



**II. FISCAL IMPACT ANALYSIS**

**A. Five Year Summary of Fiscal Impact:**

Fiscal Years	2019	2020	2021	2022	2023
Capital Expenditures	_____	_____	_____	_____	_____
Operating Costs	<u>\$33,000</u>	_____	_____	_____	_____
External Revenues	_____	_____	_____	_____	_____
Program Income (County)	_____	_____	_____	_____	_____
In-Kind Match (County)	_____	_____	_____	_____	_____
<b>NET FISCAL IMPACT</b>	<u>\$33,000</u>	_____	_____	_____	_____
<b># ADDITIONAL FTE POSITIONS (Cumulative)</b>	_____	_____	_____	_____	_____

Is Item Included in Current Budget?      Yes \_\_\_\_\_      No X

Does this item include the use of federal funds?      Yes \_\_\_\_\_      No X

Budget Account No.:

Fund \_\_\_\_\_ Department \_\_\_\_\_ Unit \_\_\_\_\_ Object \_\_\_\_\_ Program \_\_\_\_\_

**B. Recommended Sources of Funds/Summary of Fiscal Impact:**

There are sufficient funds from the General Government account to support the \$33,000 cost.

C. Department Fiscal Review: S. Neary

**III. REVIEW COMMENTS**

**A. OFMB Fiscal and /or Contract Dev. and Control Comments:**

[Signature] 7/30/19      [Signature] 8/11/19  
 OFMB 7/29      Contract Development and Control

**B. Legal Sufficiency:**

[Signature]  
 Assistant County Attorney

**C. Other Department Review:**

\_\_\_\_\_  
 Department Director



**INTERLOCAL AGREEMENT BETWEEN BROWARD COUNTY  
AND PALM BEACH COUNTY FOR COST SHARE SUPPORT OF SERVICES**

This Agreement ("Agreement") is made and entered into between Broward County ("Broward") and Palm Beach County ("Palm Beach"), political subdivisions of the State of Florida, (collectively referred to as the "Parties").

Recitals

- A. Southeast Florida is one of the areas of the country most vulnerable to the impacts of climate change.
- B. The Parties, along with Miami-Dade and Monroe Counties, formed the Southeast Florida Regional Climate Change Compact ("Compact") in January of 2010.
- C. Since adopting the Compact, the Parties, the other two (2) counties, and numerous other stakeholders have worked with each other to address climate change at the regional level.
- D. In the eight years since the Compact was adopted, the Parties and other stakeholders have earned significant national and international attention by successfully completing a Regional Climate Action Plan and a significant update to this plan, a unified sea level rise projection for Southeast Florida and several updates, a regional greenhouse gas emissions inventory, a regional vulnerability analysis, joint annual state and federal legislative programs, planning and execution of ten (10) Regional Climate Leadership Summits, and other joint activities.
- E. The Parties have recognized the benefits of regional coordination since the adoption of the Compact.
- F. Broward will enter into a contract with the Urban Land Institute ("ULI") for ULI to research the business case for resilience in Southeast Florida, and the Parties are desirous of sharing the cost for such mutually beneficial research.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

**ARTICLE 1. DEFINITIONS**

- 1.1 **Board**. The Board of County Commissioners of Broward County, Florida.
- 1.2 **Contract Administrator**. The Director of the Broward County Environmental Planning and Community Resilience Division, or such other person designated by same in writing.
- 1.3 **County Administrator**. The administrative head of Broward appointed by the Board.

- 1.4 **Services.** All work required of ULI by Broward on behalf of the Parties under an agreement between Broward and ULI, including without limitation all deliverables, consulting, training, project management, payments, and other services specified in Exhibit A.

## ARTICLE 2. OBLIGATIONS OF PARTIES

Palm Beach agrees to remit \$33,000 to Broward in accordance with Article 4 as its share of costs based on an invoice from Broward to be used by Broward to pay ULI pursuant to the Agreement between Broward County and ULI for the Business Case for Resilience in Southeast Florida project ("Project"). The Project will provide an economic analysis of risk and the return on investment and opportunity to be derived with regional investment in resilience. Broward shall remit monies recovered from Palm Beach to ULI for the Project. Broward agrees to also remit to ULI up to \$50,000 from its budget and \$75,000 from a Florida Department of Environmental Protection grant awarded to Broward for the Project. Additionally, on behalf of the Parties, Broward agrees to retain ULI, supervise ULI's performance of the ULI Services, to transmit to Palm Beach a copy of the executed agreement between Broward and ULI within ten (10) days after its execution, and to transmit to Palm Beach copies of all ULI deliverables within ten (10) days after their receipt by Broward.

## ARTICLE 3. TERM AND TIME OF PERFORMANCE

- 3.1 The term of this Agreement shall begin on the date it is fully executed by the Parties ("Effective Date") and shall end on May 31, 2020 ("Term"). The continuation of this Agreement beyond the end of either of the Parties' fiscal years is subject to both the appropriation and the availability of funds in accordance with Chapter 129, Florida Statutes. The failure of any party to budget or appropriate sufficient funds for this Agreement shall constitute additional grounds for the other party to terminate this Agreement pursuant to the procedures in Article 7 and 9.7 of this Agreement. Any extensions of time beyond the Term shall require an amendment to this Agreement, pursuant to the requirements for amendments stated herein.
- 3.2 Unless otherwise agreed by the Parties in writing, all duties, obligations, and responsibilities of the Parties required by this Agreement shall be completed no later than May 31, 2020. Time is of the essence in performing the duties, obligations, and responsibilities required by this Agreement.

## ARTICLE 4. COMPENSATION

- 4.1 Palm Beach will pay Broward the lump sum amount as follows:

Services/Goods	Amount
<b>TOTAL NOT TO EXCEED</b>	<b>\$33,000</b>

## 4.2 METHOD OF BILLING AND PAYMENT

- 4.2.1 Broward will submit an invoice for compensation to Palm Beach after the Effective Date of this Agreement. Palm Beach agrees to pay Broward by check or electronic funds transfer no later than forty-five (45) days after receipt of Broward's invoice at:

Broward County Board of County Commissioners  
Attn: Jason Liechty, Senior Environmental Project Coordinator  
Environmental Planning and  
Resilience Division  
Governmental Center, Suite 329H  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301

## **ARTICLE 5. GOVERNMENTAL IMMUNITY**

Nothing herein shall constitute a waiver of Section 768.28 of the Florida Statutes by either of the Parties or shall be construed as impacting or modifying the protections set forth therein except to the extent otherwise required under applicable Florida law. In addition, nothing herein shall be construed as consent to be sued by third parties in any matter arising out of this Agreement or any other contract. The Parties are political subdivisions as defined in Section 768.28, Florida Statutes, and each party shall be fully responsible for the acts and omissions of its agents or employees to the extent permitted by law.

## **ARTICLE 6. INSURANCE**

Parties are entities subject to Section 768.28, Florida Statutes, and shall furnish the other party with written verification of liability protection in accordance with state law upon request of the other party.

## **ARTICLE 7. TERMINATION**

- 7.1 This Agreement may be terminated for cause by an aggrieved party if a party in breach has not corrected the breach within ten (10) days after receipt of written notice from the aggrieved party identifying the breach. This Agreement may also be terminated for convenience by the Board or Palm Beach. Termination for convenience by the Board or Palm Beach shall be effective on the termination date stated in the written notice provided by the terminating party, which termination date shall be not less than thirty (30) days after the date of such written notice. This Agreement may also be terminated by Broward's County Administrator upon such notice as Broward's County Administrator deems appropriate under the circumstances in the event Broward's County Administrator

determines that termination is necessary to protect the public health, safety, or welfare. If Broward or Palm Beach erroneously, improperly, or unjustifiably terminates for cause, such termination shall, at that party's election, be deemed a termination for convenience, which shall be effective thirty (30) days after such notice of termination for cause is provided.

- 7.2 This Agreement may be terminated for cause for reasons including, but not limited to, submission for payment of false or incorrect bills or invoices or failure to promptly make payment pursuant to invoices. This Agreement may be terminated for convenience by any party to this Agreement if ULI is placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List created pursuant to Section 215.473, Florida Statutes, or if ULI provides a false certification submitted pursuant to Section 287.135, Florida Statutes.
- 7.3 Notice of termination shall be provided in accordance with the "NOTICES" section of this Agreement except that notice of termination by Broward's County Administrator, which Broward's County Administrator deems necessary to protect the public health, safety, or welfare, may be verbal notice that shall be promptly confirmed in writing in accordance with the "NOTICES" section of this Agreement.
- 7.4 In the event this Agreement is terminated by either party pursuant to the provisions of this Agreement, Broward shall be paid in accordance with Article 4 for any Services performed under the agreement with ULI so that Broward may pay ULI through the termination date specified in the written notice of termination. Such payment shall be based on a pro-rata share between the Parties to be calculated using ULI's overall completion of the Project. Broward shall notify ULI to refrain from performing further Services or incurring additional expenses under the terms of its agreement with ULI. In the event that Broward, in its sole discretion, determines ULI is not entitled to payment for Services and elects not to pay ULI for particular Services, Broward shall refund Palm Beach its pro-rata share of money received by Broward that will not be paid to ULI. Palm Beach acknowledges that they have received good, valuable, and sufficient consideration from Broward, the receipt and adequacy of which are hereby acknowledged by Palm Beach, for Broward's right to terminate this Agreement for convenience.

#### **ARTICLE 8. EEO COMPLIANCE**

- 8.1 No party to this Agreement may discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, sexual orientation, pregnancy, or gender identity and expression in the performance of this Agreement. Failure by any party to carry out any of the requirements of this section shall constitute a material breach of this Agreement, which shall permit any other party to terminate this Agreement or to exercise any other remedy provided under applicable law, all such remedies being cumulative.

## ARTICLE 9. MISCELLANEOUS

- 9.1 Rights in Documents and Work. Any and all reports, photographs, surveys, and other data and documents provided or created in connection with this Agreement are and shall remain the property of Broward and, if ULI has claimed a copyright, ULI has agreed to grant Broward a non-exclusive license to use the copyrighted item(s) indefinitely, to prepare derivative works, and to make and distribute copies to the public, which license Broward agrees to grant to and share with Palm Beach.
- 9.2 Public Records. The Parties are public agencies subject to Chapter 119, Florida Statutes. To the extent ULI is a subcontractor acting on behalf of the Parties pursuant to Section 119.0701, Florida Statutes, Broward's agreement with ULI shall contain all provisions required pursuant to Section 119.0701, Florida Statutes.
- 9.3 Truth-In-Negotiation Representation. This Agreement is based upon representations supplied by the Parties to each other and the Parties certify that the information supplied, including without limitation in the negotiation of this Agreement, is accurate, complete, and current at the time of contracting.
- 9.4 Public Entity Crime Act. Each of the Parties represents that it is familiar with the requirements and prohibitions under the Public Entity Crime Act, Section 287.133, Florida Statutes, and represents that its entry into this Agreement will not violate that Act. In addition to the foregoing, each of the Parties further represents that there has been no determination that it committed a "public entity crime" as defined by Section 287.133, Florida Statutes, and that it has not been formally charged with committing an act defined as a "public entity crime" regardless of the amount of money involved or whether it has been placed on the convicted vendor list. Notwithstanding any provision in this Agreement to the contrary, if any representation made by a party pursuant to this paragraph is false, each of the Parties shall have the right to terminate this Agreement immediately.
- 9.5 Independent Contractor. Parties are independent contractors under this Agreement. In providing services under this Agreement, neither Broward nor its agents shall act as officers, servants, employees, or agents of Palm Beach. Palm Beach and its agents shall not act as officers, servants, employees, or agents of Broward. Broward shall have control of the work performed by Broward in accordance with the terms of this Agreement and of all persons performing the same, and Broward shall be responsible for the acts and omissions of its officers, agents, servants, and employees, if any. Neither of the Parties shall have the right to bind the other party to any obligation not expressly undertaken under this Agreement.

ULI is an independent contractor under its agreement with Broward. The agreement for Services between ULI and Broward provides that neither ULI nor its agents shall act as officers, employees, or agents of the Parties. Palm Beach recognizes that ULI shall not have the right to bind the Parties to any obligation. Broward shall not be responsible to Palm Beach for any adverse actions taken by ULI, unless caused by the sole negligence of Broward or Broward's employees.

- 9.6 Third-Party Beneficiaries. Neither Palm Beach nor Broward intends to directly or substantially benefit a third party by this Agreement. Therefore, the Parties acknowledge that there are no third-party beneficiaries to this Agreement and that no third party shall be entitled to assert a right or claim against any party based upon this Agreement. Nothing in this Agreement, express or implied, is intended to (i) confer upon any entity or person other than the Parties and their successors or assigns any rights or remedies under or by reason of this Agreement as a third party beneficiary or otherwise, except as specifically provided in this Agreement; or (ii) authorize anyone not a party to this Agreement to maintain an action pursuant to or based upon this Agreement.
- 9.7 Notices. In order for a notice to a party to be effective under this Agreement, notice must be sent via U.S. first-class mail with a contemporaneous copy via e-mail to the addresses listed below and shall be effective upon mailing. The addresses for notice shall remain as set forth herein unless and until changed by providing notice of such change in accordance with the provisions of this section.

FOR BROWARD:

Broward County Environmental Planning and Community Resilience Division  
Attn: Jason Liechty, Senior Environmental Project Coordinator  
Governmental Center, Suite 329H  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301  
Email address: jliechty@broward.org

FOR PALM BEACH:

Palm Beach County Administration  
Attn: Megan Houston, Director, Office of Resilience  
Board of County Commissioners, Palm Beach County  
2300 N. Jog Road, 4<sup>th</sup> Floor  
West Palm Beach, FL 33411  
Email address: MSHouston@pbcgov.org

- 9.8 Assignment and Performance. Except for the ULI subcontracting approved in writing by the Parties at the time of execution of this Agreement or any written amendment hereto, neither this Agreement nor any right or interest herein may be assigned, transferred, subcontracted, or encumbered without the prior written consent of the Parties. If any



party violates this provision, any other party shall have the right to terminate this Agreement immediately.

- 9.9 Materiality and Waiver of Breach. Each requirement, duty, and obligation set forth herein was bargained for at arm's-length and is agreed to by the Parties. Each requirement, duty, and obligation set forth herein is substantial and important to the formation of this Agreement, and each is, therefore, a material term hereof. Each of the Parties' failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach of a provision of this Agreement shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Agreement.
- 9.10 Compliance with Laws. The Parties shall comply with all applicable federal, state, and local laws, codes, ordinances, rules, and regulations in performing its duties, responsibilities, and obligations pursuant to this Agreement.
- 9.11 Severability. In the event any part of this Agreement is found to be unenforceable by any court of competent jurisdiction, that part shall be deemed severed from this Agreement and the balance of this Agreement shall remain in full force and effect.
- 9.12 Joint Preparation. This Agreement has been jointly prepared by the Parties hereto, and shall not be construed more strictly against any party.
- 9.13 Interpretation. The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement. All personal pronouns used in this Agreement shall include the other gender, and the singular shall include the plural, and vice versa, unless the context otherwise requires. Terms such as "herein," "hereof," "hereunder," and "hereinafter" refer to this Agreement as a whole and not to any particular sentence, paragraph, or section where they appear, unless the context otherwise requires. Whenever reference is made to a section or article of this Agreement, such reference is to the section or article as a whole, including all of the subsections of such section, unless the reference is made to a particular subsection or subparagraph of such section or article.
- 9.14 Priority of Provisions. If there is a conflict or inconsistency between any term, statement, requirement, or provision of any document or exhibit attached hereto or referenced or incorporated herein and any provision of Articles 1 through 9 of this Agreement, the provisions contained in Articles 1 through 9 shall prevail and be given effect.
- 9.15 Law, Jurisdiction, Venue, Waiver of Jury Trial. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the state of Florida. The Parties agree that the exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claim arising from, related to, or in connection with

this Agreement must be litigated in federal court, the Parties agree that the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY RIGHTS THE PARTIES MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.**

9.16 Amendments. No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document prepared with the same or similar formality as this Agreement and executed by the Board and Palm Beach or others delegated authority or otherwise authorized to execute same on their behalf.

9.17 Prior Agreements. This Agreement represents the final and complete understanding of the Parties regarding the subject matter hereof and supersedes all prior and contemporaneous negotiations and discussions regarding that subject matter. There is no commitment, agreement, or understanding concerning the subject matter of this Agreement that is not contained in this written document.

9.18 Payable Interest

9.18.1 Payment of Interest. Each of the Parties shall not be liable to pay any interest to any of the other Parties for any reason, whether as prejudgment interest or for any other purpose, and in furtherance thereof each of the Parties waive, reject, disclaim, and surrender any and all entitlement it has or may have to receive interest in connection with a dispute or claim arising from, related to, or in connection with this Agreement. This paragraph shall not apply to any claim for interest, including for post-judgment interest, if such application would be contrary to applicable law.

9.18.2 Rate of Interest. If, for whatever reason, the preceding subsection is determined to be invalid or unenforceable by a court of competent jurisdiction, the annual rate of interest payable by any of the Parties under this Agreement, whether as prejudgment interest or for any other purpose, shall be, to the full extent permissible under applicable law, 0.25% (one quarter of one percent) simple interest (uncompounded).

9.19 Incorporation by Reference. Any and all Recital clauses stated above are true and correct and are incorporated herein by reference. The attached Exhibits are incorporated into and made a part of this Agreement.

9.20 Representation of Authority. Each individual executing this Agreement on behalf of a party hereto hereby represents and warrants that he or she is, on the date he or she signs this Agreement, duly authorized by all necessary and appropriate action to execute this Agreement on behalf of such party and does so with full legal authority.

- 9.21 Counterparts and Multiple Originals. This Agreement may be executed in multiple originals, and may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.
- 9.22 Contingency Fee. Each of the Parties represents that it has not paid or agreed to pay any person or entity, other than a bona fide employee working solely for a party, any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement.
- 9.23 Use of Broward Logo. Palm Beach shall not use Broward's name, logo, or otherwise refer to this Agreement in any marketing or publicity materials without the prior written consent of Broward. Broward consents to use of its name and logo in marketing and publicity materials by Palm Beach related to the Compact.
- 9.24 Force Majeure. If the performance of this Agreement, or any obligation hereunder, is prevented by reason of hurricane, earthquake, or other casualty caused by nature, or by labor strike, war, or by a law, order, proclamation, regulation, or ordinance of any governmental agency, the party so affected, upon giving prompt notice to the other party, shall be excused from such performance to the extent of such prevention, provided that the party so affected shall first have taken reasonable steps to avoid and remove such cause of non-performance and shall continue to take reasonable steps to avoid and remove such cause, and shall promptly notify the other Parties in writing and resume performance hereunder whenever such causes are removed; provided, however, that if such non-performance exceeds sixty (60) days, the party that is not prevented from performance by the force majeure event shall have the right to terminate this Agreement upon written notice to the other Party. This section shall not supersede or prevent the exercise of any right the Parties may otherwise have to terminate this Agreement.

(The remainder of this page is intentionally left blank.)

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement: BROWARD COUNTY through its BOARD OF COUNTY COMMISSIONERS, signing by and through its Mayor or Vice-Mayor, authorized to execute same by Board action on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, and PALM BEACH COUNTY, signing by and through its officials, duly authorized to execute same.

BROWARD

ATTEST:

BROWARD COUNTY, by and through  
its Board of County Commissioners

\_\_\_\_\_  
Broward County Administrator, as  
Ex-officio Clerk of the Broward County  
Board of County Commissioners

By: \_\_\_\_\_  
\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Approved as to form by  
Andrew J. Meyers  
Broward County Attorney  
Governmental Center, Suite 423  
115 South Andrews Avenue  
Fort Lauderdale, Florida 33301  
Telephone: (954) 357-7600  
Telecopier: (954) 357-7641

By: \_\_\_\_\_  
Joseph K. Jarone (Date)  
Assistant County Attorney

By: \_\_\_\_\_  
Maite Azcoitia (Date)  
Deputy County Attorney

**INTERLOCAL AGREEMENT BETWEEN BROWARD COUNTY  
AND PALM BEACH COUNTY FOR COST SHARE SUPPORT OF SERVICES**

PALM BEACH

WITNESSES:

PALM BEACH COUNTY

\_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Mayor, Mack Bernard

\_\_\_\_\_  
Print Name of Witness above

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
Print Name of Witness above

ATTEST:  
Sharon R. Bock  
Clerk and Comptroller  
By: \_\_\_\_\_  
Deputy Clerk

Approved as to Form and Legal Sufficiency  
By: \_\_\_\_\_  
Assistant County Attorney

(CORPORATE SEAL OR NOTARY)

APPROVED AS TO TERMS AND CONDITIONS  
By: \_\_\_\_\_  
Department Director

## Exhibit A – ULI Scope of Services

### Scope of Work: The Business Case for Resilience

#### ***Economic Analysis and Return on Investment for Southeast Florida***

The economics of sea level rise, flooding, and resilience are an essential component of encouraging continued action to address the challenges facing our community. Beyond the physical implications of rising seas, the economic case is an essential tool.

To further establish the business case for resilience, the proposed study will explore:

- (1) the economic risks of flooding and the augmentation of that risk due to rising sea levels;
- (2) the economic benefit of resilience action as a function of risk reduction;
- (3) the economic opportunities associated with resilience investments; and
- (4) recommended strategies to incentivize and improve resilience for our community.

The study will also provide a springboard for future analysis by collecting economic data on revenues by sector and risk not currently packaged and will explore national precedents and best practices from other cities seeking to quantify their investments in resilience. The study will be consolidated into a final report with associated materials designed for consumption by multiple stakeholder audiences.

This study will be completed by a consultant team including a Project Manager and an Economic Modeling Consultant selected by the Project Manager.

#### ***Data Sources & Deliverables***

- The project study area shall include the four (4) counties of the Southeast Florida Regional Climate Change Compact and where feasible shall seek to employ regionally consistent data sets, tools, and models as the basis for assessments.
- Where more granular analyses are required the study approach should rely upon the use of representative of corridors with findings that can be extrapolated to areas that share core characteristics.
- This proposal assumes complementary vulnerability assessments will be completed separate from this study to provide return on investment estimates for various stakeholders for specific physical infrastructure adaptations.
- This study may offer opportunities for additional 'case studies' from communities within the four (4) counties studied.

Analysis of the economic benefits associated with resilient investments will inform:

- Recommendations for collaborative planning;
- Targets for economic resilience;
- Potential strategies for future infrastructure investments; and
- Integration of this study with other resilience analyses.

All of which will ultimately contribute to a comprehensive evaluation of projections of return on investment in adaptation that specifically considers the risks of sea level rise, coupled with other flooding risks faced by Southeast Florida, including storm surge and tidal flooding.

The deliverables for the project will include:

- 1) A final project scope;
- 2) A Draft Report to be reviewed by key stakeholders and experts within the Southeast Florida Regional Climate Change Compact (SE FL Climate Compact) summarizing the findings from the first five (5) tasks and cataloguing the methods, assumptions and data used. This report should include scenarios for the year 2045 and 2070, the nominal half-life and life of many infrastructure investments, respectively;
- 3) A final report and associated outreach materials and activities:
  - a) A Final Report that consolidates the components of the Draft Report, the results of additional research, and incorporates recommendations by appropriate select stakeholders from the Draft Report.
  - b) An Executive Summary that synthesizes the findings of the Final Report with national research findings into a document designed for readership by a broad land use, real estate, resilience and policymaker audience; and
  - c) Associated outreach and engagement materials, including at least two (2) public meetings.

## **TASK 1: PROJECT SCHEDULE AND MANAGEMENT PLAN**

### **Task 1. Project Schedule and Management Plan**

The Project Manager will submit a final project schedule and management plan to guide the execution of the project.

## **TASK 2: PROJECT RESEARCH AND REPORT DEVELOPMENT**

### **Task 2.1: RFP Process**

The Project Manager will run the Request for Proposals (RFP) process to select an Economic Modeling Consultant and associated sub-consultants to manage data collection, run scenarios and complete case studies detailing the economic risks of flooding and the augmentation of that risk due to rising sea levels; the economic benefit of resilience action as a function of risk reduction; the economic opportunities associated with resilience investments; and recommended strategies to incentivize and improve resilience for our community. The Economic Modeling Consultant and the Project Manager will ultimately work together on the deliverables for this project.

Key tasks will include:

- Develop the Scope of Services for an Economic Modeling Consultant;
- Review the Scope of Services with key stakeholders;

- Publicize the RFP and associated study through national and local networks;
- Convene a Selection Committee including representatives from the SE FL Climate Compact and others; and
- Select a Consultant and agree the fee and Scope of Services.

## **Task 2.2: Economic Modeling**

The Economic Modeling Consultant will, pursuant to the Scope of Services for Economic Modeling, perform the following tasks under the Project Management (see Task 2.4) of the Project Manager.

### **Task 2.2.1: Data Collection & Scenario Selection**

As a necessary first step for the economic modeling, the necessary data should be collected from appropriate sources, the scenarios to be analyzed should be selected, and appropriate mapping of the selected scenarios/sea level rise and corresponding exposure should be done.

- Public Infrastructure and Data Collection – The necessary public infrastructures, maps, and data to perform the analysis should be collected and detailed. It is appropriate to use existing and available maps and data, such as existing NOAA flood layers.
- Scenario Selection – Three (3) tidal flooding and high frequency storm surge events should be selected. Each scenario will be explored with current sea levels, and sea levels in 2045 and 2070 utilizing appropriate sea level rise curves.
- Sea Level Rise Mapping and Exposure – Maps of the exposure associated with each of the scenarios will be created.

This task will provide the following deliverables: acquisition of REMI software license; a spreadsheet of data collected with corresponding sources; discussion of scenario selections; and exposure maps associated with scenario selection.

### **Task 2.2.2: Avoided Losses**

Economic benefits yielded from adaptation investments include:

- 4) Avoided losses from damages from tidal flooding and storm events
- 5) Stability or enhancement of property values
- 6) Insurance premium savings
- 7) and stability of the local tax base.

These elements are interdependent considering unaffordable insurance or infrastructure failure would impact property values and the tax base. Conversely, raising revenue from various sources can assist a community to afford and implement regional infrastructure improvements, thereby reducing risks in a



vulnerable area, may positively affect property values and reduce insurance premiums. However, in order to ascertain the benefit of resilience action, it is essential to determine what is at risk. This study will examine the current and future regional landscape, evaluating conditions predicted in the years 2045, and 2070.

The Economic Modeling Consultant will:

- Examine the effect of tidal flooding and high frequency storm surge events on:
  - Public Infrastructure (e.g., schools, roads, hospitals, bridges)
  - Property Tax Revenue
  - Jobs, through both commute interruptions, business disruption and job losses
  - Damage losses through exposure modeling or similar analysis
  - All of the above should include scenarios for the years 2045 and 2070.
- Explore specific adaptation options that would reduce economic losses, such as:
  - Raised roads
  - Seawall enhancements
  - Beach restoration
  - Green infrastructure opportunities, such as Living Shorelines
  - Changes in Base Flood Elevation or raising of minimum Finished Floor Elevation
  - Improvements in major infrastructure assets
  - All of the above should include scenarios for the years 2045 and 2070.
- Analyze sources of revenue for the County, detail vulnerabilities by sector and summarize jobs at risk by zip code (see methodology, MARCO (2018)).
- Compile estimates of the daily revenues from operations.
- Develop loss curves by sector for future modeling efforts.

### **Task 2.2.3: Economic Benefit**

Beyond avoided losses, there are additional economic benefits to adaptation. The approach for this task should include

- Assess and compare total real estate values and average values per square foot by land use in areas within the County where improvements have been made to areas where limited or no improvements have been made, or alternatively redeveloped to non-redeveloped areas (see methodology, Stronge and Schultz (1997)).

Context for research methods:

- Estimates of the indirect benefits associated with maintained access to community resources to properties outside of the adaptation area may be

used to derive the percent of property tax revenues derived from proximity to resilient corridors.

- Estimates of the benefits that protection of property values contributes to local taxing authorities may be applied to test the assumption that the cost of local government services including infrastructure investment is less than the contribution that high value waterfront properties generate or the loss of revenue if those parcels were removed from the tax roll.
- In this task, insurance savings based on types of policies specific sectors hold and estimation of percentage of risk offset or coverage to value ratio by insurance would also be estimated and compiled for a well-rounded view of the benefits provided by adaptation to properties and the tax base.

Investment in resilient infrastructure should allow for more rapid recovery following a system shock or disruption, avoid losses from business disruption and reduce the response required by government, utilities and others.

The costs to date of local hurricane response, losses associated with events or changing conditions and replacement infrastructure costs resulting from flooding may serve as the basis for an estimated amount that could be avoided if adaptation occurs (see methodology, NIBS (2018) and ULI (2015)). The benefits and avoided costs determined in this task and previous tasks along with several estimates of the principal amounts and debt service required for various investment programs could be input into the National Institute of Standards and Technology (NIST) Economic Decision Guide Software (EDGe\$) tool to derive benefit cost ratios and return on investment estimates.

- Additionally, the study will produce five (5) specific case studies of flooding and/or adaptation to provide demonstrable examples of the economics of flooding.

#### **Task 2.2.4: Additional Economic Benefits**

Beyond the direct benefit of infrastructure improvements, additional economic benefits will be derived from resilience action. This task will include:

- Explore qualitative and quantitative analysis of additional economic benefits.  
For example:
  - Estimates of new jobs created in response to infrastructure improvement projects by industry sector and lines of practice should be projected (see FIU (2017) methodology).
  - The sectors of focus will include but not necessarily be limited to property and real estate, banking and financing, professional, scientific and technical services, engineering and construction, hospitality and tourism, education and health services, and trade, transportation, utilities and logistics.
- Estimate the potential for job creation and retention and resulting new capital and local spending will be estimated and compared to the existing economy and projections without adaptation investments, if feasible.

### **Task 2.2.5: Recommendations for Economic Resilience Strategy**

The data collected and analyses performed in previous tasks will be used to understand the potential for greater economic resilience given investment in adaptation.

- Develop preliminary recommendations for the criteria for economic resilience at the regional and corridor scale
- Propose the incentives or partnerships necessary to reduce individual sector risk, stimulate investment in adaptation and compound the benefits yielded from investment across sectors
- Propose methods for tracking and verifying return on investment to the economy once projects are implemented.

From these recommendations, decision makers can strategize and communicate the return on investment of adaptation more effectively, and appropriately connect these recommendations to more localized existing and in-progress resilience strategies.

### **Task 2.3: Additional Project Research**

Alongside the Economic Modeling Consultant's work, the Project Manager will lead research on national precedents for cities valuing risk and climate vulnerability. This research will seek to understand whether regions and municipalities in the U.S. which have prioritized resilience have researched the ROI of investing in resilience, what the outcomes have been and whether the findings have inspired policy change or physical infrastructure investments. This research will ultimately inform the report's commentary on the economic risks of flooding, the benefits of resilience actions and recommended strategies going forward.

This research will establish best practices for municipal modeling and valuation of resilience and place southeast Florida's work on this topic in national context, informing the proposals to arise from the economic modeling study. From this research, decision makers can better understand competitors and city peers and ultimately better communicate and understand the return on investment of adaptation. This context can then inform the development of recommendations for more localized existing and in-progress resilience strategies.

Key tasks will include:

- Complete interviews with city policymakers, resilience experts, economists and other to understand national precedents and best practices for gauging the economic impact of investing in resilience;
- Complete desktop research, including academic sources, scientific journals and national media, on the national precedents and best practices for gauging the economic impact of investing in resilience;
- Analyze, code and collate findings into key themes, best practices and case studies if applicable; and

- Write summary of key research findings to be shared in the Executive Summary style document.

This research will inform the Economic Modeling Consultant's proposals for economic resilience, including the topics of:

- Criteria for economic resilience at the regional and corridor scale;
- Incentives or partnerships necessary to reduce individual sector risk, stimulate investment in adaptation and compound the benefits yielded from investment across sectors;
- Methods for tracking and verifying return on investment to the economy once projects are implemented.

National research findings will be integrated into the Final Report and Executive Summary-style Document (see Task 3.1).

## **Task 2.4: Project Management**

The Project Manager will manage the Economic Modeling Consultant's on-going process and deliverables. Key tasks will include:

- Manage overall timeline and program of work for the entire study;
- Work with the Economic Modeling Consultant and client team to identify corridors to be analyzed as case studies;
- Review work and findings at key points, ensuring quality of work and that deadlines are met;
- Convene review meetings, calls and other communications as necessary;
- Analyze work to inform development of report and direction of national research; and
- Convene an interim project workshop including representatives from the SE FL Climate Compact, the Economic Modeling Consultant, and ULI Southeast Florida District Council (ULI SE Florida) members, to share and review initial findings.

Task 2 Deliverables will include:

- A Draft Report to be reviewed by key stakeholders and experts within the Southeast Florida Regional Climate Change Compact summarizing the findings from Tasks 2.2.1, 2.2.2, 2.2.3, 2.2.4, and 2.2.5, and cataloguing the methods, assumptions and data used. This report should include scenarios for the year 2045 and 2070, the nominal half-life and life of many infrastructure investments, respectively. The Report will include the following specific components corresponding to Tasks 2.2.2 through 2.2.5:
  - Task 2.2.2: Graphical and table summary of output, the base case and benefit of adaptation options. Summary report of methodology and salient results.
  - Task 2.2.3: Summary report of the results of this task and details of the five (5) specific case studies of flooding and/or adaptation stories.

- Task 2.2.4: Summary report of the results of this task in a narrative form with specific quantitative results where appropriate.
- Task 2.2.5: A list of specific recommendations with details provide on each.

## **TASK 3: FINAL REPORT AND OUTREACH**

### **Task 3.1: Report Completion**

The Project Manager will manage the on-going analysis and development of the Draft Report from the Economic Modeling consultant and create an Executive Summary-style document, synthesizing the findings from the modeling with national research. This Executive Summary document will be designed for readership by a broad land use, real estate, resilience and policymaker audience.

Key tasks will include:

- Review and edit on-going findings and report sections from Economic Modeling consultant;
- Edit and finalize full text of the Final Report;
- Synthesize key findings into Executive Summary document;
- Manage comments and review by stakeholders including client team from SE FL Climate Compact;
- Perform graphic design, copy edit and lay-out of Final Report and Executive Summary style report; and
- Print report.

Deliverables will include:

- A Final Report that consolidates the components in the Draft Report and the national research findings described in Task 2.3, and reflects comments and feedback from stakeholders.
- An Executive Summary style-document and a document designed for readership by a broad land use, real estate, resilience and policymaker audience.

### **Task 3.2: Engagement and Outreach**

The Project Manager will lead the outreach and promotion of the project's findings, engaging a membership of professionals in real estate, urban development and land use, nationally and in southeast Florida.

Key tasks will include:

- Lead initial and interim engagement with the press and stakeholders, including:
  - Write and distribute a press release for local and national media upon announcement of the project;

- Engage on social media upon announcement of the project and at key points during the project;
- Promote the project at the 2019 national ULI Fall Meeting in Washington D.C.; and
- Present interim findings at the 2019 SE FL Climate Compact conference in Key West.
- Lead promotion of the complete report and findings:
  - Write and distribute a press release for local and national media upon completion of the project;
  - Host a national webinar on the project publicized to ULI's membership (42,000+);
  - Host a launch event hosted by ULI SE Florida; and
  - Write and publish at least one (1) article in Urban Land Online, ULI's member magazine.

Deliverables will include:

- Outreach efforts and materials, including two (2) public meetings (with agendas and sign-in sheets for each), press release, social media engagement, webinar, Urban Land Online article

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**BOARD OF COUNTY COMMISSIONERS  
PALM BEACH COUNTY, FLORIDA  
BUDGET TRANSFER**

FUND 0001 General Fund

ATTACHMENT 2

ACCOUNT NAME AND NUMBER	ORIGINAL BUDGET	CURRENT BUDGET	INCREASE	DECREASE	ADJUSTED BUDGET	ENC/EXP 7/23/2019	REMAINING BALANCE
<u>Appropriations</u>							
<u>Climate Change &amp; Resiliency</u>							
261-2101-3401 Other Contractual Services	50,000	50,000	33,000	0	83,000	37,500	45,500
<u>General Government</u>							
760-7601-3401 Other Contractual Services	100,000	90,000	0	33,000	57,000	22,012	34,988
			33,000	33,000			

Environmental Resources  
Management

Signatures & Dates

BY BOARD OF COUNTY COMMISSIONERS  
AT MEETING OF

INITIATING DEPARTMENT/DIVISION  
Administration/Budget Department Approval  
OFMB Department - Posted

*Mary S. Hutto* 7/23/19  
*Rodney Brown* 7/30/19

August 20, 2019  
Deputy Clerk to the  
Board of County Commissioners

2A36