

MEMORANDUM

Agenda Item No. 9(A)(2)

TO: Honorable Chairman Anthony Rodriguez
and Members, Board of County Commissioners

DATE: March 3, 2026

FROM: Geri Bonzon-Keenan
County Attorney

SUBJECT: Resolution ratifying, pursuant to sections 2-9 and 2-10 of the County Code, the actions of the County Mayor in executing and approving an Interlocal Agreement between Florida International University and Miami-Dade County for research, analysis, and other services for the Department of Environmental Resources Management (“Agreement”) and approving five-year extension of Agreement, for a total amount of up to \$5,450,000.00; authorizing the County Mayor to execute documentation reasonably necessary to reflect County’s approval of the extension of time to the Agreement; and authorizing the County Mayor to exercise any and all provisions of the Agreement, including the termination provisions contained therein

The accompanying resolution was prepared by the Department of Environmental Resources Management and placed on the agenda at the request of Prime Sponsor Commissioner Micky Steinberg.



Geri Bonzon-Keenan
County Attorney

GBK/wm


MDC001

Memorandum



Date: March 3, 2026

To: Honorable Chairman Anthony Rodriguez
and Members, Board of County Commissioners

From: Daniella Levine Cava
Mayor 

Subject: Resolution Ratifying and Approving an Interlocal Agreement Between Florida International University and Miami-Dade County for Research, Analysis, and Other Services for the Department of Environmental Resources Management

Executive Summary

This item seeks ratification from the Board of County Commissioners (Board) of the County Mayor or County Mayor's designee's action in executing and approving a one-year Interlocal Agreement (Agreement) between Florida International University (FIU) and Miami-Dade County (County) through which FIU will provide research, analysis, and other services to characterize and address water quality issues as well as support ecosystem restoration initiatives, and further approval of the Board of the five-year extension of the Agreement in the amount not to exceed \$5,450,000.00. The Agreement facilitates the successful completion of grant deliverables under Florida Department of Environmental Protection (DEP) Grant Agreement No. C2001, specifically the Task 3 Grant Work Plan (GWP), as well as restoration initiatives for the Department of Environmental Resources Management (DERM). FIU is uniquely positioned to support DERM in these efforts as South Florida's only public research university with certified labs and technical expertise in marine pollution and coastal wetlands and estuaries.

A healthy Biscayne Bay is crucial to the region's ecology and economy, improving quality of life for all who live in and visit Miami-Dade. As reflected in the Biscayne Bay Economic Study Update Report in 2023, the overall contributions of Biscayne Bay-related activities amount to a substantial \$64 billion in economic output, \$24 billion in income, 448,000 jobs, and \$4 billion in tax revenue for our county. This represents 9% of the economy of southeast Florida and 3% of the State's economy.

More than 70% of Biscayne Bay is impaired under the Clean Water Act due to nutrient pollution, prompting DERM to advance policies and projects that reduce contaminants and restore Bay habitats. To support this work, DERM applies annually to DEP's Biscayne Bay Water Quality Improvement Grant program, established in 2020 to fund pollution-reduction efforts. To date, DERM has been awarded over \$57 million through this reimbursement-based program.

Pursuant to Sections 2-9 and 2-10 of the Code of Miami-Dade County (Code), this Agreement (Exhibit 1) is subject to ratification by the Board. This item would also approve a five-year extension of the Agreement and authorize execution by the County Mayor or Mayor's designee of any documentation reasonably necessary to reflect the County's approval of said extension for the provision of the same services.

Recommendation

It is recommended that the Board approve the attached resolution that provides for the following:

1. Ratifies the actions of the County Mayor or County Mayor's designee in executing an Agreement with FIU authorized pursuant to Sections 2-9 and 2-10 of the County Code, to provide research,

analysis, and other services to characterize and address water quality issues and habitat restoration efforts in Biscayne Bay for a one-year term.

2. Approves a five-year extension of time to the Agreement, for a total term of up to 6 years, for the provision of the same services in an amount not to exceed \$5,450,000.00.
3. Authorizes the County Mayor or County Mayor's designee to execute any documentation reasonably necessary to reflect the County's approval of said extension of time.

Scope

This resolution approving this Agreement between the County and FIU will have a countywide impact.

Delegation of Authority

The accompanying resolution will authorize the County Mayor or County Mayor's designee to execute any documentation reasonably necessary to reflect the County's approval of the extension of time to the Agreement and exercise all provisions of the Agreement contained therein including termination.

Fiscal Impact/Funding Source

The total of all payments to FIU pursuant to this Agreement shall not exceed \$5,450,000.00 over the course of the Agreement's term. Of this amount, \$5,200,000.00 is funded through a previously approved and executed DEP grant which does not require matching funds and will be used to support Task 3 GWP deliverables. The remaining \$250,000.00 is allocated from the Miami-Dade Rescue Fund to support ecosystem assessments unrelated to grant deliverables. The funding for the \$250,000.00 ecosystem restoration projects are funded by an allocation reflected in the FY 2023-24 Adopted Budget Volume 1 – Page 63 “Tree Canopy Grant Match \$2.5M” and Page 466 “Appendix AB-Miami-Dade Rescue Plan”. These unspent funds were carried over into FY 2025-26. Payments made by the County to FIU pursuant to this Agreement contained in this item will be advanced out of the County's General Fund while the County is awaiting reimbursement from DEP.

Track Record/Monitor

The Division Chief of the Department of Environmental Resources Management, Division of Water Resources Coordination, Pamela Sweeney, will manage this Agreement on behalf of the County.

Background

On January 25, 2007, the Board adopted Resolution No. R-69-07 directing staff to explore opportunities to enter into interlocal agreements with local universities for services required by the County. The duties and powers of the Director of DERM, per Sec. 24-7(11), shall include enlisting and encouraging the assistance of scientific and educational organizations to assist in achieving DERM's goals. In February 2019, the Board adopted Resolution No. R-165-19 creating the Biscayne Bay Task Force to advise the Board and County Mayor on issues related to Biscayne Bay. Following the first major fish kill in Biscayne Bay in 2020, the Board adopted Resolution No. R-893-20, declaring a Biscayne Bay emergency, and establishing Board policy to prioritize and accelerate actions by the County to address issues related to the health and well-being of Biscayne Bay.

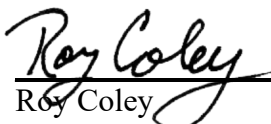
Additionally, on May 4, 2021, the Board adopted Resolution No. R-472-21 directing the County Mayor or County Mayor's designee to develop proactive, long-term measures that may help prevent fish kills, oxygen

loss, and algal blooms in Biscayne Bay, develop an action plan to mitigate the negative consequences of any such future impacts and collaborate with municipalities and universities.

On June 15, 2021, the Board adopted Resolution No. R-611-21 approving Grant Agreement No. C2001 between the County and DEP for the Biscayne Bay Water Quality Characterization and Pollution Reduction Project. This multi-million, multi-year award is managed by DERM and requires coordination across multiple County departments and divisions comprised of projects to address water quality in Biscayne Bay, test innovative technologies for stormwater and wastewater, convert septic to sewer, and facilitate biological restoration. Through this grant, DERM identified the opportunity to officially partner with FIU to support, enhance, and facilitate the County's efforts to restore Biscayne Bay and accelerate the transfer from research and knowledge gained to update policies and practices, as well as promote collaboration between researchers and the County's scientists, natural resource managers, and engineers. This Agreement allows the County to formally work with FIU, fulfilling DERM's directive to enlist and encourage the assistance of scientific and educational organizations in achieving its goals. FIU was identified as highly qualified and prepared to meet the County's research and analysis needs. Specifically, FIU's Institute of Environment will be supporting the County in overall management of Task 3-related responsibilities. FIU's Center for Aquatic Chemistry and Ecotoxicology (CACHÉ) Nutrient Analysis Core Facility is a state-of-the-art, NELAC-accredited nutrient analysis laboratory that will support the County's water quality characterization needs and can meet nutrient detection levels required of the Task 3 GWP. FIU staff and students, along with their respective expertise and laboratory capabilities, will assist the County in overall management of responsibilities and deliverables in the Task 3 GWP. In addition, FIU will assist the County in conducting ecosystem assessments within the Biscayne Bay watershed that will include assessing vegetative coverage and assessments of environmental lands.

Approval of the Agreement enables FIU's collaboration with DERM for research, analysis, and other services including specialized analytical services; water quality monitoring and assessment; ecosystem assessment; data management, visualization, and prediction; surface water, groundwater, stormwater, and wastewater characterization; and event-based sampling and analysis. Attachment A to the Agreement includes a description of the programs and divisions within the FIU Institute of Environment accessible through this Agreement. Attachment B to this Agreement includes a description of both the types of projects as well as types of positions that may work on the project tasks. Services provided by FIU will be managed through the issuance of individual task authorizations. The DERM Director or designee shall confer with FIU to agree upon scope, time for completion, and fee for services rendered pursuant to task orders, subject to the conditions of this Agreement before any task authorization is issued. Additionally, the County agrees to furnish FIU with any plans or data available within the County's files that the County wishes FIU to consider, pertaining to work performed under this Agreement. This Agreement will also result in the promotion of academic opportunities for students, faculty, and staff serving as a resource to perform research of significance to the South Florida region.

Attachment



Roy Coley
Chief Utilities and Regulatory Services Officer

**INTERLOCAL AGREEMENT
BETWEEN MIAMI-DADE COUNTY AND
FLORIDA INTERNATIONAL UNIVERSITY
AGREEMENT NO. 25FIU001**

THIS AGREEMENT made and entered into this 27 day of March, 2025 (“Effective Date”), by and between MIAMI-DADE COUNTY, FLORIDA, a political subdivision of the State of Florida (hereinafter referred to as the "COUNTY"), and THE FLORIDA INTERNATIONAL UNIVERSITY BOARD OF TRUSTEES, its successors or assigns, a public body corporate of the State of Florida (hereinafter referred to as the "UNIVERSITY" or “Consultant”, and collectively with the COUNTY, the “Parties”).

For and in consideration of the mutual agreements hereinafter contained, the COUNTY hereby retains the UNIVERSITY to, and the UNIVERSITY hereby covenants to, provide the services described herein to provide research, analysis, and other services to support water quality and ecosystem restoration initiatives for the Department of Regulatory and Economic Resources - Division of Environmental Resources Management (RER-DERM).

WITNESSETH

WHEREAS, the COUNTY has a long record of accomplishment in implementing policies and initiatives to address climate change, environmental protection and other sustainability issues, including energy efficiency and water conservation; and

WHEREAS, on May 4, 2021, the Board of County Commissioners, via Resolution No. R-472-21, directed the County Mayor or Mayor’s designee to develop proactive, long-term measures that may help prevent fish kills, oxygen loss, and algal blooms in Biscayne Bay, develop an action plan to mitigate the negative consequences of any such future impacts, provide reports, and collaborate with municipalities and universities; and

WHEREAS, on June 15, 2021, the Board of County Commissioners, via Resolution No. R-611-21, approved Grant Agreement No. C2001 with the Florida Department of Environmental Protection (DEP) awarded through the Biscayne Bay Water Quality Improvement Grant Program for the Biscayne Bay Water Quality Characterization and Pollution Project, for which the County seeks support to execute Task 3 deliverables; and

WHEREAS, the COUNTY would like to collaborate with the UNIVERSITY to support, enhance, and facilitate the County’s efforts to restore Biscayne Bay and accelerate the transfer from research and knowledge gained to updated policies and practices; promote collaboration between researchers and the County’s scientists, natural resource managers, and engineers; and serve as a public resource to perform research, analysis, assessments, and other services of significance to the South Florida region; and

WHEREAS, the COUNTY recognizes that the UNIVERSITY is fully qualified to render the interdisciplinary technical support and services described in this Agreement, including to support the COUNTY in successfully completing Task 3 deliverables and other ecosystem restoration initiatives,

NOW, THEREFORE, in consideration of the mutual terms, conditions, covenants and payments hereinafter set forth, the COUNTY and the UNIVERSITY agree as follows:

1. COUNTY'S OBLIGATIONS AND AUTHORIZATION TO PROCEED: The COUNTY will provide the UNIVERSITY with a request for services outlined in Section 2 below which shall be made by the Director of RER-DERM (hereinafter referred to as the "Director") or the Director's designee. In response, the UNIVERSITY shall submit to the COUNTY a proposal with a detailed scope of work (SOW) to be approved by the COUNTY prior to the issuance of a task authorization. No payment shall be made to the UNIVERSITY for time or service in connection with the preparation of any such proposal. The Director or the Director's designee shall confer with the UNIVERSITY before any task authorization to proceed is issued to discuss and agree upon the scope, time for completion, and fee for services to be rendered pursuant to the task authorizations, subject to the conditions of this Agreement. The COUNTY reserves the right to interview the UNIVERSITY faculty, staff, and/or students who will be providing services, including any graduate and post-doctoral research assistants.

The COUNTY agrees to furnish the UNIVERSITY with any plans or other data available within in the COUNTY files that the COUNTY wishes the UNIVERSITY to consider, pertaining to the work to be performed under this Agreement. Information shown on such plans or data shall be that which has been made available to the COUNTY and shall be provided to the UNIVERSITY without any guarantee regarding its reliability and accuracy. The UNIVERSITY shall be responsible for independently verifying such information if it shall be used by the UNIVERSITY to accomplish the work undertaken pursuant to this Agreement.

In case of emergency, the COUNTY, through the Director or Director's designee, reserves the right to issue oral authorizations to the UNIVERSITY with the understanding that written authorization shall follow within thirty (30) calendar days. If no written authorization is issued within that time, the UNIVERSITY shall cease work and submit an invoice for work completed and costs incurred or encumbered.

2. UNIVERSITY'S SERVICES: No SOW issued under this Agreement shall include any Professional Services as defined by Florida Statutes, [Section 287.055](#), and any SOWs that include such services shall be void and not subject to reimbursement by the COUNTY. "Professional services" means those services within the scope of the practice of architecture, professional engineering, landscape architecture, or registered surveying and mapping, as defined by the laws of the state, or those performed by any architect, professional engineer, landscape architect, or registered surveyor and mapper in connection with his or her professional employment or practice.

University services are needed to support the many efforts being undertaken by the COUNTY to support water quality and ecosystem restoration initiatives. Many activities related to these efforts have been funded through DEP grant awards, as COUNTY staff have been directed to seek grant funding to accomplish such environmental goals. The UNIVERSITY shall perform services to be detailed in task authorizations as set forth in Section 1 above, through the divisions within the FIU Institute of Environment listed in Attachment A, supported by the position types noted in Attachment B, and per the scope of work outlined in Attachment C for the total compensation as set forth in Section 6. Oral and written proficiency in the English language is required for individuals providing

services to the COUNTY on behalf of the UNIVERSITY. Types of services to be rendered under the Agreement are described below:

- A. Specialized Analytical Services: The UNIVERSITY will provide specialized analytical services (chemical, physical, and biological parameters) for multimedia environmental samples. The list of sample matrices, parameters, holding and reporting times, and certifications needed will be described in the appropriate task authorizations associated with specific projects in support of the COUNTY's goals and needs (typical parameters include but are not limited to nutrients, organic and inorganic contaminants, elemental analysis, wastewater tracers and indicators, stable isotopes, emergent contaminants, and bacteriological testing). Tasks can entail any or all aspects of preparation of SOWs, cost breakdown, study designs, and schedule of deliverables. The main objectives of this section is to provide detailed water, sediment, and biota lab analysis from the collection of samples, utilization of field water quality equipment for testing, assessment of performance of function, and data validation of field and lab instrumentation; preparation, implementation, and reporting of small/short term projects; and assistance to the COUNTY with generation of interpretative reports related to environmental quality and assessment and other project outcomes.
- B. Water Quality Monitoring and Assessment: The UNIVERSITY will design, develop, and/or implement monitoring and assessment programs in support of environmental and pollution reduction initiatives. Tasks can include evaluating or assessing contribution of land-based sources of pollution, estimating pollution loadings from specific sources (e.g., septic, surface runoff, groundwater, treated and untreated wastewater) and proposing strategies to reduce pollution loading into the Bay.
- C. Ecosystem Assessment: The UNIVERSITY will participate in collaborative projects aimed at assessing the status of natural resources and evaluating ecosystems within the Biscayne Bay watershed. These projects include assessing and monitoring biological resources and/or water resources, including at the ecosystem level.
- D. Data Management, Visualization, and Prediction: The UNIVERSITY will collaborate with the COUNTY and associated agencies in creating, curating, and maintaining a centralized Biscayne Bay watershed-wide repository of electronic data, documents, GIS layers, and educational resources of interest to all stakeholders so that access to information is timely, efficient, non-redundant, and could be used towards developing decision tools in support of the Task Force Recommendations. The UNIVERSITY will also help the COUNTY in the development of electronic dissemination tools, predictive models, and performance-based management tools.
- E. Surface Water, Groundwater, Stormwater, and Wastewater Characterization and Management: Detailed lab analysis, including preparation of cost breakdowns and collection of samples; utilization of field water quality meters for testing of relevant parameters, including but not limited to, pH, temperature, dissolved oxygen, oxidation reduction potential, turbidity and total dissolved solids, performance of function, and data validation of on-line instrumentation; assistance with sampling and study of infrastructure; and assistance to the COUNTY with water quality sampling and analysis to support resilient water, stormwater, and wastewater management and environmental quality.
- F. Event-based Sampling and Analysis: The UNIVERSITY will provide assistance and/or guidance with sampling and analysis related to significant weather or other events that could negatively impact Biscayne Bay. Data collection may necessitate immediate deployment of specialized equipment, emergency sampling, and/or direct observation of environmental parameters. This includes event-based response to significant weather

events, fish kills, algal blooms, seagrass die-offs, or other emergent events.

3. UNIVERSITY'S RESPONSIBILITIES: In connection with the professional services to be rendered pursuant to this Agreement, the UNIVERSITY agrees to:
 - A. Use that degree of care and skill ordinarily exercised by other similar professionals in the field under similar conditions.
 - B. Maintain an adequate staff of qualified personnel on the work at all times to ensure its completion within the term specified in the applicable task authorization to proceed.
 - C. Comply with the federal, state and local laws or ordinances applicable to the work.
 - D. Obtain applicable laboratory certification and/or accreditation for parameters analyzed.
 - E. Cooperate fully with the COUNTY in the scheduling and coordination of all phases of the work.
 - F. Provide a written report on the status of the work to the Director or the Director's designee upon request and hold pertinent data and other products open to the inspection of the Director or the Director's designee at any reasonable time and during normal business hours.
 - G. Submit for COUNTY review any data representative of the work's progress at the percentage stages of completion which may be stipulated in the applicable task authorization. Submit for COUNTY approval the final work products upon incorporation of any modifications requested by the COUNTY during any previous review. Any modifications that require an increase in costs or time to complete shall require an amended task authorization in order to be effective.
 - H. Confer with the COUNTY at any reasonable time during the term of the AGREEMENT and implement improvements for which the UNIVERSITY has provided research and analysis services. The UNIVERSITY shall not be compensated for the correction of errors and omissions on the part of the UNIVERSITY.
 - I. Use computer and networking hardware, software, and firmware standards as approved by the COUNTY's Information Technology (IT) Division staff. IT staff must be involved in the design phase of an application and in developing the testing, training, and acceptance criteria of the application before it is placed into production. All applications and/or systems to be transferred to the COUNTY must have adequate end user and systems support documentation and, as part of the design process for a Project, any system needs should be identified and will require the approval of IT. All electronic data performed or produced in the performance of this Agreement shall be transferred in an approved media and format by IT.
4. TASK AUTHORIZATION: TIME FOR COMPLETION: The services to be rendered by the UNIVERSITY for each task of the Project shall commence upon receipt of acceptance by the UNIVERSITY of a written task authorization to proceed from the Director or the Director's designee subsequent to the execution of this Agreement and shall be completed within the time stated in the accepted task authorization.
5. DELAY IN PERFORMANCE: No claim for damages or any claim other than for an extension of time shall be made or asserted against the COUNTY by reason of any delays. The UNIVERSITY shall not be entitled to an increase in this Agreement sum or payment or compensation of any kind from the COUNTY or direct, indirect, consequential, impact or other costs, expenses or damages, including but not limited to, costs of acceleration or inefficiency arising because of delay, disruption, interference or hindrance from any cause whatsoever, including any cause that could be described as a force majeure; provided, however, that this provision shall not preclude recovery or damages by the UNIVERSITY

for hindrances or delays due solely to fraud, bad faith, or active interference on the part of the COUNTY or its agents. Otherwise, the UNIVERSITY shall be entitled only to extensions of time as the sole and exclusive remedy for such resulting delay in accordance with and to the extent specifically provided below.

The time to perform this Agreement shall be extended only if the UNIVERSITY is delayed in performing any obligation under this Agreement due to a force majeure or inevitable accident or occurrence. In order to request an extension of time for a force majeure or inevitable accident or occurrence, the UNIVERSITY shall request in writing a time extension from the Director within ten (10) calendar days of said force majeure event or inevitable accident or occurrence. Failure to make such a written request within the specified time shall be a bar on the ability of the UNIVERSITY to bring any civil action for either compensable or non-compensable time extension.

Regarding force majeure events, no Party shall be liable for its failure to carry out its obligations under the Agreement during a period when such Party is rendered unable, in whole or in part, by force majeure to carry out such obligations, but the obligation of the Party or Parties relying on such force majeure shall be suspended only during the continuance of any inability so caused and for no longer period of said force majeure event, and such cause shall, so far as possible, be remedied with all reasonable dispatch.

It is further agreed and stipulated that the right of any Party hereto to excuse its failure to perform by reason of force majeure shall be conditioned upon such Party giving, to the other Party or Parties, written notice of its assertion that a force majeure delay has commenced within ten (10) calendar days after such commencement, unless there exists good cause for failure to give such notice, in which event, failure to give such notice shall not prejudice any Party's right to justify any non-performance as caused by force majeure unless the failure to give timely notice causes material prejudice to the other Party or Parties.

For the purpose of this Paragraph, force majeure shall mean an act of God which includes but is not limited to: sudden, unexpected or extraordinary forces of nature such as hurricanes, floods, washouts, storms, fires, earthquakes, landslides, epidemics, explosions or other forces of nature. Inevitable accidents or occurrences shall mean those which are unpreventable by the UNIVERSITY and shall include but not be limited to: strikes, lockouts, other industrial disturbances, wars, blockades, acts of public enemies or terrorism, insurrections, riots, federal, state, COUNTY, and local governmental restraints, military action, civil disturbances, explosions, conditions in federal, state, COUNTY, and local permits, bid protests, manufacturing and delivery delays, unknown or unanticipated soil, water, or ground conditions and cave-ins. Provision of the above specified notice shall be a condition precedent to maintenance of a claim for delay.

Such acts or events do not include inclement weather (except as noted above) or the acts or omissions of subconsultants, materialmen, suppliers or their subcontractors, unless such acts or omissions are otherwise encompassed by the definition set forth above.

6. COMPENSATION: The COUNTY agrees to pay, and the UNIVERSITY agrees to accept a fee representing full compensation for the performance of the services specified herein. The UNIVERSITY shall submit invoices as detailed in the task authorization for all work in progress using the format and procedure provided by the COUNTY. Invoices shall be submitted within one hundred twenty (120) calendar days of the performance of the service being billed. The COUNTY shall not pay invoices that are not properly submitted within

that period. Additionally, the COUNTY may withhold payment of any invoices from the UNIVERSITY if the COUNTY determines that the UNIVERSITY submitted and received payment of an inaccurate invoice, without limitation to any other legal or equitable remedies. Fees and other compensation will be computed in accordance with one or a combination of the methods outlined below as specified in a written task authorization. No fees shall be paid for any services unless expressly authorized in a written task authorization identifying the method of compensation and total costs therein. Fees for work conducted during an emergency shall be paid in accordance with the process set forth in Section 1.

PROMPT PAYMENT TO SMALL BUSINESS SUBCONSULTANTS

The Consultant's attention is directed to County Code Section 2-8.1.4, providing for expedited payments to small businesses by County agencies and the Public Health Trust; creating dispute resolution procedures for payment of County and Public Health Trust obligations; and requiring the prime contractor to issue prompt payments, and have the same dispute resolution procedures as the County, for all small business subcontractors. Failure of the prime contractor to issue prompt payment to small businesses, or to adhere to its dispute resolution procedures, may be cause for suspension, termination, and debarment, in accordance with the terms of the county contract or Public Health Trust contract and debarment procedures of the County.

A. Fee for Services as a Multiple of Direct Salary Cost and Fixed Hourly Rate: It is mutually agreed and understood that the following provision shall be applicable to this Agreement. The fee for research and analysis services rendered by the UNIVERSITY's faculty and students shall be computed based on the direct salary cost, as reported to the Internal Revenue Service, excluding bonuses or awards, if applicable, for the time of said faculty and students engaged directly in the work times a multiplier of 1.475 for expenses incurred for all faculty and students. The UNIVERSITY shall invoice the COUNTY for work performed as detailed in the task authorization in a format acceptable to the COUNTY. This fee shall constitute full compensation to the UNIVERSITY for costs incurred in the performance of the work such as salaries, overhead, fringe benefits, operating margin and all other costs not covered by reimbursable expenses.

B. Lump Sum Fee: The fee for any requested portion of Work may be, at the option of the COUNTY, a lump sum mutually agreed upon by the Director or the Director's designee and the UNIVERSITY. The lump sum fee will be estimated based on the direct salaries times the negotiated multiplier times the hours per employee. Designated lump sum fees shall be stated in the written task authorization to proceed. Lump sum fees shall NOT include any reimbursable expenses, which must be separately accounted for and paid on the basis of original receipts and actual costs.

C. Reimbursable Expenses: The UNIVERSITY may be compensated for certain work-related expenditures not covered by fees for research and analysis services, provided such expenditures are previously authorized by the Director or Director's designee in writing. Reimbursable expenses may include, but are not limited to:

Expenses for laboratory tasks and analyses, permitting fees, printing reproduction costs, technical supplies, and rental or purchase of specialized equipment and instruments necessary for the efficient performance of the work, provided that such equipment,

technical supplies and instruments become the property of the COUNTY upon work completion. Reimbursable expenses also include tolls and specialized clothing may be required. Specialized clothing or gear shall be detailed in the budget for the task authorization.

Travel out of Miami-Dade County by UNIVERSITY staff must be approved in advance by the Director or the Director's designee. Travel included in a budget in an executed task authorization shall be deemed approved by the Director.

Whenever travel costs are incurred, they will be subject to either the provisions of Miami-Dade County Administrative Order 6-1 or Section 1004.22, Fla. Stat., whichever is more restrictive.

Expenses for travel (except commuting), transportation and subsistence by Consultant's personnel in the furtherance of the work outside Miami-Dade County will be reimbursed according to the provisions of Florida Statutes Section 112.061 or Miami-Dade County Administrative Order (A.O.) 6-1, whichever is more restrictive. The Consultant shall obtain prior written authorization from the Director, for all travel expenses. Failure to obtain such prior written authorization shall be grounds for nonpayment of travel expenses.

The Consultant shall not invoice the County for charges for office, rent or overhead expenses of any kind except as set forth in a budget in an approved SOW or Task Authorization, including but not limited to, insurance, local telephone (including cellular service) and utility charges, office/drafting supplies, depreciation of equipment, professional dues, subscriptions, computer software/hardware, reproduction of drawings and/or specifications, mailing, stenographic, clerical, nor shall it invoice for other employee time or travel and substance not directly related to the work. The multiple factors set forth above shall cover all such costs for the work.

Maximum Compensation: The total of all payments to the UNIVERSITY pursuant to this Agreement shall not exceed \$5,450,000.00. Before any services are begun by UNIVERSITY, a task authorization to proceed from the Director or Director's designee shall be given to the UNIVERSITY as set forth in Section 1 of this Agreement. No minimum amount of compensation is guaranteed to the UNIVERSITY.

7. DURATION OF AGREEMENT: The term of this Agreement shall be for one year from the Effective Date of this Agreement. Upon approval of the Board of County Commissioners (BCC), the term of this agreement shall extend for an additional five years for a total term of six years unless terminated in accordance with Section 16. Furthermore, this Agreement must be ratified by the BCC within one year of the effective date. In the event this Agreement is not ratified within one year of the effective date or the BCC disapproves the Agreement, this Agreement shall terminate immediately.

Actual completion of task authorizations authorized prior to the expiration date may extend beyond such term and shall be subject to the same terms and conditions set forth in this Agreement, including but not limited to, indemnification and insurance or until depletion of the funds allocated to pay the cost of the services described herein, whichever occurs first. The performance of specifically and properly authorized Services that may extend beyond this Agreement's term shall be compensated in accordance with Section 6 herein.

8. METHODS OF PAYMENT: The UNIVERSITY is responsible for submitting invoices

that do not contain charges that are more than one hundred twenty (120) days old. In the case where disallowed charges are found, the COUNTY may return the entire invoice for correction and resubmittal. Where the COUNTY decides to utilize the Lump Sum form of payment for a task authorization, the following method will be utilized:

- A. The UNIVERSITY shall submit the invoice in a format provided by the COUNTY. Each invoice shall reference the particular task authorization to proceed that authorized the services and shall include a status report describing work completed.
 - B. The amount due on the invoice shall be calculated by applying the percentage of the total work completed to date to the authorized amount in an approved task authorization and subtracting any previous billings. Alternatively, a task authorization may detail payments for stated deliverables or based on a payment schedule, in which case, the UNIVERSITY shall issue invoices for payment upon completion of each such deliverable or in accordance with the payment schedule in the task authorization.
 - C. Payments shall be calculated on a percentage of work completed or on a deliverable completion basis or pursuant to the payment schedule in the task authorization. Proper documentation will be maintained and provided to the COUNTY for eligible reimbursable expenses. The UNIVERSITY shall maintain documentation for all expenses submitted for reimbursement in its regular course of business. Reimbursement requests shall be promptly submitted no more than thirty (30) calendar days after the expense.
9. SCHEDULE OF WORK: The COUNTY shall have the sole right to determine on which units or sections of the work the UNIVERSITY shall proceed and in what order. The written task authorization to proceed issued by the Director or the Director's designee shall cover in detail: the scope, time for completion, and compensation for the UNIVERSITY services requested in connection with each unit or section of work.
 10. RIGHTS OF DECISIONS: All services shall be performed by the UNIVERSITY to the satisfaction of the Director or the Director's designee who shall decide all questions, difficulties, and disputes of whatever nature which may arise under or by reason of this Agreement; the prosecution and fulfillment of the services hereunder; and the character, quality, amount and value thereof. The Director or Director's designee decisions upon all claims, questions and disputes shall be final, conclusive, and binding upon the Parties hereto unless such determination is clearly arbitrary or unreasonable. In the event the UNIVERSITY does not concur with the decisions of the Director or Director's designee, the UNIVERSITY shall present any such objections in writing to the County Mayor. The Director or Director's designee and the UNIVERSITY shall abide by the decisions of the County Mayor. The decision of the County Mayor shall be subject to review de novo by a court of competent jurisdiction in Miami-Dade County.
 11. OWNERSHIP OF INTELLECTUAL PROPERTY: The following terms shall apply to each task authorization executed pursuant to this Agreement: "Intellectual Property" means individually and collectively all inventions, improvements, and/or discoveries, patentable or unpatentable, copyrightable or uncopyrightable, including but not limited to mask works, computer software, both object and source code, databases, and other works of authorship. "Background Intellectual Property" means all Intellectual Property in existence prior to the execution date of this Agreement or that was developed unrelated to the subject matter of this Agreement or a task authorization executed pursuant to this

Agreement. The Background Intellectual Property of each Party is and shall remain that Party's separate property. Neither Party shall acquire any claim to or right in any Background Intellectual Property of the other Party by virtue of this Agreement.

"Project Intellectual Property" means Intellectual Property developed during the performance of a task authorization pursuant to this Agreement. If Project Intellectual Property is developed solely by one of the Parties to this Agreement, it shall be owned solely by that Party (the "Owning Party") in accordance with Fla. Stat. Section 1004.23 in the case of the UNIVERSITY. The Owning Party hereby grants a royalty-free non-exclusive license to the other Party and to any third parties designated by the other Party to use the Owning Party's Project Intellectual Property for future research and academic purposes and/or for governmental purposes in the case of the COUNTY. If Project Intellectual Property is developed jointly by the Parties to this Agreement, by the UNIVERSITY at the request of the COUNTY, or by the UNIVERSITY as part of compensable work under this Agreement, it shall be jointly owned by the Parties on the basis of an undivided one-half interest by both Parties. If either Party believes that any jointly owned Project Intellectual Property is patentable, the Parties shall negotiate in good faith the roles and responsibilities of the Parties regarding the right to file, prosecute, and maintain such patent applications for the jointly owned Project Intellectual Property. The rights set forth herein shall be subject to the rights of the U.S. Government, if any.

12. NOTICES: All notices, reports, or other written communications from the UNIVERSITY to the COUNTY required pursuant to the terms hereof may be sent by first class United States Mail, facsimile transmission, electronic mail, certified mail, or hand-delivered to the Director or the Director's designee. All notices, reports, or other written communications from the COUNTY to the UNIVERSITY required pursuant to the terms hereof may be sent by first class United States Mail, facsimile transmission, electronic mail, certified mail, or hand-delivered to the UNIVERSITY's authorized representative. All such notices or other communications will be deemed to have been given and received: (i) upon receipt if personally delivered; (ii) on the transmission date for facsimile and email communications if such transmission was made on a business day, or if not, then on the next business day, if such transmission is error-free; or (iii) three (3) business days after posting in the U.S. Mail for any communication that is sent by first class U.S. mail or certified mail.

Regulatory and Economic Resources – Division
of Environmental Resources Management
Lourdes Gomez, Director
111 NW 1st Street, 11th Floor
Miami, Florida 33128

Florida International University
Regnier Jurado, Director
Program Administration, Research
11200 SW 8th Street, MARC 430
Miami, FL 33199

13. PRESS RELEASES OR OTHER PUBLIC COMMUNICATION AND PUBLICATION: The UNIVERSITY employees and students may publish peer-reviewed scholarly articles, abstracts, theses, and similar documents concerning research work performed pursuant to this Agreement ("Research Publications"); provided that, at least sixty (60) days prior to such publication, the UNIVERSITY shall furnish to the COUNTY a copy of the proposed

manuscript, and the COUNTY shall have thirty (30) days after receipt of the same to object in writing if the COUNTY deems that such manuscript discloses Confidential Information owned by the COUNTY, or patentable subject matter owned by the COUNTY. Additionally, the UNIVERSITY shall not name the COUNTY nor any COUNTY employee in the publication unless the COUNTY provides prior written authorization. If the COUNTY does not provide any written objection to the UNIVERSITY within the thirty (30) day review period, the UNIVERSITY shall be free to proceed with such publication. If, during the thirty (30) day review period, the COUNTY provides the UNIVERSITY with written objections regarding the disclosure of patentable subject matter owned by the COUNTY, the UNIVERSITY shall refrain from making such publication for a reasonable period of time, not to exceed ninety (90) days, to enable a patent application to be prepared and filed by the COUNTY. If, during the thirty (30) day review period, the COUNTY provides the UNIVERSITY with written objections regarding the disclosure of Confidential Information owned by the COUNTY or that the COUNTY or any COUNTY employee is named in the publication, the COUNTY and the UNIVERSITY shall work together to revise the manuscript, as necessary, so that such Confidential Information is not disclosed and neither the COUNTY nor any COUNTY employee is named in the publication. To the extent that the COUNTY has any additional comments relating to the proposed publication, the UNIVERSITY will take such comments into consideration if such comments are provided within the thirty (30) day review period; however, the technical and scientific analyses and conclusions in the publication shall at all times and in every event be determined solely by the UNIVERSITY. Publications shall include language, to be provided by the COUNTY, as to how raw data, graphics, interpretations of data, or other information provided or made possible by the COUNTY shall be attributed in the document.

The following disclaimer must appear in the publication relating to the work performed under this Agreement: "The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies or endorsements, either expressed or implied, of Miami-Dade County Florida."

For Non-Research Deliverables and Documents (defined below), each Party agrees that it shall make no statements, publications, press releases, advertisements, literature or public releases regarding or as part of work performed under this agreement without first notifying the other Party and securing its consent, unless otherwise indicated in the respective task authorization. Non- research Deliverables and Documents means "gray literature", i.e. technical reports, fact sheets, raw data, and communication products other than Research Publications. Nothing in this Agreement shall prevent either Party from complying with the requirements of Chapter 119 or Section 1004.22(2), Florida Statutes, regarding the disclosure of public non-confidential information.

14. AUDIT RIGHTS: The COUNTY reserves the right to audit the records of the UNIVERSITY related to this Agreement at any reasonable time and during normal business hours during the performance of the work included herein and for a period of three (3) years after final payment under this Agreement. The UNIVERSITY agrees to provide any records necessary to substantiate payment requests to the COUNTY, including audited financial statements, to the extent such records are maintained by the UNIVERSITY in the normal course of business. In the event an audit undertaken pursuant to this section reveals improper, inadvertent, or mistaken payments to the UNIVERSITY, the UNIVERSITY shall remit such payments to the COUNTY. The COUNTY shall retain all legal and equitable rights with respect to recovery of payments.
15. SECURITY REQUIREMENTS: Access to certain COUNTY property is restricted. The

UNIVERSITY is subject to Article IX, Chapter 32 of the Miami-Dade County Code (Ordinance No. 02-68). In the event the UNIVERSITY students and/or staff need access to such COUNTY property, the UNIVERSITY agrees to comply with the security ordinance and any other requirements by the COUNTY relating to security which may include background checks, the use of photo identification badges, and limited access to COUNTY property. The photo identification badges and associated costs are not reimbursed. Prior to commencing Work at any COUNTY property, the UNIVERSITY shall meet with the Plant Superintendent or other designated personnel to submit required information and discuss security relating to the Project while on the COUNTY property.

Issued identification badges must be worn and displayed on an outermost garment at all times while at a COUNTY site. The UNIVERSITY will be charged on a per-person basis for the issuance of COUNTY identification badges and background investigations. All UNIVERSITY students and staff must be aware that access to COUNTY sites is restricted to only those with assigned identification badges. Unescorted access to chemical areas, control areas, electrical generation areas/switching areas, and fuel areas will not be allowed unless authorized in advance by the Director.

Issued COUNTY identification badges must be safeguarded by assigned UNIVERSITY student(s) or staff. In the event of a lost or stolen identification badge, the UNIVERSITY student(s) or staff must immediately notify the COUNTY security and pay for a badge replacement fee, which is currently twenty-five dollars (\$25.00). Once a UNIVERSITY student or staff member has completed their assigned work or upon termination of this Agreement, the identification badge(s) must be returned to the student's or staff member's immediate COUNTY Supervisor. The UNIVERSITY students and staff will safeguard against unauthorized distribution or posting of any and all COUNTY provided infrastructure information to any individual or organization not authorized in advance by the COUNTY. Use of camera photography, video, or any recording device is prohibited at all COUNTY sites. The UNIVERSITY students and staff shall comply with all COUNTY vehicle parking regulations.

16. TERMINATION OF AGREEMENT: The COUNTY may terminate this Agreement, in total or in part, without cause or penalty, by ten (10) calendar days, prior written notification, or by declining to issue written task authorizations, as provided herein, in which event the COUNTY's sole obligation to the UNIVERSITY shall be payment, in accordance with Section 6, for those units or sections of work previously authorized by the UNIVERSITY in furtherance of this Agreement prior to receipt of notice of termination. Such payment shall be determined on the basis of the hours or percentage of work performed and incurred by the UNIVERSITY up to the time of termination. In the event partial payment has been made for professional services not performed, the UNIVERSITY shall return such sums to the COUNTY within ten (10) days after receipt of written notice that said sums are due. Upon such termination, the COUNTY may, without penalty or other obligation to the UNIVERSITY, elect to employ other persons to perform the same or similar services. The UNIVERSITY may terminate this Agreement upon thirty (30) days' written notice to the COUNTY if the UNIVERSITY is unable to continue work pursuant to this Agreement or any task authorization issued hereunder, and no other UNIVERSITY employee is available to perform such work.
17. SUBCONTRACTING: The UNIVERSITY may subcontract work under this Agreement with prior written approval from the COUNTY. The UNIVERSITY shall submit a copy of

the executed subcontractor agreement to the COUNTY. Subcontractor position types align with and are limited to those identified in Attachment B, Table A. Regardless of any subcontract, the UNIVERSITY is ultimately responsible for all work to be performed under this Agreement.

18. DEFAULT: If the UNIVERSITY fails to comply with the material provisions of this Agreement, the Director may declare the UNIVERSITY in default by ten (10) calendar days prior written notification, provided that the UNIVERSITY shall have an opportunity to cure such default within such ten (10) day notice period or such extended period as the Parties may agree upon. If the UNIVERSITY does not cure the default within the notice period, then the UNIVERSITY shall only be compensated for any professional services completed and incurred as of the date written notice of default is served. In the event partial payment has been made for incomplete professional services, the UNIVERSITY shall return such sums to the COUNTY within ten (10) calendar days after receipt of written notice that said sums are due. In the event the COUNTY prevails in litigation to enforce or defend the provisions of this or any other Paragraph of this Agreement, the COUNTY shall be compensated by the UNIVERSITY for reasonable attorney's fees and court costs to the extent permitted by Section 768.28, Fla. Stat., and awarded by the presiding court.
19. INDEMNIFICATION AND INSURANCE: Each Party agrees to be (i) fully responsible for its acts of negligence or its employees' acts of negligence when acting within the course and scope of their employment; and (ii) liable for any damages resulting from said negligence. The foregoing shall only be to the extent and within the limitations of Section 768.28, Florida Statutes, subject to the provisions of that statute whereby neither Party shall be held liable to pay a personal injury or property damage claim or judgment by any one person which exceeds the sum of \$200,000, or any claim or judgment, or portions thereof, which, when totaled with all other claims or judgments paid by said Party arising out of the same incident or occurrence, exceeds the sum of \$300,000. Nothing herein shall be construed as making either Party responsible for any liability or claim arising out of the negligent performance or failure of performance of the other Party or as a result of the negligence or failure of performance of any third party. Further, nothing contained herein shall be construed or interpreted as: (i) denying either Party or other state or public entity any remedy or defense available under the laws of the State of Florida; (ii) the consent of either Party to be sued; or (iii) a waiver of sovereign immunity of either Party beyond the waiver described herein and provided in Section 768.28, Fla. Stat.

The UNIVERSITY, a State of Florida agency, will provide proof of general liability insurance coverage under the State of Florida Risk Management Trust Fund, established pursuant to Section 284.30, Fla. Stat., and administered by the State of Florida, Department of Insurance, and will provide workers' compensation insurance as required by statute.

20. ENTIRETY OF AGREEMENT: This writing embodies the entire Agreement and understanding between the Parties hereto, and there are no other agreements and understandings, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby.
21. MODIFICATION: This Agreement may be amended or modified only by agreement, formalized in a written amendment (or amendments) to this Agreement, and with the written assent of the relevant authority for each organization.

All words used herein in the singular form shall extend to and include the plural. All words used in the plural form shall extend to and include the singular. All words used in any

gender shall extend to and include all genders.

22. GOVERNING LAW: This Agreement, regardless of where executed, shall be governed by and construed according to the laws of the State of Florida, and venue for resolution of any dispute shall be in a court of law in Miami-Dade County, Florida.
23. SEVERABILITY: If any clause, provision, subsection, or Section of this Agreement which is void or unenforceable under any law, regulation, or as a matter of public policy shall be deemed stricken, and not binding on the UNIVERSITY or the COUNTY, or if ruled invalid by any court of competent jurisdiction, the remaining provisions hereof and this Agreement shall be construed and enforced as if such invalid portion did not exist.
24. BINDING EFFECT: This Agreement shall inure to the benefit of and shall be binding upon the UNIVERSITY and the COUNTY and their respective successors, assigns, and legal representatives.
25. HEADINGS: The table of contents and any headings preceding the text of the Sections and subsections of this Agreement shall be solely for convenience of reference and shall not affect its meaning, construction, or effect.
26. CONFIDENTIALITY: In accordance with Section 119.071(3)(b), Fla. Stat., building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structures owned or operated by an agency are exempt from Section 119.07, Fla. Stat., and Section 24(a), Article I of the Florida Constitution. This exemption applies to building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structure owned or operated by an agency before, on, or after the effective date of this Act. Information made exempt by this Paragraph may be disclosed to another governmental entity with prior approval by the property owner if disclosure is necessary for the receiving entity to perform its duties and responsibilities; to a licensed architect, engineer, or consultant who is performing Work on or related to the building, arena, stadium, water treatment plant, or other structure owned or operated by an agency; or upon a showing of good cause before a court of competent jurisdiction. The entities or persons receiving such information shall maintain the exempt status of the information.

A. PUBLIC RECORDS AND CONTRACTS FOR SERVICES PERFORMED ON BEHALF OF MIAMI-DADE COUNTY

The UNIVERSITY shall comply with the Public Records Laws, including by not limited to, (1) keeping and maintaining all public records that ordinarily and necessarily would be required by the COUNTY in order to perform the service; (2) providing the public with access to public records on the same terms and conditions that the COUNTY would provide the records and at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law; (3) ensuring that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (4) meeting all requirements for retaining public records and transferring, at no cost, to the COUNTY all public records in possession of the UNIVERSITY upon termination of the Contract and destroying any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements upon such transfer. In addition, all records stored electronically must be provided to the COUNTY in a format

that is compatible with the information technology systems of the COUNTY. Failure to meet any of these provisions or to comply with Florida's Public Records Laws as applicable shall be a material breach of this Agreement and shall be enforced in accordance with the terms and conditions of the Agreement.

IF THE UNIVERSITY HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE UNIVERSITY'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT RERPublicRecords@miamidade.gov, 111 NW 1st STREET, 11th Floor, MIAMI, FLORIDA 33128.

27. APPLICABLE LAWS: Each Party shall comply with all applicable local, state, and federal laws, rules, and regulations pertaining to this Agreement and the Project.

IN WITNESS WHEREOF, the Parties hereto have caused this instrument to be executed by their respective officials thereunto duly authorized, all as of the day and year written above.

ATTEST:
Juan Fernandez-Barquin, Clerk of the Court
and Comptroller

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

By: *Olga Valverde*
Deputy Clerk

By: *Roy Coley*
County Mayor or Designee



THE FLORIDA INTERNATIONAL
UNIVERSITY BOARD OF TRUSTEES

By: Olga Valverde – e18183
03/31/2025

DocuSigned by:
Ana Villafana as
72B07C29FB71418...
Ana Villafana,
Sr. Director Award Services,
Office of Research and Economic Development

Approved as to legal form
and sufficiency

Approved as to legal form
and sufficiency

Monica Rizo Perez
Assistant County Attorney

DocuSigned by:
Diana Finida-Oliva
Diana Finida-Oliva
University Attorney

Read and Acknowledged:

DocuSigned by:
Piero Gardinali
A48C2023B3734C3...
Dr. Piero Gardinali

Attachment A

Florida International University (FIU), an institution of Distinction in Environmental Resilience.

FIU's commitment to environmental resilience has roots in the understanding that nature and the built world are integrally intertwined. FIU is a world-leading university for coastal and marine science research. Based on the United Nations criteria for the Sustainable Development Goals, FIU ranked No. 2 in the world for impact on Life Below Water, No. 7 for impact on Clean Water and Sanitation and No. 12 for impact on Life on Land. FIU also ranked top 50 in the world for impact on Affordable and Clean Energy and No Poverty. At FIU, projects to ensure sustainability involve experts in multiple fields collaborating across disciplines. FIU has spent decades protecting the world's oceans and freshwater resources. The research being conducted on coral reefs and animal conservation around the world, Florida Everglades restoration and Biscayne Bay recovery have pushed FIU's earth and environmental sciences researchers to among the most highly published on the subject (No. 1 in the U.S. among universities less than 50 years old, No. 23 in that category globally, per Nature Index rankings).

FIU Institute of Environment (IoE) a Preeminent Program

The Institute of Environment (IoE) represents one of the largest collections of faculty and students associated with water resources, ecosystem functioning, restoration, resilience, climate change conservation and general environmental science in the United States. Increased concern over the preservation of Florida's natural areas and resources has created a critical need for accurate, unbiased scientific information for those who must make decisions affecting the sustainability of these fragile resources. This Preeminent Program includes the Freshwater Resources Division (FWR), the Coastline & Oceans Division (C&O) and the Land and Biodiversity Division (L&B).

The Institute is home of flagship programs such as the Medina Aquarius Program, the NSF-Funded Florida Coastal Everglades Long Term Ecological Research Program (FCE-LTER), and the NSF-funded CREST Center for Aquatic Chemistry and Environment. It also contains specific initiatives such as Sea Level Solutions Center (SLSC), the Environmental Finance & Risk Management and our Biscayne Bay Initiatives programs bringing together faculty from nearly every college and school at FIU to address challenges posed by rising seas, climate change, the sustainable built environment, and our international water security initiatives. The shared analytical facilities of the combined Institute of Environment laboratories have a long history of supporting research that has generated world-class environmental information. The Field Operations Center (FOC), is another vital core facility responsible for maintaining and providing a fleet of vehicles and vessels to facilitate environmental field work. Currently the FOC has 14 vehicles, most of which are large 4x4's capable of towing and rough terrain use, 6 airboats and 19 small- and large-size boats that are used for transportation in wetlands and coastal waters. In addition, FOC maintains a full inventory of field and safety equipment.

Institute of Environment personnel have engaged in a broad dissemination of results and have recently 1700 contributions to the peer-reviewed literature (since 1993). Much of the data included in these papers was supported by the Institute of Environment Labs. **In keeping with the mission of FIU, as the nation's largest Hispanic Serving Institution**, all associated FIU Institute of Environment labs and facilities have continually integrated opportunities for undergraduate, graduate, and post-doctoral education, training, and involvement in research. Many of these people are from traditionally underrepresented groups in the science fields. The Institute of Environment analytical facilities provide an opportunity for students to learn important analytical techniques, chemical and biogeochemical ecology, and other research approaches. The Institute of Environment analytical laboratories are user-based, shared facilities where students, when possible, learn to analyze their samples. When "hands-on" student involvement is not possible Research Assistants or, more commonly, staff technicians run the samples thus allowing the completion of student/faculty projects. These activities support numerous undergraduate and graduate students and post-doctoral associates. For instance, in 2022-2023 Institute of Environment research grants supported 78 graduate students (Ph.D. and M.S.), 89 post-docs, and many undergraduates.

Contact: **Dr Todd Crowl**, Executive Director, Institute of Environment, Florida International University. tcrowl@fiu.edu; (305) 348- 3095,

Freshwater Resources Division (FWR) at the Institute of Environment

As one of the three branches of the **IoE**, the **Freshwater Resources Division (FWRD)** is a multidisciplinary center devoted to environmental research efforts in the Southeastern United States and the neotropics. Previously known as the Southeast Environmental Research Center (SERC), founded in 1993 in response to a growing regional need for scientific investigations in threatened environments of South Florida. Research programs developed in Biscayne National Park, Big Cypress National Preserve, Everglades National Park, Florida Bay, the Florida Keys and the Florida Keys National Marine Sanctuary have been instrumental in providing a basis for management decisions for sustaining these fragile resources in specific areas of water quality, biogeochemistry, ecological modeling, hydrology and contaminant transport. SERC has been a pioneer providing research in support of the Comprehensive Everglades Restoration Program (CERP). Within the FWRD is the SERC Water Quality Monitoring Network. The function of the Network is to address regional water quality concerns that exist outside the boundaries of individual political entities. Funding for the Network has come from many different sources with individual programs being added as funding became available. The advantages of having this Network operated from the same facility include site continuity, consistency in analytic methodology, and ease of data integration. The product is a quasi-synoptic "big picture" as to what is happening in the South Florida coastal waters. Although traditional water quality parameters are common used in the network it has been constantly expanded to include human-derived wastewater tracers (caffeine, antibiotics) and indicators (Splenda) and other specialized target compounds (endocrine disruptor chemicals).

Other related activities include the NSF-funded CREST Center for Aquatic Chemistry and the Environment (CACHÉ) , the Florida Coastal LTER and the Water Security initiative at FIU (UNESCO Water Chair). The IoE also houses all FIU's Certified Environmental Laboratories. The CACHÉ Analytical Core Facility (previously known as the SERC Nutrient Lab) is a core environmental laboratory offering many services such as nutrient analysis, trace metal analysis, Mercury speciation, analysis of emergent contaminants, water tracers, inorganic bulk parameters, regulated organic chemicals and ecotoxicology studies for multiple environmental matrices. The CACHÉ core lab also offers training and talent development for students and professionals interested in the analysis of water and wastewater. FIU is establishing the Water Security project, which will permit FIU and its associates to make a difference as it relates to building capacity, sharing knowledge and strengthening links between universities/other higher education institutions, government agencies, and development bodies within the US and in partner countries. Also, the project will serve as a laboratory of ideas, helping reinforce the global security and sustainability agenda, fostering alliances, intellectual cooperation, and operational partnerships, as well as providing advice for policy development and implementation, and strengthening individual and institutional capacities. The target beneficiaries will be water-professionals, but special tailor-made capacity building modules will be put together for policy and decision –makers.

Contact: **Dr. Piero R. Gardinali**, Associate Director for the Freshwater Resources Division, Institute of Environment, Florida International University. gardinal@fiu.edu; (305) 348- 6354,

Coastlines and Oceans Division (C&O) at the Institute of Environment

The **Coastlines and Oceans Division** of the Institute of Environment provides the logistical support for the academic research and grant activities that are making a difference from local to global, and brings together marine-related research groups to foster collaboration and synergistic activities. C&O Division Scientists work extensively on our local south Florida systems, like Biscayne Bay, Florida Bay, the Ten Thousand Islands and the Florida Reef Tract – but they also conduct research on all seven continents and in all five oceans of the world. Fifty-two faculty with research interests in coastal and marine environments comprise the C&O Division; these faculty research groups conduct research across a breadth of scales and disciplines. In the natural sciences, C&O faculty have expertise ranging from marine chemistry to the biology and behavior of the largest animals in the sea. We have particular strengths in marine water quality, marine plants, coastal food webs, fisheries and conservation. Further, the Division specializes in doing the science needed to solve pressing environmental problems in south Florida. The C&O Division also contains the **Sea Level Solutions Center** (SLSC). Scientists in the SLSC apply information to build knowledge, design and evaluate mitigation and adaptation strategies, and create resilient, prosperous coastal urban communities. The vision of the SLSC is: 1) to realize innovative, equitable solutions for social, environmental and economic prosperity and engage communities to become resilient to the impacts associated with sea-level rise and climate change, 2) to forge interdisciplinary teams to develop cross-cutting decision support and guide solutions to the impacts of sea level rise

and actions that benefit society locally, regionally and internationally, and 3) to play an integral role in guiding and adapting the South Florida community to be economically-viable, equitable, healthy and sustainable. The SLSC develops mechanisms that facilitate education and communication of climate change science, by supporting government and industry frameworks for timely responses, conducting research to establish a sound basis for adaptation and resource management plans, informing decisions and actions, and evaluating the implementation of long-term mitigation strategies.

We achieve our mission through interdisciplinary work streams in a focused coastal urban resilience program with outcomes in the public and private sector areas of (1) economy, (2) natural environment, (3) community, and (4) built environment. This formulaic approach integrates environment, social and infrastructure data to create knowledge that advances sea level solutions in collaborations across FIU units including natural sciences, engineering, computer sciences, architecture, economics, policy and law, and external partners.

Active interdisciplinary research programs of the SLSC include the NSF- funded projects Urban Resilience to Extremes and Urban Water Innovation Sustainability Research Networks (UREx SRN & UWIN). UREx integrates scholars with city and community practitioners to produce the social-ecological-technological approach to apply resilient infrastructure data, models, images, maps, stories, risk scenarios and on-the- ground projects in 10 cities to accelerate innovative urban sustainability and resilience knowledge and application. UWIN creates technological, institutional, and management solutions to help communities increase the resilience of their water systems and enhance preparedness for responding to water crises. New projects include real-time sensing of urban flooding for government and resident decision-making in local municipalities. Other key activities include the SLSC interdisciplinary research and design studio where faculty and students co-develop science-based design solutions, relevant adaptation strategies and data-driven performance outcomes and our urban flooding citizen science program to develop a robust database of on- the-ground measurement data that engages the public.

Contact: **Dr. James Fourquaran**, Associate Director for the Coastlines and Oceans Division, Institute of Environment, Florida International University. jim.fourquaran@fiu.edu, (305)348-4084.

Attachment B

TABLE A

Position Types
Senior Scientist (Faculty)
Lead Scientist (Faculty)
Expert Scientist
Scientist (Staff)
Post-Doc (Faculty)
Research Associate (Faculty)
Research Analyst (Staff)
Research Assistant (Graduate Student)
Research Assistant (Undergraduate Student)

TABLE B

Type of Project	Level of Effort	Description of Tasks (See Section 2 - University's Services)
Specialized Analytical Services	(See Table A for Position Types. Position Types will be specified in Scope of Work based on tasks to be performed)	<ul style="list-style-type: none"> - detailed water, sediment and biota lab analysis - utilization of field water quality equipment for testing - assessment of performance of function and data validation of field and lab instrumentation
Water Quality Monitoring and Assessment	(See Table A for Position Types. Position Types will be specified in Scope of Work based on tasks to be performed)	<ul style="list-style-type: none"> - design, develop implement and communicate monitoring and assessment programs
Ecosystem Assessment	(See Table A for Position Types. Position Types will be specified in Scope of Work based on tasks to be performed)	<ul style="list-style-type: none"> - characterize, evaluate status of, and/or assess natural resources and environmental lands within the Biscayne Bay watershed
Data Management, Visualization, and Prediction	(See Table A for Position Types. Position Types will be specified in Scope of Work based on tasks to be performed)	<ul style="list-style-type: none"> - create, curate, and maintain a centralized repository of electronic data, documents, GIS layers, and educational resources of interest
Surface water, Groundwater, Stormwater, and Wastewater Characterization and Management	(See Table A for Position Types. Position Types will be specified in Scope of Work based on tasks to be performed)	<ul style="list-style-type: none"> - lab analysis - preparation and collection of samples - utilization of field water quality meters for testing of relevant parameters - assist MDC in day-to-day tasks and long-term projects - assistance with minor/short term sampling and study of infrastructure - assist MDC with water quality sampling and analysis
Event-based Sampling and Analysis	(See Table A for Position Types. Position Types will be specified in Scope of Work based on tasks to be performed)	<ul style="list-style-type: none"> - provide assistance and guidance with data collection and sampling for extreme events

Attachment C

Table 1: Outline of FIU and Subcontractor Scopes of Work

Tasks	University Services to Support Water Quality and Ecosystem Restoration Initiatives (Section 2 of Agreement)
Grant Agreement C2001 – Task 3	
Inventory water resources contributing to watershed (FIU)	A, C, D
Water quality characterization and sampling (FIU)	A, B, E, F
Characterize particulate matter, sediment, vegetation (FIU and UM)	A, E, F
Characterize contributions of ground and surface water into watershed (FIU and UM)	A, E, F
Characterize nitrogen isotopes as indicators of pollution sources (FIU and UM)	A, E, F
Inventory and compilation of available data for model development (UM)	C, D
Model implementation (UM)	C, D
Model validation (UM)	C, D
Model output analysis (UM)	C, D
Characterize contributions of and source track microbial community and pathogens (FIU and UM)	A, B, E, F
Characterize contributions of and source track particulate matter, sediment, pathogens (FIU and UM)	A, B, E, F
Source apportioning, microbial population taxonomy and fingerprinting (FIU and UM)	A, B, E, F
Ecosystem Restoration Initiative Tasks	
Evaluate existing datasets to assess status of natural resources in the watershed (FIU)	C, D
Identify and complete evaluation of degraded habitats with high potential for restoration adjacent to a waterbody (FIU)	C



MEMORANDUM
(Revised)

TO: Honorable Chairman Anthony Rodriguez
and Members, Board of County Commissioners

DATE: March 3, 2026

FROM: 
Gen Bonzon-Keenan
County Attorney

SUBJECT: Agenda Item No. 9(A)(2)

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 ____, majority plus one ____, 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) ____, 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 _____ Mayor
Veto _____
Override _____

Agenda Item No. 9(A)(2)
3-3-26

RESOLUTION NO. _____

RESOLUTION RATIFYING, PURSUANT TO SECTIONS 2-9 AND 2-10 OF THE COUNTY CODE, THE ACTIONS OF THE COUNTY MAYOR OR COUNTY MAYOR’S DESIGNEE IN EXECUTING AND APPROVING AN INTERLOCAL AGREEMENT BETWEEN FLORIDA INTERNATIONAL UNIVERSITY AND MIAMI-DADE COUNTY FOR RESEARCH, ANALYSIS, AND OTHER SERVICES FOR THE DEPARTMENT OF ENVIRONMENTAL RESOURCES MANAGEMENT (“AGREEMENT”) AND APPROVING FIVE-YEAR EXTENSION OF AGREEMENT, FOR A TOTAL AMOUNT OF UP TO \$5,450,000.00; AUTHORIZING THE COUNTY MAYOR OR COUNTY MAYOR’S DESIGNEE TO EXECUTE DOCUMENTATION REASONABLY NECESSARY TO REFLECT COUNTY’S APPROVAL OF THE EXTENSION OF TIME TO THE AGREEMENT; AND AUTHORIZING THE COUNTY MAYOR OR COUNTY MAYOR’S DESIGNEE TO EXERCISE ANY AND ALL PROVISIONS OF THE AGREEMENT, INCLUDING THE TERMINATION PROVISIONS CONTAINED THEREIN

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:

Section 1. This Board hereby ratifies, pursuant to sections 2-9 and 2-10 of the Code of Miami-Dade County, the actions of the County Mayor or County Mayor’s designee in executing and approving Interlocal Agreement No. 25FIU001, between Miami-Dade County and Florida International University, attached to the memorandum as Exhibit 1 and made a part hereof, for research, analysis, and other services for the Department of Environmental Resources Management (the “Agreement”) for a one-year term.

Section 2. This Board approves a five-year extension to the Agreement, for a combined total term of six years, and a total amount up to \$5,450,000.00.

Section 3. This Board hereby authorizes the County Mayor or County Mayor's designee to execute, following consultation with the County Attorney's Office, any documentation reasonably necessary to reflect the County's approval of said extension of time and to exercise the provisions contained therein including termination.

The foregoing resolution was offered by Commissioner _____ ,
who moved its adoption. The motion was seconded by Commissioner _____
and upon being put to a vote, the vote was as follows:

Anthony Rodriguez, Chairman	
Kionne L. McGhee, Vice Chairman	
Marleine Bastien	Juan Carlos Bermudez
Sen. René García	Oliver G. Gilbert, III
Roberto J. Gonzalez	Keon Hardemon
Danielle Cohen Higgins	Vicki L. Lopez
Natalie Milian Orbis	Raquel A. Regalado
Micky Steinberg	

The Chairperson thereupon declared this resolution duly passed and adopted this 3rd day of March, 2026. 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

JUAN FERNANDEZ-BARQUIN, CLERK

By: _____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

MRP

Monica Rizo Perez
Abbie Schwaderer-Raurell