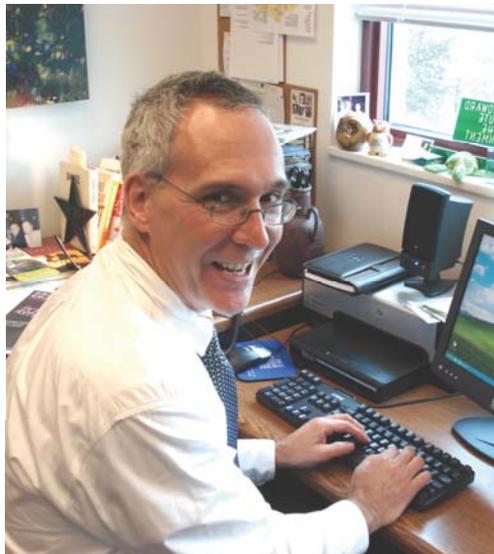
# W

elcome to South Florida, to FAU's John D. MacArthur campus, to the greater Everglades region and to a week of environmental exploration and education. This is the third year for the Scripps Howard Institute on the Environment in South Florida. We have 35 speakers lined up this year and a program that balances classroom talks at our Jupiter base camp with time in the field every day but one. We readjust the agenda each year based on participant feedback, infusing new topics and experts while bringing back the strongest elements from the preceding year. To better transcend our South Florida location, we have invited at least 10 speakers from other states to participate in the 2008 institute.

South Florida is a stimulating laboratory for study given its variety of environmental issues -- from phosphorus pollution choking the Everglades, to estuary-battering discharges of Lake Okeechobee water, to controversial flood control maneuvers intended to help the endangered Cape Sable seaside sparrow, to coral reef decline, to developers' steadfast appetite for dwindling green space. This week, during our travels, you will paddle the wild-and-scenic Loxahatchee River, hike through Florida scrub, visit an Indian River Lagoon research station, slog through a slough in Everglades National Park, visit the site of a proposed ethanol plant in sugar cane country, examine the impacts of drought on the bed of Lake Okeechobee and search for nesting loggerhead sea turtles on a moonlit beach. In class, you will learn about climate modeling and carbon mitigation, wind-farming and a proposal to harness the Gulf Stream current, contaminant exposure studies and battles over water supply. You will have some quality time with both Florida and national environmental experts, and hear veteran journalists talk about new media and environmental reporting, science-writing and emerging issues on the environment beat.

Water defines a large segment of this program, reflecting our setting. Water sheet flows inches deep across the Everglades, collects in the cubbyholes of prolific aquifers just underfoot, curls around the peninsular tip of South Florida and falls copiously from above (when we are not parching under a drought).

Although rooted in South Florida, our program of study is designed to be relevant and useful to journalists covering similar issues in other states. The Ohio-based Scripps Howard Foundation, and FAU's School of Communication and Multimedia Studies, together make this program happen. By the



time we wind to our conclusion Saturday afternoon, we hope to have had a role in molding a better-informed group of journalists, and in elevating the standards of environmental reporting.

Sincerely,

*Neil Santaniello*

Neil Santaniello, Institute Director  
School of Communication and Multimedia Studies  
Dorothy F. Schmidt College of Arts and Letters  
Florida Atlantic University

# Our Setting: The Jupiter Area

At first glance, your headquarters for exploration this week — a community tucked between West Palm Beach and Stuart — might look like plain-vanilla suburbia. But there's a bit more ecological sensitivity around than you might think.

Our base camp — Florida Atlantic University's John D. MacArthur campus — is part of Abacoa, a New Urbanist community in Jupiter, population 50,000. Abacoa follows a mixed-use development pattern that offers northern Palm Beach County an alternative to open space-devouring sprawl.

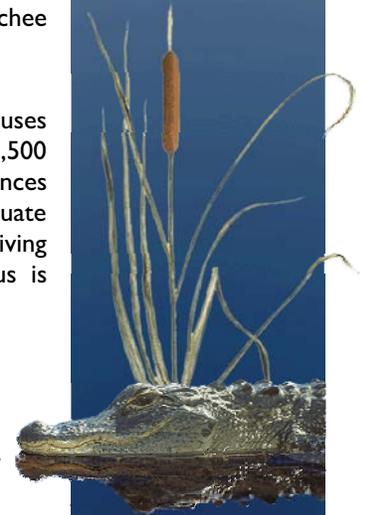
North of the campus, you will find walkable neighborhoods (missing the isolating gates and walls synonymous with much of South Florida) and development clustered to protect open space. Woven into the 2,000-acre Abacoa landscape is a five-mile greenway, a 60-acre preserve for gopher tortoises (a state species of special concern), a walking path built along a restored water flow system and lawns sprinkled with recycled wastewater. To be sure, there are restaurants, shops and golf courses, too, and — just across from campus — the Roger Dean Stadium, where the Florida Marlins and St. Louis Cardinals play spring training games.



Four miles east of campus, along the Atlantic coast, endangered sea turtles bury their eggs in beach sand each spring and summer. Jupiter is home to the Jupiter Inlet, the southern extent of the Indian River Lagoon, deemed North America's most biologically diverse estuary. Threatened scrub jays and 14 percent of the world's population of the endangered four petal pawpaw can be found inside the nearby Juno Dunes Natural Area. One Interstate 95 exit to the north, the wild-and-scenic Loxahatchee River winds past cypress and mangrove trees. Spreading west of Jupiter are more spacious protected lands that include the 60,000-acre J.W. Corbett Wildlife Management Area, the 18,000-acre Pal-Mar wetlands and the 12,000-acre Loxahatchee Slough.

Spanning 135 acres of former farmland, the John D. MacArthur campus is one of seven FAU campuses stretching from Dania Beach to Port St. Lucie. Opened in the Fall of 1999, it enrolls more than 3,500 students and houses the Harriet L. Wilkes Honors College, a four-year residential liberal arts and sciences program. Jupiter students are offered a wide range of upper-division (junior/senior year) and graduate programs from six of FAU's colleges, including 17 bachelor's degrees and six master's degrees. A thriving Lifelong Learning Society provides non-credit liberal arts courses for mature students. The campus is sprouting a biomedical research hub, the direct result of environmental advocacy.

Environmental groups waged a successful campaign to steer this growth magnet away from major western conservation lands and into Jupiter's more urban setting east of I-95. As a result, the California-based Scripps Research Institute is building its 364,000-square-foot East Coast expansion on the east end of the MacArthur campus. More than 230 Scripps Florida scientists, technicians and administrative staff now work in temporary buildings and trailers while they await the 2009 opening of this permanent home. Scripps Florida's presence is expected to make the area a new center of biomedical and drug discovery science and bolster this young campus's future in research and education.





# General Information

## **RESIDENCE HALL POLICIES:**

As temporary residents of University housing, please observe these rules. You will find a list of residence hall policies included in your room welcome bag. If you have a housing problem or question during your institute stay, please do not hesitate to discuss this with either Neil Santaniello or Alana Edwards, your program coordinators and campus hosts.

## **COMPUTER USAGE:**

There are two options for getting online and accessing your e-mail and the Internet via Jupiter campus computers:

1— Go to the computer lab next door to SR 108, our main classroom. You will find the lab right behind the vending machines. FAU will equip you with a guest access code upon your arrival.

2— Use the campus library computers. No access code is needed to get onto the internet. The library is located east of the Student Resources building, just a short walk across campus.

## **EVALUATIONS:**

Your feedback on institute speakers, topics, field trips and other operations is very valuable to FAU and the Scripps Howard Foundation. We want to know what we did well, and what needed improvement. Please be sure to fill out and turn in the evaluation form included in your welcome folder. We will pass out an additional conference keepsake in return for the completed evaluation.

## **CONTACT INFO:**

Neil Santaniello – SR 257 / 561-799-8047 (o) / 561-212-7446 (c)

Alana Edwards – SR 250 / 561-799-8462 (o) / 561-706-6732 (c)

Housing Office – RHI 108 / 561-799-8828 (o) / 561-596-1770 (c)

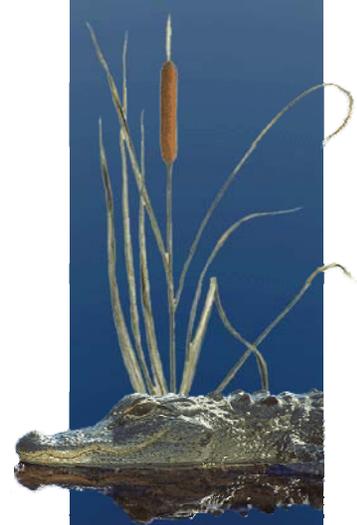
Campus Police – SR 150 / 561-799-8700 (o) / 561-339-0015 (c)

Library Service Desk – LB/ 561-799-8530

# Monday, May 12, 2008

## The South Florida environment/Growth and a river/Sea level rise

- 10:00 – 11:00 am      FAU welcome reception and brunch at The Burrow  
*Dr. Manju Pendakur, Dean, Dorothy F. Schmidt College of Arts and Letters*  
*Dr. Susan Reilly, Director, School of Communication and Multimedia Studies*  
*Dr. Leonard Berry, Director, Florida Center for Environmental Studies*
- 11:00 am – 1:00 pm      Welcome to the swamp: A South Florida orientation (Natural history, water flow and flood control, environmental politics and realities)  
*Tommy Strowd, Assistant Deputy Executive Director, South Florida Water Management District*  
*Mark Perry, Co-Chair, The Everglades Coalition, Executive Director, Florida Oceanographic Society*
- 1:00 – 1:30 pm      Travel to Riverbend Park and the Loxahatchee River
- 1:30 – 4:30 pm      Canoe trip (drought permitting) and river bank walk  
Protecting rivers and their watersheds in the southeastern U.S. /  
The Loxahatchee River – A case study  
*Robin Rossmann, Park Biologist, Jonathan Dickinson State Park;*  
*Dr. David A. McNaught, Senior Policy Analyst, Environmental Defense*  
*Dr. D. Albrey Arrington, Director of Water Resources, Loxahatchee River District*
- 4:30 – 5:30 pm      Dinner at Riverbend Park
- 5:30 – 6:00 pm      Return to Jupiter Campus
- 6:00 – 7:00 pm      Break
- 7:00 – 8:00 pm      Keynote Speaker  
Comes the sea: Earth's changing coastal future  
*Dr. Harold Wanless, Chairman, Department of Geological Sciences, University of Miami*





## Tuesday, May 13, 2008

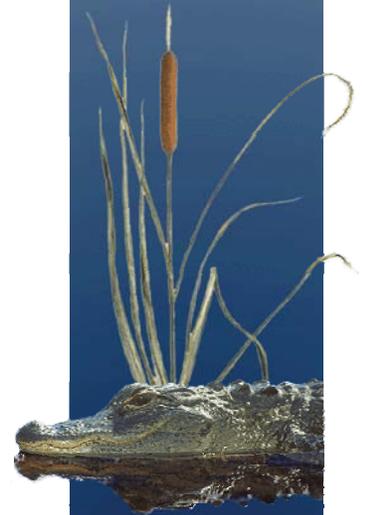
### Wrestling over water/Politics polluting science/Screening out exotics

- 7:00 – 8:00 am Breakfast on campus
- 8:00 – 9:00 am The run on water: Water wars and water transfers  
*Noah D. Hall, Executive Director, Great Lakes Environmental Law Center, Assistant Professor of Law, Wayne State University Law School*
- 9:00 – 10:00 am The water beat: It's not just quality but quantity  
*Cynthia Barnett, Staff Reporter, Florida Trend, author of Mirage: Florida and the Vanishing Water of the Eastern U.S.*
- 10:00 – 10:15 am Break
- 10:15 – 11:15 am Politics polluting public agency science  
*Jeff Ruch, Executive Director, Public Employees for Environmental Responsibility*
- 11:15 am – 12:30 pm Separating Fact From Opinion: The craft of science writing  
*Paul Raeburn, Author of Acquainted with the Night, Host of "Innovations in Medicine" and "The Washington Health Report" on XM Satellite Radio, former senior editor for science, technology and the environment at Business Week*
- 12:30 – 1:00 pm Lunch on the bus / Travel to Jonathan Dickinson State Park, Hobe Sound
- 1:00 – 3:00 pm Guided hike through Florida scrub  
A good burn for nature: prescribed fire  
*Miranda Cunningham, Biologist, Florida Park Service*
- 3:00 – 4:00 pm Nature writing and a sense of place in stories  
*Jeff Klinkenberg, Staff Writer, St. Petersburg Times*
- 4:00 – 5:00 pm Screening out invaders: Protecting the U.S. from invasive plant importation  
*Dr. Doria Gordon, Senior Ecologist and Associate Director of Conservation Science, The Nature Conservancy / Florida Chapter*
- 5:00 – 5:30 pm Return to campus  
Dinner on your own

# Wednesday, May 14, 2008

## Climate change/Estuary science/New media and environmental journalism

- 7:00 – 8:00 am Breakfast on campus
- 8:00 – 9:00 am Forecasting climate change  
*Keith Dixon, Research Climatologist, NOAA Geophysical Fluid Dynamics Laboratory*
- 9:00 – 10:30 am The climate game: Carbon mitigation with familiar technology  
*Dr. Roberta M. Hotinski, Information Officer, Princeton University's Carbon Mitigation Initiative*
- 10:30 – 10:45 am Break
- 10:45 – 11:45 am To be determined
- 11:45 am – 12:00 pm Travel to Loggerhead Park in Jupiter
- 12:00 – 1:00 pm Lunch on the beach and self-guided coastal dune hike
- 1:00 – 2:00 pm Travel to the Smithsonian Field Station in Fort Pierce
- 2:00 – 3:30 pm Marine Station Tour
- 3:30 – 5:30 pm Boat trip on the Indian River Lagoon  
Estuarine research -- water quality and lagoon biodiversity  
*Dr. Valerie Paul, Head Scientist, Smithsonian Marine Station, Fort Pierce*  
*Hugh Reichardt, Research Station Manager*  
*Woody Lee, Research Station Technician*
- 5:30 – 6:30 pm Return to Jupiter campus
- 6:30 – 7:30 pm Dinner and talk: New Media and Environmental Reporting  
*Dale Willman, Executive Editor, Field Notes Productions*





## Thursday, May 15, 2008

### Everglades restoration/Aquatic invaders/Hurricane research

- |                     |  |
|---------------------|--|
| 7:30 – 9:30 am      | Breakfast on the bus / Travel to Everglades National Park  |
| 9:30 – 11:30 am     | The Everglades: Getting the water right<br><i>Dr. Nick Aumen, Aquatic Ecologist, Everglades National Park</i><br><i>Mary Barley, Vice Chairperson, The Everglades Foundation</i> |
| 11:30 am – 12:30 pm | Franken-fish and more: The Non-indigenous Aquatic Species Database<br><i>Pam Fuller, Biologist, U.S. Geological Survey</i>   |
| 12:30 – 2:30 pm     | Slough slog  |
| 2:30 – 3:00 pm      | Refreshment break at “Robert is Here”  |
| 3:00 – 4:30 pm      | Travel to the 2008 Governor’s Hurricane Conference at the Greater Fort Lauderdale/Broward County Convention Center   |
| 4:30 – 5:30 pm      | Hurricanes and climate change<br><i>Dr. Kerry A. Emanuel, Professor of Atmospheric Science, Massachusetts Institute of Technology</i>  |
| 5:30 – 7:00 pm      | Return to campus   |

## Friday, May 16, 2008

### Alternative energy/Drought east and west/Sea turtle conservation

- |                    |  |
|--------------------|--|
| 7:00 – 8:00 am     | Breakfast on campus  |
| 8:00 – 9:00 am     | Harnessing the Gulf Stream: Energy from an ocean current<br><i>Dr. Rick Driscoll, Assistant Professor, Florida Atlantic University</i><br><i>Department of Ocean Engineering</i>   |
| 9:00 – 10:00 am    | Wind farming<br><i>Eric Silagy, Vice President for Business Management, FPL Energy</i>   |
| 10:00 – 11:30 am   | Travel to the Everglades Agricultural Area and Okeelanta Mill  |
| 11:30 am – 1:00 pm | Lunch and talk: From farms to fuel, Florida Crystals’ proposed cellulosic ethanol plant<br><i>Dr. George Philippidis, Associate Director, Applied Research Center, Florida International University</i><br><i>Dr. Stephen Clarke, Director of Industrial R&amp;D, Florida Crystals Corp.</i> |

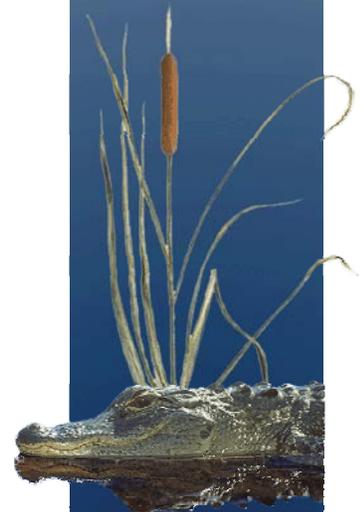
## Friday, May 16, 2008 (continued)

- 1:00 – 2:15 pm Travel to the northwest rim of Lake Okeechobee, Okee-Tantie Campground and Marina
- 2:15 – 5:00 pm A drought case study: Lake Okeechobee  
*Dr. Paul Gray, Science Coordinator, Audubon of Florida;*  
*Donald Fox, Biologist, Florida Fish and Wildlife Conservation Commission*
- A national perspective on drought: Comparing eastern and western approaches  
*Woody Wodraska, National Director of Water Resources, PBS&J*
- 5:00 - 7:00 pm Return to campus
- 7:00 – 7:30 pm Break
- 7:30 – 7:45 pm Travel to John D. MacArthur Beach State Park
- 7:45 – 11:00 pm Dinner by the sea  
Threats to marine turtles  
*Dr. Kirt Rusenko, Marine Conservationist, Gumbo Limbo Nature Center*  
Guided sea turtle walk

## Saturday, May 17, 2008

### Environmental reporting/Climate change in the courts/Contaminant exposure

- 8:30 – 9:30 am Breakfast on campus
- 9:30 – 10:30 am Emerging (and underreported) issues on the environment beat  
*Jeff Burnside, NBC 6 investigative reporter and Society of Environmental Journalists board member*
- 10:30 – 11:30 am Climate change in the courts  
*Patrick A. Parenteau, Senior Counsel to the Environmental and Natural Resources Law Clinic, Vermont Law School*
- 11:30 am – 12:30 pm Emerging Technologies: The Research Challenge of Exposures to Environmental Contaminants  
*Dr. Daniel Vallero, Environmental Scientist, U.S. Environmental Protection Agency National Exposure Research Laboratory*
- 12:30 – 1:30 pm Lunch  
Program ends



# Speaker Bios

All speakers for the institute are listed in alphabetical order.



Keynote Speaker



Field Presenters



Formal Presentations



Arrington

Aumen

Barley



**Dr. D. Albre Arrington**, Director of Water Resources, Loxahatchee River District, [albre@loxahatcheeriver.org](mailto:albre@loxahatcheeriver.org)

Albre Arrington is a fourth or fifth generation Floridian, born and raised in Jupiter. He graduated from Jupiter Elementary, Middle and High Schools and earned a B.S. (major: Zoology) from the University of Florida. Upon graduating from UF, he worked for 5 years on the Kissimmee River Restoration project where he was ultimately promoted to the lead fish ecologist. In 1997, he left south Florida to attend graduate school at Texas A&M University, where he earned a Ph.D. in the Department of Wildlife & Fisheries Sciences. In 2002, Arrington moved to Tuscaloosa, Alabama to become an assistant professor in the department of biological sciences at the University of Alabama. He left Alabama in 2005 to become the science director at the Perry Institute for Marine Science. After a year at PIMS, he moved to the Loxahatchee River District where he now spends all of his time focused on documenting and safeguarding the ecological health of the Loxahatchee River.



**Dr. Nick Aumen**, Ecologist, Everglades National Park, [nick\\_aumen@nps.gov](mailto:nick_aumen@nps.gov)

Nick Aumen is an aquatic ecologist for Everglades National Park, and oversees an interagency team of scientists and engineers tracking the progress of the South Florida ecosystem restoration program. His team, located at the Arthur R. Marshall Loxahatchee National Wildlife Refuge, assesses the potential impacts of restoration programs on Everglades National Park and other sensitive federal lands. Formerly, he served as research director at the South Florida Water Management District in West Palm Beach, directing a team of 120-plus scientists and engineers conducting research in support of ecosystem restoration.



**Mary Barley**, Vice Chairperson, Everglades Foundation, [mbarley@bellsouth.net](mailto:mbarley@bellsouth.net)

Mary Barley currently serves as vice chairperson of The Everglades Foundation after serving as chairperson from 1995-2003. She serves on the boards of the National Coalition for Marine Conservation, World Wildlife Fund National Council and Marine Leadership Committee, Atlantic Salmon Federation, Sierra Foundation (2004-07) and several Everglades related organizations. In 1999, she was named "Hero for the Planet" by *Time* magazine for her pioneering work to save the "River of Grass." In her role as one of the nation's preeminent Everglades conservationists, Barley spearheaded the passage of two Everglades Protection Amendments to the Florida Constitution and worked toward passage of the \$8 billion comprehensive Everglades restoration plan signed into law in

2000. She is the recipient of many honors, including NOAA Environmental Hero, and awards from the national League of Conservation Voters, National and Florida Audubon Societies, Sierra, Florida Wildlife Federation, Everglades Coalition and Miccosukee Tribe. In 2002 she received "The Lifetime Achievement" award from Audubon of Florida, and in 1996 the Atlanta Constitution named her "a southerner to watch." She has been profiled in numerous magazines and newspapers including *Time* and *Time for Kids* 1999 and *Audubon*. She was raised in Wisconsin, moved to Florida in 1970, and currently lives in Islamorada, a village in the Florida Keys.



**Cynthia Barnett**, Associate Editor, *Florida Trend*,  
cynthia\_barnett@yahoo.com

Cynthia Barnett has been a reporter and editor at newspapers and magazines for 20 years. Since 1998, she's written for *Florida Trend* magazine where she covers investigative, environmental, public policy and business stories. Her numerous awards include three investigative-reporting prizes in the Green Eyeshades, which recognize the best journalism in 11 southeastern states. She earned a bachelor's degree in journalism and master's in American history with a specialization in environmental history, both from the University of Florida. In 2004, she was awarded a Knight-Wallace Fellowship at the University of Michigan, where she spent a year studying freshwater supply. Her first book, *Mirage: Florida and the Vanishing Water of the Eastern U.S.*, published in 2007 by the University of Michigan Press, won the Gold medal for best nonfiction in the Florida Book Awards. *The St. Petersburg Times* called *Mirage* "one of the most important books to hit our state in a very long time."



**Dr. Leonard Berry**, Director, Florida Center for Environmental Studies, berry@ces.fau.edu

Leonard Berry earned his doctorate from the University of Bristol, England, with studies focused on the East and South Asia tropical environment. He has worked globally in Africa, Asia and the Americas on environment and development issues. He chairs the WaterWeb Consortium, is a member of the Secretariat of the Inter American Water Resources Network and is an alternate on the South Florida Water Management District's Water Resource Advisory Committee. In 1994, he was appointed director of the Florida Center for Environmental Studies (CES), a state-wide center for the state university system that focuses on critical environmental management issues in Florida and tropical and sub-tropical ecosystems worldwide. He has authored/edited 21 books and over 250 professional papers and reports, and has served as a consultant to the World Bank, the United Nations Environmental Program, the Global Environment Facility and other agencies.



**Jeff Burnside**, Reporter and Creator, NBC6's EcoWatch segment,  
jeff.burnside@nbc.com

Jeff Burnside has been in the news business for more than 20 years working as a reporter, anchor, news manager and producer in cities such as Seattle, Boston and now Miami, where he is part of the WTVJ Special Projects Unit. Jeff reports investigative, long-format and environmental stories and periodically covers daily news. He's won dozens of journalism awards for television and newspaper reporting and photography. For 2007, he was awarded top national investigative awards from Investigative Reporters and Editors, the National Press Club, and the Clarion Awards, an Edward R.

Murrow Regional Award and 3 regional Emmy's. In 2000, Burnside launched "EcoWatch," a nationally acclaimed environmental news segment. He is a frequent invited speaker and panelist on environmental journalism and journalism ethics. He was elected to the national board of the Society of Environmental Journalists and the National Association of Television Arts and Sciences southeastern U.S. region. He serves on the advisory board for the Scripps Howard Institute on the Environment, and completed service on the advisory council for the Pew Institute for Ocean Science, the Faculty Selection Committee for the Knight Center for Journalism at the University of Miami, and the board of the Wildlife Care Center in Fort Lauderdale, Florida. In addition, he earned a fellowship at the Metcalf Institute for Environmental Reporting (University of Rhode Island Graduate School of Oceanography) and a fellowship at the Western Knight Center for Specialized Reporting in political coverage (University of Southern California Annenberg School). Jeff was born and raised in Seattle, Washington and now lives Miami Shores. He graduated from Washington State University's Edward R. Murrow School of Communications.

Barnett

Berry

Burnside



# Speaker Bios



Clarke

Dixon

Driscoll

Edwards



**Dr. Stephen Clarke**, Director of Industrial R&D, Florida Crystals Corporation, [stephen\\_clarke@floridacrystals.com](mailto:stephen_clarke@floridacrystals.com)

Stephen Clarke was born and educated in the UK and received both B.Sc. and Ph.D. degrees in chemistry from the University of London. Following a three-year post-doctoral position in molecular biology at Yale University, he went to Jamaica to teach chemistry at the University of the West Indies. He began his association with the sugarcane industry in Jamaica and then joined the faculty of the Audubon Sugar Institute of Louisiana State University, focusing on sugar industry related research. In 1995, he joined the Florida Crystals Corporation as director of Industrial R&D, working on the application of new technology in processing and laboratory operations. A significant part of his current effort relates to all aspects of energy production and use in sugarcane-based operations.



**Keith Dixon**, Research Climatologist, NOAA/Geophysical Fluid Dynamics Laboratory, [keith.dixon@noaa.gov](mailto:keith.dixon@noaa.gov)

Keith Dixon is a senior research meteorologist at the National Oceanic and Atmospheric Administration's (NOAA's) Geophysical Fluid Dynamics Laboratory (GFDL) located in Princeton, New Jersey. His expertise lies in the use of state-of-the-art computer models to simulate the Earth's global climate — past, present, and future. During a 20-year plus career at GFDL, he has participated in national and international climate change assessment projects, including the Intergovernmental Panel on Climate Change (IPCC). He has been an author on more than 30 articles in scientific journals. He has delivered briefings on Capitol Hill, participated in the preparation of museum exhibits and developed graphics, animations and text used by major news organizations. Early in his professional career he also worked as a radio broadcast meteorologist and taught at his alma mater, Rutgers University.



**Dr. Rick Driscoll**, Assistant Professor, FAU Department of Ocean Engineering, [fdriscoll@fau.edu](mailto:fdriscoll@fau.edu)

Frederick "Rick" R. Driscoll is an associate professor in the department of ocean engineering at Florida Atlantic University, director of technology for the Center of Excellence for Ocean Energy Technology at FAU, and also serves as a commissioner on the Florida Energy Commission. He received his bachelor's degree in mechanical engineering from the University of Victoria in 1994, and a Ph.D. in the areas of mechanical engineering and physical oceanography from the University of Victoria in 1999. His research areas include ocean energy, finite-element modeling, numerical algorithms, mooring technology, data fusion and processing techniques for ocean sensors, physical oceanography and control of ocean systems. Prior to joining FAU, he was president and CEO of Deep Sea Technologies Ltd. As an undergraduate student, he worked for Mobil Oil, Gulf Canada Resources, and the Canadian National Energy Board. He is very active in energy and national defense research and has acquired millions of dollars in research funding to develop ocean energy technologies and a rapidly deployable stable platform to support the U.S. Navy seabasing program.



**Alana Edwards**, Education & Training Coordinator, FAU's Center for Environmental Studies, [aedwards@fau.edu](mailto:aedwards@fau.edu)

Alana Edwards graduated with her master's in environmental science from FAU in 2001. Since that time she has worked as education and training coordinator for CES. For several years she was stationed at the Riverwoods Field Laboratory located on a remnant section of the Kissimmee River where she educated students, teachers and environmental professionals about the Kissimmee River Restoration project. She is currently working on the Jupiter campus of FAU where she is involved in a variety of projects, including the Robert J. Huckshorn Arboretum and teacher training focusing on the Greater Everglades Watershed.



 **Dr. Kerry Emanuel**, Professor of Meteorology, Massachusetts Institute of Technology, emanuel@texmex.mit.edu

Kerry Emanuel is a professor of atmospheric science at the Massachusetts Institute of Technology, where he has been on the faculty since 1981 after spending three years as a faculty member at UCLA. Professor Emanuel's research interests focus on tropical meteorology and climate, with a specialty in hurricane physics. His interests also include cumulus convection and advanced methods of sampling the atmosphere in aid of numerical weather prediction. He is the author or co-author of more than 100 peer-reviewed scientific papers and two books: *Divine Wind: The History and Science of Hurricanes*, recently released by Oxford University Press and aimed at a general audience, and *What We Know about Climate Change*, published by the MIT Press.

Emanuel



 **Donald Fox**, Biological Scientist, Florida Fish and Wildlife Conservation Commission, donald.fox@myfwc.com

Donald Fox is a native of northeast Tennessee who received his B.S. from East Tennessee State University and his M.S. from Tennessee Technological University. Before coming to Florida, he was employed by the Tennessee Wildlife Resources Agency. He joined the Okeechobee Project in 1982 as a biological scientist. He has been with conservation commission for 23 years, all based in Okeechobee. He has participated in and supervised numerous research and management projects associated with Lake Okeechobee and the Kissimmee River.

Fox



 **Pam Fuller**, Biologist, US Geological Survey, pfuller@usgs.gov

Pam Fuller is the program leader for the U.S.G.S. Nonindigenous Aquatic Species Program, which maintains a nationwide database and a web site of aquatic invaders. She is author of the summary book *Nonindigenous Fishes Introduced into Inland Waters of the United States*, which reviews the introductions of more than 500 species and looks at spatial and temporal patterns of these introductions. She has been involved in numerous national and international invasive species research activities and work groups, particularly in the field of invasive species information management. She has collaborated with the Smithsonian Environmental Research Center to develop NISbase, a distributed query system for aquatic invasive species databases.

Fuller



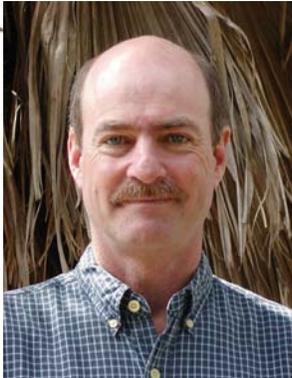
 **Dr. Doria Gordon**, Senior Ecologist/Associate Director of Conservation Science, Nature Conservancy/Florida, dgordon@tnc.org

Doria Gordon has been a senior ecologist for the Florida Chapter of The Nature Conservancy since 1990 and is now associate director of conservation science. She is also a courtesy professor of botany at the University of Florida and a research affiliate at Archbold Biological Station. Her research focus includes screening and ecological effects of non-indigenous plant species, restoration of fire and longleaf pine ecosystems, and rare species biology, demography and management. She leads the Florida Chapter's efforts on invasive non-native species, conservation planning, and restoration. She also teaches workshops on ecological management and monitoring for the Florida Chapter's Natural Areas Training Academy. Prior to her work with The Nature Conservancy, she completed her M.S. and Ph.D. in ecology at the University of California, Davis.

Gordon



# Speaker Bios



**Dr. Paul Gray**, Science Coordinator, Lake Okeechobee Watershed Program, Audubon of Florida, [audubon@okeechobee.com](mailto:audubon@okeechobee.com)

Paul Gray is the science coordinator of Audubon of Florida's Lake Okeechobee Watershed Program. In this role, he works with technical and policy teams designing and implementing the various restoration plans in the region, including Everglades restoration, the Lake Okeechobee Protection Plan, Kissimmee Chain of Lakes Long Term Management Plan and the Kissimmee River Restoration. His educational background includes a bachelor's degree in science from the University of Missouri, a master's in wetland ecology from Texas Tech University and a doctorate from the University of Florida. He worked for three years for the Florida Game and Fresh Water Fish Commission before joining Audubon.



**Noah D. Hall**, Executive Director, Great Lakes Environmental Law Center, [nhall@wayne.edu](mailto:nhall@wayne.edu)

Noah Hall is a member of the Wayne State University Law School faculty. He previously taught at the University of Michigan Law School and was an attorney with the National Wildlife Federation, where he managed the Great Lakes Water Resources Program for the nation's largest conservation organization. He also worked in private practice for several years, representing a variety of business and public interest clients in litigated and regulatory matters. He has extensive litigation experience and numerous published decisions in state and federal courts, and continues to represent a variety of clients in significant environmental policy disputes. He graduated from the University of Michigan Law School and the University of Michigan School of Natural Resources and Environment, concentrating in environmental policy. After law school, he clerked for the Honorable Kathleen A. Blatz, Chief Justice of the Minnesota Supreme Court. He is currently co-authoring (with Plater et al.) the fourth edition of *Environmental Law and Policy: Nature, Law, and Society* (Aspen Publishers 2008).



**Dr. Roberta Hotinski**, Information Officer, Carbon Mitigation Initiative/Princeton University, [hotinski@princeton.edu](mailto:hotinski@princeton.edu)

Dr. Roberta M. Hotinski is a geoscientist turned science communicator who has worked at *U.S. News & World Report*, the National Science Foundation and most recently Princeton University. As the information officer for Princeton's Carbon Mitigation Initiative (CMI), she helped develop the "stabilization wedges" game with CMI co-directors Stephen Pacala and Robert Socolow. Now a consultant to CMI, she has presented the wedge concept and game to audiences around the world and continues to work with the group to develop wedge-related resources for educators and the general public. Hotinski earned her B.A. in environmental geology from Southern Methodist University in 1993, and, after a short stint as mass media fellow for the American Association for the Advancement of Science (AAAS) at *U.S. News & World Report*, her Ph.D. in Geosciences from Pennsylvania State University in 2000. After completing postdoctoral work in paleoclimate modeling in Princeton's Atmospheric and Ocean Sciences program, Hotinski accepted a AAAS Science & Technology Policy Fellowship working in the National Science Foundation's Office of Legislative Affairs, then joined CMI in 2003.

Gray

Hall

Hotinski



**Jeff Klinkenberg**, Staff Writer, *St. Petersburg Times*,  
klink@sptimes.com

Jeff Klinkenberg writes about Florida culture and the people who make the state unique. He joined the *Times* in 1977, and his work takes him from Pensacola to Key West. Klinkenberg's interest in Florida began when he was a small boy growing up in Miami on the edge of the Everglades. He started working at the Miami News when he was 16 and later became a journalism graduate of the University of Florida. His new book, which collects favorite columns, is *Pilgrim in the Land of Alligators*, published by University Press of Florida. Another anthology, *Seasons of Real Florida*, is also in print.

*Klinkenberg*



**Dr. David A. McNaught**, Senior Policy Analyst, Environmental Defense, dmcnaught@edf.org

David McNaught is a senior policy analyst for Environmental Defense. He works on water quality, wetlands, endangered species, sustainable development and both regulatory and incentive-based conservation strategies. He focuses on reduction of non-point source pollution and comprehensive conservation at landscape and watershed scale. He led development of *Horizon 2100: Aggressive Conservation for North Carolina's Future* (2003). He previously served as executive director of the N.C. Clean Water Management Trust Fund and the Pamlico-Tar River Foundation and was a member of the N.C. Coastal Resources Commission. He received his Ph.D. in social theory from University of Florida, an MS in environmental studies from the University of Montana and an MA and BA in sociology from Wake Forest University.

*McNaught*



**Patrick A. Parenteau**, Senior Counsel, Environmental and Natural Resources Law Clinic/Vermont Law School, pparenteau@vermontlaw.edu

Patrick A. Parenteau is professor of law and senior counsel in the Environmental and Natural Resources Law Clinic at Vermont Law School. He previously served as director of the Environmental Law Center at VLS from 1993-1999. Professor Parenteau also teaches in the Environmental Studies Program at Dartmouth College. Professor Parenteau has an extensive background in environmental and natural resources law. His previous positions include vice president for conservation with the National Wildlife Federation in Washington, D.C. (1976-1984); general counsel to the New England Regional Office of the EPA in Boston (1984-1987); commissioner of the Vermont Department of Environmental Conservation (1987-1989); and Of Counsel with the Perkins Coie law firm in Portland, Oregon (1989-1993). Parenteau is a nationally recognized expert on the Endangered Species Act, the Clean Water Act, the National Environmental Policy Act and other environmental laws. He has been involved in drafting, litigating, implementing, teaching, and writing about these laws for more than 30 years. He is a recipient of the National Wildlife Federation's Conservation Achievement Award for 2005 in recognition of his contributions to wildlife conservation and environmental education. He holds a B.S. from Regis University, a J.D. from Creighton University, and an LLM in Environmental Law from the George Washington University.

*Parenteau*



# Speaker Bios



**Dr. Valerie J. Paul**, Head Scientist, Smithsonian Marine Station, Fort Pierce, paul@si.edu

Valerie J. Paul is currently head scientist at the Smithsonian Marine Station at Fort Pierce, Florida. She received her B.A. from the University of California, San Diego in 1979 with major in biology and studies in chemical ecology and her Ph.D. in marine biology in 1985 from the University of California San Diego, Scripps Institution of Oceanography. She joined the faculty of the University of Guam Marine Laboratory in 1985, served as director of the Laboratory from 1991-1994 and as full professor from 1993-2002. Her research interests include marine chemical ecology, marine plant-herbivore interactions, coral reef ecology and marine natural products. She was elected a fellow of the American Association for the Advancement of Science in 1996 and was elected and served as chairperson of the Marine Natural Products Gordon Research Conference in 2000 (vice-chair in 1998). She currently serves on the editorial boards of the journals *Coral Reefs* and *Journal of Natural Products*. She is the author or co-author of over 175 research papers and review articles.



**Dr. Mark Perry**, Executive Director, Florida Oceanographic Society, markperry@floridaoceanographic.org

Mark Perry is state co-chairman of the Everglades Coalition, an alliance of 45 local, state and national conservation and environmental organizations dedicated to full restoration of the greater Everglades ecosystem, from the Kissimmee Chain of Lakes to Florida Bay and the Keys. He is executive director of Florida Oceanographic Society, assuming that job in 1978. He attended Tulane University, the University of Miami and the Florida Institute of Technology, acquiring degrees in Marine Science and Applied Oceanography. After serving four years in the U.S. Merchant Marine, working in the oil industry and conducting ocean research with the University of Miami, Perry fights for the health of the St. Lucie River Estuary and Indian River Lagoon as a member of The Rivers Coalition, a group of 31 regional businesses and environmental organizations. He has testified before the Senate Agriculture Committee on Sugar Reform explaining impacts to the Everglades, Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries, and continues to serve on government committees involved in Florida coastal environment planning and management.



**Dr. George Philippidis**, Associate Director, Applied Research Center/ Florida International University, George.Philippidis@fiu.edu

George Philippidis is associate director of the Applied Research Center (ARC) and co-director of the Energy Business Forum at Florida International University. He is an international expert in biofuels and has 18 years of experience in leading strategic business units in the ethanol, biodiesel and renewable energy industries in both the private and public sectors. In 1989, he joined DOE's National Renewable Energy Laboratory to direct a joint venture between DOE and Amoco Corp. on renewable fuels commercialization. In 1996, he became director of business development at a subsidiary of Thermo Electron Corporation, a Fortune 500 company, where he commercialized environmentally friendly composite products and helped take the company public on the American Stock Exchange. In 2002, he joined ARC to form and direct the Center's energy business, including biofuels, renewable energy and energy conservation and efficiency in the United States, Central and South America and the Caribbean. Dr. Philippidis holds a Ph.D. in Chemical Engineering and a MBA. He has authored numerous articles and book chapters and holds 9 US patents.

Paul

Perry

Philippidis



 **Paul Raeburn**, Journalist, past president of the National Association of Science Writers, paulraeburn@nasw.org

Paul Raeburn ([www.paulraeburn.com](http://www.paulraeburn.com)) is a journalist and the author of three books, including *Acquainted with the Night*, a memoir of raising children with depression and bipolar disorder (Broadway Books, 2004). His work has appeared most recently in *The New York Times Sunday Magazine*, *Scientific American*, *Psychology Today*, *Self*, *Technology Review* and others. He is now working on a book on fathers tentatively titled “Are Fathers Necessary?” He is a former senior editor for science, technology and medicine at *Business Week*. Before that, he was the science editor and chief science correspondent at The Associated Press. In 2007, he created, produced and hosted *Innovations in Medicine* and *The Washington Report* on XM satellite radio channel 157. He has also been a commentator for

National Public Radio’s “Morning Edition”, occasional guest host of NPR’s “Talk of the Nation: Science Friday”, and a regular guest on CNN and the PBS show “This Week in Business”. He is also the organizer of the annual conference *New Horizons in Science* and past president of the National Association of Science Writers. A native of Detroit, he now lives in New York City with his wife, the writer Elizabeth DeVita-Raeburn.



 **Dr. Susan Reilly**, Director, School of Communication and Multimedia Studies, sreilly@fau.edu

Susan Reilly is the director of the School of Communication and Multimedia Studies at Florida Atlantic University and regularly teaches the Introduction to Graduate Studies class. An established mass communication scholar as well as a writer/producer of public television documentaries, she has published widely on international media, international public television and critical pedagogy issues. Her co-authored books include *Rethinking Media Literacy: A Critical Pedagogy of Representation* and *Media Knowledge: Popular Culture, Pedagogy and Critical Citizenship*.



 **Robin Rossmanith**, Park Biologist, Jonathan Dickinson State Park, Robin.Rossmanith@dep.state.fl.us

Rob Rossmanith has been the park biologist for Jonathan Dickinson State Park since December 2004. He started as a temporary non-native plant technician in the regional office and then took a position as a ranger at JDSP. Rob graduated with a bachelor of science from Virginia Tech in 2000 and a master’s of science in zoology in 2004 from Southern Illinois University, where he studied declining frog species in the mountains of Panama.



 **Jeff Ruch**, Executive Director, Public Employees for Environmental Responsibility, jruch@peer.org

Jeff Ruch has been the executive director of PEER since 1997. With Jeff DeBonis, he helped to start PEER and for its first four years served as general counsel and program director. Prior to that, Ruch was the policy director and a staff attorney at the Government Accountability Project, representing whistleblowers from both the public and private sector. Before coming to Washington, D.C., he worked in California state government for 17 years, mostly in the state legislature as counsel to various committees. In that post he drafted hundreds of laws on topics ranging from energy conservation to the rights of employed inventors. He

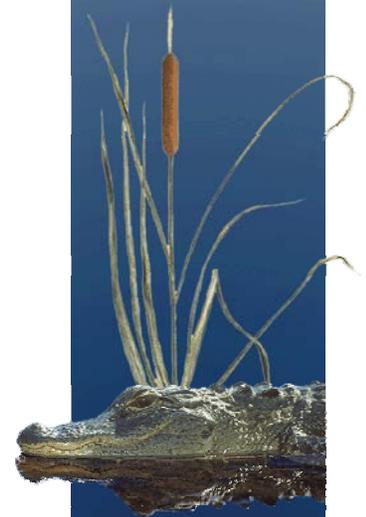
served stints as a deputy district attorney and appellate court clerk and is a graduate of the California Correctional Officers Academy.

Raeburn

Reilly

Rossmanith

Ruch



# Speaker Bios



Rusenko

Silagy

Strowd



**Dr. Kirt Rusenko**, Marine Conservationist, Gumbo Limbo Nature Center, [krusenko@ci.boca-raton.fl.us](mailto:krusenko@ci.boca-raton.fl.us)

Kirt Rusenko has been the marine conservationist for the City of Boca Raton, based at the Gumbo Limbo Nature Center, since 1995. He is in charge of the Boca Raton Sea Turtle Conservation and Research Program and monitors sea turtles on Boca Raton's five miles of beaches. He has been working on reducing many forms of environmentally destructive lighting that disrupt turtle nesting. He works closely with the City on construction projects that impact beach/dune ecosystems. He formerly worked as research assistant professor of dermatology at University of North Carolina Medical School in Chapel Hill. Previously he was a research and development scientist for Thermo Separation Products in Riviera Beach and an environmental specialist for Florida Power and Light at the St. Lucie Nuclear Power Plant.



**Eric Silagy**, Vice President for Business Management, FPL Energy, [eric\\_silagy@fpl.com](mailto:eric_silagy@fpl.com)

Eric Silagy joined FPL Energy in 2003 and currently serves as vice president/general manager for the Texas region. In this capacity, he is responsible for managing all business activities related to the company's generation assets in the region, including 1,600 MW of wind power. Prior to undertaking his duties in Texas, he served as vice president, business development with responsibility for managing and supporting FPL Energy and FPL Group activities, including all nuclear power plant acquisitions. From 1999 to 2003, he served as vice president of Mergers, Acquisitions and Divestitures at Entergy Wholesale Operations. In this position, he led the successful sale and purchase of numerous energy related assets and companies in the U.S. and overseas. Prior to joining Entergy, he held the position of vice president for development, Southeast Asia, for The Wing Group, a subsidiary of Western Resources. From 1987 to 1996, he served on the staff of U.S. Sen. J. Bennett Johnston in a variety of roles, including professional staff member of the U.S. Senate Energy and Natural Resources Committee, legislative assistant and chief of staff. He holds a B.A. in economics from the University of Texas at Austin and a J.D. from Georgetown University Law Center.



**Tommy Strowd**, Assistant Deputy Executive Director, Everglades Restoration Resource Area, [tstrowd.@sfwmd.gov](mailto:tstrowd.@sfwmd.gov)

Tommy Strowd has more than 29 years of experience in the environmental and water resource engineering field, with the vast majority of that experience focused in South Florida. He received his bachelor's degree in oceanographic technology from Florida Tech in 1976. He attended the Jensen Beach Campus and did much of his undergraduate course work in environmental and ocean engineering fields in the St. Lucie River, the Indian River Lagoon and off the coasts of Stuart and Fort Pierce. After graduating, he worked for the National Marine Fisheries Service, the Florida Department of Transportation and the Florida Department of Environmental Protection and worked in the consulting engineering field until 1992, when he accepted a position as a senior engineer in the Planning Department of the South Florida Water Management District. During his tenure with the District, he worked on several key regional planning efforts including the Lower East Coast Regional Water Supply Plan, the Northwest Miami-Dade Lake Belt Plan, the East Coast Buffer Feasibility Study and the Comprehensive Everglades Restoration Plan. He served as the director of water control operations for 6 years. In 2005, he was promoted to assistant deputy executive director for the Everglades Restoration Resource Area.



**Dr. Daniel Vallero**, Environmental Scientist, U.S. Environmental Protection Agency National Exposure Research Laboratory, [vallero.daniel@epa.gov](mailto:vallero.daniel@epa.gov)

Daniel Vallero has been involved in environmental sea changes for 32 years, serving in the EPA's regional offices, headquarters and laboratories. He is an authority on pollutant exposures in ecosystems and human populations. His research covers a wide variety of areas, including emerging technologies, such as nanomaterials, consumer products and fuels. He also conducts research related to the emergency response and homeland security, notably leading EPA's urban dispersion program. Most recently, he has led personal exposure tracer studies in New York City. He is the author of seven engineering textbooks and consulting editor (environmental engineering) to the *McGraw-Hill Yearbook of Science and Technology* and the *Encyclopedia of Science and Technology*, with his articles appearing in both. He is adjunct professor in Duke's Pratt School of Engineering. Dr. Vallero holds a Ph.D. in Civil and Environmental Engineering from Duke University, a master's in environmental health sciences (Civil and Environmental Engineering) from the University of Kansas, a master's in city and regional planning from Southern Illinois University, and a Bachelor's Degree in the Earth Sciences and Psychology from SIU.



**Dr. Harold Wanless**, Chairman, Department of Geological Sciences, University of Miami, [hwanless@miami.edu](mailto:hwanless@miami.edu)

Harold R. Wanless is professor and chairman of the Department of Geological Sciences at the University of Miami. He and his students have been studying the dynamics and evolution of coastal and shallow marine environments of South Florida and the Bahamas since the mid 1960s, especially focusing on the influence of sea level and hurricanes and on the dynamics of biotic wetland and marine communities. They are now applying this understanding to projecting future changes in response to global warming.



**Dale Willman**, Executive Editor, Field Notes Productions, [dale@willman.tv](mailto:dale@willman.tv)

Dale Willman is a leading voice in environmental journalism and a national award-winning correspondent and editor for more than 30 years. He runs his own production company and reports on environmental issues for a number of outlets. He also lectures and teaches on college campuses on numerous topics, from environmental journalism to diversity in the media, and he conducts journalism training around the world. He spent more than 10 years in various roles at National Public Radio in Washington, D.C. As a correspondent he won a national Edward R. Murrow Award for Investigative Reporting in 1998 for his CNN Radio series "Broadway's Dirty Little Secret."

For CBS radio stations, provided coverage of the White House, Capital Hill, the Pentagon and the State Department. He has a master's degree in environment and community from Antioch University and a certificate in environmental law and policy from the graduate school at the U.S. Department of Agriculture.



**Woody Wodraska**, National Director of Water Resources, PBS&J, [woody@pbsj.com](mailto:woody@pbsj.com)

John R. "Woody" Wodraska is a nationally known expert in the water resource industry. During a 30-year career, he has worked with sensitive water management issues on both the East Coast and West Coast. As executive director of the South Florida Water Management District, he helped develop restoration programs for the Everglades, Kissimmee River and Lake Okeechobee and oversaw water use and surface water management programs. As general manager and CEO of the Metropolitan Water District of Southern California, he created a drought-proofing plan and resolved long-standing water use conflicts affecting the Colorado River and San Francisco Bay/Delta region. Currently, he serves as national director of Water

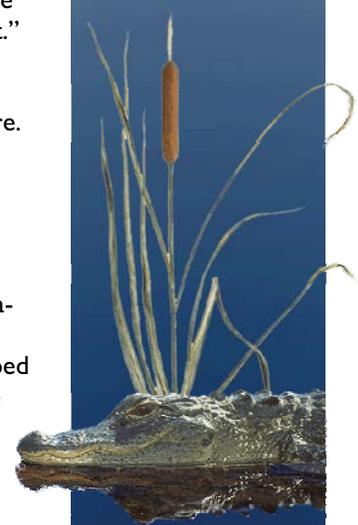
Resources for the consulting firm PBS&J. He is working with water resource agencies to solve complex water management issues using his both extensive experience and innovative new technologies.

Vallero

Wanless

Willman

Wodraska



# Notes





Florida Atlantic University  
 John D. MacArthur Campus  
 5353 Parkside Drive  
 Jupiter, Florida 33458  
 561-799-8500

**BUILDING LEGEND**

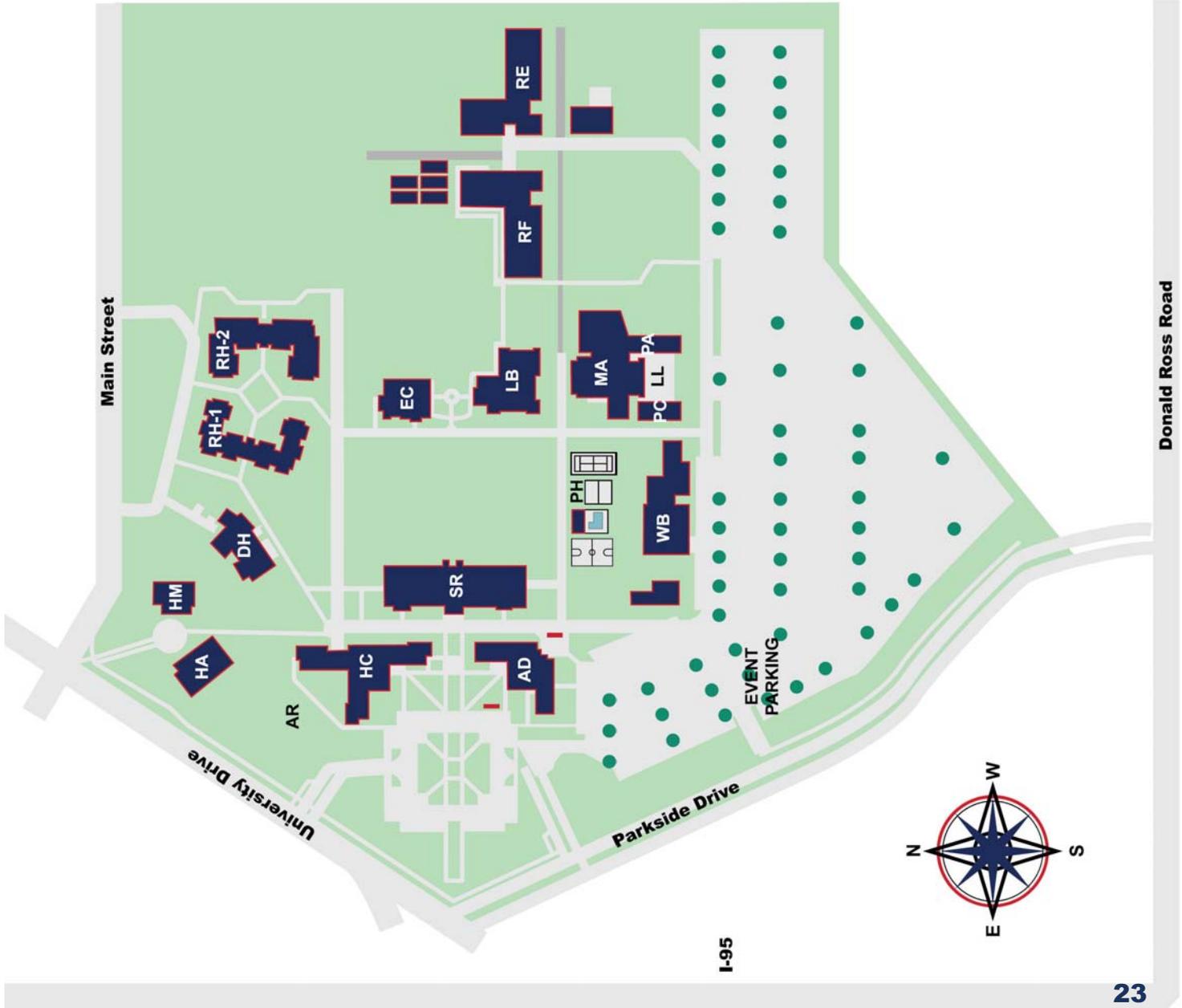
- AD Administration/Classroom
- AR Huckshorn Arboretum
- DH Dining Hall Commons
- EC Education and Classroom
- HA Hibel Fine Arts
- HC Wilkes Honors College
- HM Hibel Museum
- LB Library
- LL Elinor Bernon Rosenthal Lifelong Learning Complex
- MA Maltz Center for Education
- PA Perloff Administration
- PC Perloff Classroom
- PH Pool House/Recreation Area
- RE Scripps Research Expansion
- RF Scripps Temporary Research Facility
- RH Residence Halls 1 & 2
- SR Student Resources/Classrooms
- WB Wilkes Psychology
- Campus Directory

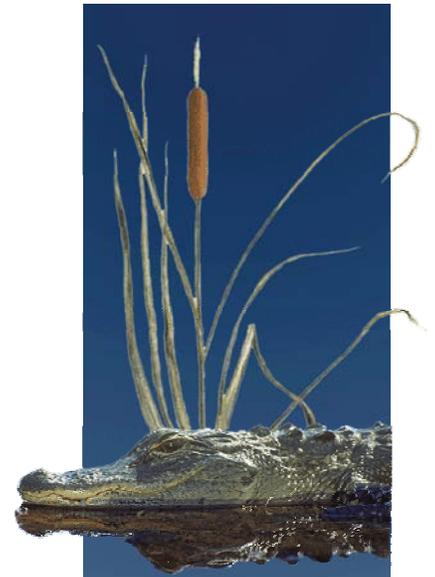
**DRIVING DIRECTIONS**

From I-95: take exit 83 (Donald Ross Road) east to Parkside Drive. Turn North on Parkside Drive and turn right into parking area.

From Florida Turnpike headed South: take exit 116 (Indiantown Road) east to I-95 South. From I-95 exit 83 (Donald Ross Road) east to Parkside Drive. Turn North on Parkside Drive and turn right into parking area.

From Florida Turnpike headed North: take exit 109 (PGA Blvd) east to Central Blvd. North. Turn West on Donald Ross Road. Turn North onto Parkside Drive and turn right into parking area.





*"The most unhappy thing about conservation is that it is never permanent. If we save a priceless woodland today, it is threatened from another quarter tomorrow."*

- Marjory Stoneman Douglas

**Scripps Howard Institute  
on the Environment  
Institute Organizers**

FAU's School of  
Communication and  
Multimedia Studies

Dorothy F. Schmidt College of  
Arts and Letters

FAU's Center for  
Environmental Studies

**Institute Location:**

**Florida Atlantic University  
John D. MacArthur Campus  
5353 Parkside Drive  
Jupiter, Florida 33458**