

MEMORANDUM

Agenda Item No. 8(L)(1)

TO: Honorable Chairman Jose "Pepe" Diaz
and Members, Board of County Commissioners

DATE: October 19, 2021

FROM: Geri Bonzon-Keenan
County Attorney

SUBJECT: Resolution waiving, by a two-thirds vote of the full membership of the Board of County Commissioners, the resident elector requirement of section 2-11.38 of the Code and appointing members to the Miami-Dade County Watershed Management Advisory Board; appointing Brett Bibeau; Dr. Todd Crowl; Dr. Diego Lirman; Dr. Joan Bowder; Dr. Erik Stabenau; Julissa Kepner; T. Spencer Crowley III; Jannek Cederberg, P.E.; Gerald C. McGinley, Jr.; John L. Alger; Roberto Torres; and David Doeblner, each for a four-year Term

Resolution No. R-992-21

The accompanying resolution was prepared by the Regulatory and Economic Resources Department and placed on the agenda at the request of Prime Sponsor Commissioner Rebeca Sosa.



Gerí Bonzon-Keenan
County Attorney

GBK/smm

Memorandum



Date: October 19, 2021

To: Honorable Chairman Jose “Pepe” Diaz
and Members, Board of County Commissioners

From: Daniella Levine Cava 
Mayor

Subject: Twelve Appointments to the Miami-Dade County Biscayne Bay Watershed Management Advisory Board; Waiving Requirement that all Board Members be Permanent Residents and Electors of Miami-Dade County

Recommendation

It is recommended that the Board of County Commissioners waive the resident elector requirement, for one nominee, and appoint twelve individuals to the Miami-Dade County Biscayne Bay Watershed Management Advisory Board (Advisory Board), as detailed herein.

Scope

The recommendations and actions of the Advisory Board have a countywide impact.

Delegation of Authority

The proposed resolution does not delegate authority to the County Mayor or County Mayor’s designee.

Fiscal Impact/Funding Source

There is no fiscal impact associated with appointing twelve members to the Advisory Board. The primary cost of creating the Advisory Board would be staff time by the County’s Chief Bay Officer and technical and professional staff throughout County departments, who will also provide support as necessary. Additional costs such as hosting of summits and conferences for the purposes of developing the Watershed Recovery Plan will be in the Office of Resilience’s annual operating budget.

Track Record/Monitor

The Advisory Board will be staffed by the Chief Bay Officer and support staff from the Department of Regulatory and Economic Resources, Division of Environmental Resources and Management (DERM). Technical and professional staff throughout County departments will provide support as necessary.

Background

The Miami-Dade County Biscayne Bay Watershed Management Advisory Board (Advisory Board) was created by the Board of County Commissioners, through Ordinance No. 21-72, as recommended by the Biscayne Bay Task Force. The Advisory Board was created by newly enacted Article CLXIV of Chapter 2, Sections 2-2420 to 2-2426 of the Code of Miami-Dade County (Code) as a permanent board established to advise the Board of County Commissioners (“BCC”) and the County Mayor on issues related to Biscayne Bay, including, but not limited to, (1) the long-term management of Biscayne Bay, (2) health of the marine community, (3) run-off

Honorable Chairman Jose “Pepe” Diaz
and Members, Board of County Commissioners

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and other impacts to water quality, (4) marine debris, (5) education and outreach, (6) economic development and vitality related to Biscayne Bay, and (7) how conditions in Biscayne Bay may affect residents and property owners. These recommendations could also be used to update Chapter 24 of the Code to incorporate a new management plan and prioritize projects for Biscayne Bay. In addition, the new board will provide a local perspective on Biscayne Bay problems, issues, and solutions.

The Advisory Board will consist of 21 members. Pursuant to section 2-2421 of the Code, 14 of the members will be representatives from various entities and organizations, as recommended by the respective entity or organization, as follows:

1. One representative from the Miami River Commission, recommended by the Miami River Commission;
2. Three representatives with scientific expertise from each of, and as recommended by, the following institutions: one from the Florida International University Institute of Environment, one from the University of Miami Rosenstiel School of Marine and Atmospheric Science, and one from the National Oceanic and Atmospheric Administration;
3. One representative from Biscayne National Park, as recommended by the Superintendent of Biscayne National Park;
4. One representative from the Greater Miami Visitors and Convention Bureau, as recommended by the Greater Miami Convention and Visitors Bureau;
5. One representative of the development industry, as recommended by the South Florida Builders Association;
6. One representative who is a coastal engineer working in Miami-Dade County, as recommended by the Florida Engineering Society;
7. One representative who works in banking and finance in Miami-Dade County, as recommended by the Greater Miami Chamber of Commerce;
8. One representative of the marine or boating industry, as recommended by the Miami Marine Council;
9. One representative of the agricultural industry, recommended by the Dade County Farm Bureau;
10. One representative of the Miccosukee Tribe, as recommended by the Miccosukee Tribe; and
11. Two representatives from environmental groups, one recommended by the Nature Conservancy and one recommended by the Biscayne Bay Marine Health Coalition.

After the nominees are recommended for appointment pursuant to procedures in Ordinance No. 21-72, such nominees may be appointed to the Advisory Board by the Board of County Commissioners via resolution. The recommendations of the Miccosukee Tribe and the Greater Miami Chamber of Commerce have not been submitted as of the date that this resolution was prepared.

The following 12 nominations were submitted to the County and are recommended for appointment to the Advisory Board.

Miami River Commission

The Miami River Commission has recommended Mr. Brett Bibeau for appointment. Correspondence from the Miami River Commission and the resume of the nominee are attached as Exhibit 1.

Florida International University Institute of Environment

Florida International University (FIU) has recommended Dr. Todd Crawl for appointment. Correspondence from FIU and the resume of the nominee are attached as Exhibit 2.

University of Miami Rosenstiel School of Marine and Atmospheric Science

University of Miami Rosenstiel School of Marine and Atmospheric Science has recommended Dr. Diego Lirman for appointment. Correspondence and the resume of the nominee are attached as Exhibit 3.

National Oceanic and Atmospheric Administration

The National Oceanic and Atmospheric Administration (NOAA) has recommended Dr. Joan Browder for appointment. Correspondence from NOAA and the resume of the nominee are attached as Exhibit 4.

Biscayne National Park

Biscayne National Park has recommended Dr. Erik Stabenau for appointment. Correspondence from the Superintendent of Biscayne National Park and the resume of the nominee are attached as Exhibit 5.

Greater Miami Convention and Visitors Bureau

The Greater Miami Convention and Visitors Bureau (GMCVB) has recommended Ms. Julissa Kepner for appointment. Correspondence from the GMCVB and the resume of the nominee are attached as Exhibit 6.

Builders Association of South Florida

The Builders Association of South Florida has recommended Mr. Spencer Crowley for appointment. Correspondence from the Builders Association and the resume of the nominee are attached as Exhibit 7.

Miami Marine Council

The Miami Marine Council has recommended Mr. Gerald C. McGinley, Jr. for appointment. Correspondence from the Miami Marine Council and the resume of the nominee are attached as Exhibit 8.

Dade County Farm Bureau

The Dade County Farm Bureau has recommended Mr. John L. Alger for appointment. Correspondence from the Dade County Farm Bureau and the resume of the nominee are attached as Exhibit 9.

The Nature Conservancy

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and Members, Board of County Commissioners

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The Nature Conservancy has recommended Mr. Roberto Torres for appointment. Correspondence from the Nature Conservancy and the resume of the nominee are attached as Exhibit 10.

Biscayne Bay Marine Health Coalition

The Biscayne Bay Marine Health Coalition has recommended Mr. David Doebler for appointment. Correspondence from the Biscayne Bay Marine Health Coalition and the resume of the nominee are attached as Exhibit 11.

Florida Engineering Society

The Florida Engineering Society has recommended Mr. Jannek Cederberg for appointment. Correspondence from the Florida Engineering Society and the resume from the nominee are attached as Exhibit 12. Please note staff has verified that Mr. Cederberg is a permanent resident but is not an elector of Miami-Dade County. Pursuant to section 2-11.38 of the Code, “[a]ll members of County boards shall be permanent residents and electors of Miami-Dade County unless the Board of County Commissioners, by a two-thirds vote of its membership, waives this requirement.”

The attached resolution waives the resident elector requirement in section 2-11.38 of the Code and appoints these 12 members to the Biscayne Bay Watershed Management Advisory Board, each to a term of four years. This waiver is necessary for the appointment of nominee Mr. Jannek Cederberg, as discussed above.



Jimmy Morales
Chief Operations Officer

Policy Committee:**Governor of State of Florida**

Mr. Ron DeSantis

Designee: Ms. Patricia Harris

Chair of Miami-Dade Delegation

Senator Ana Maria Rodriguez

Designee: Senator Ileana Garcia

Chair of Governing Board of South Florida Water Management District

Mr. Chancey Goss

Designee: Mr. Scott Wagner

Miami-Dade State Attorney

Ms. Katherine Fernandez-Rundle

Designee: Mr. David Maer

Mayor of Miami-Dade County

Mayor Daniella Levine Cava

Designee: Mr. Jim Murley

City of Miami Mayor

Mayor Francis Suarez

Designee: Ms. Megan Kelly

City of Miami Commissioner

Commissioner Alex Diaz de la Portilla

Miami-Dade County Commissioner

Commissioner Eileen Higgins

Designee: Ms. Maggie Fernandez

Chair of Miami River Marine Group

Mr. Bruce Brown

Designee: Mr. Richard Dubin

Chair of Marine Council

Mr. Michael Karcher

Designee: Mr. Phil Everingham

Executive Director of Downtown Development Authority

Ms. Alyce Robertson

Designee: Ms. Christina Crespi

Chair of Greater Miami Chamber of Commerce

Mr. Alfred Sanchez

Designee: Ms. Sandy O'Neil

Neighborhood Representative Appointed by City of Miami Commission

Dr. Ernest Martin

Designee: Mr. Tom Kimen

Neighborhood Representative Appointed by Miami-Dade Commission

Ms. Sallye Jude

Designee: Mr. Mike Simpson

Representative from Environmental or Civic Organization Appointed by the Governor

Mr. Horacio Stuart Aguirre

Member at Large Appointed by the Governor

Mr. Luis Garcia

Designee: Mr. John Michael Cornell

Member at Large Appointed by Miami-Dade Commission

Ms. Sara Babun

Designee: Ms. Roselvic Noguera

Member at Large Appointed by City of Miami Commission**Managing Director**

Mr. Brett Bibeau



Miami River Commission

c/o Robert King High
1407 NW 7th Street, Suite 2

Miami, Florida 33125

Office: (305) 644-0544

BrettBibeau@MiamiRiverCommission.org

www.miamirivercommission.org

August 23, 2021

Re: Brett Bibeau on Biscayne Bay Watershed Advisory Board

Dear Chief Bague,

On behalf of the Miami River Commission (MRC), Brett Bibeau is appointed to serve on Miami-Dade County's Biscayne Bay Watershed Advisory Board. MRC Managing Director Brett Bibeau has worked for the MRC for over 21 years, and previously served on Miami-Dade County's Manatee Protection Plan Advisory Board and Palmer Lake Zoning Advisory Board.

Your time and continued strong support for the Miami River are appreciated.

Sincerely,

Horacio Stuart Aguirre
Chairman,
Miami River Commission

1801 SW 13 Avenue, Miami, FL 33145
(305) 987-4446
brettbibeau@aol.com

BOARDS:

- Chairman of Metropolitan Planning Organization (MPO), Bicycle Pedestrian Advisory Committee (BPAC)**
Board Member 2001-May 2008 – Elected Chairman May 2008
- Chairman of Greater Miami Chamber of Commerce New World Committee's Legislative Task Force**
2006 - 2009
- Chairman of the Legislative & Grants Subcommittee of the US Coast Guard's Miami River Port Security Committee**
2003-2009
- Florida Riverwalk Exchange**
Board Member 2007 – 2011
- Manatee Protection Plan Review Committee**
Miami-Dade Appointed Board member 2007 – 2009
- Comprehensive Plan Amendments Advisory Committee**
City of Miami Appointed Board Member 2007 - 2009
- Miami River Fund, Inc.**
Board Member 2003 - Present

ACCOLADES: **“Best of Miami 2008 – Providing Infrastructure Award” – Miami Today**
 “Best Backstage Leader” – Miami Today – 2007
 Miami Image Award – Realtor Association of South Florida – 2007
 “The Achiever – Miami River’s Renaissance Man” – Miami Today 2007

Award of Merit for the *Miami River Corridor Multi-Modal*
***Transportation Plan* – American Planning Association FL Chapter - 2007**
“Community Steward Award” – 1,000 Friends of Florida - 2005

Best Non-for Profit Organization – Miami Today 2004

2004 Positive Development for the Miami River Greenway - Urban
Environment League

Award of Excellence – Am. Society of Landscape Architects - 2003

REFERENCES: Robert L. Parks, Esq. (305) 446-5700
 Sandy O’Neil (305) 447-3502



September 21, 2021

Ms. Irela Bagué
Chief Bay Officer
Miami-Dade County
111 NW 1st Street
Miami, FL 33128

Dear Ms. Bagué:

This letter is to inform you that Florida International University's (FIU) official representative to the Miami-Dade County Biscayne Bay Watershed Management Advisory Board will be Dr. Todd Crawl. Dr. Crawl is the Executive Director of FIU's Institute of Environment. Enclosed please find Dr. Crawl's *Curriculum Vitae*. I am confident that Dr. Crawl will be a valuable addition to the Advisory Board.

Should you require additional information, please feel free to contact Dr. Crawl at 305-348-3095.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark B. Rosenberg", with a stylized flourish extending upwards and to the right.

Mark B. Rosenberg

CV

NAME: Todd Alan Cowl
ADDRESS: Institute of Environment
&
Department of Biological Sciences
Florida International University
11200 SW 8th St., OE-148
Miami, FL 33199

PHONE: (305) 348-1666

EMAIL: tcowl@fiu.edu

NATIONALITY: U.S. Citizen

EDUCATION:

1985-1989	University of Oklahoma; PhD. - Ecology
1982-1984	University of Oklahoma; M.S. - Zoology
1978-1982	Ohio State University; B.S. - Zoology

PROFESSIONAL EXPERIENCE:

2019 –Present Executive Director, Institute of Environment, Florida International University
2016 - Present Director and PI, NSF Center of Research Excellence in Science and Technology, FIU
2015 - Present Founder and Director, Institute of Environment, FIU
2014 - Present Professor, Department of Biological Sciences, Florida International University
2014 – 2018 Director, Southeast Environmental Research Center (SERC), FIU
2015 Founder, Sea Level Solutions Center, FIU
2005 - Present Graduate Faculty, University of Notre Dame
1994 - Present Adjunct Professor, University of Puerto Rico
2012 - 2014 Director and PI, Utah EPSCoR Program
2012 - 2014 Utah National Science Foundation EPSCoR Director
2009 - 2011 Director, Long-Term Ecological Research Program, National Science Foundation
2008– 2011 Program Officer, Division of Environmental Biology, National Science Foundation
2007– 2008 Bullard Fellow, Harvard University
2007 - 2008 Distinguished Professor in Environmental Sciences, University of Notre Dame
2003 - 2014 Full Professor, Utah State University
2003 - 2006 Associate Dean and Director of Research and Graduate Education, College of Natural Resources, Utah State University
1996 - 2003 Associate Professor, Utah State University
1991 - 1996 Assistant Professor, Utah State University
1991 - 1994 Adjunct Lecturer, Otago University, New Zealand
1989 - 1993 Associate Scientist, CEER, University of Puerto Rico
1989 - 1991 Post-doctoral Fellow, Otago University, New Zealand (with C. Townsend)
1988 - 1989 ORAU Fellow
1982 - 1989 Graduate research assistant, Department of Zoology and The Oklahoma Biological Survey, University of Oklahoma
1980 - 1982 Research assistant, Department of Zoology and The Ohio Cooperative Fisheries Unit, Ohio State University

TEACHING EXPERIENCE:

Florida International University

Philosophy of Biology,
Philosophy of Interdisciplinary Science and Engineering

University of Notre Dame

Aquatic Field Ecology
The Philosophy of Ecology

Utah State University

Biometry, Experimental Design, Quantitative Methods in Ecology, Sampling Designs for Ecology, Biostatistics, Competition, Philosophy of Science and Management, Ecology for non-majors, Ecology for majors, Conservation Biology, Biodiversity, Honors Integrated Science; Philosophical Approaches to Ecological Statistics

Otago University

Stream Ecology, Summer Science camp for high school students

University of Oklahoma

Lecturer, Honors Program for gifted high school students
Lecturer, Principles of Ecology
Laboratory Instructor, Limnology
Teaching Assistant, Invertebrate Zoology

UNIVERSITY COMMITTEES:

Florida International University

2014-present	Provost's Steering Committee
2015-2016	FIU Strategic Implementation Steering Committee
2014-2017	Department of Biological Sciences Personnel Committee
2014-2015	FIU Strategic Planning Committee – Preeminent Programs Sub-committee
2014-2015	FIU CAS Strategic Planning Committee – Creative Activities and Research

Utah State University

2012-2014	Faculty Senate Executive Council
2012-2014	President's Advisory Council
2012-present	Athletic Council
2011-present	Sustainability Council
2010-present	Faculty Senate
2009-present	Research Council
2003-present	Millville Advisory Board (chair)
2003-present	Biotech Research Advisory Committee
2003 -2006	CNR EPC and Graduate Education Committee (chair)
2003-2006	Curriculum Committee (chair)
2003-2006	Center For Integrative Biology Advisory Committee
2001-2006	Academic Standards Committee
2000-2006	Educational Policy Committee
1998-2006	Graduate Council
2000	CNR restructuring leadership
1998	CNR core course committee
1997-1998	Ecology Center Advisory Committee
1995-1999	CNR undergraduate education committee
1997-2001	Graduate Academic Review Committee (chair)
various yrs	Seminar Committee
various yrs	Undergraduate Advisory Committee

Professional Committees:

American Institute of Biological Sciences Advisory Board
Florida Department of Environmental Protection Statewide Ecosystem Assessment of Coastal and Aquatic Resources Committee
Luquillo LTER Science Council
Klamath Basin Recovery Team
STREON Steering Committee Member
Center for Embedded Network Sensing (CENS), UCLA, Advisory Committee
Long-Term Ecological Research Information Management committee member
Long-Term Ecological Research, LTERArts Advisory Board
University of Puerto Rico- IGERT Advisory Board
North American Benthological Society – Program Chair (2008)
Consortium of Regional Ecological Observatories (Co-chair)
Intermountain Regional Observatory Network (Co-chair)
June Sucker Recovery Team
Bonneville Basin Recovery Team
Ecological Society of America - Program Committee

AWARDS:

2021 Department of Interior Recognition (for Science to down list an endangered species)
2016 InWE Designated as a Preeminent Program
2010 Distinguished Service Award – Division of Environmental Biology, National Science Foundation
2009 Distinguished Service Award – Division of Environmental Biology, National Science Foundation
2009 Directors Award for Collaboration – National Science Foundation
2008 Harvard University Bullard Fellow
2007 University of Notre Dame Environmental Sciences Visiting Fellow
1999 Research recognition award – Mexican Government
1997 Research Paper of the Year - Mexico
1995 Researcher of the Year - American Fisheries Society
1994 finalist - NSF Presidential Young Scholar Award - Utah State
1990 UNESCO Young Scientist Fellow - New Zealand
1990 Best Dissertation - University of Oklahoma
1989 Presidential Post-Doctoral Fellow – Otago University
1988 Best student presentation - North American Benthological Society meeting, Tuscaloosa, Alabama
1986 Best poster in Arts and Sciences - University of Oklahoma, Graduate College Research Competition

PROFESSIONAL SOCIETIES:

American Institute of Biological Sciences
American Fisheries Society
American Society of Limnology and Oceanography
American Society of Naturalists
Ecological Society of America
North American Benthological Society
Conservation Biology
Society of Restoration Ecology

REVIEWER FOR:

Proposals: DIVERSITAS
European Union
National Science Foundation

National Institute of Health
Environmental Protection Agency
U.S.D.A. Competitive Grants Program
Cal-Fed program

Manuscripts: Ecology
Ecology Letters
Restoration Ecology
Transactions for the American Fisheries Society
Journal of the North American Benthological Society
Oikos
Freshwater Biology
North American Fisheries
Freshwater Ecology Evolution
Copeia
American Naturalist
Conservation Biology
Oecologia
Science
Nature
BioScience
Limnology and Oceanography
Fundamental and Applied Limnology
Trends in Ecology and Evolution
Functional Ecology
Hydrobiologia
Crustacean Biology

STUDENTS FINISHING UNDER MY SUPERVISION:

Otago University (with C. Townsend)
1990 Angus McIntosh, B.Sc. Honours
1991 Kerri-Anne Edge, B.Sc. Honours
1991 Kathy Shave, B.Sc. Honours
1991 Tania King, B.Sc. Honours
1992 Brent Evans, M.Sc.
1994 Angus McIntosh, PhD

Utah State University
1992 Kathy Coghill, M.S.
1994 Robert Black, PhD
1995 Laura Hartt, M.S.
1996 Matt Petersen, M.S.
1996 Pete Cavalli, M.S.
1996 Heather Thomas, M.S.
1997 Craig Schaugaard, M.S.
1998 Bert Lewis, M.S.
1998 Heather Thomas, PhD
1999 Nick Bouwes, PhD
2000 Jessica Gourley, M.S.
2001 Eric Archer, M.S.
2002 Matt Townsend, M.S.
2002 Paul Badame, MNR
2003 Josh Mace, MNR
2004 Stephanie Rohan, M.S.
2005 Leah Rigsby, M.S.
2005 Eric Billman, M.S.
2005 Tamara Heartsill-Scalley, PhD

2006 Kris Buelow, M.S.
 2006 David Kikkert, M.S.
 2006 Praveena Pepalla, MNR
 2008 Catherine Hein, PhD
 2009 Stephanie Kraft, M.S.
 2009 Kevin Landom, M.S.
 2010 Brian Hines, M.S.
 2014 David Cole, Ph.D.
 2014 Omar Perez-Reyez, Ph.D.
 2014 Kit Wheeler, Ph.D.

University of Puerto Rico
 2014 Maria Ocasio-Torres, Ph.D.

Florida International University
 2019 Tiffany Yanez, M.S.

Research Experience for Undergraduates

2002 Summmer Kartchner, USU
 2003 Alejandro Barberena, U. Puerto Rico
 2003 Vanessa Welsch, USU
 2003 Christine Mingione, Notre Dame
 2006 Sara Redd, USU
 2007 Maria Ocasio Torres, Univ. Puerto Rico
 2012 Tyler Nelson, Utah State University
 2012 Kristina Krone, Williams College
 2019 Harrison Mancke, Florida International University
 2019 Jonathon Chapman, University of Hawaii

Post-docs Normand Bergeron, Utah State University (with J. Schmidt)
 Liz Bergey, Utah State University
 Phaedra Budy, Utah State University
 Felipe Blanco, Utah State University
 Jacob Parnell, Utah State University
 Samuel Rivera, Utah State University
 Maria Ocasio-Torres, Florida International University
 Jennifer Vieleux, Florida International University
 Omar Perez-Reyes, Florida International University
 Daniel Ogurgak, Florida International University
 Rolando Santos Corujo, Florida International University
 Marta D'Elia, Florida International University
 Jesus Gomez, Florida International University

INVITED LECTURES:

2021 Great Miami Chamber of Commerce – Water and Energy Nexus
 2021 Greater Everglades Ecosystem Restoration Conference – 100 Years of Degraded Solitude:
 How Do We Restore Biscayne Bay
 2020 Coral Gables Commission – The Greater Biscayne Bay Watershed
 2020 Florida Water & Climate Alliance – Water Quality and Climate Change
 2020 French Embassy – 5th Anniversary of the Paris Accord: Nature-based Solutions
 2020 Miami Beach Chamber of Commerce – Biscayne Bay – Our Health, Wealth and Happiness
 2020 National Science Foundation CoPe Workshop – Welcome and Keynote: A Vision of
 Observations and Models in Physical, Social and Economic Systems in Coastlines
 2020 American Institute of Biological Sciences – The Role of Ecosystems as Economic Drivers
 2019 University of Notre Dame – Puerto Rico's Tropical Forest Tapestry
 2019 Association of Ecosystem Research Centers – Coastal Resilience

- 2018 University of Notre Dame – The Legacy of the Florida Everglades
- 2017 University of South Florida – Environmental Stressors on South Florida Aquatic Ecosystems.
- 2017 Society of Wetland Sciences - Florida Everglades Restoration: The Thrill of Victory and Agonies of Defeat.
- 2017 U.S. Forest Service - Climate Change and Sea-Level Rise: A View from Down-under - S. Florida
- 2016 University of Notre Dame, Environmental Research Center – Florida Coastal Everglades LTER Program (FCE): The Grand Challenges
- 2015 Association of Ecosystem Research Centers and AIBS – Effects of Everglades Restoration on Sea Level Rise Resilience in Urban Miami.
- 2015 Florida Atlantic University – Biotechnological Approaches to Water Resource Research.
- 2015 University of Notre Dame, Environmental Research Center – Florida Coastal Everglades LTER Program (FCE): The Grand Challenges
- 2015 Florida International University, GSS Department – River, Roads People and Shrimp: Oh What a Tangled Network We Weave
- 2014 Pontificia Universidad Javeriana, Bogota, Columbia – Using Statistics (& Models) to Untangle the Complexities of Aquatic Communities and Ecosystems
- 2014 Water Institute, Dominican Republic – Watershed Management Strategies and Practices
- 2013 Florida International University, Southeast Environmental Research Center – Theory-driven, Place-based, Long Term Research: Past, Present and Future.
- 2013 University of Maryland, Center for the Environment – From Genes to Human-dominated Landscapes: Theory Driven, Place-based, Long Term Research
- 2013 Washington State University – Overlapping River-Road Networks: Understanding the Complexity of Physical, Ecological and Human Interactions
- 2012 University of Utah - Stream restoration: bringing back ecological function.
- 2010 Society of International Limnology, Salzburg University, Austria – Plenary Talk - Rivers, Trees and Shrimp: A View of a Complex System After Twenty Years of Observation
- 2010 University of Georgia, Institute of Ecology - The Complexity of Overlapping River-road Networks: It's an Uphill Battle
- 2010 President's Council on Science and Technology – The role of long-term environmental observatories for understanding ecological and evolutionary change
- 2009 University of Notre Dame – Integrating Social and Ecological Science
- 2009 University of Maryland Baltimore County – Biocomplexity: integrating ecological research into a social sciences framework
- 2008 University of Puerto Rico – The complexity of overlapping river and road networks
- 2008 University of Louisiana-Lafayette – Oh the places you'll go: Long-term ecological research opportunities
- 2008 University of Vermont – NSF funding opportunities in the aquatic sciences.
- 2008 Harvard Forest, Harvard University – Using Hydrological connectivity as a framework for integration across disciplines
- 2008 NSF, LTER mini-symposium – Hydrologic connectivity as a framework for integrating socio-ecological systems
- 2007 University of Louisville – The biocomplexity of river-road networks in the tropics
- 2007 University of New Hampshire – The complexity of river-road networks and human behavior.
- 2007 Harvard University – Of fish and men: the saga of an endangered fish and the imperiled ecosystem whence it came.
- 2006 Colorado State University, Dept. of Civil and Environmental Engineering – Seeking analyses for complex, non-linear dynamics of aquatic systems: The Puerto Rico Biocomplexity Example
- 2006 National Science Foundation and HBCU - Interdisciplinary research opportunities for graduate students
- 2006 North American Benthological Association Symposium – Comparing Temperate and Tropical Stream Ecology
- 2005 National Science Foundation – River-road networks and the complexity of foodwebs
- 2005 Northern Arizona University – The role of species in ecosystem function
- 2003 University of Notre Dame – Species diversity and ecosystem function
- 2003 University of Puerto Rico – The importance of shredders in tropical streams
- 2003 Colorado State University – Biocomplexity: What is it?
- 2003 North American Benthological Association Symposium – Tropical Stream Ecology
- 2002 Panama – Organization of Tropical Studies – What can ecologists learn from tropical

- stream ecologists?
- 2002 University of Puerto Rico – The role of biodiversity in Puerto Rican stream food webs. 2002 Utah State University Sustainability Conference – Water Development in the neo-tropics. 2001 Brigham Young University – Linking species to ecosystems: Puerto Rican stream foodwebs.
- 2001 Oregon State University – Floodplain restoration in the Colorado River Basin.
- 1999 Department of Landscape Architecture, Utah State University - What is sustainability?
- 1998 University of Puerto Rico - Geomorphological control of food web structure
- 1996 University of Montana, Flathead Lake Biological station - Using Ecological Principles to solve conservation problems
- 1994 Leon University, France - The role of introduced brown trout on the Taieri River Community.
- 1994 Leon University, France - Patch dynamics and The River Continuum Concept: can hierarchical organization save a dying concept?
- 1994 Austrian Freshwater Institute - The role of nonnative fish predators on the Colorado River Fish Community
- 1994 University of Prague - Assessing non-native fish effects in large rivers: a physical habitat template approach. (in conjunction with the Regulated Rivers Conference)
- 1994 University of Prague - Planning Reservoir Releases to enhance endangered fish habitat availability in the Colorado River Basin: Geomorphic interactions with non-native species effects. (in conjunction with the Regulated Rivers Conference).
- 1994 Desert Fishes Council, Symposium on the Upper Colorado River Program - Upper Colorado Recovery Implementation Program: directions for management of nonnative and native fish interactions.
- 1994 Desert Fishes Council, Symposium on the Upper Colorado River Program - Upper Colorado Recovery Implementation Program: Investigations and management directions for bonytail reintroductions.
- 1993 Association of Tropical Biology - Symposium on Island vs mainland ecology - Community structure on tropical islands and mainlands: Mechanistic explanations or biogeography?
- 1993 North American Benthological Society - Symposium on Chemical cues in aquatic systems - Responses of a freshwater shrimp to chemical and tactile stimuli from a large decapod predator
- 1993 Annual meeting of the Society of Range Management, Albuquerque, New Mexico - Stream habitat restoration and its effects on native and introduced trout: An abiotic and biotic evaluation (with R. Black and J. Kershner)
- 1993 Annual meeting of the North American Benthological Society, Calgary, Alberta, Canada - The response of native and introduced trout to coarse woody debris: An abiotic and biotic evaluation (with R. Black and J. Kershner)
- 1992 Lincoln University, New Zealand - Long-term ecological research in the Taieri River Drainage, Otago
- 1992 Christchurch University, New Zealand - Understanding stream community structure: The need for hierarchical analyses through time and space
- 1991 Utah Department of Wildlife Resources, Non-game section annual meeting -Experimental approaches for determining the impacts of introduced species on natives
- 1991 University of Oklahoma - Impacts of exotic species on New Zealand stream ecosystem dynamics
- 1991 Otago University - They shall not pass: A tale of the wily brown trout and some insignificant little tiddlers
- 1991 New Zealand Department of Conservation - Land-use changes and introduced fish species: How natural are New Zealand Stream communities?
- 1991 Symposium on geomorphology and stream ecology - North American Benthological Society - Flow variability and the dominance of *deleatidium* in two contrasting New Zealand streams (with M. Scarsbrook and C. Townsend)
- 1991 Utah State University - Hierarchical analyses for understanding stream community dynamics: The New Zealand Experience
- 1991 University of Puerto Rico - The relative importance of land use practices and introduced species on New Zealand stream community dynamics
- 1990 International Symposium on Spatial Information and Research-Hierarchical design and the use of geographic information systems to bridge the gap between river science and management
- 1990 Ecological Society of America Symposium - A vector algebraic approach to understanding

- cumulative effects in disturbed watersheds (with A. Covich)
- 1990 University of Otago - Predator-induced life-history shifts in a freshwater snail
- 1990 Woods Hole - jointly sponsored by the American Malacological Society - The role of chemical cues in antipredation strategies in freshwater snails
- 1990 Dartmouth - Hierarchical designs for understanding stream dynamics
- 1990 Dartmouth - Life history responses of snails to crayfish predators: Coevolved response? 1989 University of Otago Graduate Student Symposium - Long-term ecological research in a tropical forest
- 1989 Symposium sponsored by The Ecological Society of America and the Organization for Tropical Students - Effects of highly variable flow on detrital processing by decapod crustaceans in rainforest streams (with A. Covich)
- 1989 Symposium sponsored by the Institute of Tropical Forestry - Spatial and temporal analysis of woody debris and benthic invertebrates in two Puerto Rican streams (with A. Covich and D. Certain)
- 1989 Utah State University - Direct and indirect effects of crayfish predation on snail population dynamics: Is bigger really better?
- 1988 University of Oklahoma - Crayfish predation on snail community and population dynamics: Evaluating direct and indirect effects

REGIONAL, NATIONAL AND INTERNATIONAL SEMINARS:

I have presented 155 lectures/seminars at scientific conferences in addition to the invited seminars above

PEER-REVIEWED PUBLICATIONS:

- McGee, S., **T.A. Crowl** and R. McGee-Tekula. 2021. Becoming through Being: Dewey's Relevance to Educating for the Future of Work. In: *John Dewey and Teacher Education: Accountability, Standardization, and Assessment*.
- Heartsill-Scalley, T. and **T.A. Crowl**. 2021. Tropical forest understorey riparian and upland composition, structure, and function in areas with different past land use. *Applied Vegetation Science*. DOI:10.1111/avsc.12603.
- Pena, F., F. Nardi, A. Melesse, J. Obeysekera, F. Castelli, R.M. Price, **T.A. Crowl**, N. Gonzalez-Ramirez. 2021. Compound flood modelling framework for rainfall-groundwater interactions. *Natural Hazards and Earth System Sciences*. DOI 10.5194/nhess-2021-259.
- Ocasio-Torres, M.E., **Crowl, T.A.** and A.M. Sabat. 2021. Effect of multimodal cues from a predatory fish in refuge use and foraging on an amphidromous shrimp. *PEERJ* 9. DOI 10.7717/peerj.11011.
- D'Elia, M., R. Campo, R. Garcia, K. Boswell, J. Rehage, **T.A. Crowl**. 2020. Evaluation of an imaging sonar system (Didson) as a fisheries-monitoring tool for complex habitats. *Bulletin of Marine Science* 96:544.
- Hogan, J.A. et al. 2020. A research Framework to integrate cross-ecosystem responses to tropical cyclones. *BioSciences* (2020) 70:477-489. DOI:10.1093/biosci/biaa034.
- Gutierrez-Fonseca, P.E., Ramirez, A., Pringle, C.M., Torres, P.J., McDowell, W.H., Covich, A. **Crowl, T.A.** and O. Perez-Reyes. 2020. When the rainforest dries: Drought effects on a montane tropical stream ecosystem in Puerto Rico. *Freshwater Science* (2020) 39:197-212. DOI:10.1086/708808.
- Teutonico, R., Chiappa-Carrara, X., Garcia, M. and **T.A. Crowl**. 2019, "Climate change & the: coastal resilience", *Research OUTREACH* (109). DOI:10.32907/RO-109-2225.
- Tank, J., et al. (18 other authors). 2018. Partitioning assimilatory nitrogen uptake in streams: an analysis of stable isotope tracer additions across continents. *Ecological Monographs* (2018)

88:120-138. DOI:1002/ecm.1280.

- Wheeler, K., S.W. Miller and **T.A. Crowl**. 2018. Adfluvial salmonids have engineering but not fertilization impacts in tributaries of a central Utah reservoir. *Canadian Journal of Fisheries and Aquatic Sciences* (2018) 75:389-401. DOI:10.1139/cjfas-2016-0462.
- Strohm, D.D., P. Budy and **T.A. Crowl**. 2017. Matching watershed and otolith chemistry to establish natal origin of an endangered desert lake sucker. *Transactions of the American Fisheries Society* (2017) 146:732-743. DOI:10.1080/00028487.2017.13011994.
- Perez-Reyes, O., **T.A. Crowl** and A.P. Covich. 2016. Comparison of decapod communities across an urban-forest land use gradient in Puerto Rican streams. *Urban Ecosystems* (2016) 19:181-203. DOI 10.1007/s11252-015-0490-4.
- Ocasio-Torres, M., **T.A. Crowl** and A.M. Sabat. 2015. Allometric differences between two phenotypes of the amphidromous shrimp *Xiphocaris Elongata*. *Journal of Crustacean Biology* (2015) 35:747-752. DOI:10.1163/1937240X-00002372.
- Ocasio-Torres, M., T. Giray, **T.A. Crowl** and A.M. Sabat. 2015. Antipredator defence mechanism in the amphidromous shrimp *Xiphocaris elongate* (Decapoda: Xiphocarididae): rostrum length. *Journal of Natural History*. DOI: 10.1080/00222933.2015.1005716.
- Ocasio-Torres, M., **T.A. Crowl** and A.M. Sabat. 2015. Effects of the presence of a predatory fish and the phenotype of its prey (a shredding shrimp) on leaf litter decomposition. *Freshwater Biology* 60:2286-2296.
- Perez-Reyes, O., **T.A. Crowl** and A.P. Covich. 2015. Effects of food supplies and water temperature on growth rates of two species of freshwater tropical shrimps. *Freshwater Biology* (2015).
- Wheeler, K., S.W. Miller and **T.A. Crowl**. 2015. Migratory fish excretion as a nutrient subsidy to recipient stream ecosystems. *Freshwater Biology* (2015) *Freshwater Biology* 60:537-550.
- Dodds, W. K., Collins, S.M., Hamilton, S.K., Tank, J. L., Johnson, S. ,Webster, J. R., Simon, K. S., Whiles, M. R., Rantala, H. M, McDowell, W. H., Peterson, S.D., Riis, T, Crenshaw, C. L., Thomas, S. A., Kristensen, P. B., Cheever, B. M., Flecker, A. S., Griffiths, N.A., **Crowl, T.**, Rosi-Marshall, E. J., El-Sabaawi, R., Martí, E. 2014. You are not always what we think you eat: selective assimilation across multiple whole-stream isotopic tracer studies. *Ecology*. 95:2757–2767.
- Archer, S.K. and **T.A. Crowl**. 2014. Retention of learned predator recognition in an endangered Sucker *Chasmistes liorus liorus*. *Aquatic Biology Vol 20*:195-201. DOI: 10.3354/ab00558.
- Ocasio-Torres, M.E., **T.A. Crowl** and A.M. Sabat. 2014. Long rostrum in an amphidromous shrimp induced by chemical signals from a predatory fish. *Freshwater Science* 33:451-458.
- Perez-Reyes, O., **Crowl, T.A.**, Hernandez-Garcia, P.J. Ledesma-Fuse, R., Villar-Fornes, F.A. and Covich, A.P. 2013. Freshwater decapods of Puerto Rico: a checklist and reports of new localities. *Zootaxa* 3713:329-344.
- Rivera, S., P. Martinez de Aguita, R.D. Ramsey and **T.A. Crowl**. 2013. Spatial modeling of tropical deforestation using socioeconomic and biophysical data. *Small Scale Forestry*. DOI 10.1007/s11842-012-9214-2
- Garner, J., A.L. Porter, N.C. Newman and **T.A. Crowl**. 2012. Assessing Research Networks and Disciplinary Engagement Changes Induced by an NSF Program. *Journal of Research Evaluation*.
- Choat, D., C. Prather, M. Michel, M. Barnes, D. Hoekman, C. Patrick, J. Ruegg and **T.A. Crowl**. 2012. Integrating theoretical components: A graphical model for graduate students and researchers. *BioScience* 62:594-602.

- Brokaw, N., **T.A. Crowl**, A.E. Lugo, W.H. McDowell, F.N. Scatena, R.B. Waide and M.R. Willig (eds.). 2012. A Caribbean Forest Tapestry: The Multidimensional Nature of Disturbance and Response. Oxford University Press, Oxford, U.K.
- Lugo, A.E., R.B. Waide, M.R. Willig, **T.A. Crowl**, F.N. Scatena, J. Thompson, W.L. Silver, W.H. McDowell and N. Brokaw. 2012. Ecological Paradigms for the Tropics, in: A Caribbean Forest Tapestry, N. Brokaw, **T.A. Crowl**, A.E. Lugo, W.H. McDowell, F.N. Scatena, R.B. Waide and M.R. Willig, eds. Oxford University Press, Oxford, U.K.
- McDowell, W.H., **T.A. Crowl** and 22 authors. 2012. Geographic and Ecological Setting of the Luquillo Mountains, in: A Caribbean Forest Tapestry, N. Brokaw, **T.A. Crowl**, A.E. Lugo, W.H. McDowell, F.N. Scatena, R.B. Waide and M.R. Willig, eds. Oxford University Press, Oxford, U.K.
- Brokaw, N. **T.A. Crowl** and 23 authors. 2012. Response to Disturbance, in: A Caribbean Forest Tapestry, N. Brokaw, **T.A. Crowl**, A.E. Lugo, W.H. McDowell, F.N. Scatena, R.B. Waide and M.R. Willig, eds. Oxford University Press, Oxford, U.K.
- Crowl, T.A.** and 11 authors. 2012. When and Where Biota Matter, in: A Caribbean Forest Tapestry, N. Brokaw, **T.A. Crowl**, A.E. Lugo, W.H. McDowell, F.N. Scatena, R.B. Waide and M.R. Willig, eds. Oxford University Press, Oxford, U.K.
- Porter, A.L., J. Garner and **T.A. Crowl**. 2012. The RCN (Research Coordination Network) experiment: Evidence of the relationship between funded interdisciplinary networking and scholarly impact. *BioScience* 62:282-288.
- Parnell, J. J., G. Rompato, **T. A. Crowl**, B.C Weimer and M.E. Pfrender. 2011. Phylogenetic distance in Great Salt Lake microbial communities. *Aquatic Microbial Ecology* 6:267-273.
- Latta, L.C., M. Baker, **T.A. Crowl**, J.J. Parnell, B. Weimer, D.B. DeWald and M.E. Pfrender. 2011. Species and genotype diversity drive community and ecosystem properties in experimental microcosms. *Evolutionary Ecology* 25:1107-1125.
- Hein, C.L., A.S. Pike, J.F. Blanco, A.P. Covich, F.N. Scatena, C.P. Hawkins and **T.A. Crowl**. 2011. Effects of coupled natural and anthropogenic factors on the community structure of diadromous fish and shrimp species in tropical island streams. *Freshwater Biology* 56:1002-1015
- Perez-Reyes, O. and **T.A. Crowl**. 2010. Comparisons of the decapod community structure in urban and natural streams in Puerto Rico. *Integrative and Comparative Biology* 50:E280.
- Hein, C.L. and **T.A. Crowl**. 2010. Running the predator gauntlet: do freshwater shrimp (*Atya lanipes*) migrate above waterfalls to avoid fish predation? *Journal of the North American Benthological Society* 29(2):431-443.
- Crowl, T.A.** 2009. Putting philosophy back in the PhD: faculty response. *Frontiers in Ecology and the Environment*. 7:390-391.
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- Parnell, J. J., **T. A. Crowl**, et al. 2009. Biodiversity in microbial communities: system scale patterns and mechanisms. *Molecular Ecology* 18(7): 1455-1462.
- Kikkert, D. A., **T. A. Crowl**, and A.P. Covich. 2009. Upstream migration of amphidromous shrimps in the Luquillo Experimental Forest, Puerto Rico: temporal patterns and environmental cues. *Journal of the North American Benthological Society* 28(1): 233-246.
- Covich, A.P., **T.A. Crowl**, C.L. Hein, M.J. Townsend and W.H. McDowell. 2009. Predator-prey interactions in river networks: A drainage basin comparison of shrimp spatial refugia. *Freshwater Biology* 54:450-465.

- Cross, W.F., A.P. Covich, **T.A. Crowl**, J.P. Benstead and A. Ramirez. 2008. Secondary production, longevity and consumption rates of freshwater shrimps in two tropical streams of contrasting geomorphology and food web structure. *Freshwater Biology* 53:2504-2519.
- Cole, D.D., K.E. Mock, B.L. Cardall and **T.A. Crowl**. 2008. Morphological and genetic structuring in the Utah Lake sucker complex. *Molecular Ecology* 17:5189-5204.
- Crowl, T.A.**, T.O. Crist, R.R. Parmenter, G. Belovsky and A.E. Lugo. 2008. The spread of invasive species and infectious disease as drivers of ecosystem change in an increasingly connected world. *Frontiers in Ecology and the Environment*. 6:238-246.
- Billman, E.J. and **T.A. Crowl**. 2007. Population dynamics of a June Sucker refuge population. *Transactions of the American Fisheries Society* 136:959-965.
- Miller, S.A. and T.A. Crowl. 2006. Effects of common carp (*Cyprinus carpio*) on macrophytes and invertebrate communities in a shallow lake *Freshwater Biology* 51: 85-94.
- Covich, A.P., **T.A. Crowl**, and T. Heartsill-Scalley. 2006. Effects of drought and hurricane disturbance on headwater distributions of palaemonid river shrimp (*Macrobrachium* spp.) in the Luquillo Mountains, Puerto Rico. *Journal of the North American Benthological Society* 25:99-107.
- Crowl, T.A.**, V. Welsh, T. Heartsill-Scalley and A.P. Covich. 2006. Effects of different types of conditioning on rates of leaf-litter shredding by *Xiphocaris elongata*, a neotropical freshwater shrimp. *Journal of the North American Benthological Society* 25:198-208.
- Beard, K.H., K.A. Vogt, D.J. Vogt, F.N. Scatena, A. P. Covich, R. Sigurdardottir, T.C. Siccama, and **T.A. Crowl**. 2005. The response of structural and functional characteristics of a tropical forested ecosystem to multiple, natural disturbances in legacy environments. *Ecological Monographs*. 75:345-361.
- Belovsky, G. E., D. B. Botkin, **T.A. Crowl**, K. Cummins, J. Franklin, Malcolm Hunter, A. Joern, D. B. Lindenmayer, J. MacMahon, C. Margules, and M. Scott. 2004. Ten Suggestions to Strengthen Ecology. *BioScience* 54:345-351.
- Covich, A.P., **T.A. Crowl** and F.N. Scatena. 2003. Effects of extreme low flows on freshwater shrimps in a perennial tropical stream. *Freshwater Biology* 2003 48:1199-1206.
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- Crowl, T.A.**, A.P. Covich, F.N. Scatena, R. Phillips, M.J. Townsend and D.K. Vinson. 2002. Particulate organic matter dynamics in tropical headwater streams: a comparison of biotic and abiotic factors. *Verhandlungen Internationale Vereinigung Limnologie*. 28:1-5.
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- Crowl, T.A.**, W.H. McDowell, A.P. Covich, and S.L. Johnson. 2001. Freshwater shrimp effects on detrital processing and nutrients in a tropical headwater stream. *Ecology* 82:775-783.
- Horan, D.L., J.L. Kershner, C.P. Hawkins and **T.A. Crowl**. 2000. Effects of habitat area and complexity on Colorado River cutthroat trout density in Uinta Mountain streams. *Transactions of the American Fisheries Society* 129:1250-1263.
- Crowl, T.A.**, N. Bouwes, M.J. Townsend, A.P. Covich, and F.N. Scatena. 2000. Estimating the potential role of freshwater shrimp on an aquatic insect assemblage in a tropical headwater stream: A bioenergetics approach. *Verhandlungen Internationale vereinigung fur Theoretische und Angewandte Limnologie*. 27:6-2403-2407.

- Covich, A.P., **T.A. Crowl**, and F.N. Scatena. 2000. Linking habitat stability to floods and droughts: Effects on decapods in montane streams. *Verhandlungen Internationale vereinigung fur Theoretische und Angewandte Limnologie*. 27:1-5.
- Covich, A.P., M.A. Palmer, and **T.A. Crowl**. 1999. The role of benthic invertebrate species in Freshwater Ecosystems. *BioScience* 49:119-128.
- Johnson, S.L., A.P. Covich, **T.A. Crowl**, A. Estrada-Pinto, J. Bithorn and W. Wurtsbaugh. 1998. Do seasonality and disturbance influence reproduction in freshwater atyid shrimp in headwater streams, Puerto Rico? *Verhandlungen Internationale Vereinigung Limnologie* 26:2076-2081.
- Ibarra-Flores, F., J.R. Cox, M. Martin-Rivera, **T.A. Crowl**, B.E. Norton, R.E. Banner, and R.W. Miller. 1999. Soil Physicochemical changes following buffelgrass establishment in Mexico. *Arid Soil Research and Rehabilitation* 13:39-52.
- Covich, A.P., **T.A. Crowl**, S.L. Johnson, and F.N. Scatena. 1998. Drought effects on pool morphology and neotropical stream benthos. Pages 91-96. In: Segarra-García, R.I., editor. *Tropical hydrology and Caribbean Water Resources, Proceedings of the Third International Symposium on Water Resources*. American Water Resources Association 98-2.
- Crowl, T.A.**, C.R. Townsend, N. Bouwes, and H. Thomas. 1997. Scales and causes of patchiness in stream invertebrate communities: top down predator effects? *Journal of North American Benthological Society* 16:277-285.
- Townsend, C.R., **T.A. Crowl**, C.J. Arbuttle and M.R. Scarsbrook. 1997. The relationship between land use and physiochemistry, food resources and macroinvertebrate communities in tributaries of the Taieri River, New Zealand: a hierarchically scaled approach. *Freshwater Biology* 37:177-191.
- Covich, A.P., **T.A. Crowl**, S.L. Johnson, and M. Pyron. 1996. Distribution and abundance of tropical freshwater shrimp along a stream corridor: Response to disturbance. *Biotropica* 28:484-492.
- Ibarra-Flores, F., J.R. Cox, M. Martin-Rivera, **T.A. Crowl**, D.F. Post, R.W. Miller, and G.A. Rasmussen. 1995. Relationship between buffelgrass survival, organic carbon, and soil color in Mexico. *Soil Sci. Soc. Am. J.* 60:1120-1125.
- Allibone, R.M., **T.A. Crowl**, J.M. Holmes, J.M. King, R.M. McDowall, C.R. Townsend and G.P. Wallis. Isozyme analysis of *Galaxias* species (Teleostei: Galaxiidae) from the Taieri River, South Island, New Zealand: A species complex revealed. *Biological Journal of the Linnaean Society* 57:107-127.
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- Ibarra-Flores, F., J.R. Cox, M. Martin-Rivera, **T.A. Crowl**, and C.A. Call. 1995. Predicting buffelgrass survival across a geographic al and environmental gradient. *J. Range Manage.* 48:53-59.
- McIntosh, A.R., **T.A. Crowl** and C.R. Townsend. 1994. Size-related impacts of introduced brown trout on the distribution of native, common river galaxias. *New Zealand Journal of Marine and Freshwater Research* 28:135-144.
- Crowl, T.A.** and A. Covich. 1994. Responses of freshwater shrimp to chemical and tactile stimuli from large decapod predators: Implications for habitat selection, *Journal of the North American Benthological Society* 13:291-298.
- Covich, A.P., **T.A. Crowl**, J.E. Alexander and C.C. Vaughn. 1994. Benthic prey avoidance behaviors in response to decapod predators: Temperate and tropical comparisons. *Journal of the North American Benthological Society* 13:283-290.

- Culp, J.M. and **T.A. Crowl**. 1994. Non-visual cues in benthic predator-prey systems: Introduction to a symposium. *Journal of the North American Benthological Society* 13:266-267.
- Dodson, S., **T.A. Crowl**, B.L. Peckarsky, L.B. Katz, A.P. Covich and J.M. Culp. 1994. Non-visual communication in freshwater benthos and plankton. *Journal of the North American Benthological Society* 13:268-282.
- Shave, C., C.R. Townsend and **T.A. Crowl**. 1993. Predator-prey interactions among freshwater crayfish, trout and eels in New Zealand Streams. *New Zealand Journal of Ecology* 18:1-10.
- Edge, K.A., C.R. Townsend and **T.A. Crowl**. 1993. An investigation of anti-predator behaviour in three genetically differentiated populations of non-migratory galaxiid fishes in a New Zealand river. *New Zealand Journal of Marine and Freshwater Research*, 27:357-363.
- Evans, B.F., C.R. Townsend and **T.A. Crowl**. 1993. Distribution and abundance of coarse woody debris in some southern New Zealand streams from contrasting forest catchments. *New Zealand Journal of Marine and Freshwater Research*, 27:227-239.
- McIntosh, A.R., C.R. Townsend and **T.A. Crowl**. 1992. Competition for space between introduced brown trout (*Salmo trutta* L.) and a native galaxiid (*Galaxias vulgaris* Stokell) in a New Zealand stream. *Journal of Fish Biology*, 41:63-81.
- Crowl, T.A.**, C.R. Townsend and A. McIntosh. 1992. The effects of introduced trout on Austral-Asian fish communities. *Reviews in Fish Biology and Fisheries*, 2:217-241.
- Covich, A.P., **T.A. Crowl**, S.L. Johnson, D. Varza and D.L. Certain. 1991. Post-Hurricane Hugo increases in Atyid shrimp abundances in a Puerto Rican Montane Stream. *Biotropica*, 23:448-454.
- Townsend, C.R. and **T.A. Crowl**. 1991. Fragmented population structure in native New Zealand fish: An effect of introduced brown trout? *Oikos*, 61:347-354.
- Covich, A.P. and **T.A. Crowl** 1990. Effects of hurricane stormflow on transport of woody debris in a rain forest stream (Luquillo, Puerto Rico), *Proceedings of the International Symposium on Tropical Hydrology*, 1990:197-205.
- Crowl, T.A.** and A.P. Covich. 1990. Predator-induced life-history shifts in a freshwater snail: A chemical mediated and phenotypically plastic response. *Science*, 247:949-951.
- Crowl, T.A.** 1990. Life-history strategies of a freshwater snail as a result of stream permanence and predation: Balancing conflicting demands. *Oecologia*, 84:238-243.
- Crowl, T.A.**, C.R. Townsend and A.P. Covich 1990. Hierarchical design and the use of geographic information systems to bridge the gap between river science and management. *Proceedings of the International Symposium of the Spatial Information Research Centre*, 2:27-35.
- Crowl, T.A.** and G.D. Schnell 1990. Factors determining population density and size distributions of a freshwater snail in streams: Effects of spatial scale. *Oikos*, 59:359-367.
- Crowl, T.A.** 1989. Effects of crayfish size, orientation and movement on the reactive distance of largemouth bass foraging in clear and turbid water. *Hydrobiologia*, 183:133-140.
- Crowl, T.A.** and J.E. Alexander, Jr. 1989. Parental care and foraging ability in male water bugs (*Belostomatidae*). *Canadian Journal Zoology*, 67:513-515.
- Crowl, T.A.** and J. Boxrucker 1989. Competitive effects of two introduced planktivores (threadfin Shad and inland silversides) on white crappie in Lake Thunderbird, Oklahoma. *Proceedings of the Annual conference of Southeastern Association of Fish and Wildlife Agencies*, 41:348-360.

NON-PEER REVIEWED PUBLICATIONS:

My students and I have written over 80 Federal and State Agency reports.

RESEARCH SUPPORT:

2016-2018	National Park Service, Stabilize and Protect South Florida Archeological Sites (\$80,000)
2016-2021	National Science Foundation, Center for Excellence in Science and Technology: Aquatic Chemistry and the Environment (\$5,000,000)
2016-2017	Department of Interior, Everglades Restoration; \$965,851
2016-2018	Department of Energy, Next Generation Ecosystem Experiment in the Tropics (\$102,000)
2016-2018	National Science Foundation, long-Term-Ecological-Research: Luquillo Experimental Forest (\$75,000); Total NSF award – \$2.8 million
2015	Department of Interior, Everglades Restoration; \$410,000
2015-2017	National Science Foundation, Critical Zone Observatory: Hot Spots and Hot Moments (\$210,000); Total NSF award – \$6.5 million
2014	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$75,000)
2013	Utah Lake Restoration Program (CUP) - \$155,000
2012-2017	National Science Foundation EPSCoR Track 1; iUTAH - \$20,000,000
2012-2017	Utah Science, Technology and Research Program (USTAR); Supporting funds for iUTAH - \$200,000
2012-2014	National Science Foundation: A Drupal Approach to Collecting, Coalating and disseminating Jurisdiction-Specific Data - \$170,787
2012	Utah Lake Restoration Program (CUP) - \$278,000
2012-2014	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental forest (\$90,000); Total NSF award – \$2.8 million
2011	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental forest (\$45,000); Total NSF award – \$6.8 million
2011	Utah Lake Restoration Program (\$238,000).
2007 - 2010	Utah Lake Restoration Program (\$1,279,000)
2006 - 2010	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental forest (\$125,000); Total NSF award – \$6.8 million
2006 - 2008	Center for Integrative Biology, Below Species diversity effects on Ecosystem Function (\$108,000); Mike Pfrender, Co-PI.
2003 - 2008	National Science Foundation, Biocomplexity in the Environment: Dynamics of coupled river and road networks (\$340,807). Total NSF award - \$ 4.7 million
2006	Utah Lake Restoration Program (\$245,000)
2005	Utah Lake Restoration Program (\$225,000)
2004	June Sucker Recovery Program: Ecosystems Ecology of Utah Lake (\$282,000)
2003	June Sucker Recovery Program: Various research topics for the recovery of June Sucker (\$269,000)
2002	June Sucker Recovery Program: Various research topics for the recovery of June Sucker (\$162,000)
2001-2006	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental forest (\$125,000); Total NSF award - \$6.2 million
2000	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$15,660)
2000	U.S. Fisheries and Wildlife Service - Upper Colorado River Research (\$56,000.)
1999	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$15,660)
1999	U.S. Fisheries and Wildlife Service - Upper Colorado River Research (\$290,568)
1998	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$15,660)
1998	U.S. Fisheries and Wildlife Service - Upper Colorado River Research (\$231,160)
1997	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$15,660)

1997	U.S. Fisheries and Wildlife Service - Upper Colorado River Research (\$73,110.)	1996
	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$15,660)	
1996	U.S. Fisheries and Wildlife Service - Upper Colorado River Research (\$337,987.)	
1995	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$15,660)	
1995	U.S. Fisheries and Wildlife Service - Upper Colorado River Research (\$311,500)	
1994	National Science Foundation, Long-Term-Ecological-Research: Luquillo Experimental Forest (\$98,660 over 6 years)	
1994	U.S. Fisheries and Wildlife Service - Upper Colorado River Research (\$210,000.)	
1994	U.S. Forest Service - Habitat restoration as a template for restoring native trout populations in high-mountain streams \$25,400.	
1994	Department of Interior, Bureau of Reclamation - Development of an endangered fish experiment station (\$100,000)	
1994	Utah Division of Wildlife Resources - Food web interactions in intermountain west lakes and reservoirs (\$46,000)	
1994	IAFWA - Foodweb stability: the role of exotic species. \$41,000 (D. Beachamp, Co-Pi)	
1993	Department of Interior, U.S. Fish and Wildlife Service - Upper Colorado River Research (\$246,781; J. Schmidt, Co-PI)	
1993	Dept. of Interior (through BOR) - Development of an endangered fish experiment station. \$90,000	
1993	Utah Division of Wildlife Resources - Investigation of trophic competition and vulnerability to predation of gizzard shad and June sucker. \$61,334	
1993	U.S. Forest Service - Colorado cutthroat trout restoration. \$24,600	
1992	Dept. of Interior (through UDWR) - Upper Colorado River Research I. (J. Schmidt, Co-PI). \$50,660	
1992	Dept. of Interior (through UDWR) - Upper Colorado River Research II. (J. Schmidt, Co-PI). \$54,810	
1992	U.S. Forest Service - Historical importance of coarse woody debris in stream ecosystem function (J. Kershner, Co-PI). \$30,000	
1992	U.S. Forest Service - Hierarchical analysis for stream ecosystems. \$17,000	1992
	U. S. Forest Service - Habitat restoration as a template for restoring native trout populations in high-mountain Uinta streams (J. Kershner and R. Black, Co-PIs). \$25,000	
1991	Utah Division of Wildlife Resources - Investigation of trophic competition and vulnerability to predation of gizzard shad and June sucker (T. Modde, Co-PI). \$65,954	
1991	Utah State University, New Faculty Grant - On the use of chemically-mediated anti-predation behaviors for determining phylogenetic and ecological relationships in freshwater pulmonate snails. \$19,097	
1991	Ministry of Research, New Zealand - Land-use impacts on the Taieri River Ecosystem. NZ \$72,000	
1991	Department of Conservation (DOC), New Zealand - Determination of native fish distributions with emphasis on determining the 'gene pool' in the Taieri River. NZ \$56,000	
1990	U.S. Forest Service - Using hierarchical models to predict trout abundances and distributions on small streams (J. Kershner, Co-PI). \$42,000	
1990	Department of Conservation - National Office - Genetic differentiation of native galaxiids: Effects of introduced predators. NZ \$18,000	
1989	Otago Research Council - Land-use effects on Otago Stream community dynamics (C. Townsend, Co-PI). NZ \$65,000	
1989	DSIR - Hydrology Group - Land-use effects on Otago stream community dynamics (C. Townsend, Co-PI). NZ \$5,000	
1989	Otago Regional Council - Land-use effects on Otago stream community dynamics (C. Townsend, Co-PI). NZ \$17,000	
1989	Otago Fish and Game Council - Land-use effects on Otago stream community dynamics (C. Townsend, Co-PI). NZ \$9,000	

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August 27, 2021

Irela Bague
Chief Bay Officer
Irela.bague@miamidade.gov
via email

Dear Ms. Bague:

I enthusiastically support the nomination of Dr. Diego Lirman, to the Miami-Dade County Biscayne Bay Watershed Management Advisory Board. Dr. Lirman has over 25 years of research experience in Biscayne Bay ecosystems and will be a very valuable member of your board.

Regards,

Roni Avissar, Ph.D.
Dean

CURRICULUM VITAE

Name: DIEGO LIRMAN, Ph.D.

Position: Associate Professor

Address: University of Miami
Rosenstiel School of Marine and Atmospheric Science
Department of Marine Biology and Ecology
4600 Rickenbacker Cswy., Miami, FL 33149
Tel: 305-421-4168; Fax: 305-421-4600
Email: dlrman@rsmas.miami.edu

EDUCATION

- Ph.D. Marine Biology. 1997. Rosenstiel School of Marine and Atmospheric Science, Miami
- M.S. Marine Biology. 1992. California State University, Long Beach
- B.S. Biology. 1988. University of California, Los Angeles

EMPLOYMENT

2011- Associate Professor, University of Miami
2005-2011 Research Assistant Professor, University of Miami
1997-2005 Assistant Scientist, University of Miami

AREAS OF EXPERTISE

Coral Reef Ecology and Restoration, Seagrass Ecology, Disturbance Ecology, Science Education and Outreach

RESEARCH STATEMENT

Dr. Lirman's research focuses on the disturbance ecology and active restoration of coastal ecosystems including both coral reefs and seagrass ecosystems. He has been a member of the Florida Reef Restoration program since its inception in 2007 and runs coral nurseries in Miami-Dade County and Biscayne National Park. His lab has been instrumental in developing science-based restoration and monitoring practices now used widely in Florida and the Caribbean. His lab has planted 10,000s of corals onto degraded reefs in Florida and the Dominican Republic. Dr. Lirman also created the Rescue a Reef citizen science program where members of the public contribute to reef restoration by joining expeditions alongside restoration practitioners.

Dr. Lirman has been conducting research on Submerged Aquatic Vegetation in Biscayne Bay, Miami, Florida for > 20 years focused on the impacts of salinity and other factors on the abundance and distribution of seagrasses and macroalgae in habitats highly impacted by the Comprehensive Everglades Restoration Plan.

Dr. Lirman has received >\$7M in funding from NPS, Army Corps of Engineers, NSF, NOAA, TNC, Miami-Dade County, Mote, and corporate sponsors to complete his research activities in the past 10 years.

PUBLICATIONS

- Rivas, N., D. Hesley, M. Kaufman, J. Unsworth, M. D'Alessandro, and **D. Lirman**. 2021. Developing best practices for the restoration of massive corals and the mitigation of predation impacts: influences of physical protection, colony size, and genotype on outplant mortality. *Corals Reefs*, <https://doi.org/10.1007/s00338-021-02127-5>.
- Drury, C. and **D. Lirman**. 2021. Genotype by environment interactions in the coral bleaching response. *Proceedings of the Royal Society B*. 288: 20210177 <https://doi.org/10.1098/rspb.2021.0177>.
- Serafy, J., I. Zink, G. Shielder, G. Liehr, J. Browder, H. Jobert, and **D. Lirman**. 2021. Evaluating the rainwater killifish (*Lucania parva*) as an indicator of Everglades restoration. *Restoration Ecology* 29:e13344. <https://doi.org/10.1111/rec.13344>.
- Carrick, J., C. Lustic, **D. Lirman**, et al. 2021. Hurricane Impacts on Reef Restoration: The Good, the Bad, and the Ugly. In: D. Vaughn (Ed.), *Active Coral restoration: Techniques for a Changing Planet*, J. Ross Publishers, Ch 19.
- Kaufman, M., E. Watkins, R. van Hooidek, A. Baker, and **D. Lirman**. 2021. Thermal history influences lesion recovery of the threatened Caribbean coral *Acropora cervicornis* under heat stress. *Coral Reefs* 40:289-293.
- Ghiasian, M., J. Carrick, L. Rhodes-Barbarigos, B. Haus, A. Baker, and **D. Lirman**. 2020. Dissipation of wave energy by a hybrid artificial reef in a wave simulator: implications for coastal resilience and shoreline protection. *Limnology and Oceanography: Methods*, doi.org/10.1002/lom3.10400.
- van Woessik, R., R. Banister, E. Bartels, D. Gilliam, E. Goergen, C. Lustic, K. Maxwell, A. Moura, E. Muller, S. Schopmeyer, R. S. Winters, and **D. Lirman**. 2020. Differential survival of nursery reared *Acropora cervicornis* outplants along the Florida Reef Tract. *Restoration Ecology* 29: e13302. doi.org/10.1111/rec.13302.
- Unsworth, J., D. Hesley, M. D'Alessandro, and **D. Lirman**. 2020. Outplanting optimized: developing a more efficient coral attachment technique using Portland cement. *Restoration Ecology* 29: e13299. <https://doi.org/10.1111/rec.13299>.
- Koval G., N. Rivas, M. D'Alessandro, D. Hesley, R. Santos, and **D. Lirman**. 2020. Fish predation hinders the success of coral restoration efforts using fragmented massive corals. *PeerJ* 8:e9978 <https://doi.org/10.7717/peerj.9978>.
- Stipek, C., R. Santos, E. Babcock, and **D. Lirman**. 2020. Modelling the resilience of seagrass communities exposed to pulsed freshwater discharges: A seascape approach. *PLoS ONE*, doi.org/10.1371/journal.pone.0229147.
- Lustic, C., K. Maxwell, E. Bartels, B. Reckenbeil, E. Utset, S. Schopmeyer, I. Zink, and **D. Lirman**. 2020. The impacts of competitive interactions on coral colonies after transplantation: A multispecies experiment from the Florida Keys, US. *Bulletin of Marine Science* 96:805-818. doi.org/10.5343/bms.2019.0086.
- Patterson, J.T. and **D. Lirman**. 2020. Species Profile: Stony Corals. SCRA Publication No.7214. United States Department of Agriculture, 7 pp.
- Drury C., J. Greer, I. Baums, B. Gintert, and **D. Lirman**. 2019. Clonal diversity impacts coral cover in *Acropora cervicornis* thickets: potential relationships between density, growth and polymorphisms. *Ecology and Evolution* 9:4518-4531. [doi: 10.1002/ece3.5035](https://doi.org/10.1002/ece3.5035).
- Santos, R., G. Varona, C. Avila, **D. Lirman**, and L. Collado-Vides. 2019. Implications of macroalgae blooms to the spatial structure of seagrass seascapes: The case of the

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- Zink I, J. Browder, **D. Lirman**, and J. Serafy. 2018. Pink shrimp *Farfantepenaeus duorarum* spatiotemporal abundance trends along an urban, subtropical shoreline slated for restoration. PLoS ONE, doi.org/10.1371/journal.pone.0198539.
- Lirman, D.**, J. Ault, J. Fourquaran, and J. Lorenz. 2018. The Coastal Marine Ecosystem of South Florida, United States. In: C. Sheppard (ed.), World Seas: An Environmental Evaluation, AP Press, Vol 1, 427-444.
- Lirman, D.** and J. Mate. 2018. Status of coastal habitats of Bocas del Toro, Panama: Coral reefs and seagrass meadows. In: D. Suman and A. Spalding (eds.), Coastal Resources of Bocas del Toro, Panama: Tourism and Development Pressures and the Quest for Sustainability. Geminis Press. p. 159-181.
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- Schopmeyer S., **D. Lirman**, E. Bartels, D. S. Gilliam, E. A. Goergen, S. P. Griffin, M. E. Johnson, C. Lustic, K. Maxwell, C. S. Walter. 2017. Regional restoration benchmarks for *Acropora cervicornis*. Coral Reefs, DOI 10.1007/s00338-017-1596-3.
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- M. Chiappone, T. Christensen, M. J. Crabbe, O. Day, E. de la Guardia, G. Diaz-Pulido, D. DiResta, D. Gil-Agudelo, D. Gilliam, R. Ginsburg, S. Gore, H. Guzman, J. Hendee, E. Hernandez-Delgado, E. Husain, C. Jeffrey, R. Jones, E. Jordán-Dahlgren, L. Kaufman, D. Kline, P. Kramer, J. Lang, **D. Lirman**, J. Mallela, C. Manfrino, J-Philippe Maréchal, K. Marks, J. Mihaly, W. J. Miller, E. Mueller, E. Muller, C. Orozco Toro, H. Oxenford, D. Ponce-Taylor, N. Quinn, K. Ritchie, S. Rodríguez, A. Rodríguez-Ramírez, S. Romano, J. Samhuri, J. Sanchez, G. Schmahl, B. Shank, W. Skirving, S. Steiner, E. Villamizar, S. Walsh, C. Walter, E. Weil, E. Williams, K. Woody, and Y. Yusuf. 2010. Caribbean corals in crisis: record thermal stress, bleaching, and mortality in 2005. *PloS ONE* 5(11): e13969. doi:10.1371.
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Editorial Responsibilities: **Associate Editor, Bulletin of Marine Science.** Reviewed manuscripts for Botanica Marina, Hydrobiologia, Coral Reefs, Atoll Research Bulletin, Journal of Experimental Marine Biology and Ecology, Marine Ecology Progress Series, Bulletin of Marine Science, Biological Bulletin, Estuaries, Aquatic Conservation, Zoological Science, Oecologia, Limnology and Oceanography, Ecological Monitoring and Assessment, Marine Pollution Bulletin, Remote Sensing of the Environment, Journal of Coastal Research, Revista de Biologia Tropical, Galaxea, Marine Pollution Bulletin.

Proposal Reviews: Reviewed proposals for the National Science Foundation, NOAA, USAID, SeaGrant, National Coral Reef Institute, COLCIENCIAS (Colombian Office of Science).

Education and Outreach: Created the University of Miami's **Rescue a Reef** Citizen Science and Education Program where members of the public participate in reef restoration expeditions and educational activities designed around Coastal Resilience and Reef Restoration.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Fisheries Science Center
75 Virginia Beach Dr.
Miami, FL 33149

August 26, 2021

Office of the Mayor
Miami-Dade County

Honorable Mayor Daniella Levine Cava:

Subject: NOAA seat on Biscayne Bay Watershed Advisory Board

Thank you for encouraging establishment of a NOAA seat on the new Biscayne Bay Watershed Management Advisory Board and for giving the Miami Office of the Southeast Fisheries Science Center an opportunity to nominate a representative to that position.

We nominate Dr. Joan Browder, a senior scientist on our Miami staff, whose resume, providing her credentials as they relate to this position, is attached.

Thank you again for this opportunity. We hope for the best for Miami-Dade County and Biscayne Bay with the establishment of this new advisory entity.

Sincerely,

Joseph E. Serafy

Joseph E. Serafy, Ph.D.
Research Fishery Biologist
NOAA/NMFS/SEFSC
75 Virginia Beach Drive, Miami FL 33149 USA.
305.361.4255 (office), 305.361.4562 (fax)

Cc: Irela Bague, Chief Bay Officer



RESUME

Joan A. Browder, Ph.D.

Southeast Fisheries Science Center
NOAA National Marine Fisheries Service
75 Virginia Beach Drive
Miami, Florida 33149

August 26, 2021

Joan Browder is a senior scientist and fishery research biologist at the Southeast Fisheries Science Center. She received her B.S. and M.S. in Biology at the University of Miami and her Ph.D. at the University of Florida, where she worked in the systems ecology program of H.T. Odum. She spent the first half of her career working on issues related to anthropogenic changes in freshwater flow to estuaries and the most recent part of her career applying the knowledge gained to monitoring coastal ecosystems in support of the Comprehensive Everglades Restoration Plan (CERP). She has worked in most of South Florida's estuaries, including Florida Bay, Biscayne Bay, Fakahatchee, Faka Union, and Pumpkin Bays, and the St. Lucie Estuary. In Biscayne Bay, she has published studies about morphological abnormalities in fish; fishing industries for pink shrimp; a common prey fish, rainwater killifish; and a conceptual model recommending ecological indicators for CERP. Presently she is assisting in the development of performance measures and ecological indicators for the Biscayne Bay and Southeast Everglades Restoration Project (BBSEER), as well as monitoring the shallow-water seagrass-associated habitat of nearshore Biscayne Bay to assess effects of CERP components already implemented. She has served for several years as co-leader of the NOAA Biscayne Bay Habitat Focus Area, which was one of the first 10 dedicated NOAA focus areas in the U.S. and its territories. NOAA's HFA designation opened new doors for the Bay to attention, appreciation, and assistance.



United States Department of the Interior



NATIONAL PARK SERVICE
BISCAYNE NATIONAL PARK
9700 SW 328th Street
Homestead, FL 33033

IN REPLY REFER TO:

14 September 2021

Irela Bague
Chief Bay Officer
Miami-Dade County

Re: Appointing representative for Biscayne National Park on the Biscayne Bay Water Management Advisory Board

Dear Irela Bague,

I am writing to respectfully submit the appointment of Erik Stabenau, Ph.D., Physical Resources Branch Chief of the South Florida Natural Resources Center, National Park Service to represent Biscayne National Park on the Biscayne Bay Water Management Advisory Board (BBWMAB). We expect that Erik would be a strong addition to the Board, bringing deep technical skill and personal experience that would assist the County in meeting its mission while continuing to represent the best interests of the Biscayne National Park.

Erik has two decades of experience at both the technical and leadership level within the South Florida scientific and Everglades Restoration community. On the technical front, he is a graduate of the University of Miami (Ph.D. 2004, Marine & Atmospheric Chemistry), and has completed post-doctoral work through the National Academies of Sciences' National Research Council posting at NOAA. After that, he came to the National Park Service, working his way up through the scientific fields by first managing the monitoring program, then developing and using oceanographic models to improve management actions, and now onto leading groups involved in restoration projects and policy issues. His work has touched all four south Florida National Park units.

Locally, he is known on a first name basis by many of the key players within the county at both governmental and non-governmental organizations, is familiar in management circles and readily bridges the divide between the technical realms and public policy. He has developed positions on controversial water management issues in support of improving conditions in Biscayne Bay and Biscayne National Park and made direct requests to the South Florida Water Management District Governing Board on the same. In his career, he has met conflict and controversy by seeking agreement, carefully listening and appreciating the competing interest in freshwater management in South Florida while seeking a balanced solution that supports our mission.

Interior Region 2 • South Atlantic-Gulf

Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi
North Carolina, Puerto Rico, South Carolina, Tennessee, U.S. Virgin Islands

In short, he has the skills and connections necessary to make a strong contribution to the BBWMAB and he has our full support. If you have any further questions concerning this request, reach out to me directly.

Thank you for your consideration.

Sincerely,

Penelope Del Bene
Superintendent, Biscayne National Park

Enclosures: Stabenau-Erik_CV_BISC-representative_2021-09-03.pdf

Erik Stabenau, Ph.D.

Miami, FL 33186 | 305.972.3640 | Erik_Stabenau@nps.gov

Branch Chief, Physical Resources, National Park Service | Applied natural resource management | Project alternatives evaluation | Climate compatibility analysis | Hydrodynamic modeling | Database design and implementation | Real-time automated data acquisition and validation | Expert systems forecasting

- Experienced environmental analyst, prioritizing management actions based on combinations of data-based inquiry, hydrodynamic modeling, and thorough professional knowledge of regional and global climatic drivers and dependencies.
- Leader in multiple interagency professional advisory boards, guiding state and federal actions on topics including Ecosystem Restoration, water resource management, coral reef disease response and reef restoration, and regional ecological issues
- Respected developer of hydrodynamic models, databases, data sharing protocols, and performance metrics for the selection and evaluation of specific project features, including development of systems to track quantifiable outcomes.
- Frequently invited public speaker where I make the science behind technical projects understood, helping to guide opinion and drive agency positions.

PROFESSIONAL AND ACADEMIC TIMELINE

Branch Chief - Physical Sciences, GS-14 (GS-1315-14) 10/2019 – Present

National Park Service, Everglades National Park

South Florida Natural Resources Center

Homestead, FL

Supervisor: G. Melodie Naja

Description: Position includes leadership of 15 - 20 scientists at the South Florida Natural Resources Center (SFNRC) through development of in-park science and resources management to support four South Florida Park units including Everglades, Biscayne and Dry Tortugas National Park and the Big Cypress National Preserve. I serve as the National Park Service (NPS) lead in water resources investigations and projects for the South Florida Ecosystem Restoration effort, holding a position on the Science Coordination Group that reports directly to the Restoration Task Force, a federal congressionally mandated leadership body for the Comprehensive Everglades Restoration Program. I also serve on multiple interagency forums where I bring the expertise of the scientists of the SFNRC to develop positions and provide guidance on high value projects with multi-decade impacts on the South Florida environment.

On the technical front, I continue to provide hands-on expertise in database development, data management, development, evaluation and application of hydrodynamic models. I have the privilege of working with published experts in various analytical fields, including the development of novel analytical techniques to deal with non-stationary large-scale datasets with the end result of providing simple actionable products to develop and support potentially controversial and complex positions. My focus has been to create products that interpret data in natural language, expressing complex information in manageable and decision-oriented terms, making it easier to differentiate between random outliers and significant early indicators of change.

Branch management involves developing multi-year budgets, strategic planning including decisions about the return on investment and considerations of long-term needs when selecting between accomplishing tasks through contracts, agreements, or direct hire. I am primarily responsible for personnel on my team, handling performance planning and development in areas including water quality, hydrodynamic modeling, technical capacity building, hydrology, and field programs in both

marine and freshwater environments. I maintain supervisory authority over staff and equipment including boats, airboats, and have a supervisory role in our aviation program.

Oceanographer-Coastal Ocean Modeler, GS-13 (GS-1360-13)

1/2009 – 10/2019

National Park Service, Everglades National Park, Homestead, FL

Supervisor: Robert Johnson

Description: Duties include; modifying and running physical models for optimizing the impact of freshwater discharge on salinity within Biscayne National Park and Everglades National Parks, developing programs to monitor environmental conditions and respond to critical events such as mass fish mortality or algal blooms along the coast, and enhancing data management and sharing across multiple state and federal agencies. As an oceanographer and resource manager, I review projects proposed by the US Army Corps of Engineers and the South Florida Water Management District related to Everglades Restoration for potential impact on salinity and other environmental conditions in both of these national parks. These reviews include running models representing Biscayne Bay and Florida Bay, writing computer programs to manage data and process results. Several peer-review publications have resulted from this work. I act as a member of several interdisciplinary teams, organizing or participating in workshops where we developed solutions to complex multi-jurisdictional environmental issues. In addition, I provide scientific assessments and guidance documents that are shared through committees and in public venues and develop position statements on environmental issues.

Facilitating data sharing between organizations is a key area of personal interest for me and an important part of my daily activities. I have expanded our data sharing ability by automating data delivery to both the USGS Everglades Depth Estimation Program and NOAA's National Data Buoy Center as part of our efforts to collaborate with regional, national and international Ocean Observing Systems. At the national level, I have represented the Everglades National Park on the Integrated Ocean Observing System Data Management and Acquisition Steering Team and was involved in making the final recommendations from that team on the adoption of national data sharing standards.

My other duties have included being an agreements technical representative in the park where I typically manage projects conducted by universities that provide information to improve resource management while serving the public purpose of developing our next generation of scientists. As an agreements representative, I have had the opportunity to guide research by being involved in several developmental and field projects, enlisting the assistance of the Natural Resources Stewardship and Science directorate in the National Park Service headquarters and through agreement with university professors at Florida International University, the University of Miami, and Cornell University to develop research programs in estuarine monitoring, algal bloom detection, and the use of passive acoustics for monitoring ecosystem response to restoration efforts. In order to achieve success both in the funding and implementation of these projects, I've had to develop methods to explain the strategic value of the project and to propose several alternatives on how to best achieve the objectives while controlling costs and providing appropriate management for personnel.

Within the South Florida Natural Resources Center and through collaboration with the superintendent at Biscayne National Park, I helped to establish a scientific support team that engages in issues of freshwater management to meet the goals Biscayne National Park. I frequently serve as the technical lead on water management issues for the Park where they intersect with the interests to private corporations and other federal entities. In this role, I routinely need to interpret scientific literature for non-technical audiences in order to provide clear scientific message on NPS resource needs and NPS policy requirements.

The 4th South Florida park that I have assisted is Dry Tortugas National Park. At that site, I installed a water level and meteorological monitoring station in order to track the impact of storms as well as seasonal or longer-term variations in water level on cultural resources. The station produces data that is shared via satellite, stored in our database system, and delivered through our partners at NOAA to the public. As part of the installation project, I also worked with science communications branch to develop a tri-fold brochure to explain the monitoring project to the public. The data itself

has since been used in a peer-review publication I co-authored with other scientists from the South Florida Natural Resources Center.

Collateral duty: I was the Department of Interior Technical Lead for the Florida Peninsula Command Post during the Deepwater Horizon/BP oil spill in 2010, providing daily technical briefings to command staff about the location and potential impacts of the spill on Florida's coastline. Post-spill, I continued to be active in emergency management and planning, including providing input to the NOAA Gulf of Mexico offshore restoration planning effort and acting as an advisor to the USCG and NOAA with respect to protecting NPS resources from the potential of oil drilling related impacts related to oil exploration efforts in Cuba.

Adjunct Professor, Chemistry, Physics, and Oceanography **8/2004 – 7/2018**

Miami Dade College, Miami, FL

Supervisor: John Barimo

Description: Maintained adjunct status teaching oceanography, introductory physics, and chemistry undergraduate courses at a rate of 1 or 2 per semester, including laboratories and lectures.

Supervisory Hydrologist, GS-12 (GS-1315-12) **12/2005 – 12/2008**

National Park Service, Everglades National Park, Homestead, FL

Supervisor: Kevin Kotun Office phone: 305.224.4229

Description: Duties included supervising a team of hydrologist in the expansion and maintenance of a hydrologic data collection network of 100 stations within Everglades National Park. I developed automated data sharing processes, prescreening data for outliers prior to storing and delivering data to partners. I also implemented systems that identify stations in need of service when showing any variety of unexpected behavior. I was responsible for all aspects of the program, including multi-year budget management, project planning and implementation, personnel management, data collection, final data review and reporting, and database development and management. I produced annual data reports and periodic data summaries. I was responsible for my team's use of helicopters, boats and airboats to access remote areas of the park, including maintaining training and tracking related equipment. In this position, I also developed new projects and programs to address park management needs such as instituting a program to monitor algal bloom frequency and intensity in Florida Bay or investigating the relationship between stage and flow within the park and managed freshwater levels in neighboring canals. I routinely presented our work at national level meetings, at interagency forums, and with researchers from outside the Federal Government. This position provided a training ground for me with respect to personnel management, providing experience with high performers as well as recognizing limitations and developing opportunities for improvement.

NRC Post-doctoral Scientists: Research Coordinator **3/2004 – 12/2005**

National Research Council post-doctoral appointment

NOAA, Atlantic Oceanographic and Meteorological Laboratory, Miami, FL

Supervisor: James C. Hendee, Ph.D.

Description: Duties include investigating new instrumentation and managing programmers and station construction personnel to meet deployment deadlines, improving the data processing functions related to underwater light data near coral reef ecosystems, and development of new collaborations with university researchers involved in research at or near Coral Reef Early Warning System (CREWS) research sites. The heart of this program was the development of Expert System processing, a mechanism to translate terms expressing best professional judgement of conditions (ex.: extremely hot, unusually salty) into numeric algorithms that allow for early detection of change and identify approaching critical thresholds before they occur. This work involved collaboration between NOAA and the EPA and culminated in several publications on issues related to water clarity, water temperature, and coral bleaching.

Research and Teaching Assistant **7/1998 – 12/2003**

Rosenstiel School of Marine and Atmospheric Science,

University of Miami, Miami, FL.

Supervisor: Rod Zika, Ph.D.

Description: This position was in support of my Ph.D. program at the University of Miami. I conducted basic research into the chemical basis for coastal ocean optical properties and developed novel techniques for the analysis of environmental macromolecules. A focal region for this study was in Everglades National Park and along the west Florida shelf, where I studied marine and terrestrial sources of organic material that impact coastal water quality. I also spent a significant portion of my time involved in atmospheric chemistry studies that looked at air quality in the eastern U.S. including a study on photochemical smog within Shenandoah National Park. I spent several semesters teaching or assisting in teaching marine and atmospheric chemistry courses and also had the pleasure of serving on multiple research cruises in coastal Florida waters.

Assistant Oceanographer/Limnologist (GS-7)

4/1997 – 7/1998

NOAA, Great Lakes Environmental Research Laboratory, Ann Arbor, MI.

Supervisor: Nathan Hawlee, Ph.D.

Description: Assisted in field research and associated data processing and programming activities associated with research on the source and fate of environmental contaminants in sediments in southern Lake Michigan.

DEVELOPMENTAL PATH

The following **Details** were performed under the guidance of senior management at the South Florida Parks and Preserve as part of a developmental process. My primary position, responsibilities, and duties were either briefly paused or carried over, to some extent, while performing these assignments.

DETAIL: Branch Chief, GS-14 (GS-0301-14)

12/2018 – 3/2019

National Park Service, South Florida Natural Resources Center

Everglades National Park, Homestead, FL

Supervisor: Robert Johnson

During this detail I performed the duties of Branch Chief (Supervisory Hydrologist) while the South Florida Natural Resources Center sought to fill the position permanently. In this role, I provided guidance to a group of 16 employees that manage all aspects of physical sciences related to ecological restoration for 3 South Florida park units; Everglades, Biscayne, and Dry Tortugas National Parks. The primary duties included maintaining staffing, funding, database activity, tracking contracts, supporting UNIX systems in our high-performance computing center, and generally keeping the branch on track through a transition period.

DETAIL: Supervisory Program Specialist, GS-13 (GS-0301-13)

7/2018 – 10/2018

National Park Service, Biscayne National Park, Homestead, FL

Supervisor: Margaret Goodro

Developmental detail to support the superintendent of Biscayne National Park as her senior advisor, working on multiple sensitive issues related to workforce management while also supporting the day-to-day operations of the park. In this role also represented the park at meetings with the South Florida National Parks Trust and the Florida National Parks Association, sharing information on the park's identified priority areas and learning about the activities of these organizations and their support for the park.

DETAIL: Senior Advisor and Legislative Liaison, GS-14 (GS-1301-14)

6/2015 – 9/2015

National Park Service, Natural Resources Stewardship and Science (NRSS) Directorate

Department of Interior, Washington DC

Supervisor: Ray Sauvajot

I served on a development detail to the NRSS Directorate at the Washington Office (WASO) as a senior advisor and legislative liaison as part of a year-long leadership development program. Primary tasks included responding to congressional requests on natural resources issues within

National Park units and coordinating responses across agencies within the Department of Interior. Highlights included editing and assisting with the final release of Director's Order 12 which provided guidance on completing environmental reviews under the National Environmental Protection Act.

DEVELOPMENT: US Army Corps of Engineers South Atlantic Division Regional Leadership Development Program

For this highly selective program, I was honored with being one of four representatives from outside of USACE as part of their effort to bring together partner agencies for more efficient and effective government across the region. The primary focus of this training program was to create leaders that are sensitive to relationship building, firm in their management approach, aware of the critical path to developing high performing teams, well educated in conflict resolution, and to create an overall culture of continuous improvement to be cast through the agencies from the graduates of this program.

EDUCATION

Higher Education

January 2004 to December 2005

Level: Post-doctoral

National Academy of Science

National Research Council Post-Doctoral Associate

Program: Coral Reef Early Warning System (CREWS) science coordinator

Advisors: Dr. Rik Wanninkhof and Dr. James Hendee

NOAA - Atlantic Oceanographic and Meteorological Laboratory, Miami, FL

- Developed data processing under an Expert System approach that converts the best professional judgement of conditions in common language into dynamic numeric ranges and then interprets those values with the goal of identifying critical thresholds before they occur.
- Developed light transfer equations to predict light intensity and spectra at coral surface within monitored coral reef zone from near surface light measurements
- Applied fluorescent techniques for remote real-time monitoring of coral fluorescent efficiency – a measure of coral health that was used in producing real-time environmental alerts
- Coordinated field studies with associated researchers during several projects including the deployment of a pCO₂ sensor and automated sampling device near Lee Stocking Island, Bahamas
- Chaired session and subsequently managed peer review of manuscripts submitted about coral reefs and global change at the 10th International Coral Reef Symposium in Okinawa, Japan.

July 1998 to December 2003

Level: Graduate

Degree: Ph.D.

Doctoral Degree in Marine and Atmospheric Chemistry

Dissertation Title: *Photochemistry and Structure of Environmental Macromolecules*

Advisor: Dr. Rod G. Zika

Department of Marine and Atmospheric Chemistry

Rosenstiel School of Marine and Atmospheric Sciences

University of Miami, Miami, FL

- Developed analytical and computational methods to understand sources and sinks for chemicals in South Florida coastal waters and Florida Bay
- Developed new techniques using Ion Trap Mass Spectroscopy for analysis of environmental macromolecules and processing techniques for relatively large scale datasets.
- Analyzed photochemical and structural properties of natural organic materials and complex organic mixtures

August 1989 to December 1992

Level: Undergraduate

Degree: B.A.-Chemistry

Bachelor's Degree in Chemistry

Wayne State University, Detroit, MI

- Conducted research on anti-metastatic cancer drug treatment protocols for the Radiation Oncology Division of a NIH funded Cancer Research Center

Professional Interests

Resource management and environmental sustainability
Integrated data management standards and communication protocols
Computational techniques to identify environmental change and critical thresholds
Ecological monitoring systems for extreme events and routine management
Developing passive ocean acoustic data processing methods for restoration management
Coastal ecosystem connectivity
Climate change detection
Managing the social environment of high performance teams
Professional workforce development and mentoring

Memberships & Committees

2020 - Present National Park Service representative on the Science Coordination Group, an interagency technical team that provides guidance on the overall implementation of the comprehensive Everglades Restoration Program.
2019 – Present National Park Service Executive Coordination Team member for the interagency Stony Coral Tissue Loss Disease Response effort
2011 – 2014 Integrated Ocean Observing System (IOOS) Data Management & Communication Steering Team member
2010 Department of Interior Technical Lead for the Environment at the Florida Peninsula Command Post response to the Deepwater Horizon/BP Gulf Oil Spill Incident.
2008 – 2011 Gulf Coast Ocean Observing System (GCOOS) Data Management & Communication Committee Member

Honors and Awards

Multiple awards for exceptional service with the National Park Service, 2006 – 2020.
United States Coast Guard Award for exceptional service during Deepwater Horizon/BP Gulf Oil Spill Incident Response 2010
Environmental Protection Agency Level 2 Science and Technological Achievement Award for published optical research 2009
National Oceanic and Atmospheric Administration Bronze Award for work with the Coral Reef Early Warning System, 2004 – 2005.

Publications

Park, Joseph, Gerald Pao, George Sugihara, Erik Stabenau, and Thomas Lorimer. 2021. *Empirical Mode Modeling: A data-driven approach to recover and forecast non-linear dynamics from noisy data*. **ARXIV** (pre-print).

Park, Joseph, Erik Saberski, Erik Stabenau, and George Sugihara. 2021. *Dynamics of milk production and total phosphate in Lake Okeechobee*. **PLoS ONE** 16(8) DOI 10.1371/journal.pone.0248910.

Wachnicka, A., Joan Browder, Thomas Jackson, William Louda, Chris Kelble, Omar Abdelrahman, Erik Stabenau and Christian Avila. 2020. *Hurricane Irma's Impact on Water Quality and Phytoplankton Communities in Biscayne Bay (Florida, USA)*. **Estuaries and Coasts** (43), 1217-1234. DOI 10.1007/s12237-019-00592-4

- Zink, Ian C., Joan Browder, Chris Kelble, Erik Stabenau, Chris Kavanagh, and Zach Fratto. 2019. *Hurricane mediated shifts in subtropical seagrass associated fish and microinvertebrate community*. **Estuaries and Coasts** (43) 1174 - 1193. DOI 10.1007/s12237-020-00715-2.
- Fournet, Michelle E.H., Erik Stabenau, and Aaron N. Rice. 2019. *Relationship between salinity and sonic fish advertisement behavior in a managed sub-tropical estuary: Making the case for an acoustic indicator species*. **Ecological Indicators** (106) DOI 10.1016/j.ecolind.2019.105531.
- Buxton, Rachel, Megan F. McKenna, Mary Clapp, Erik Meyer, Erik Stabenau, Lisa M. Angeloni, Kevin Crooks and George Wittmeyer. 2018. *Efficacy of extracting indices from large-scale acoustic recordings to monitor biodiversity*. **Conservation Biology** DOI 10.1111/cobi.13119.
- Park, Joseph, Erik Stabenau, Jed Redwine and Kevin Kotun. 2017. *South Florida's Encroachment of the Sea and Environmental Transformation over the 21st Century*. **Journal of Marine Science and Engineering** 5(3). 31 pp.
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- Park, Joseph, Erik Stabenau, Jed Redwine and Kevin Kotun. 2016. *Hypersalinity in Florida Bay: A low-dimensional nonlinear model*. U.S. Department of Interior, Everglades National Park, South Florida Natural Resources Center, SFNRC Technical Series 2016:2. 14 pp.
- Stabenau, Erik, Amy Renshaw, Jiangang Luo, Edward Kearns, and John Wang. 2015. *Improved coastal hydrodynamic model offers insight into surface and groundwater flow and restoration objectives in Biscayne Bay, Florida, USA*, **Bulletin of Marine Science**, 91(3).
- Koch, M.S., C. Coronado, M.W. Miller, D.T. Rudnick, E. Stabenau, R.B. Halley, and F.H. Sklar,. 2014. *Climate change projected effects on coastal foundation communities of the Greater Everglades using a 2060 scenario: Need for a new management paradigm*, **Environmental Management**, DOI 10.1007/s00267-014-0375-y.
- Kearney, Kelly, Mark Butler, Bob Glazer, Chris Kelble, Joe Serafy, and Erik Stabenau. 2014. *Quantifying Florida Bay habitat suitability for fishes and invertebrates under climate change scenarios*, **Environmental Management**, DOI 10.1007/s00267-014-0336-5.
- Karamperidou, Christina, Victor Engel, Erik Stabenau, and Upmanu Lall. 2013. *Implications of multi-scale sea level and climate variability for coastal resources: a case study for south Florida and Everglades National Park, USA*, **Regional Environmental Change**, 13(Suppl. 1):S91-S100.
- Stabenau, Erik, and Kevin Kotun. 2012. *Salinity and Hydrology of Florida Bay: Status and Trends 1990-2009*. National Park Service, Everglades National Park, South Florida Natural Resources Center, Homestead, FL. Status and Trends Report. SFNRC Technical Series 2012:1. 39 pp..
- Stabenau, Erik, Victor Engel, Jimi Sadle, and Leonard Pearlstine. 2011. *Sea-level rise: Observations, impacts and proactive measures in Everglades National Park*, **Park Science**, 28(2):26-30.
- Manzello, Derek, Mark Warner, Erik Stabenau, James Hendee, Michael Lesser, and Mike Jankulak. 2009. *Remote monitoring of chlorophyll fluorescence in two reef corals during the 2005 bleaching event at Lee Stocking Island, Bahamas*, **Coral Reefs**, 28(1):209-214.
- Zepp, Richard, G., Christopher Shank, Erik Stabenau, Karen W. Patterson and Mike Cyterski. 2008. *Geographic and seasonal variations in UV exposure of coral assemblages in the Florida Keys*, **Limnology and Oceanography**, 53(5):1909-1922.

- Stabenau, Erik R., James C. Hendee, and Louis Floritt. 2005. *Techniques for the Automatic Assessment of Intense Light and High Sea Temperature on Coral Response*, Proceedings of the 10th International Coral Reef Symposium.
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The Official Accredited Destination Marketing Organization for Greater Miami and the Beaches

August 31, 2021

Ms. Irela Bague
Chief Bay Officer
Miami-Dade County
111 N.W. 1st Street
Miami, FL 33128

**RE: GMCVB Nomination to the Miami-Dade County Biscayne Bay Watershed
Management Advisory Board**

Dear Ms. Bague,

The Greater Miami Convention & Visitors Bureau (GMCVB) is delighted to be part of the Biscayne Bay recovery efforts and welcomes the opportunity to provide feedback on this worthwhile project.

We are nominating Ms. Julissa Kepner to be the GMCVB representative for the Miami-Dade County Biscayne Bay Watershed Management Advisory Board. Ms. Julissa Kepner is the General Manager of the Miami Marriott Biscayne Bay and is a member of the GMCVB Executive Committee where she serves as the Chair of the Convention Sales Committee. Attached is her impressive resume for your perusal.

Ms. Kepner's contact information is as follows:

Ms. Julissa Kepner, General Manager
Miami Marriott Biscayne Bay
1633 N. Bayshore Drive, Miami, FL 33132
Office: (305) 536-6374 / Mobile: (305) 781-5350
Email: Julissa.Kepner@marriott.com

Let me know if you need anything else.

Sincerely,

David Whitaker
President & CEO

cc: Ms. Julissa Kepner



JULISSA KEPNER
GENERAL MANAGER

OBJECTIVE

Leader in senior roles with 20 years of experience with Marriott International and several roles with Hilton and Radisson prior to Marriott.

LEADERSHIP

Chair AOHT- NAF Miami

Chair of Convention Sales GMCVB

Executive Board Member GMCVB

Chair of Government Affairs South Florida Marriott Business Council

Executive Board GMBHA

EXPERIENCE

GENERAL MANAGER

MIAMI MARRIOTT BISCAYNE BAY

APR 2019 – Present

- Manage and embrace owner relations successfully and securing \$48M investment on the asset beginning projects July 2021 to 2022.
- Provide strategic direction in balanced score card of financial results, associate engagement, owners satisfaction, customer satisfaction and sales performance.
- Delivered positive results in EBITDA for owners during a pandemic year and yielding positive results post pandemic 2021
- Restructure hotel after pandemic and rebuilding the team post pandemic
- Increased ROIs for the hotel creating value in the asset
- Collaborate with stake holders in sales, revenue management, marketing, regional team and operations leaders

DUAL GENERAL MANAGER

COURTYARD & RESIDENCE INN MIAMI AIRPORT

JAN 2014-MAR 2019

- Provide strategic direction in financial results. Courtyard increased ADR with daily review of comp set in rates and occupancy to maximize our opportunities. Maintaining GOP margins of 50.6% at Courtyard and 58.2% at Residence Inn.
- Manage and embrace owner relations successfully by having a proactive approach and communication. Previous ownership groups Host, Thayer-Brookfield, North Star and Colony Capital with open line of communication.
- Develop and mentor managers and supervisors, promoted AGM to GM role, managers to senior manager roles and supervisor.
- Increased Associate Engagement Scores YOY: Courtyard 2018 87% and Residence Inn 2018 90%.
- Increased Guest Voice scores at Courtyard 2018 ITR 64.2% up 0.6 pts to brand in a renovation year. Residence Inn ITR 72.9% up 3.8 pts to brand.

KEPNER, JULISSA

GENERAL MANAGER

- Collaborates with different stake holders such as owners, area sales, group sales, marketing, revenue, operations leaders.
- Experience managing complex renovations projects with Courtyard by finishing before dateline. Conducting daily meetings for accountability and communication process with project manager and contractor to complete renovation on time.
- Delivered return on the investment successfully to ownership and Marriott, Courtyard \$4M and Residence Inn \$3M with combined revenues of \$22.
- Collaborates with different stake holders such as owners, area sales, group sales, marketing, revenue, operations leaders.
- Actively communicates with owners the property performance creating value for the asset.
- Provide strategic direction in financial results. Achieving growth in ADR, Occ. and RevPAR.
 - Courtyard increased ADR by 16% YOY
 - Residence Inn ADR increased by 17% YOY
- Knowledgeable of Miami market, seasons, competitors. Review of competition strategy daily to maximize hotel opportunities.
- Increasing Associate Engagement scores YOY.
 - Courtyard 2018 AE 87% up 5 points to LY
 - Residence Inn 2018 AE 90% up 6 points to LY
- BLT Champion for both hotels, BLT AE score increased YOY allowing us to grow in GSS.
 - Courtyard BLT AE 97%
 - Residence Inn BLT AE 95%
- Manages a collaboration relationships with different stakeholders, owners, revenue management, area sales, and sales group team, and marketing and campus leaders.
- Provides analytical support with Guest Voice, Problem elimination and processes to drive Guest Satisfaction.
 - Courtyard ITR 2018: 64.2% up 0.6 to brand average in renovation year
 - Residence Inn ITR 2018: 72.9% up 3.8 to brand average with a tired product (last Reno 2009)
- Experience managing complex renovations projects with Courtyard by finishing before dateline. Conducting daily meetings for accountability and communication process with project manager and contractor to complete renovation on time.

KEPNER, JULISSA

GENERAL MANAGER

DIRECTOR OF HOTEL OPERATIONS**BISCAYNE BAY MARRIOTT**

SEP 2010- DEC 2013

- Responsible for Rooms, Food and Beverage, Event Management, Culinary, Banquets, Loss Prevention, Valet/Self-Parking, Business Center.
- Associate relations focus and maintain a positive environment by fostering diverse work force resulting in 89% AES, 12 points above the region.
- Active participation in Sales Strategy with great results earning YTD RevPAR index change of 5.1% and 8.6% growth in 2013.
- Mentor leaders to become strong managers resulting in 5 managers promoted.
- Successful execution on time and on budget of Brand Re-investment, New Restaurant, Additional Meeting Space, Rooms Renovation. A total owner investment of 31M.
- Partnered with CLS Food and Beverage Team to successfully open a new restaurant concept "Catch Grill and Bar".
- Increase sales YOY in all Food and Beverage Outlets by 5% YTD.

RESIDENT MANAGER

BISCAYNE BAY MARRIOTT 2008-2010

FRONT OFFICE MANAGER 2007-2008

MIAMI AIRPORT MARRIOTT, FL

FRONT OFFICE MANAGER 2005-2007

RENAISSANCE AGOURA HILLS, CA

DIRECTOR OF SERVICES 2002-2005

RENAISSANCE AGOURA HILLS, CA

AWARDS/RECOGNITION

- 2018 Top 3 hotel McCluskey region GSS ITR Award, Residence Inn Miami Airport(72.9% + 3.8 points to brand)
- 2018 hotel inspector app award for room cleanliness.
- Room Advisory Board member CLS FS hotels 2013
- Eastern Region Talent Leadership Award 2012
- Breakthrough Leadership Award 2012
- Operations Excellence Awards 2011
- Project Zenith- Rooms subject matter expert
- EDGE award recipient 2010
- EDGE award recipient 2008
- Manager of the year 2007, 2005, 2003, 2001.
- MVP 2002 Davidson Hotels Award.

EDUCATION/TRAINING

- Access Sales Edge, Connect U and OY 2.0
- 2006-2007 Miami Dade College/Hotel Management
- 1999-2002 Oxnard College, CA/ Hotel Management



**Builders Association
of South Florida**

BUILDING GREAT CITIES
SINCE 1944

www.basfonline.org

111 NW 183rd Street, Suite 111
Miami Gardens, FL 33169

Honorable Mayor Levine-Cava
Miami-Dade County
Metro Dade Center
111 NW First Street, 29th Floor
Miami, FL 33131

August 11, 2021

Re: Appointment of Mr. T. Spencer Crowley to Biscayne Bay Watershed Management Advisory Board

Dear Mayor Levine-Cava:

I am writing to advise your office of the choice made by the Builders Association of South Florida's (BASF) Executive Committee as to the appointment to the above-referenced Advisory Board. They have selected and approved Mr. T. Spencer Crowley, III, Esq., to be their representative to this important Advisory Board. His resume is attached, along with minutes of the BASF's Executive Committee as additional reference.

Mr. Crowley has an extensive background in the environmental law and issues relating to Biscayne Bay, having served on several waterfront boards. He has been asked to provide comment on the County's Manatee Protection Plan and has served on the prestigious Florida Inland Navigational District, among other bay-related boards and efforts.

Mr. Crowley is extremely well-qualified to sit on this Board and his contributions would make an important difference to the community's on-going efforts to protect and enhance our unique resource in Biscayne Bay. Please call if you have questions or need additional information.

Sincerely,

A handwritten signature in blue ink that reads 'Truly Burton'.

Truly Burton
Executive Vice President

cc: Miami-Dade County Commission Chair and County Commissioners
Spencer Crowley, III
Jose Gonzalez, BASF President
Nelson Stabile, BASF Incoming President
Joseph G. Goldstein, BASF Legislative Chair
Howard E. Nelson, Esq., BASF Environmental Code Review Committee

Encs: Resume, T. Spencer Crowley, III
BASF Executive Committee Minutes

People



T. Spencer Crowley III

Partner, Real Estate

Miami

T: +1 305 982 5549

spencer.crowley@akerman.com

vCard

[Connect With Me](#)

Spencer Crowley's practice focuses on large scale land use and environmental permitting matters, including zoning, growth management, urban development, transportation, sovereignty submerged lands, coastal regulation, marina permitting, wetlands, and water resources. He has worked with the Governor's Commission for a Sustainable South Florida, the South Florida Water Management District, and Duke University's Wetlands Center in the Florida Everglades. He has assisted clients in the land use permitting of major projects such as the Babcock Ranch, Midtown Miami, Village at Gulfstream Park, Miami World Center and Brickell City Centre.

In addition to his private practice, Spencer has served on several waterfront boards. In 2008, County Commissioner Carlos Gimenez appointed Spencer to the committee charged with reviewing and recommending changes to Miami-Dade County's Manatee Protection Plan. In 2007, Spencer was appointed to serve as Miami-Dade County Commissioner for the Florida Inland Navigational District, and he was reappointed for an additional 4-year term by Governor Rick Scott in 2012. In 2005, Miami Mayor Manny Diaz appointed Spencer to the City of Miami's Waterfront Advisory Board where he served as chair.

Spencer holds an undergraduate degree from Duke University, a Masters degree from the University of Miami's Rosenstiel School of Marine and Atmospheric Sciences, and JD and MBA from the University of Florida where he served on the Florida Law Review and the Environmental Moot Court team.

Notable Work

Marina and Coastal Permitting

Mega Yacht Arena: Representing client in permitting of 50 slip mega yacht marina. Project involves negotiation of submerged land lease with the city, waiver of public purpose restriction by the Board of Trustees of the Internal Improvement trust Fund, permitting managed mooring field as seagrass mitigation for the project

Areas of Experience

Real Estate
Economic Development and Incentives
Environment and Natural Resources
Environment and Natural Resources Policy and Regulation
Florida Land Use and Entitlements
State Legislative and Executive Lobbying
Land Use and Development
Local Government Advocacy
Public-Private Partnerships
Water Task Force
Hospitality
Hospitality Regulatory Compliance
Hospitality Acquisition and Development
Real Estate and Construction

Education

J.D., University of Florida Levin College of Law, 2001, Certificate in Environmental and Land Use Law
M.B.A., University of Florida, 2001, Specialization in Real Estate and Urban Analysis
M.A., University of Miami Rosenstiel School of Marine and Atmospheric Sciences, 1998
A.B., Duke University, Environmental Science and Policy, Geology, 1996

Admissions

Bars

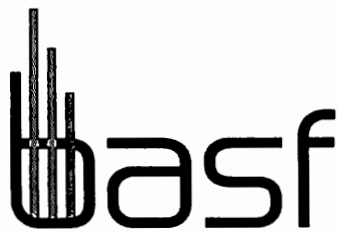
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Akerman Sponsors the Environmental Permitting Summer School
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111 NW 183rd Street, Suite 111
Miami Gardens, FL 33169

**BASF Special Executive Committee Meeting Minutes
prepared by Susan Burns, BASF Deputy Director**

Meeting Purpose, Date, Time: Minutes of the BASF Special Executive Committee Meeting via Conference Call, Tuesday, August 10, 2021, 2:15 pm

Conference Call Attendees: BASF President Jose Gonzalez, BASF 2022 Incoming President Nelson Stabile, Treasurer/Finance Chair Jim Werle, Executive Vice President Truly Burton

Staff: Susan Burns, Lilia Morales

President Jose Gonzalez welcomed everyone, confirmed the presence of a quorum, and called the special meeting to order.

New Business: Executive Vice President Truly Burton gave a brief update on the Miami-Dade County's Biscayne Bay Watershed Management Advisory Board.

Mr. T. Spencer Crowley, III, Esq. is a partner in the Law Firm of Akerman, LLC, one of the BASF Industry Leaders members in good standing. He has an extensive background in environmental law and is extremely qualified to sit on this Advisory Board.

Motion was made and approved to appoint Mr. T. Spencer Crowley, III, Esq. to be the BASF Representative on this Advisory Board.

Hearing no further discussions, the meeting was adjourned.

The Marine Council

Guardian of the marine community for 53 years!



September 17, 2021

Dear Ms. Bague,

On behalf of the Miami Marine Council, we would like to nominate Gerald C. McGinley, Jr. of Admiral Oil as our representative on the Biscayne Bay Watershed Management Advisory Board.

Gerald is a native to Miami and has been involved as both a maritime business owner, as well as, a conservationist for more than 30 years. He has served on the many boards including the Miami Marine Council, the Miami Billfish Tournament, Miami- Dade Coastal Conservation Association of Florida, Florida Sea Grant and many more.

His unique knowledge of Biscayne Bay as a businessman, conservationist, recreational boater, diver and fisherman make him a valuable asset to this advisory board. He is extremely familiar with the mission of the Miami Marine Council and will represent us with a professionalism we have come to expect from him.

We have included a copy of his bio for your review. If you need anything additionally on behalf of the Miami Marine Council, please do not hesitate to let us know.

Warmest regards,

Kitty McGowan, Executive Director
Miami Marine Council



Gerald C McGinley Jr is President of Admiral Oil Inc, providing marine vessel fuel for over 25 years. They deliver high-quality fuels throughout Miami-Dade County and Broward County. Admiral Oil carries and delivers gasoline, ultra-low sulfur diesel, and lubricants specializing in marine vessels, construction sites, generators, and equipment.

A native Miamian, he has been an active member in the Miami-Dade community through participation in many marine charities, conservation efforts and associations.

An active fisherman, he has participated in multiple fishing tournaments and was a Director on the Miami Billfish Tournament raising funds for marine conservation for 30 years.

His conservation efforts also led him to be President of the Miami Dade Chapter of the Coastal Conservation Association of Florida, as well as, an Advisory Board Member of Florida Sea Grant.

For the past four years, he has served on the Board of the Miami Marine Council and is an active member and sponsor advocating on behalf of recreational boaters in Miami-Dade County.

He is an experienced boater, fisherman and diver and is extremely familiar with all aspects of Biscayne Bay.



DADE COUNTY FARM BUREAU

1850 Old Dixie Hwy., Homestead, FL 33033 • Tel. 305-246-5514 • Fax 305-245-9170



August 30, 2021

Irela Bague

Chief Bay Officer

Irela.bague@miamidade.gov

This is to inform you that Dade County Farm Bureau has selected John Alger as our nominee for the newly established Miami-Dade County Biscayne Bay Water Shed Management Advisory Board (BBWMAB).

Attached is the resume for John L. Alger and the minutes of the business meeting approving John L. Alger as our nominee.

Thank You for including Dade County Farm Bureau in this very important initiative.

If I can be of further assistance, please feel free to contact me.

Sincerely

A handwritten signature in black ink, appearing to read "James R. Pierce, Jr", is written over a horizontal line.

James R. Pierce, Jr Executive Director

Dade County Farm Bureau

Cell #305-345-9734

Alger Farms, Inc.

PO Box 1253

950 NW 8th Street

Homestead, Fl. 33030

305-342-2505

Jlalgerfarms@gmail.com

Resume: John Leighton Alger, 8.28.21

Education:

Palmer prep class '77

Cornell University class '81 BS Agricultural economics/ study of plant science

Professional experience:

1969-1981: summers spent working on Alger blueberry farm, West Bridgewater, Massachusetts

1969-1977: spring breaks working pack house sweet corn/potatoes

1974: eight weeks working on Alger seed potato farm Chateaugay, NY

1980: two weeks as Farm Credit Fellow interning in Auburn, Maine

1981-1982: general farm labor

1982 to present: assume responsibilities of Alger Farms sweet corn operation, Homestead, Fl. 800-1400 acres

1982-2004: assume responsibilities of Alger Farms potato operations, Homestead, Fl. 450-650 acres

1982 to present: start, run and now oversee Alger Farms tree farm operation 20-250 acres

1987-2009: Fifty percent owner of Alger Farms Inc.

2010 to present: start and assume responsibilities of Alger Farms snap bean operation 400-750 acres

2009: purchase balance of Alger Farm's interest from Richard T Alger

1990 to present: assume all roles at Alger Farms Inc.

2003 to present: purchase interest and managing partner of SM Jones and Co., Belle Glade, Fla.

2011 to present: oversee and manage through 4th generation of Alger Farm's running day to day operations

Community and professional involvement:

1982-1985: Cornell university ambassador interviewing university applicants

1987-2012: Dade County Farm Bureau board member, Vice President and PAC chairman

2000 to present: Director at Florida Fruit and Vegetable Association

1994-2011 First National Bank of South Florida advisory committee

2011-2014: Director, First National Bank of South Florida, audit committee

1995-2007: Farm Credit of South Florida nominating committee

2007 to present: Director Farm Credit of Florida Bank, audit and credit lending committee

2002-2004: Citizens advisory committee for the agricultural and rural land retention study (ARAS)

1994-1998: Methodist Day School board of directors

1972-2007: Member First United Methodist church Homestead, Fl

2008 to present: Member Christ Fellowship church, Palmetto Bay

2015 to present: Baptist Hospital Founders club

2015 to present: UHealth Champions Club

Personal:

February 22, 1959 to present: alive (☺)

1984 to present: Married to Carla Jean Waldon Alger

Children: Kristy, John, Amanda (Wes) and Lizzie

Grandchildren: Mason, Emily, Wyatt and Carrie.

Dogs: Suzie and Prissey(☺)

Hobbies: Family time, hunting, salt water fishing, health



DADE COUNTY FARM BUREAU

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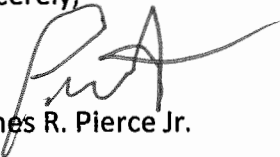


Election August 27, 2021

An official meeting by the Dade County Farm Bureau Board of Directors was duly called by President Sal Finocchiaro on August 27, 2021. For the sole purpose electing our representative for Dade County Farm Bureau, Miami Dade County Biscayne Bay Watershed Management Advisory Board (BBWMAB) ordinance.

Mr. John Alger was duly elected by a majority vote by the Dade County Farm Bureau Board of Directors.

Sincerely,



James R. Pierce Jr.

Executive Director



September 13, 2021

Mayor Daniella Levine Cava
111 NW 1st Street, 29th Floor
Miami, FL 33128-1930

Dear Mayor Levine Cava,

I am pleased to nominate Roberto Torres, Field Representative with The Nature Conservancy (TNC) in Florida, to the Miami-Dade County Biscayne Bay Watershed Management Advisory Board (BBWMAB). Roberto is highly qualified to serve the BBWMAB given his strong background in serving the Governor's Commission for a Sustainable South Florida/Everglades, as a commercial fisher and more recently working for TNC to assist the County's Environmentally Endangered Land Program. I have included Roberto's resume for reference.

The Nature Conservancy looks forward to partnering with Miami-Dade County on Biscayne Bay's recovery, especially on nature-based solutions that can strengthen community resilience to climate change impacts. Please feel free to contact Rod Braun, Climate Program Manager, at 561-351-1210 or rod.braun@tnc.org with any questions.

Sincerely,

Temperince Morgan
Executive Director

cc: Irela Bagué, Chief Bay Officer

Enclosure: Roberto Torres Resume

Roberto Torres

8300 SW 184th Terrace Miami, FL 33157 | 305-338-7370
rtorres@tnc.org | www.nature.org

WORK EXPERIENCE

Field Representative

The Nature Conservancy

August 2001 - Present

- Currently assigned as lead staff assisting Miami-Dade County's Environmentally Endangered Land Program with all aspects of land acquisition within its project areas. Duties include identification of target parcels, contacting landowners, negotiating with willing sellers, preparing maps in GIS, assisting TNC and County staff with contract preparation, and provide any support needed to close on acquisitions.
- Assisted with ecoregional planning and threats assessments for Florida habitats and species at risk
- Assisted with TNC's contribution to Florida's Comprehensive Wildlife Conservation Strategy
- Duties consisted of collection of data on Florida's habitats and species of greatest conservation need, data analysis and compilation into usable formats, selecting target habitats and species, collecting and/or preparing spatial data in GIS format, assessing threats to selected targets, and preparation of reports.
- Originally hired to develop and implement and outreach and education program aimed at raising awareness of the threats from invasive species in South Florida.

Senior Management Analyst

Governor's Commission for a Sustainable South Florida / Everglades

June 1997 - June 2001

- Provided staffing support at Commission meetings
- Aided in development of Commission documents
- Served as liaison with government/community groups
- Served as lead staff for several subcommittees including Sustainable Agriculture and Economy
- Monitored and reported on important South Dade issues such as Modified Waters Deliveries Project, C-111, Homestead Air Reserved Base, and 8.5 Square Mile Area.

Commercial Fisherman

Self Employed

June 1980 - May 1997

- Participated full-time and part-time in multiple fisheries in the waters off Broward, Miami-Dade and Monroe counties, including Swordfish, King and Spanish Mackerel, Snapper-Grouper, Shrimp, Lobster, and Stone Crab

EDUCATIONAL BACKGROUND

University of Miami Rosenstiel School of Marine and Atmospheric Science

Miami, FL

Master's of Art in Marine Biology
1997

University of Miami

Miami, FL

Bachelor's of Art in Marine Affairs
Minor in Business Administration
1995

SKILLS & PROFICIENCIES

- Fluent in Spanish and English
- Proficient in ArcGIS
- Licensed Captain/Master to 50 tons

AFFILIATIONS

Board of Directors

Southern Cross Astronomical Society
2006 to Present

Collaborate with Board of Directors to complete mission of bringing astronomy to the public.

Member

Cutler Bay Parks and Recreation
Advisory Committee
2011-2019

Advise on decisions regarding parks and open spaces in the town of Cutler Bay, Florida.



The Honorable Daniella Levine Cava
Mayor, Miami Dade County
111 NW 1st Street, 29th Floor
Miami, Florida 33128

Re: Biscayne Bay Marine Health Coalition Recommendation to serve on the Biscayne Bay Watershed Management Advisory Board

Dear Mayor Levine Cava:

On behalf of the Biscayne Bay Marine Health Coalition, we are pleased to recommend David Doeblner to serve on the new Biscayne Bay Watershed Management Advisory Board in accordance with the ordinance creating the new board.

David has been an active member of our grass roots Coalition since its earliest days, and played key roles in the Biscayne Bay Marine Health Summits we hosted in 2017 and 2019. He currently serves as an active member of our Steering Committee. His resume is attached.

Mr. Doeblner is a consummate citizen activist who founded and operates a hugely successful non-profit organization called VolunteerCleanup.Org which regularly sponsors and conducts cleanups of marine debris in Biscayne Bay. He is intimately familiar with the issues affecting the decline of the ecological health of the bay, and would bring to the new board a profound understanding of the impact of marine debris in the bay and around the world.

Having called for the establishment of a statutorily organized body to develop a comprehensive restoration plan even before our first summit, we are delighted that our vision is now being brought into reality. Please don't hesitate to call on us for assistance. We are in the earliest states of planning a third summit next Spring and look forward to collaborating with you and your team to expeditiously move forward to restore sustainable health of our treasured Biscayne Bay.

With warm regards,

A handwritten signature in black ink that reads 'Camila Quaresma-Sharp'.

Camila Quaresma-Sharp
Chair, Biscayne Bay Marine Health Steering Committee
Biscayne Bay Marine Health Coalition
camila@sharpdentistry.com



Dave Doeblar

800 West Ave, 212 • Miami Beach, FL 33139 • 954-415-7434 cell

dave.doebler@gmail.com

www.linkedin.com/pub/david-doebler/4/90/1b3/

www.slideshare.net/davedoebler



As a Miami native and environmental activist, I am a strong advocate for reasonable solutions to real problems and see strong social and economic opportunities within environmental protection. I have been working on marine debris issues in Biscayne Bay and Miami Beach since 2012 and have led numerous action-oriented campaigns to address the problem at the source. I believe that we can implement logical and fiscally responsible strategies to create a more sustainable city for residents, visitors, and the business community to enjoy.

Experience

- **Biscayne Bay Marine Health Summit – Steering Committee Member; “State of the Bay” opening presenter 2016-Present**
 - Held 3 summits which led to the creation of the official Miami-Dade County Biscayne Bay Task Force, with a comprehensive plan to restore a healthy Biscayne Bay.
- **Founder – VolunteerCleanup.Org 501(c)3 2014-Present**
 - Website platform that “Connects those leading shoreline cleanups with the volunteers looking for one to join”
 - Over 1,600 cleanups in Miami Dade County, 14,900 registered volunteers, 328,600 pounds of debris
 - Coordinator for annual ‘International Coastal Cleanup Day’ which organizes the Miami-Dade effort with 45+ cleanup events across the county each led by different community organizations, local businesses, and partners
 - Launched ‘Zero Waste Guide’ in partnership with Surfrider Foundation and Debris Free Oceans to engage and assist businesses and large events in reducing single use plastics. Success stories with Wynwood Yard (‘skip the straw’ and reusable cup program), 2018 Art Deco Weekend (‘skip the straw’, reusable cup program, biodegradable food packaging), North Beach Bandshell (managed by The Rhythm Foundation) diversion of landfill waste by 70%
- **Chair, City of Miami Beach Sustainability Committee 2012-2020**
 - Led working group on Solutions to Trash in Miami Beach waterways based on my personal 8-week kayak survey which quantified the issue and determined sources (<https://goo.gl/7dhijk>)
 - Led the effort to enhance storm drain system maintenance from once every 7 years to once every year to reduce street flooding and marine debris input into the bay
 - Led the effort to enhance waterway cleanup and island maintenance frequency and improvements
 - Led legislative effort to eliminate unencapsulated foam docks and boating supplies in private and public waters
 - Led effort to require contractors to stencil their company information on water-based Construction Booms / turbidity curtains to identify the owner of derelict and damaged booms
 - Led effort for storm drain ‘grating’ pilot project to determine viability of solutions to keep trash out of storm drains
 - Led the effort for ‘Can on Every Corner’ campaign to deploy a garbage cans at every street intersection, yielding over 300 new garbage cans strategically placed throughout City of Miami Beach
 - Contributed to the city-wide polystyrene (aka Styrofoam) ban
 - Led effort for ‘Unified Wastehauler Container Messaging’ to clearly differentiate landfill and recycling containers to increase recycling rates and decrease recycling contamination <https://goo.gl/LbbBmi>
- **Personal Activism Accomplishments**
 - Successfully lobbied for significant pollution control improvements to new Storm Water Pump Stations
 - Successfully forced Yachts Miami Beach to switch 6 miles of unencapsulated foam docks that were littering Indian Creek and Biscayne Bay (as well as waterways in 5 other shows across the state) to encapsulated docks
 - Successfully lobbied for formula modification of Miami Beach branded Sun Screen to require the use of Bio-Degradable ‘Reef Safe’ formula to prevent coral damaging chemicals and enhance the image of the cities brand
 - Successfully lobbied for a County-wide ban on unencapsulated foam docks in all Miami-Dade County waterways
 - Supported efforts for City of Coral Gables foam and plastic bag ban, and Miami Dade County foam ban from county property and parks

Dave Doeblar - continued

Awards and Recognitions

- Publicly commended by Commissioner Jerry Libbin for setting the example of good activism and action
- Awarded 'Key to the City of Miami Beach' by Mayor Philip Levine for action in cleaning the waterways and activism for better storm drain maintenance – 2013
- Award for "Excellence in Environmental and Civic Activism" at Miami Beach Community Resiliency Summit - 2015
- New Times Magazine – 2017 "Citizen of the Year"
- Awarded second 'Key to the City of Miami Beach' by Mayor Philip Levine for my success in leading the Sustainability Committee, engaging the community in volunteerism, and action with improving overall sustainability - 2017
- Honored with Resolution naming October 31, 2017 as 'Dave Doeblar Day' for City of Miami Beach

Published Articles

- Miami Herald – "[Miami Beach kayaker is on a mission to clean up city's waterways and help alleviate backed-up drains](#)" March 15, 2014
- Al Jazeera America – "[Miami's plastic vice: Bagging the ban on bag bans](#)" – Jun 30, 2014
- The New Tropic – "[Our Plastic Paradise](#)" – Sep 29, 2015
- Miami New Times – "[Yachts Miami Beach Event Leaves Styrofoam Mess in Water, Environmentalists Say](#)" – Feb 16, 2016
- Broward New Times – "[Palm Beach Boat Show Pollutes Water With Styrofoam](#)" – Mar 25, 2016
- Miami New Times – "[Yachts Miami Beach Show Promises to Stop Using Styrofoam Docks That Leave Mess in Bay](#)" – May, 11 2016
- NBC6 Miami – "[Miami Beach Styrofoam Ban Looks to Protect Ocean and Bay](#)" – Sept 18, 2016
- Miami New Times – "[Video: Styrofoam Docks Pollute Biscayne Bay Near Venetian Causeway, Environmentalists Say](#)" – Oct 3, 2016
- Miami New Times – "[County Removes Styrofoam Docks From Biscayne Bay, Says It Will Change Policies](#)" – Oct 13, 2016
- Miami New Times – "[Miami Beach Might Ban Styrofoam From Its Waterways](#)" – Nov 11, 2016
- Miami New Times – "[Miami's Best Citizen](#)" – June 15, 2017
- WLRN – "[Let's Keep It Beautiful: Biscayne Bay Summit Brings Together Stakeholders To Develop Cleanup Plan](#)" – Jun 2017
- Planted in Miami – "[The Dirty Truth About Trash with Dave Doeblar + Dara Schoenwald](#)" 1 hour podcast – Aug 14, 2017
- Miami New Times – "[There's So Much Trash in Miami Canals, You Can See It From Space](#)" – Oct 20, 2017
- Weather.com – "[Massive Amounts of Trash Trapped In Miami Canal Booms Can Be Seen From Space](#)" – Oct 24, 2017
- Video Interview with The Weather Channel – "[Trash Clogs South Florida Waterways](#)" – Oct 30, 2017
- Miami New Times – "[Sprinkles at Museum of Ice Cream Deemed 'Environmental Hazard' by City of Miami Beach](#)" – Jan 2018

Professional Experience

2006 – Present	Mission Critical Systems, Director of Sales Cyber Security provider for Enterprise corporations, critical infrastructure, healthcare, and governments
1994 – 2006	Aladdin Knowledge Systems, Regional Sales Manager Anti-Virus and 2 factor authentication manufacturer for Medium and Enterprise Companies
1990 – 1994	Florida International University BA Business Management and BA International Business



EXHIBIT 12

MIAMI
CHAPTER

Florida Engineering Society Miami Chapter

September 17, 2021

FES MIAMI CHAPTER
Board of Directors
2020-2021

Chapter Officers

Joanne Prince, P.E., ENV SP
President

Jose Acosta, P.E.
President-Elect

Shari Ramirez, P.E., ENV SP
Vice-President

Fernando Gomez, P.E., PSM
Treasurer

Luiz Felipe Lopes
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Tejsingh Rana, P.E.
Publications Director

Rudy Ortiz, P.E.
State Director

Juan Prieto, P.E.
Past-President

Chapter Directors

Sybille Bayard, P.E.

Elia Nuñez, P.E.

Andrew Pierce, P.E.

Dave Clarke, P.E.

Pedro Zuloaga, P.E.

Ms. Irela Bague
Chief Bay Officer
Miami-Dade County
111 NW 1st Street
Miami, FL 33128

**Re: Appointment of the Florida Engineering Society – Miami Chapter
Representative to the Biscayne Bay Watershed Management Advisory Board**

Dear Ms. Bague:

Miami-Dade County on July 20, 2021, passed Ordinance No. 21-72 creating the Biscayne Bay Watershed Management Advisory Board (Board) to serve and advise the Board of County Commissioners and the County Mayor on a variety of Biscayne Bay-related issues, and to make recommendations to develop a new Miami-Dade County Biscayne Bay Watershed Management plan. The Florida Engineering Society (Miami Chapter) has been assigned a seat for a member to serve on the recently created Board.

Between September 3 and September 13, 2021, the FES Miami Chapter conducted a search to identify a suitable representative. Upon careful review of the applications received and based on the qualifications criteria, the following candidate was selected and confirmed by the FES Board of Directors during the September 15, 2021 board meeting.

- Mr. Jannek Cederberg, P.E.

I have attached Mr. Cederberg's application and resume for your reference. The meeting minutes will be forwarded once they are approved at the October board of directors meeting, which is scheduled for the 13th.

The FES Miami Chapter would like to thank the Biscayne Bay Office and Miami Dade County for allowing us to participate in such an important initiative.

Please let me know of any questions you may have and, or any additional information you may need.

Sincerely,

Joanne Prince, P.E.
President- FES Miami Chapter

Enclosures (2)

September 12, 2021

Florida Engineering Society

Sent via email: past.president@fesmiami.org
president@fesmiami.org
president.elect@fesmiami.org

RE: FES Representative

To the Biscayne Bay Watershed Management Advisory Board

Dear FES Voting Members:

As a Miami-Dade County resident for almost 20 years, I am thrilled to submit this application to serve as the FES Representative to the Biscayne Watershed Management Advisory Board. I am a licensed Professional Engineering in Florida and cofounder of Cummins Cederberg, Inc., which is Miami-Dade County's largest coastal engineering firm with 5 offices throughout the state. I have spent most of my professional career in Miami working on various types of coastal and marine engineering projects. These projects include complex analyses and numerical modeling of the coastal dynamics in Biscayne Bay as well as design of waterfront infrastructure. Analyses include modeling of tidal dynamics, wave propagation and sediment transport as well as water exchange (flushing) of various locations relative to potential pollutants, e.g., from stormwater. As part of the design, I have processed numerous environmental permits through Miami-Dade RER, Florida Department of Environmental Protection (DEP) and US Army Corps Engineers (USACE). I have been active in designing and promoting nature-based solutions for shoreline stabilization and environmental restoration in suitable areas along the shoreline of Biscayne Bay as well as leading sea level rise adaptation plans for seven (7) of Miami-Dade County's largest waterfront parks (e.g., Haulover Park, Crandon Park, Matheson Hammock Park, etc.) fronting Biscayne Bay. As a resident and professional, I truly have a vested interest in the health of Biscayne Bay. Should you have any questions, please do not hesitate to contact me at 305-741-6155 or jcederberg@CumminsCederberg.com.

Sincerely,

CUMMINS CEDERBERG, INC.



Jannek Cederberg, M. Sc., PE
Principal

Name of Applicant: Jannek Cederberg, M. Sc., PE

Question	Yes	No
Are you an FES Member and are your dues current?	✓	
Are you a Resident of Miami Dade County?	✓	
Are you a Professional Engineer licensed in the State of Florida?	✓	
Are you a Coastal Engineer familiar with Biscayne Bay and Miami Dade County?	✓	
Do you have experience with Stormwater discharges and nutrient levels?	✓	
Do you have experience with Seawalls? (If so, pls show in resume)	✓	
Do you have experience with Shorelines? (If so, pls show in resume)	✓	
Do you have experience working with FDEP? (If so, pls show in resume)	✓	
FES Representative will act as unpaid public servant to the County. Are you willing to take that responsibility? (please refer to attached opinion from the Miami Dade County Commission on Ethics regarding conflicts of interest)	✓	
The member commitment is for 4 years. Approximately 4 meetings per year. Are you able to commit to this dedication?	✓	



Jannek Cederberg, PE

Principal Engineer

As Principal Engineer, Jannek Cederberg is responsible for all engineering production including scheduling, resource allocation, and quality management. He is formally trained as a coastal and marine engineer from the Technical University of Denmark. He has more than twenty years of experience in coastal and marine engineering. Jannek is a registered professional Engineer in the United States, and he has completed engineering analyses, designs and permitting for a variety of shore protection, beach nourishment, river, cruise ship, marina and waterfront projects throughout Florida, the Caribbean and Central America.

YEARS OF EXPERIENCE

- 20

EDUCATION

- M.Sc. Coastal Engineering, Technical University of Denmark

LICENSES

- Florida PE No. 69839

PROFESSIONAL AFFILIATIONS

- Permanent International Association of Navigation Congress (PIANC)
- Member of PIANC Working group Design and Operational Guidelines for "Superyacht Facilities"
- Danish Society of Hydraulic Engineering
- Florida Association of Environmental Professionals
- Port Everglades Association
- Florida Engineering Society Miami Chapter

RELEVANT PROJECT EXPERIENCE

Waterfront Adaptation at Jose Marti Park, City of Miami, Florida. The adaptive redesign of this 13-acre, multi-use recreational space on the Miami River explores ways in which the park can minimize tidal flood impacts to the surrounding neighborhood, adapt to sea-level rise, and enhance waterfront access to residents. Given its physically and socially vulnerable location between the River and Little Havana, a low-lying, low-income Hispanic community, a participatory design process emphasizing community goals is critical for success. The Jose Marti Park Redesign will serve as a model for resilient waterfront parks that can adapt to current and future flood risks associated with Climate Change and Sea-Level Rise. Jannek is leading the inundation modeling, and waterfront engineering design, while the Cummins Cederberg team is also leading the environmental permitting, coordination with FIND, and grant management.

Matheson Hammock Park Sea Level Rise Flood Mitigation Study, Coral Gables, Florida. Served as Senior Project Manager to prepare a Sea Level Rise Flood Mitigation Study to analyze the impacts of sea level rise on the park's infrastructure and operations, as well as develop flood mitigation concepts for planning and budgeting. Compiled existing survey data within the Park and LiDAR data for the area to prepare a general topographic map for the Park; assessed the condition of existing infrastructure to understand conditions, remaining service life and adaption feasibility relative to sea level rise; performed an assessment of the environmental conditions on site to generally understand and document current conditions, as it would relate to environmental permitting; conducted an engineering analysis to provide extreme tide water levels; developed flood mitigation concepts and preliminary cost estimates; coordinated stakeholder involvement; developed an implementation strategy; and presented the results and findings into a report.

Crandon Park Marina, Key Biscayne, Florida. Field investigations including bathymetric surveying, tide and current measurements, marine resource survey, and sediment sampling. Tidal hydrodynamic modeling along with wave and sediment transport analyses conducted to determine source and magnitude of marina sedimentation problem. Alternatives assessment of potential coastal structures to inhibit sedimentation and need for periodic dredging.

Town of Bay Harbor Islands Resiliency and Seawall Condition Assessment, Bay Harbor Islands, Florida. Shoreline assessment and island resiliency study for the entire Town of Bay Harbor Islands. The shoreline assessment included 20,000 feet of shoreline, including seawalls, rock revetment, residential areas, bridges, and the causeway that connects the town to the mainland. LiDAR survey data was processed to provide 3D elevation map, and an analysis of the water levels to predict sea level rise, along with tidal data analysis.

Vizcaya Museum & Gardens, Miami, Florida. Site plan for storm surge protection wall, environmental wetland restoration and public space. Grant application, regulatory permitting, and engineering design for marine works. Wall design for reinforced concrete able to withstand storm surge and high wave loads associated with tropical storm event

Regional Sediment Transport Study, Miami, Florida. Shoreline and sediment transport studies performed on the coast of Miami-Dade County between Bakers Haulover Inlet and Government Cut. Numerical modeling conducted utilizing Danish Hydraulics Institute (DHI) MIKE 21 and LITPACK software to simulate waves and nearshore coastal processes.

Dade Boulevard Seawall Replacement, Miami Beach, Florida. Marine engineering and construction drawings for 2,670 linear feet of seawall replacement with steel sheet pile and reinforced concrete cap. Structural design of barrier wall connection to cap, and utility crossover detail for FPL 69KV oil-filled transmission line. Pre-construction seawall inspection of opposite shoreline, and vibration monitoring during pile driving activity.

Winston Tower 700, Sunny Isles Beach, Florida. Construction of 240 feet of seawall and repair of 800 feet seawall for shoreline stabilization at large condominium. Above/below water condition inspection, seawall replacement and repair design, permit application and processing (DERM/USACE/DEP), construction administration.

One Miami Condominium, Miami, Florida. Above and below water structural inspection of more than 900 feet of bulkhead consisting of steel sheet piles, reinforced concrete cap, and concrete mat scour protection. Prepared engineering report to document investigation, including specific deficiencies, conditions rating and cost estimate for recommended repairs.

FDEP Bahia Honda Road Improvements, Big Pine Key, Florida. Coastal engineering consulting services for resilient road improvements at Bahia Honda State Park. Improvements include the existing 0.2-mile road to employee housing on the Gul side of Big Pine Key by raising the elevation of the unpaved road to mitigate the impacts of sea level rise and reduce the frequency of flooding events.

FDEP Pennekamp Dock Replacement, Key Largo, Florida. Marine engineering and environmental consulting services for partial dock replacement and boat ramp repairs at John Pennekamp Coral Reef State Park. The improvements consist of replacement of the dock structure fronting the Pennekamp Dive Shop and repairs to the boat ramp and associated staging docks. The new dock structure will include replacement of approximately 2,600 sq. ft. of wood dock framing and associated timber piles. The improvements to the boat ramp and docks will consist of repairs to the ramp surface and isolated framing repairs to the staging docks, as well as concrete spall and erosion repair to the upper ribbed portion of the boat ramp.

FDEP Florida Bay/Gulf of Mexico Tidal Connections, Long Point Key, Florida. Engineering and environmental consulting services for the tidal connection's restoration project on either side of Long Point Key. These historical tidal connections were filled during the construction of Flagler's railroad and are located of FDEP and FDOT property.

FDEP Living Shoreline Database, Statewide, Florida. Providing consulting services for the establishment of a Living Shoreline Database cataloging living shoreline efforts through Florida. Details will be recorded for a comprehensive database that coordinates with the USACE and FWX for federal permitting information. This databased is hosted on a public website where living shoreline information can be easily accessed.

Costa Brava Marina, Miami Beach, Florida. Costa Brava Condominium Association. Environmental permitting for reconstruction of a 30-slip marina in Biscayne Bay through local, State, and Federal Agencies Such as Miami-Dade County Regulatory, Economical Resources Department (DERM), Florida, Department of Environmental Protection (FDEP) and US Army Corps of Engineers (USACE). Engineering support through construction bid process, including bid evaluation, contractor selection and construction administration.

Vertical Yacht Club at Marina Mile, Fort Lauderdale, Florida. Prepared design of bulkhead and docks for boats up to 70 feet for the redevelopment of the Vertical Yacht Club marina facility located on the New River in Fort Lauderdale. Prepared engineering studies and communicated with environmental agencies relative to project approval. Conducted a site-specific flushing analysis to assess potential impacts of dredging on water circulation and quality.

Sunset Harbour Yacht Club, Miami Beach, Florida. The project included repairs of concrete slabs, caps and piles for 125-slip marina located in Biscayne Bay Aquatic Preserve, which has strict environmental guidelines. A marine resource assessment was conducted to assess potential impacts. Pre-application meetings were conducted with environmental agencies to understand primary concerns and potential impacts on schedule. Environmental permit applications were prepared and processed with DERM, FDEP, and USACE. Building permit was obtained with City of Miami Beach. Detailed repair drawings were prepared with specific criteria to minimize impacts to marine resources and water quality.

Coco Plum Beach Erosion Study and Beach Design, Marathon, Florida. Prepared an erosion study for the City of Marathon in Monroe County. Design and permitting of truck haul project for placement of sand above the mean high-water line. Coordinate with environmental agencies for approval of design and sand source.

FDOT Manatee Bridge Repair, Pinellas County. Review of hurricane and storm surge analysis completed to determine peak water level and extreme wave conditions for proposed bridge repair project. Comparison of calculated values with historical observations. Evaluated the potential impacts of dredging on wave conditions.

North District Wastewater Treatment Plant, Miami, Florida. Assessment of coastal resiliency of important infrastructure components relative to flooding and sea level rise. Analyzed storm surge impacts from historical hurricane events as well as assessed potential and magnitude of future impacts. Evaluated risk and probability of various events.

Miami Beach Emergency Truck Haul, Miami Beach, Florida. Performed surveying, data collection, volumetric and equilibrium toe of fill analysis based on available historical beach profiles for four segments of beach. This information was utilized in designing the expansion of beach segments for maintenance nourishment

Aquazul Condominium Risk Mapping, Lauderdale-by-the-Sea, Florida. Longshore and cross-shore erosion assessment based on existing beach conditions and potential 100-year storm event. Evaluation of dune volume and consistency over 10,000 feet of shoreline north and south of subject property. Numerical modeling of wave propagation, storm surge and potential wave run up impacts. Revised flood risk mapping, processing, and approval through FEMA.

Aquazul Condominium Dune Project, Lauderdale-by-the-Sea, Florida. Design of dune project based on FDEP approved sand hauled to the site by trucks in a densely developed area. Coordination of access and placement with contractor and client. Processed and obtained FDEP CCCL permit. Vegetation plan developed for further stabilizing dune.

Bayshore Landing Marina, Coconut Grove, Florida. Above and below water structural inspection of concrete and timber dock structures, as well as utilities of a 100+ slip marina. Compiled inventory of structure elements (i.e. caps, deck slabs, piles, etc.) with condition rating and repair recommendation. Prepared engineering report to document investigation along with cost estimate for recommended repairs.

Rybovich Spencer Boatyard, West Palm Beach, Florida. Coastal design criteria for fixed and floating dock structures, including an integrated wave attenuator. Numerical wave and hydrodynamic modeling. Evaluation of flushing characteristics and water quality for proposed marina design. Simulation of current velocities at the entrance and evaluate navigation.

Hillsboro Club Dune Project, Hillsboro, Florida. Design and permitting of dune projects for almost 2,000 cy along eroding shoreline. Sand from nearby dredging projects was used based on discussions with and approval from FDEP. Coordinated geotechnical analyses, stock piling and placement.

Fort Zachary Taylor State Park Truck Haul Beach Project, Key West, Florida. Truck haul beach project along heavily eroded area. Prepared beach design and coordinated with environmental agencies. The project was unique as it was one of Florida's first larger truck haul beach project with sand from inland mines, thus required extensive discussions and analyses of sand source. Construction administration was provided as well.

Hollywood/Hallandale Beach Restoration, Hollywood, Florida. Coastal engineering and environmental permit processing for a 400,000 cubic yard truck haul beach fill project. Engineering design of beach fill template. Cross-shore sediment transport modeling. Geotechnical investigations. Coastal engineering analysis including extreme waves and storm surge. (

FDOT A1A Vulnerability Study and Roadway Stabilization Design, Indian River County. Scour and wave load analysis for proposed seawall from almost 2 miles of shoreline that experienced significant erosion during Hurricane Matthew. A hydrodynamic MIKE21 model was established to simulate tidal and storm surge flow. The model was calibrated relative to site specific current measurements obtained. A MIKE21 wave model was developed to simulate the wave conditions during extreme events. The scour associated with a 100-year event was determined and proper scour protection was designed. Wave loads were calculated for the proposed seawall for extreme event under varying conditions and water levels.

32nd Street Morphological Change Study, Florida. GIS analysis of morphological changes related to the construction of three shoreline attached breakwaters at the 32nd street erosional hotspot. GIS database was established, and the morphological changes were reviewed relative to coastal processes. Based on the study, recommendations were provided for short- and long-term beach management.

Sun Power Diesel Marina Facility, Broward County, Florida. Dredging design for the proposed marina basin as well as dock and bulkhead design to support a 300-slip dry storage facility. Current and tide measurements were obtained to calibrate a numerical hydrodynamic model, which was then utilized to evaluate the flushing time for the proposed dredged conditions.

FDOT I-275 Seawall Repair, Pinellas County, Florida. Review of seawall design and scour protection for a proposed seawall repair and replacement project. Review of storm conditions as well as soil and wave loadings.

INTERNATIONAL PROJECT EXPERIENCE

MSC Cruises Ocean Cay Marine Reserve, Bimini Islands, The Bahamas. Topographic and bathymetric surveying rectified aerial photography and mapping for proposed out-island cruise destination. Environmental resource surveys and preparation of Environmental Impact Assessment (EIA) for proposed land and marine works. Detailed coastal engineering analysis, including numerical modeling of hurricane impacts. Engineering design of beach improvements and shoreline stabilization of reshaped island perimeter. Processing of EIA through government regulatory agencies.

CocoCay, Berry Islands, The Bahamas. Prepared a coastal engineering analysis for installation of over-water platforms and swimming area along the southern shoreline of CocoCay. An analysis of the coastal processes influencing the stability and potential infilling of the beach profile created for the swimming area was performed. A numerical model was developed to simulate the nearshore wave conditions affecting the swimming area, and a simulation for the created beach profile was conducted to evaluate potential changes within a 5-year period.

Great Stirrup Cay Development, Berry Islands, The Bahamas. Site investigations and planning support for coastal and marine improvements to cruise ship private island destination improvements to accommodate 5,000 passenger cruise ships. Numerical modeling of hurricanes and storm surge, evaluation of resiliency and proposed coastal protection measures. Engineering design of beach expansion using coastal structures, and reinforcement of existing iron-shore.

Port Development Feasibility, Panama. Conducted feasibility study for the development of a port facility, including the potential for cruise operations and ship repair facility. Evaluated coastal design criteria, including wind, waves, water levels and currents. Reviewed existing water depths, navigational requirements and potential dredging. Prepared conceptual layouts of proposed facilities, and cost estimates for construction and operational equipment.

Port of Roatan Cruise Terminal, Roatan, Honduras. Design of reclamation and shore protection for cruise terminal expansion. Numerical modeling of hurricane, storm surge, and wave propagation. Site inspections and surveying.

Sporting Club at Ambergris Cay, Turks & Caicos. Engineering design of coastal works including entrance channel, dredging, 150-slip marina, and RoRo platform for shipments to remote island. Performed hydrodynamic numerical modeling of flushing characteristics for a proposed marina basin.

Cap Cana Marine Works, Punta Cana, Dominican Republic. Coastal engineering design for the dredging of 1.25-mile canal to create basin for 500+ slip marina. Design of shoreline stabilization, beaches, entrance channel jetties, numerical modeling of coastal processes and hydrographic surveying. Water circulation analysis of marina and canal layout.

Cap Juluca Beach Restoration, Anguilla. Evaluate sediment transport and storm impacts. Perform hydrographic and beach profile surveys. Subsurface investigations of nearshore borrow area. Design of dredge plan and beach fill template. Provided construction administration for emergency beach restoration.

Sediment Study, Turks & Caicos. Field investigations to collect sediment core samples from the seabed in multiple locations. Collected samples were tested for grain size and composition. Conducted coastal study to evaluate wind, wave and tidal forcing mechanisms relating to sediment transport.

Starfish Resort, Panama. Extreme offshore wind and wave conditions were determined along with analysis of coastal processes at the project site. Conducted numerical modeling of wave propagation and localized currents. Review of masterplan and design of shoreline stabilization.

Goldeneye, Jamaica. Hydrographic survey and tidal study of Oracabessa Bay for proposed coastal development. Statistical analysis of historical wave data from satellite measurements to develop deep-water wave conditions. Wave and hydrodynamic numerical modeling. Design of coastal structures and piers.

Troumassee Development, St. Lucia, British West Indies. Field investigations, surveying and coastal engineering for 1,200-acre development on the southeast coast of St. Lucia. Numerical modeling of tidal hydraulics for the proposed lagoon and river discharge analysis for flood study. Hurricane numerical modeling for storm surge and coastal development planning. Conducted a feasibility study of the coastal processes with regards to the proposed Troumassee Development project located on the island of St. Lucia, BWI, as well as storm surge analysis, flushing analysis, river and coastal stabilization design and a project comparability study. The 1,200-acre proposed development includes a hotel, golf course, in-water bungalows, lagoon and beaches.

Pelican Island Development Project, Pelican Island, Antigua. Wave and storm surge analysis, modeling, and sediment transport for \$100M development project. Engineering design of beach expansion and shoreline stabilization structures.

South Cay Development, South Cat Cay, The Bahamas. Design of land reclamation, beach improvements and 150-slip marina for 80-acre private island development. Extreme wind and wave conditions were determined along with preparation of a preliminary flood map.

Starfish Resort, Panama. Extreme offshore wind and wave conditions were determined along with analysis of coastal processes at the project site. Conducted numerical modeling of wave propagation and localized currents. Review of masterplan and design of shoreline stabilization.

Papagayo Mega-Yacht Marina, Costa Rica. Inspection of 180-slip marina with yachts up to 240 feet following passing Hurricane Nate. The marina suffered significant damage, as large waves were generated causing failure of the floating breakwater leaving the marina exposed. The marina is in deeper water requiring a specialized anchoring system. The anchoring system was inspected relative to hurricane damage and normal wear. Connections between docks were inspected and components were assessed for potential reuse.

Leeward Mega-Yacht Marina, Turks & Caicos. Inspection of mega-yacht marina following impacts from Hurricane Maria. The marina is located in 25 feet of water within an existing tidal channel connected ocean side to the shallower sand banks resulting in extreme currents. An inspection was conducted of all floating docks and pile to understand if components had been overstressed during the extreme conditions.

El Portillo Development Project, Samana, Dominican Republic. Site investigations and feasibility study of creating lagoon feature from existing stream flow within Project site. Obtained flow measurements and performed hydrodynamic modeling of lagoon layout alternatives. Lagoon design construction drawings of feasible alternative. Construction administration.



MEMORANDUM

(Revised)

TO: Honorable Chairman Jose "Pepe" Diaz
and Members, Board of County Commissioners

DATE: October 19, 2021

FROM: 
Gen Bonzon-Keenan
County Attorney

SUBJECT: Agenda Item No. 8(L)(1)

Please note any items checked.

- ☐ "3-Day Rule" for committees applicable if raised
- ☐ 6 weeks required between first reading and public hearing
- ☐ 4 weeks notification to municipal officials required prior to public hearing
- ☐ Decreases revenues or increases expenditures without balancing budget
- ☐ Budget required
- ☐ Statement of fiscal impact required
- ☐ Statement of social equity required
- ☐ Ordinance creating a new board requires detailed County Mayor's report for public hearing
- ☒ No committee review
- ☒ Applicable legislation requires more than a majority vote (i.e., 2/3's present ____, 2/3 membership ☒, 3/5's ____, unanimous ____, CDMP 7 vote requirement per 2-116.1(3)(h) or (4)(c) ____, CDMP 2/3 vote requirement per 2-116.1(3)(h) or (4)(c) ____, or CDMP 9 vote requirement per 2-116.1(4)(c)(2) ____ to approve
- ☐ Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required

Approved Daniella Levine Caro Mayor
Veto _____
Override _____

Agenda Item No. 8(L)(1)
10-19-21

RESOLUTION NO. R-992-21

RESOLUTION WAIVING, BY A TWO-THIRDS VOTE OF THE FULL MEMBERSHIP OF THE BOARD OF COUNTY COMMISSIONERS, THE RESIDENT ELECTOR REQUIREMENT OF SECTION 2-11.38 OF THE CODE OF MIAMI-DADE COUNTY AND APPOINTING MEMBERS TO THE MIAMI-DADE COUNTY WATERSHED MANAGEMENT ADVISORY BOARD; APPOINTING BRETT BIBEAU; DR. TODD CROWL; DR. DIEGO LIRMAN; DR. JOAN BOWDER; DR. ERIK STABENAU; JULISSA KEPNER; T. SPENCER CROWLEY III; JANNEK CEDERBERG, P.E.; GERALD C. MCGINLEY, JR.; JOHN L. ALGER; ROBERTO TORRES; AND DAVID DOEBLER, EACH FOR A FOUR-YEAR TERM

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

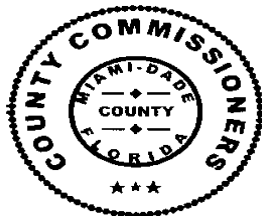
NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that: that this Board, by a two-thirds vote of its membership, hereby waives the resident elector requirement of section 2-11.38 of the Code of Miami-Dade County and appoints the following 12 individuals to the Miami-Dade County Biscayne Bay Watershed Management Advisory Board: (1) Brett Bibeau; (2) Dr. Todd Crowl; (3) Dr. Diego Lirman; (4) Dr. Joan Browder; (5) Dr. Erik Stabenau; (6) Julissa Kepner; (7) T. Spencer Crowley, III; (8) Jannek Cederberg, P.E.; (9) Gerald C. McGinley, Jr.; (10) John L. Alger; (11) Roberto Torres; and (12) David Doeblor. Each of the above-mentioned individuals has been recommended by a particular organization or entity, as outlined in the County Mayor's memorandum, which has been incorporated herein by reference. Each of the above-mentioned

individuals is hereby appointed to the particular seat on the Miami-Dade County Biscayne Bay Watershed Management Advisory Board for said respective organization or entity, to serve a four-year term beginning with the effective date of this resolution. ,

The foregoing resolution was offered by Commissioner **Rebeca Sosa** who moved its adoption. The motion was seconded by Commissioner **Sally A. Heyman** and upon being put to a vote, the vote was as follows:

Jose "Pepe" Diaz, Chairman	aye		
Oliver G. Gilbert, III, Vice-Chairman	aye		
Sen. René García	aye	Keon Hardemon	aye
Sally A. Heyman	aye	Danielle Cohen Higgins	aye
Eileen Higgins	aye	Joe A. Martinez	aye
Kionne L. McGhee	aye	Jean Monestime	aye
Raquel A. Regalado	aye	Rebeca Sosa	aye
Sen. Javier D. Souto	aye		

The Chairperson thereupon declared this resolution duly passed and adopted this 19th day of October, 2021. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this resolution and the filing of this approval with the Clerk of the Board.



MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: **Melissa Adames**
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Abbie Schwaderer-Raurell