



**CITY OF FORT LAUDERDALE
City Commission Agenda Memo
REGULAR MEETING**

22-1120

TO: Honorable Mayor & Members of the
Fort Lauderdale City Commission

FROM: Greg Chavarria, City Manager

DATE: December 6, 2022

TITLE: Resolution Authorizing the Acceptance of Grant Funds from the Florida
Division of Emergency Management Awarded to the City of Fort Lauderdale
for a Watershed Master Plan and the Execution of Related Agreements –
(Commission Districts 1, 2, 3 and 4)

Recommendation

Staff recommends that the City Commission consider a resolution authorizing the City Manager to accept a grant in the amount of \$150,000 from the Florida Department of State and authorize the City Manager or designee to execute documents required to accept the funds including negotiating and executing any procurement agreements pursuant to the subaward agreement subject to approval of the City Attorney's Office.

Background

The Florida Division of Emergency Management (FDEM) initiated a project using Federal Emergency Management Agency (FEMA) funding for the purpose of creating standardized, cost-effective, and easily replicable Watershed Master Plans (WMP) throughout the state of Florida. In addition to providing Florida communities a tool they can use to make decisions that will reduce flooding from development on a watershed-wide basis, FDEM is seeking participation in this grant opportunity from Community Rating System (CRS) communities to facilitate further National Flood Insurance Premiums (NFIP) flood insurance discounts.

The FDEM Watershed Initiative has been implemented in two phases. Phase I was an exploratory process in which they partnered with Florida Atlantic University (FAU) to: catalog and analyze statewide modeling data to identify gaps; develop a strategy and verify a watershed modeling process; develop an instructional manual for the modeling tool and develop a WMP template; and to develop two WMPs for the pilot communities of Clewiston (inland) and Dania Beach (coastal). Phase II of the initiative was then launched with an opportunity for any Florida CRS community to submit a notice of proposal. The City submitted its proposal for Phase II for the development of the Fort Lauderdale WMP. Should the City accept the funds, the City will pursue an agreement with FAU to complete a WMP for the City of Fort Lauderdale.

FDEM has awarded funding for the City of Fort Lauderdale’s proposal in the amount of \$150,000 with \$50,000 in matching funds. Matching funds will be provided as in-kind services through staff time spent on the grant project. The proposed partnership between the City and FAU will be facilitated through a Master Research Agreement, with deliverables and associated costs clearly identified as part of the scope of work. Once the Fort Lauderdale WMP is finalized it will be submitted to the City Commission for approval, thereby completing the performance period of the award.

The proposed WMP will be designed to look at existing stormwater conditions and identify potential future conditions to provide an understanding of the watershed’s behavior to ensure that established or enhanced regulations requiring onsite control will prevent flood damage due to future development. The Fort Lauderdale WMP will include modeling design storms including 5-, 10-, 25- and 100-year floods, plus the 3-day and 25-year storm event, with 1, 2, 3, 4 and 5 ft of sea level rise and king tides, as applicable. It is also structured to meet CRS credit criteria and generate additional CRS credit contributing to the City’s goals for classification improvement and reduced NFIP flood insurance premiums for its neighbors.

Resource Impact

This action will result in a positive impact to the City in the amount of \$150,000. Funding will be appropriated as a reimbursement upon proof of expenditures related to this project. Accounts below will be utilized contingent upon the approval of the Consolidated Budget Amendment CAM #22-0896.

Source:

<i>Funds available as of November 3, 2022</i>					
ACCOUNT NUMBER	COST CENTER NAME	ACCOUNT/ACTIVITY NAME	AMENDED BUDGET (Character)	AVAILABLE BALANCE (Character)	AMOUNT
10-129-9300-538-331-206-23GWSMP	Watershed Master Plan	Intergovernment Revenue/ DHS FEMA	N/A	N/A	\$150,000
APPROPRIATION TOTAL ►					\$150,000

Use:

ACCOUNT NUMBER	COST CENTER NAME	CHARACTER CODE/ACCOUNT NAME	AMENDED BUDGET (Character)	AVAILABLE BALANCE (Character)	AMOUNT
10-129-9300-538-30-3104-23GWSMP	Watershed Master Plan	Services/Materials/ Architectural/Engineering Services	N/A	N/A	\$150,000
APPROPRIATION TOTAL ►					\$150,000

Strategic Connections

This item supports a 2022 Commission Priority, advocating for State and Federal funding.

This item supports the *Press Play Fort Lauderdale 2024 Strategic Plan*, specifically advancing:

- The Infrastructure Focus Area
- Goal 1: Build a sustainable and resilient community
- Objective: Reduce flooding and adapt to sea level rise

This item advances the *Fast Forward Fort Lauderdale 2035 Vision Plan: We Are Ready*.

This item supports the *Advance Fort Lauderdale 2040 Comprehensive Plan* specifically advancing:

- Neighborhood Enhancement Focus Area
- Conservation Element
- Goal 5: Conserve, protect, and appropriately utilize the City's natural resources, including soils, designated sensitive lands, and natural reservations.
- Objective CON 5.1: The City shall recognize, protect, and plan for sensitive and vulnerable areas, and for lands of importance.

- Infrastructure Focus Area
- Climate Change Element
- Goal 3: Preserve and enhance the quality of life through advance planning, improved coordination with businesses and local and regional governments, better monitoring of evolving conditions, and equitable provision of resources to address issues related to climate change, and hazard and natural disaster resiliency and recovery.
- Objective CC 3.1: Continue to coordinate with the private sector, governmental agencies within the South Florida region, non-governmental entities, and academic institutions in the ongoing assessment of existing and projected conditions related to our changing climate and rising sea levels and continue to collaborate as necessary in the identification and development of effective solutions and strategies to adapt and improve resiliency of the community. Work with other agencies and seek out new funding for implementation of programs.

Related CAM

#22-0896 Consolidated Budget Amendment

Attachments

Exhibit 1 – Federally-Funded Subaward and Grant Agreement

Exhibit 2 – Resolution

Prepared by: Constance Lake, CFM, Development Services Department

Department Director: Christopher Cooper, AICP, Development Services

RESOLUTION NO. 22-277

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF FORT LAUDERDALE, FLORIDA, APPROVING A FEDERALLY-FUNDED SUBAWARD AND GRANT AGREEMENT BETWEEN THE CITY OF FORT LAUDERDALE AND THE STATE OF FLORIDA, DIVISION OF EMERGENCY MANAGEMENT, AUTHORIZING THE CITY MANAGER TO EXECUTE THE FEDERALLY-FUNDED SUBAWARD AND GRANT AGREEMENT, ACCEPT GRANT FUNDS FROM THE FLORIDA DIVISION OF EMERGENCY MANAGEMENT ON BEHALF OF THE CITY OF FORT LAUDERDALE IN THE AMOUNT OF \$150,000.00 FOR PREPARATION OF A WATERSHED MANAGEMENT PLAN, TO EXECUTE ANY AMENDMENTS EXTENDING THE TERM OF THE GRANT AGREEMENT, TO DIRECT PROCUREMENT OF SERVICES, TO NEGOTIATE AND FINALIZE THE TERMS AND CONDITIONS OF ANY PROCUREMENT AGREEMENT, AND TO EXECUTE ANY AND ALL SUCH PROCUREMENT AGREEMENTS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, in June 2022, the City of Fort Lauderdale submitted a proposal to the Florida Division of Emergency Management requesting funding for the preparation of a Watershed Master Plan at an estimated cost of \$200,000; and

WHEREAS, preparation of such a plan is consistent with Objective SWS 6.1 of the Sanitary Sewer, Water, & Stormwater Element of the City of Fort Lauderdale Comprehensive Plan; and

WHEREAS, the grant application was approved by the Florida Division of Emergency Management in the amount of \$150,000; and

WHEREAS, the City of Fort Lauderdale is required to provide matching funds in the amount of \$50,000; and

WHEREAS, the City Commission finds that executing the grant agreement with the State of Florida Division of Emergency Management furthers the public health, safety and welfare of the residents of the City of Fort Lauderdale.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF FORT LAUDERDALE, FLORIDA:

SECTION 1. The Federally-Funded Subaward and Grant Agreement ("Agreement"), in substantially the form attached as Exhibit 1 to Commission Agenda Memorandum No. 22-1120, is hereby approved and the City Manager is authorized to execute the agreement on behalf of the City of Fort Lauderdale, Florida.

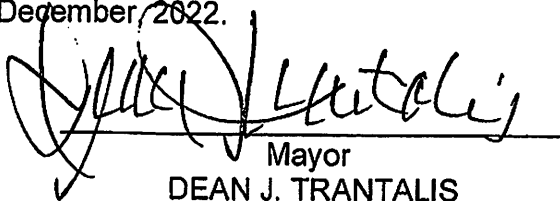
SECTION 2. The City Manager is hereby authorized to accept grants funds on behalf of the City of Fort Lauderdale from the State of Florida, Division of Emergency Management, in the amount of one hundred and fifty thousand dollars and 00/100 cents (\$150,000.00) for the preparation of a Watershed Master Plan, and execute any amendments to extend the term of the grant agreement.

SECTION 3. The City Commission hereby authorizes the City Manager to direct procurement pursuant to the Agreement and consistent with the requirements of 2 C.F.R. §§ 200.318 through 200.327 as well as Appendix II to 2 C.F.R. Part 200 (entitled "Contract Provisions for Non-Federal Entity Contracts Under Federal Awards") as required by the terms of the Agreement, to negotiate and finalize the terms and conditions of any agreement required as a result of such procurement, and to execute any and all such procurement agreements on behalf of the City of Fort Lauderdale, Florida, subject to the review and approval of the Office of the City Attorney.

SECTION 4. That the Office of the City Attorney shall review and approve as to form all documents prior to their execution by proper City officials.


SECTION 5. That this Resolution shall be in full force and effect upon final passage and adoption.

ADOPTED this 6th day of December, 2022.



Mayor
DEAN J. TRANTALIS

ATTEST:



City Clerk
DAVID R. SOLOMAN

Dean J. Trantalis Yea

John C. Herbst Yea

RESOLUTION NO. 22-277

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APPROVED AS TO FORM:



City Attorney
ALAIN E. BOILEAU

Steven Glassman Yea

Pamela Beasley-Pittman Yea

Warren Sturman Yea

**FLORIDA ATLANTIC UNIVERSITY
WATERSHED MANAGEMENT PLAN RESEARCH AGREEMENT
AGREEMENT # C-23-028**

This Agreement is made by and between FLORIDA ATLANTIC UNIVERSITY Board of Trustees, having its business address at 777 Glades Road, P.O. Box 3091, Boca Raton, Florida 33431-0991 (hereinafter "UNIVERSITY") and City of Fort Lauderdale, a municipal corporation, having its business address at 100 North Andrews Avenue, Fort Lauderdale, FL 33311 (hereinafter "SPONSOR").

SUBJECT

The purpose of this Agreement is to further the research objectives of UNIVERSITY and SPONSOR.

IT IS AGREED:

Article 1.0 RESEARCH PROJECT

- 1.1 UNIVERSITY agrees to undertake certain research tasks associated with the Federally-Funded Subaward and Grant Agreement Number H0873 ("Subaward Agreement") for the production of a Watershed Master Plan ("WMP") identified as Project 4337-4-Px (hereinafter "PROJECT") specifically described in Task Orders issued by SPONSOR to UNIVERSITY. TASK ORDERS will be incorporated in the form attached hereto as Appendix A. Each TASK ORDER will at a minimum include the following information:
 - a) A unique and sequential identification number.
 - b) A Statement of Work (SOW) providing sufficient and reasonable details of the work.
 - c) Period of Performance of the identified SOW.
 - d) Deliverables and due dates for the deliverables.
 - e) Amount of financial support being provided to UNIVERSITY.
- 1.2 The PROJECT and all work assignments shall be carried out under the direction of a designated PROJECT DIRECTOR (hereinafter "PROJECT DIRECTOR") while employed by UNIVERSITY, and by others (e.g. technician, graduate student, postdoctoral fellow, or faculty member, hereinafter collectively referred to as PERSONNEL), as assigned by PROJECT DIRECTOR.
- 1.3 UNIVERSITY agrees that there shall be no change of PROJECT DIRECTOR without prior written approval of SPONSOR.
- 1.4 UNIVERSITY acknowledges its role as a subcontractor pursuant to the Subaward Agreement and agrees to be bound by the terms of the Subaward Agreement in that capacity. In the event of a conflict between the Subaward Agreement and this Watershed

Management Plan Research Agreement, the provisions of the Subaward Agreement shall govern.

Article 2.0 TERM

- 2.1 The term of this Agreement extends for a period beginning on October 1, 2022 and continuing through September 30, 2027.
- 2.2 It is understood that each TASK ORDER will have its own TERM, but the period of performance must be within the TERM of the Watershed Management Plan Research Agreement. The Agreement may be extended for additional periods of time under terms mutually agreed upon in writing in a duly executed amendment to this agreement.

Article 3.0 FACILITIES AND EQUIPMENT

- 3.1 UNIVERSITY agrees to furnish such available laboratory facilities and equipment as it shall determine necessary for the PROJECT, other than that specifically provided by SPONSOR under this Agreement.
- 3.2 Parties agree that all equipment and supplies purchased with funds obtained as a result of this Agreement become the property of the UNIVERSITY.

Article 4.0 PAYMENT

- 4.1 This Agreement does not authorize UNIVERSITY to perform work nor to spend any funds. The funding will be noted and authorized in each TASK ORDER and a payment schedule will be specified for each TASK ORDER.

The foregoing payment by SPONSOR is acknowledged to be full and complete compensation for all work and obligations assumed under this Agreement.

Checks will be made payment to: Florida Atlantic University

Mail checks to: Florida Atlantic University
P.O. Box 198660
Atlanta, GA 30384-8660

Article 5.0 REPORTS

- 5.1 The PROJECT DIRECTOR shall furnish SPONSOR with written reports and/or deliverables according to the schedule outlined in each TASK ORDER.

Article 6.0 PUBLICATION

- 6.1 SPONSOR recognizes that under University policy, the PROJECT results are non-confidential and agrees that PERSONNEL engaging in the PROJECT shall be permitted to present or publish at their own choosing, methods and results of the PROJECT, provided, however, that SPONSOR shall have been furnished copies of any proposal presentation or publication thirty (30) days in advance for review for patentable items or items deemed confidential as defined in article 7.0.
- 6.2 If SPONSOR believes that any planned publication contains a patentable development and wishes UNIVERSITY to file a patent application, upon written notice to UNIVERSITY, submission of such manuscript for publication shall be delayed for a reasonable time, not to exceed sixty (60) days, to permit the filing of a patent application(s) by UNIVERSITY.
- 6.3 Nothing in this Agreement shall entitle UNIVERSITY to disclose to others or publish any information disclosed to UNIVERSITY by SPONSOR which is confidential within the meaning of article 7.0 without the prior written approval of SPONSOR.

Article 7.0 CONFIDENTIALITY

- 7.1 UNIVERSITY acknowledges that SPONSOR may wish to disclose information which sponsor considers confidential, in furtherance of the PROJECT. SPONSOR acknowledges that UNIVERSITY has no mechanism to maintain or guarantee the confidentiality of information and cannot sustain liability for inadvertent or other disclosure of confidential information. These considerations notwithstanding, if any such information is disclosed by SPONSOR it shall be clearly marked "confidential information" and furnished in writing only to the PROJECT SUPERVISOR or orally disclosed to the PROJECT SUPERVISOR and reduced to writing by the SPONSOR within thirty (30) days of disclosure. Confidential information shall remain the property of the SPONSOR and for a period of three (3) years from the end of the Agreement shall not be used or disclosed to others except in furtherance of this Agreement. The foregoing obligation of non-use and non-disclosure shall not apply to:
 - a) Information which at the time of disclosure is in the public domain;
 - b) Information which after disclosure is published or otherwise becomes part of the public domain through no fault of the PROJECT SUPERVISOR;
 - c) Information which was in the possession of the PROJECT SUPERVISOR at the time of disclosure and was not acquired from SPONSOR under an obligation of confidentiality; or
 - d) Information which SPONSOR provides written permission to disclose.
- 7.2 **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE**

APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT PRRCONTRACT@FORTLAUDERDALE.GOV, 954-828-5002, CITY CLERK'S OFFICE, 100 N. ANDREWS AVENUE, FORT LAUDERDALE, FLORIDA 33301.

UNIVERSITY shall comply with public records laws, and UNIVERSITY shall:

- a) Keep and maintain public records required by the City to perform the service.
- b) Upon request from the SPONSOR's custodian of public records, provide the SPONSOR with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2022), as may be amended or revised, or as otherwise provided by law.
- c) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the UNIVERSITY does not transfer the records to the SPONSOR.
- d) Upon completion of the Agreement keep and maintain public records required by the SPONSOR to perform under the Agreement. The UNIVERSITY shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the SPONSOR, upon request from the SPONSOR's custodian of public records, in a format that is compatible with the information technology systems of the SPONSOR.

Article 8.0 PATENT AND OTHER RIGHTS AND LICENSE OPTIONS

- 8.1 UNIVERSITY agrees to notify sponsor of any invention made by UNIVERSITY hereunder within thirty (30) days after receipt of an invention disclosure from the inventor.
- 8.2 UNIVERSITY qualifies as a state university under Florida law and pursuant to section 1004.23, Florida Statutes, shall retain all rights to inventions or discoveries, patentable or not, conceived solely by UNIVERSITY. UNIVERSITY shall prepare and prosecute all related patent applications. SPONSOR shall retain all rights to inventions or discoveries, patentable or not, conceived solely by SPONSOR. Inventions or discoveries, patentable or not, made jointly by SPONSOR and UNIVERSITY shall be jointly owned by SPONSOR and UNIVERSITY, and UNIVERSITY shall prepare and prosecute all related

patent applications and SPONSOR shall reimburse UNIVERSITY for one-half of the expense of all filing, prosecution and maintenance costs for all such patent applications and all issued patents. UNIVERSITY grants SPONSOR an option to secure an exclusive license to UNIVERSITY'S rights to said jointly-owned inventions and discoveries. The provisions of Article 8.3, 8.4, 8.5, 8.6 and 8.7 shall apply to such an option.

- 8.3 SPONSOR shall indicate to UNIVERSITY in writing, within thirty (30) days of receipt of invention disclosure, whether it wishes UNIVERSITY to file a patent application on the invention, if applicable, or whether it wishes UNIVERSITY to register a copyrightable material.
- 8.4 UNIVERSITY agrees to grant and hereby grants SPONSOR an option to secure a royalty-bearing license under reasonable terms, with the right to make, use and sell, have made and have used, the claimed invention of any patent which is based on any invention conceived and reduced to practice during the term of this Agreement. Such option shall be in effect and exercisable for ninety (90) days from the date of filing of a U.S. patent application under this Agreement or for ninety (90) days from the date of receipt of notice of such a filing by SPONSOR whichever date is earlier.
- 8.5 The license, which will be exclusive, will include a royalty rate in an amount to be negotiated in good faith by both UNIVERSITY and SPONSOR at the time SPONSOR decides to exercise its option. SPONSOR shall have the rights under the license to sublicense and shall have the sole right to designate the terms of any sublicense, provided that UNIVERSITY shall receive, at a minimum, the royalty rate expressed in the license between UNIVERSITY and SPONSOR, and fifty percent (50%) of any other remuneration received by SPONSOR from sub-licensees.
- 8.6 At the time of exercise of the option, SPONSOR shall indicate in which foreign countries it wants a patent application filed. Rights to such foreign countries shall be included in the patent rights under any license between UNIVERSITY and SPONSOR.
- 8.7 SPONSOR shall reimburse UNIVERSITY for all filing, prosecution and maintenance costs for all patent applications and all issued patents filed at the request of SPONSOR. Any such patent applications shall become part of the patent rights in any license between UNIVERSITY and SPONSOR. SPONSOR shall also reimburse UNIVERSITY for all filing, prosecution and maintenance costs for all other patent applications and issued patents which become part of the patent rights in any license Agreement between UNIVERSITY and SPONSOR.

Article 9.0 TERMINATION

- 9.1 Either party may terminate this Agreement prior to the designated term by giving thirty (30) days written notice to the other. Terminating this Agreement will also terminate all TASK ORDERS that are still active unless the parties agree that the active Scopes of Work

will be completed in which event those active projects will be completed under the terms of this Agreement and no further work will be accepted.

- 9.2 Upon early termination of this Agreement and TASK ORDERS, SPONSOR shall pay all costs accrued by UNIVERSITY as of the date of termination including non-cancelable obligations for the term of the Agreement, which shall include all appointments of research staff incurred prior to the effective date of the termination.

Article 10.0 LIABILITY AND NEGATION OF WARRANTY

- 10.1 Each party will be responsible for its own negligent acts or omissions, and the negligent acts or omissions of its officers, employees, servants, and agents when acting within the scope of their employment or agency, and each party agrees to be liable for any damage or injury resulting from said negligent acts or omissions, subject to the limitations provided under Section 768.28 of the Florida Statutes. Nothing contained herein, or in any term or to any party any remedy or defense available to such party under the laws of the State of Florida; (2) consent by a party to be sued except as authorized under Section 768.28 of the Florida Statutes; (3) a waiver of sovereign immunity; or (4) constituting a hold harmless agreement.
- 10.2 UNIVERSITY makes no representation other than those specified in this Agreement. UNIVERSITY makes no express or implied warranties of merchantability of fitness for any particular purpose of data or technical information derived from this RESEARCH PROJECT.

Article 11.0 ASSIGNMENT

- 11.1 This Agreement may not be assigned by SPONSOR without the prior written Agreement of UNIVERSITY.

Article 12.0 PUBLICITY

- 12.1 SPONSOR and UNIVERSITY agree that they will not use the name of the other party, nor of any member of ITS PERSONNEL, in any publicity, advertising, or news release without the prior written approval of the other.

Article 13.0 NOTICES

- 13.1 Notices, invoices, payments, and other communications hereunder shall be deemed to have been made when delivered, sent by telex or telegram, or when mailed first class, postage prepaid, and addressed to the party at the address given below, or such other address as may hereafter be designated by notice in writing:

SPONSOR:

**City of Fort Lauderdale
700 NW 19th Avenue,
Fort Lauderdale, FL 33311
(954) 828-7266
clake@fortlauderdale.gov**

FLORIDA ATLANTIC UNIVERSITY

For Administrative matters:

**Miriam Campo
Assistant VP for Research
Office of Sponsored Programs
Division of Research
Florida Atlantic University
777 Glades Road, ADM 310
Boca Raton, FL 33431-0991
campom@fau.edu**

For Technical matters:

**Principal Investigator Frederick Bloetscher
Address 777 Grades Load
Boca Raton, FL 33431
(239) 250-2423
fbloetsc@fau.edu**

Article 14.0 MISCELLANEOUS

- 14.1 UNIVERSITY and SPONSOR agree that the PROJECT SUPERVISOR AND PERSONNEL are acting as employees of UNIVERSITY and not as agents or employees of SPONSOR.
- 14.2 This Agreement shall be binding upon and inure to the benefit of the respective parties and their successors.
- 14.3 This Agreement shall be governed by and construed according to the laws of the State of Florida.
- 14.4 This Agreement may not be assigned by the SPONSOR without the written permission of UNIVERSITY.
- 14.5 This Agreement embodies the entire understanding of the parties and supersedes all prior agreements, oral or written, and all other communications between the parties relating to the subject matter hereof.

- 14.6 No amendment or modification of this Agreement shall be valid or binding upon the parties unless made in writing and signed by their duly authorized employees.
- 14.7 Upon termination of this Agreement, neither party shall have any liability to the other, except for any provisions of this Agreement which by their nature extend beyond the termination or expiration until fulfilled and shall bind the parties and their legal representatives, successors and assigns.
- 14.8 The parties shall abide by the Financial Conflict of Interest (FCOI) federal regulations (42 CFR Part 50 Subpart F and 45 CFR Part 94) revised effective September 26, 2011.

The parties hereto have caused this Agreement to be executed by duly authorized representatives effective as of the later date indicated below:

SPONSOR

 Name: Greg Chavarria
 Title: City Manager
 Date: 7/21/23

FLORIDA ATLANTIC UNIVERSITY BOARD OF TRUSTEES

 Name: Miriam Campo
 Title: Assistant VP for Research
 Date: July 10, 2023

APPROVED AS TO FORM AND CORRECTNESS:

 D'Wayne M. Spence
 Interim City Attorney
 Date: 7/19/2023

APPENDIX A

**FLORIDA ATLANTIC UNIVERSITY
WATERSHED MANAGEMENT PLAN RESEARCH AGREEMENT
TASK ORDER NO. XX**

This TASK ORDER is issued under Watershed Management Plan Research Agreement No. C-23-028, between Florida Atlantic University Board of Trustees and the City of Fort Lauderdale.

TO Issue Date:

Principle Investigator:

Project Title:

Period of Performance:

Funding Amount for this Task: \$

Payment Schedule:

Deliverables:

The Statement of Work, line item budget and a budget justification are attached.

All the terms and conditions of the Watershed Management Plan Research Agreement between UNIVERSITY AND SPONSOR shall apply in full to this TASK ORDER.

IN WITNESS WHEREOF, the parties have agreed and do hereby enter into this TASK ORDER.

SPONSOR

**FLORIDA ATLANTIC UNIVERSITY
BOARD OF TRUSTEES**

Name: Greg Chavarria

Name: Miriam Campo

Title: City Manager

Title: Assistant VP for Research

Date: 7/21/23

Date: _____

APPENDIX A

FLORIDA ATLANTIC UNIVERSITY
MASTER RESEARCH AGREEMENT
TASK ORDER NO. 1

This Task Order is issued under Master Research Agreement No. C-23-028, between Florida Atlantic University (“UNIVERSITY”) and City of Fort Lauderdale (“SPONSOR”)

Issue Date: July 10, 2023
Principle Investigator: Frederick Bloetscher

Project Title: Phase 2 FDEM Watershed Planning Grant

Period of Performance: Upon execution of the FDEM contract through September 30, 2023

Funding Amount for this Task: \$ 150,000

Payment Schedule: Completion of deliverable 1 \$112,500
Completion of deliverable 2 \$37,500

Deliverables: _____

- Deliverable 1 – Create Preliminary Project Plan based on Initial Flood Modeling, and Submit Draft WMP (Task 1)
- Deliverable 2 – Revise Draft WMP and Submit Completed WMP (Task 2)

The Statement of Work, line item budget, and a budget justification are attached.

All the terms and conditions of the Master Agreement between UNIVERSITY AND SPONSOR Task Order.

the parties have agreed and do hereby enter into this Task Order.

UNIVERSITY

CITY MANAGER
↓

Name: <u>Greg Chavarria</u>	Name: <u>Miriam Campo</u>
Title: <u>City Manager</u>	Title: <u>Assistant VP for Research</u>
Date: <u>7/21/23</u>	Date: _____

Statement of Work for Phase 2 FDEM Watershed Planning Grant

Scope of Work:

For Phase 2, FDEM will coordinate with Sub-recipients to produce a Watershed Master Plan (WMP) for credit under the Community Rating System (CRS). In Phase 1, a pilot project was completed that consisted of research, the creation of a framework and guidance documents that ensure a consistent statewide approach to WMP development.

Sub-recipients under the Watershed Planning Initiative will use the Phase 1 guidance materials to produce a Watershed Master Plan for credit under CRS. Phase 1 materials can be found at:

<https://www.floridadisaster.org/dem/mitigation/watershed-planning-initiative> or

<https://www.fau.edu/engineering/research/cwr3/clearinghouse/>. The Sub-recipient will finalize the process by receiving approval from ISO/CRS that the created WMP is sufficient to receive credits under CRS 452.b. Tasks necessary to the completion of a Phase 2 include:

Task 1 – Creation of preliminary scope of work, initial flood modeling & submission of draft WMP to CRS officials for approval. The flood modeling should consider evaluations of the watershed's runoff response from design storms under current and predicted future conditions and assessments of the impacts of sea level rise and climate change. Preliminary modeling should include 10-, 25- & 100-year storm events. This initial scope of work and WMP draft should include preliminary modeling of the 10-, 25- and 100-year storm events, an inventory of the ground characteristics and data availability, existing regulations and plans in place, a description of vulnerable areas or areas of interest, a list of potential solutions, and a brief description of future actions plans.

Task 2 – Submit final WMP & CRS approval. After receiving feedback and approval on the sub-recipient's scope of work and flood modeling submission in Task 1 from FDEM and CRS officials, the sub-recipient will finalize the flood modeling process and complete their WMP. At a minimum, the modeling and WMP must include 10, 25 & 100 year storm events—or model sea level rise—to receive credit through CRS element 452.b. The sub-recipient will update their CRS plan and submit the updated prospective point total to CRS to receive points for element 452.b. The sub-recipient will submit the updated CRS plan to CRS for approval at the same time as they submit their final WMP to CRS for approval. If revisions are necessary. The subrecipient will correct and re-submit for CRS approval.

FDEM's grant process includes the previously stated Task 1 and Task 2. Task 1 for the subrecipient grant includes the following sub-Tasks 1.1-1.6 which will be performed by FAU under subcontract.

Task 1.1- Background Information Gathering

Task 1.2 - Policy Documentation for HUCS

Task 1.3- Risk Models for HUCS)

Task 1.4- Identifying Critical Areas/Solutions in HUCS

Task 1.5- Action Plan

Task 1.6 - Submit for Staff Review

Task 2.1 - Submit to NFIP for Review

Task 2.2 – Update CRS submission

Task 2.3 - Commission Approval

Task 2.4 – Progress reports to FDEM

Interim documentation will be provided for submission for initial commentary at the 75% stage of Tasks 1.1 to 1.5. FAU will complete Tasks 1.1-1.5 based on feedback from NFIP reviewers as a part of Subrecipient Task 2 in the FDEM RFP and provide support for sub-Tasks 2.1 to 2.3 which are a part of the Task 2 in the FDEM guidance. Each work task is outlined in the following paragraphs.

Task 1.1 - Background Information

Watershed Master Plans (WMPs), as conceived by the National Flood Insurance Program (NFIP) Community Rating System (CRS) program, provide an outline for communities to reduce local flood risk. According to the CRS Coordinator's Manual 2021 Addendum (FEMA, 2021), "the objective of watershed master planning is to provide communities within a watershed with a tool they can use to make decisions that will reduce flooding from development on a watershed-wide basis." Successful watershed master plans (WMPs) consist of the following activities (Association of State Floodplain Managers, 2020):

1. Evaluation of the watershed's runoff response from specific design storms under current and predicted future conditions
2. Assessment of the impacts of sea level rise and climate change
3. Identification of wetlands and other natural areas throughout the watershed
4. Protection of natural channels
5. Implementation of regulatory standards for new development such that peak flows and volumes are sufficiently controlled
6. Specific mitigation recommendations to ensure that communities are resilient in the future
7. A dedicated funding source to implement the mitigation strategies recommended by the plan

The process begins by first characterizing the watershed. A balanced approach is needed to obtain watershed-related information with the relevant precision. For example, groundwater is relevant when the ground and surface waters are directly connected, and the soil may lack capacity for infiltration storage. Geology, hydrogeology, land use, canals and other water bodies, and historical changes to the surface may be relevant to create the watershed description. A summary of the local communities involved in each HUC will be developed. Topographic features, uplands, wetlands, and shorelines will be delineated along with current flood maps. Other requirements are growth projections and mitigation strategies at the various scales (watershed, regional, and local) to limit increasing flood risk. FAU will collect the necessary data to be able to generate the mapping products needed for watershed master planning activities.

DELIVERABLE: Chapters 1 and 2 of the Watershed plan

Task 1.2 - Policy Documentation for HUCs

A Watershed Master Plan should be cognizant of applicable regulatory guidelines, ordinances, and public policies that relate to water management within the study area. It is important that the WMP identify the control actions, management practices, and regulations as well as the agencies that have authority and jurisdiction, as applicable to the study area. These will include regulatory standards for new development such that peak flows and volumes are sufficiently controlled and regulations that prohibit development, alteration, and modification of existing natural channels are in place. The universe of existing regulations includes federal, state, tribal, regional, and local rules. FAU with assistance from the communities in the study area will identify the necessary documents including the Local Mitigation Strategy (LMS) plan and previous CRS credit reviews, as well as minimum flows and levels and flow volumes, as applicable.

DELIVERABLE: Chapter 3 of the Watershed plan

Task 1.3 - Risk Models for HUCS

Modeling and assessment of vulnerability focused on the combination of a high water table, low soil storage, heavy rains, flat topography, and impervious conditions that can lead to localized nuisance flooding events. Modeling at the screening level is needed to identify areas of the watershed that are at risk. FAU will use a screening tool to identify regions with elevated risk of inundation based on multiple collected datasets and hydrological modeling. The screening tool utilizes topographic data from various sources, water table elevations, tidal information for coastal areas obtained from the NOAA Current & Tides website, soil maps obtained from the USDA, and other key datasets. **Error! Reference source not found.**1 shows how the GIS layers interface in the tool, and how they are combined for spatial analysis. The model chosen for this screening tool is Cascade 2001, which is a multi-basin hydrologic/hydraulic routing model developed by the South Florida Water Management District. The model permits the investigator to analyze different storm events and flooding scenarios. The following data layers collected during Task 1 activities are processed to develop the input files for Cascade 2001.

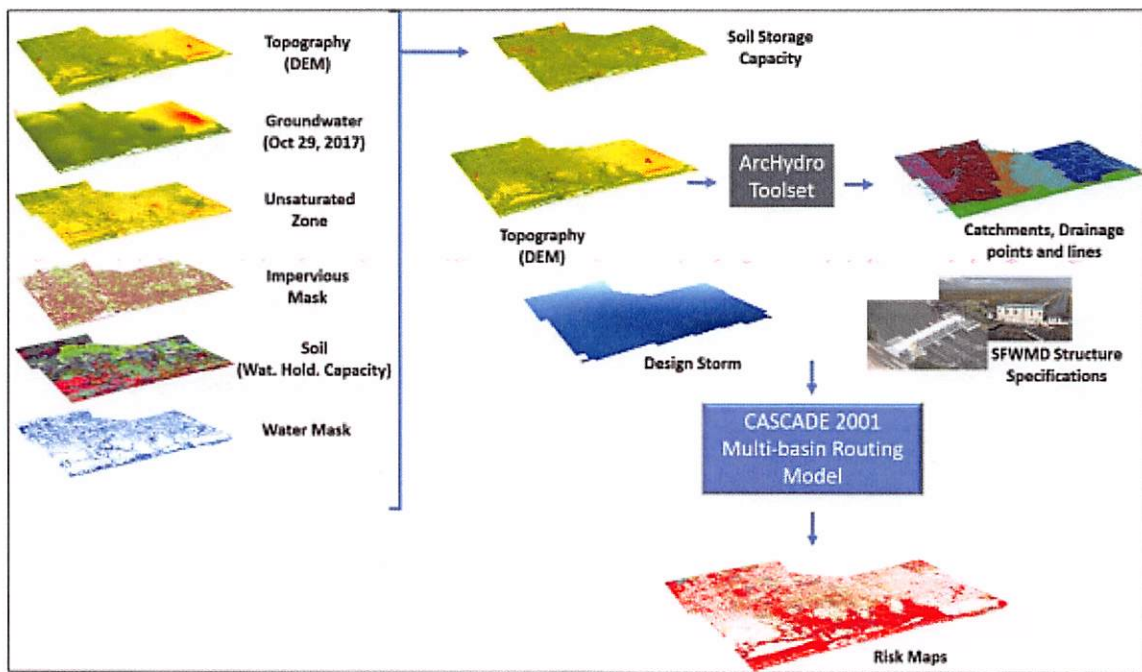


Figure 2.1. Screening tool methodology for creating flood risk maps

FAU will conduct map development activities that address the required design storms including 5-, 10-, 25- and 100-year floods, plus the 3-day, 25-year storm event, with 1, 2, 3, 4 and 5 ft of sea level rise and king tides, as applicable. At a minimum, the modeling and WMP must include 10-, 25- & 100-year storm events—or model sea level rise—to receive credit through CRS element 452.b. Note that understanding build-out and the impacts build-out has on drainage are factors that must be considered in modeling which must come from the underlying local communities. This is the watershed master planning assessment.

DELIVERABLE: Chapter 4 of the Watershed plan with all applicable modeling scenarios for the

HUC and relationship to involved HUCs; drilldown to community issue modeling

Task 1.4- Identifying Critical Areas/Solutions in the HUCs

Once areas at risk have been identified in the watershed master planning assessment, Task 4 is designed to identify potential mitigation measures to improve community resilience and flood protection. The process starts with narrowing down the feasible engineering alternatives using threshold criteria and quantifiable selection criteria that include measures of effectiveness, cost, and added benefit to the community. At the center of these planning efforts should also exist the provision for an adequate drainage system, designed to accommodate an increased volume of water and/or increased peak flows. Current capital plans, stormwater master plans, capital projects etc. will be identified. Local governments have these documents which will be secured in Task 2.

For this document, 35 solutions referred to as the “Periodic Table” menu of green and grey infrastructure technologies (**Error! Reference source not found.2.2**) will be referenced as applicable. Improvements like pump stations, changing weir elevations, larger pipes and coastal sea walls are major hardening efforts that can be modeled in Cascade 2001.

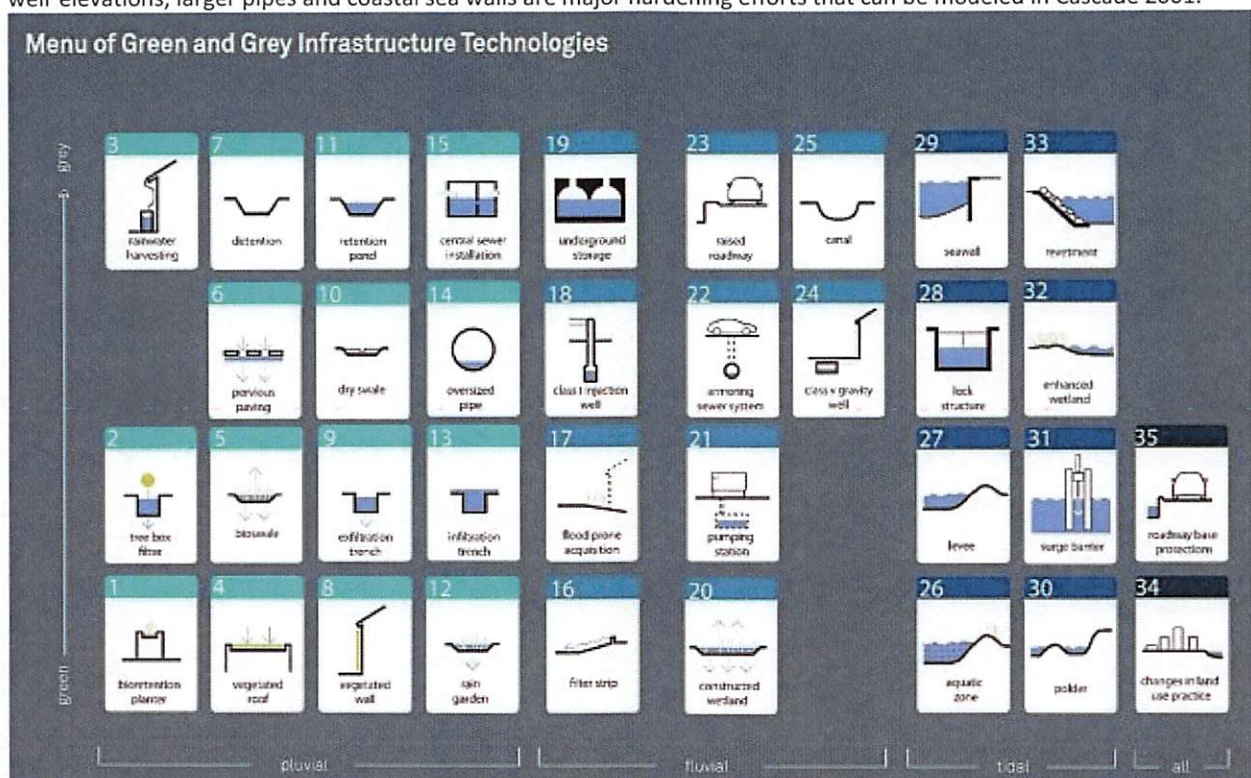
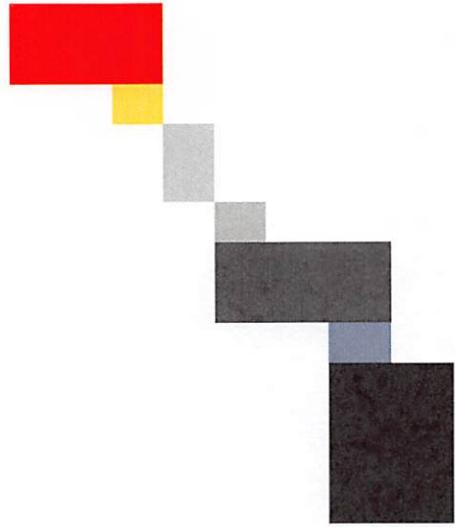


Figure 2.2. “Periodic table” menu of green and grey infrastructure technology options. The menu is organized to address various flooding types, from *pluvial* (rainfall and runoff mitigation in upland areas), *fluvial* (runoff, high ground water, and surface water management in low-lying flood prone areas), *tidal* (flooding associated with storm surge, high ground water, and tidally influenced), and *all* (applies across the spectrum).

DELIVERABLE: Update and completion of Chapter 4 and Chapter 5 of the Watershed plan with applicable modeling scenarios for the HUC

Task 1.5 - Action Plan

Task 1.4- Identifying Critical areas/Solutions in HUCs	FAU
Task 1.5 - Action Plan	FAU
Task 1.6 - Submit for Staff Review	Staff
Revisions	FAU
Task2.1- Submit to NFIP for Review	Staff w FAU support
Revisions	FAU
Task 2.2 -Update CRS submission	Staff w FAU support
Task 2.3 - Commission Approval	Staff w FAU support



FAU Watershed Budget – City of Fort Lauderdale		
FAU Watershed Budget – City of Fort Lauderdale		
Classification	Cost	Effort
Faculty Salary + Fringe	\$65,347	
Project Coordinator Salary + Fringe	\$4,822	0.7 Months
IT Personnel Salary + Fringe	\$7,067	0.7 Months
Research Assistant - MS	\$28,750	25 hours/Week
Research Assistant - Ph.D.	\$12,500	10 hours/week
Tuition	\$13,394	
Computer Hardware/Software	\$5,182	
Travel and Supplies	\$527	
Graduate Student Training	\$5,268	
Total Direct Cost	\$142,857	
Indirect Cost (5%)	\$7,143	
Total	\$150,000	

Senior Personnel

Budget requests summer salary/fringe for PI Dr. Frederick Bloetscher and Co-PIs Dr. Daniel Meeroff, Dr. Yan Yong, Dr. Hongbo Su, Dr. Khaled Sobhan, and Professor Anthony Abbate. The FAU-negotiated fringe rate for faculty is 29.7 percent.

Project Coordinator & IT Personnel

Budget requests salary and fringe for project coordinator and IT personnel to work on the deliverables of the project. The FAU negotiated fringe rate for administrative managerial personnel is 37.2 percent.

Graduate Research Assistants

Budget requests salary for a MS and PhD student to work on the deliverables of the project. There is no fringe for students.

Domestic Travel

Budget requests funds for domestic travel to project sites and professional meetings

Supplies

Budget requests funds for supplies needed to complete the deliverables of the project.

Computer hardware/software

Budget requests funds for computer hardware/software. Cost shared with other projects for stand-alone servers

Graduate Research Assistants Training

Budget requests graduate research assistants' training on report writing and communication skills.

Tuition

Budget requests tuition for MS and PhD graduate research assistants. Tuition is for 42 graduate

credits with \$303.71/credit plus 5% tuition increase.

Indirect Cost

Indirect cost is calculated at the sponsor's approved rate of 5% of total direct cost.



COMMISSION AGENDA ITEM
DOCUMENT ROUTING FORM

2L

Today's Date: 7/12/23

DOCUMENT TITLE: Florida Atlantic University Watershed Management Plan Research Agreement, Agreement # C-23-028

COMM. MTG. DATE: 12/6/22 CAM #: 22-1120 ITEM #: R-3 CAM attached: YES NO

Routing Origin: CAO Router Name/Ext: Jolene C/5035 Action Summary attached: YES NO

CIP FUNDED: YES NO

Capital Investment / Community Improvement Projects defined as having a life of at least 10 years and a cost of at least \$50,000 and shall mean improvements to real property (land, buildings, or fixtures) that add value and/or extend useful life, including major repairs such as roof replacement, etc. Term "Real Property" include: land, real estate, realty, or real.

1) Dept: CAO Router Name/Ext: Jolene C/5035 # of originals routed: 2 Date to CAO: N/A

2) City Attorney's Office: Documents to be signed/routed? YES NO # of originals attached: 2

Is attached Granicus document Final? YES NO Approved as to Form and Correctness: YES NO

Date to CCO: 7/19/23 D. Spence DJS
Attorney's Name Initials

3) City Clerk's Office: # of originals: 2 Routed to: Donna V./Amber C./CMO Date: 07/20/23

4) City Manager's Office: CMO LOG #: JUL44 Document received from: CCO 7/21/23

Assigned to: GREG CHAVARRIA
ANTHONY FAJARDO SUSAN GRANT
GREG CHAVARRIA as CRA Executive Director

APPROVED FOR G. CHAVARRIA'S SIGNATURE N/A FOR G. CHAVARRIA TO SIGN

PER ACM: A. Fajardo (Initial/Date)
S. Grant (Initial/Date)

PENDING APPROVAL (See comments below)

Comments/Questions:

Forward 2 originals to Mayor CCO Date: 7/21/23

5) Mayor/CRA Chairman: Please sign as indicated. Forward originals to CCO for attestation/City seal (as applicable) Date:

6) City Clerk: Scan original and forwards 2 originals to: Jolene C./CAO/x.5035

Attach certified Reso # YES NO Original Route form to Jolene C./CAO