Resilient Benefit-Cost Analysis (BCA) Framework Request for Proposals

The South Florida Regional Planning Council (SFRPC) is soliciting proposals for the development of a Resilient Infrastructure Benefit-Cost Analysis Framework ("BCA Framework"). The development of the BCA Framework is envisioned as a two-phase project. Phase I is currently funded. It is expected that Phase II of the project will be funded in FY 25/26 by the Florida Department of Environmental Protection. The BCA Framework will be developed through the execution of the following Tasks:

1. **Project Overview**

A. Task A: Stakeholder Engagement - Lead a consensus-driven process, which may be conducted virtually, among a peer group of consultants to complete the following Sub-Tasks:
   - Task A(1): Develop an infrastructure cost schedule and construction cost inflation index of gray and green infrastructure solutions to the problems of sea level rise, such as coastal and flood protections, transportation structure impacts from sunny day flooding, storm surge, and heat impacts. Respondents may suggest other problems that can be addressed.
   - Task A(2): Develop a matrix of direct and indirect benefits that are or can be reduced to quantitative or dollar-based measures of success from gray and green infrastructure solutions to the problems indicated in Task A(1).
   - Task A(3): Stakeholder Engagement to be documented by Meeting Agendas and concise Meeting Summaries which will be submitted at the end of Phase I as part of the project **Deliverable**.

B. Task B: Both deliverables under Task A will be incorporated into one **Deliverable**; a Spreadsheet Model ("Model") that will support the analysis of comparative gray and green infrastructure investment scenarios to calculate standard BCA outputs, such as the Benefit-Cost Ratio, Net Present Value, Internal Rate of Return, and other potential benchmarks. The resulting Model will be useful for local governments applying for federal grants that require a BCA, as a supplemental tool to other models such as HAZUS, as well as for local governments seeking broader decision-making perspectives through Multiple Account Benefit Cost Analysis to compare non-market costs and benefits across a panel of decision-making criteria. The **Deliverable** will include up to three case studies or scenarios using local South Florida data as a demonstration of a working Model.

C. **Phase II:** Development of a Best Practices Guide and Spreadsheet model manual to assist users with using the Model and Consensus Building Outreach Effort (expected to be funded in FY25/26 under a separate award).

Respondents for Phase I are encouraged to quote a price to complete Phase II, should Phase II be funded. Phase II may also involve targeted refinements to the Model for improved functionality, contingent upon funding. Respondents are advised to consult the proposed technical specifications of the Model in Section 4 of this RFP.

While it is desirable that the data for Task A be derived from public sources, it will be incumbent upon the selected firm to refine any public source data through a consensus building process engaging with stakeholders, their consultants, and other experts so that cost and benefit estimates are consistent with typical South Florida construction costs. The SFRPC desires that respondents propose the specific process for obtaining consensus in their Proposal as well as recommendations on broadening consensus on direct and indirect benefits and costs in South Florida, which can be continued in Phase II of the project, contingent on grant funding.

Due to funding constraints, this RFP will provide the basis for selecting a consultant team to prepare the cost matrix and spreadsheet model (Tasks A and B) under the currently funded **Phase I** of the project, and should **Phase II** be funded, the selected consultant will prepare a Best Practices Guide and manual for using the spreadsheet model (Task C). It is expected that the team selected for Phase I will continue as the team that will be contracted to complete Phase II, contingent upon available funding and satisfactory completion of Phase I.

Therefore, Respondents are encouraged to bid on all tasks identified in the project overview. Phase I tasks must be completed and accepted by the Florida Department of Environmental Protection by June 30, 2025. **Consultant funding for Phase I shall not exceed $70,000, while funding for Phase II, if awarded, shall not exceed $49,000**. Under this RFP, responding consultant teams will be encouraged to submit a proposal which will address the entire scope of the project, including a stakeholder engagement strategy, but with two price quotations; one for Phase I, and a second quote for Phase II.

For consideration under this RFP, an organization/corporation must be registered to do business in the State of Florida as required by Florida Statute 48.091, along with staff who are available to work in Southeast Florida. Proposals may be submitted by any public or private university, state or federal agency, private or public consulting organization, or any combination of the above as allowed under existing state or federal law and regulations. Proposals will be evaluated for the total period of performance based on the evaluation criteria for both Phases. The SFRPC may negotiate content, cost, and timeframe on selected proposal(s) and award multiple contracts if deemed appropriate to fulfill the project objectives.

2. Project Background

Benefit-Cost Analysis (BCA) is a critical decision-making tool for evaluating infrastructure investments in Florida, where it is used to support grant applications and assist decision-makers in comparing solutions to climate-resilient infrastructure challenges. Despite its importance,

the practice of BCA in Florida lacks standardization, especially in areas such as cost assumptions and the measurement of indirect project costs and benefits. This inconsistency creates challenges for local governments seeking to align their analyses with the requirements of various federal programs while balancing local priorities regarding the relative importance of job creation, non-market values such as environmental impacts, and other decision-making criteria that are typically associated with Multiple Account Benefit Cost Analysis but are often excluded to maintain the clarity of a single Benefit-Cost ratio. As new project needs emerge for local governments, the lack of uniformity in BCA methodologies may lead to incommensurate results in benchmarking both costs and benefits as new and successive projects emerge over time within a capital improvements program.

Furthermore, some federal BCA frameworks adopt a one-size-fits-all and unidimensional approach that often fails to account for project complexity, scope, distributive impacts, or fully capture who has standing as well as the long-term implications of infrastructure investments. These gaps highlight the need for a robust, adaptable BCA framework that supports equitable and comprehensive comparisons of green and gray infrastructure solutions, tailored to South Florida's unique needs and priorities. Beneficiaries of a more uniform approach to BCA include local governments, consultants, and other users who may use comparisons of the net benefits of project proposals that share common baseline assumptions.

The SFRPC anticipates that the tool can be used to support resilient infrastructure planning and communication, as well as to provide user support in assessing the economic impacts provided by other existing tools. For example, the Federal Emergency Management Agency's (FEMA) HAZUS identifies property and job losses impacted by a weather event, which can then be refined through the Framework to compare different infrastructure scenarios, which can narrow the range of best investment options and then entered into FEMA's Benefit-Cost Analysis tool, which is for certain grant programs but lacks more sophisticated scenario comparison options.

3. Task A: Stakeholder Engagement

Under Task A, Respondents are expected to incorporate input from a stakeholder group designated by the SFRPC, consisting of South Florida local government resilience planning staff, and from a peer group of consultant stakeholders, who will provide input upon the assumptions that are used in the Model during the stakeholder group meetings as the primary vehicle for consensus building. The purpose of the Stakeholder Engagement process consists of:

- Identifying the important working draft features of the project timeline and budget achievable Model functionality.
- Consensus on a broad spectrum of draft infrastructure costs, which may be drawn from the public or consultant team's relevant project experience, and a Construction Cost Index, which will be based on reasonable assumptions consistent with South Florida historical trends.

- Consensus on the methodology for generating direct and indirect quantifiable economic benefits, as well as non-market benefits.
- Respondent may provide their own definition of what consensus means in the Proposal, but at a minimum should refer to which criteria constitute consensus, how stakeholder input will be transparent, such as through shared cloud-based working documents, and how disputes were resolved, such as through a summary document.

The SFRPC expects Respondents to identify in their Proposal a strategy for engaging both local government staff and peer consultants over the course of two to three meetings, which may be virtual, as well as any follow-through meetings. A portion of the grant funding, not to exceed $14,000, for this project will be used for SFRPC staff expenses in supporting stakeholder engagement and research. The SFRPC expects the Consultant to maintain a bi-weekly check-in with SFRPC staff.

Under Phase II, the SFRPC intends that the Consultant team continue engagement with peer stakeholders to further refine the model, and finalize costs and benefit estimates and methodology, subject to available funding and satisfactory completion of Phase I tasks.

4. Task B: Tentative Technical Specifications for the Resilient Infrastructure Benefit-Cost Analysis (BCA) Model

Respondents are advised to refer to the following tentative Model specifications in their proposal and may offer alternative user functionality and scope of resiliency issues (e.g., flooding, water quality, heat impacts) to fit consultant fees and costs to the budget maximum and timeframe under this Request for Proposals.

A. General Specifications

- **Platform**: Microsoft Excel or Google Sheets, either of which should be compatible with desktop or cloud-based use.
- **Users**: Planning and Engineering staff; Consultants.
- **Audience**: Elected Officials and Grant Administrators
- **Primary Functions**:
  - Scenario comparison for gray and green infrastructure projects.
  - Calculation of benefit-cost ratios (BCR) using traditional and, at user discretion, multiple account methodologies for both scenarios.
  - Customizable input for costs, benefits, discount rates, and analysis periods.

B. Inputs

1. **Infrastructure Cost Schedule**:
   - **Categories**: Initial investment (e.g., cost per linear foot), annual or lifecycle maintenance, operating, and replacement costs in current dollars ($).

- **A Construction Cost Index**: a cost of construction index prepared by the Consultant, with peer input, to forecast future year construction costs.
- **Timeframe**: Input over a 45-year period (annual or milestone years).
- **Format**: Editable table with cost categories in rows and years in columns.
- **Validation**: Error check to ensure all costs are assigned.

2. **Benefit Matrix**:
   - **Criteria**:
     - **Market-Based**: Direct revenue, cost savings, avoided property value impacts.
     - **Non-Market-Based**: Consultant may suggest options (e.g., lifecycle dollar savings over gray infrastructure alternatives, non-displacement of residents, etc.)
   - **Units**: Clearly defined for each benefit type (e.g., dollars, tons of CO_2).
   - **Adjustable Valuation**: Inputs for valuation coefficients (e.g., $/ton of CO_2).
3. **Scenario Selection**:
   - **Drop-Down Menus**:
     - Fill-in cell to name a scenario (e.g., "Shoreline Protection"), with drop-down menus for conventional solutions, such as seawalls, that call data from the Cost Schedule on cost per linear foot, maintenance, and replacement costs in a user-defined year, with another drop-down menu for green solutions, that call similar data from the Cost Schedule.
     - Users will also see projected benefits drawn from public sources across a number of metrics that are called from a Benefits tab. Because some metrics are highly sensitive to location, such as jobs, users may enter custom assumptions on categories such as "avoided job losses."
     - Custom input options for new scenarios or innovative solutions.
   - **Parameters**:
     - Project type, location, size, and most salient specific features.
4. **Discount Rate**:
   - Adjustable range (e.g., 0% to 10%).
   - Format: Slider or input cell.
5. **Analysis Period**:
   - Selection of analysis horizon (e.g., 10, 20, 30, 45 years).
6. **Criteria Highlighting**:
   - Checkboxes or drop-downs for emphasizing specific benefits or costs in the analysis.

C. Outputs

1. **Traditional Benefit-Cost Ratio (BCR)**:
   - Benefit-Cost Ratio as numerical value or Pass/Fail.
   - Net Present Value.

- Internal Rate of Return
- Cost-Effectiveness Ratio
- Other measures as recommended (e.g., weighted average costs, etc.)

2. **Multiple Account BCA**:
   - Breakdown of benefits and costs into financial, environmental, and socio-economic accounts.
   - Weighted scoring if applicable.
3. **Dynamic Comparison Dashboard**:
   - Visuals: Bar charts for BCR and NPV by scenario.
   - Table: Summary of key metrics for selected scenarios.
4. **Detailed Reports**:
   - Summary tables of annual cash flows.
   - Separate tables for market and non-market criteria.

D. Tool Functionalities

1. **Scenario Comparison**:
   - Automatically update metrics and visuals when users select different scenarios.
   - Multi-scenario comparison (e.g., side-by-side analysis for two scenarios).
2. **Interactivity**:
   - Dynamic drop-down menus, sliders, and checkboxes.
   - Conditional formatting to highlight key insights (e.g., best-performing scenario).
3. **Customizability**:
   - Open but password-protected formulas for all calculations. Passwords will be provided to users to administrate the use of the Model.
   - Modifiable assumptions for growth rates, valuation coefficients, and discounting.
4. **Error Checking**:
   - Alerts for missing inputs or invalid assumptions (e.g., negative costs).
5. **Documentation Tab**:
   - Explanation of key terms and data sources.

E. Data and Calculation Modules

1. **Cost Schedule Calculation**:
   - Cost Schedule of Gray and Green Infrastructure.
   - Total costs: Summation of all categories over the analysis period.
   - Discounted costs: Present value calculation using the selected discount rate.
2. **Benefit Calculation**:
   - Total benefits: Summation of all benefit types.
   - Discounted benefits: Present value calculation for each benefit type.

3. **BCR and NPV Formulas**:
    - Integrated into the tool for automatic updates.
4. **Sensitivity Analysis**:
    - Built-in module to test results against changes in discount rates or assumptions.

F. Data Management

1. **Inputs**:
    - Structured sheets for raw data input and assumptions.
    - Clear separation between user inputs and protected formulas.
2. **Outputs**:
    - Dedicated sheets for outputs and visuals.
    - Preformatted for printing and sharing.

G. Design and Usability

1. **Visual Design**:
    - Clean and intuitive layout with clear labels.
    - Use of color to differentiate inputs, outputs, and visuals.
2. **Usability Enhancements**:
    - Freeze panes for large tables.
    - Autofill functionality for repetitive data entry.
3. **Compatibility**:
    - Fully functional in either Excel or Google Sheets.
    - Light macros for maximum compatibility.

5. Project Timeline

Latest Project Start Date	March 3, 2025
Stakeholder Usability Scoping Meeting	March, 2025
Draft Model Mock-Up	April, 2025
Stakeholder Review of Draft Model Deliverable	May, 2025
Working Model for Comment by Stakeholders	June 15, 2025
Submission of finalized Deliverable to the SFRPC	June 21, 2025
Deliverables Accepted by SFRPC and by DEP	June 30, 2025

Information for Respondents

6. Evaluation Criteria for Consultant Selection

Evaluation Criteria	Weight
1. Relevant Experience	30%
1.1 Demonstrated expertise in benefit-cost analysis (BCA), particularly for resilience projects.	15%
1.2 Knowledge of gray and green infrastructure solutions and their impacts.	10%
1.3 Experience with similar collaborative stakeholder processes.	5%
2. Proposed Methodology	25%
2.1 Clear understanding of the project scope and objectives.	10%
2.2 Feasibility and innovation in the engagement strategy.	10%
2.3 Alignment with project deliverables and timeline.	5%
3. Team Qualifications	15%
3.1 Expertise and roles of key personnel.	10%
3.2 Ability to facilitate stakeholder engagement and consensus.	5%
4. Past Performance	10%
4.1 Quality and relevance of past projects.	5%
4.2 Client references and testimonials.	5%
5. Cost Effectiveness	10%
5.1 Reasonableness of the budget for the proposed scope.	5%
5.2 Value provided relative to cost.	5%
6. Deliverables	10%
6.1 Clarity and detail in proposed deliverables.	5%
6.2 Realistic and achievable timeline for deliverables.	5%

Guidance on Value Provided Relative to Cost (5 Percent of Total Score)

- Lowest qualified bid (5 pts)
- *Based on the difference between the maximum project budget and the lowest qualified bid:*
- if bid is less than 25% 4 pts.
- if bid falls within 25-50% 3 pts.
- if bid falls within 50-75% 2 pts.
- if bid falls within 75-100% 1 pt
- if bid is over budget 0 pts.

7. RFP Timeline

Request for Proposals Released	January 17, 2025
Questions Due to the SFRPC	January 24, 2025
Response Posted on the SFRPC website	January 29, 2025
Deadline for Proposals	February 14, 2025
Evaluation/Interviews	Mid-February
Contractor Notified of Selection	No Later than February 28, 2025
Deliverables Accepted by SFRPC and by DEP	June 30, 2025

Questions concerning this RFP must be submitted by email to Randy Deshazo, Deputy Director at sfadmin@sfrpc.com, no later than 2:00 p.m. EST on January 24, 2025. Please include, "Resilient BCA 2025" in the subject line. Anonymized questions and answers will be posted on the SFRPC website: https://sfregionalcouncil.org/requests-for-proposals/, no later than 4:00 p.m., January 29, 2025.

8. Proposal Format

Proposals must be submitted by email to Randy Deshazo, Deputy Director at sfadmin@sfrpc.com no later than 4:00 p.m., **February 7, 2025**. The SFRPC reserves the right to refuse any proposal that does not meet the specifications outlined herein. Total proposal length, including all supplemental material, should not exceed 30, 8½" x 11" pages. At a minimum, an 11-pt typeface, 1" margins, and 1.15 line spacing should be used throughout the body of the text. The proposal should be submitted as a single, digital pdf file with the following preferred naming convention and file format:

[INSERT_Firm Name]_2025 Resilient CBA Proposal_RFP.pdf

In order to simplify the review process and obtain the maximum degree of comparison, the SFRPC requires that each proposal be organized according to the following format:

A. Letter of Interest

1. Include the RFP project name; the address, email, and telephone number of the respondent project manager (who will be authorized to bind the respondent).
2. The letter should also include a brief statement on the current workload and availability of the respondent to meet with SFRPC staff and stakeholders both in person or via other technologies.

B. Respondent Qualifications

1. Provide a detailed curriculum vitae or resume that demonstrates expertise in the fields of stakeholder facilitation and engagement; resiliency planning and engineering; and a strong record of applying benefit-cost analysis to resiliency projects. Experience with Multiple Account Benefit-Cost Analysis and the capacity to prepare sophisticated spreadsheet tools are also desired.
2. Provide sample work products and a listing of up to 3 client references.
3. Indicate if the respondent is a minority business enterprise, a women's business enterprise, or controlled by socially and economically disadvantaged individuals and provide current employment statistics showing the total number of employees and minorities employed by the respondent. Provide any plans that the respondent has to increase minority employment.
4. Provide evidence that your organization is chartered and registered with the Florida Department of State, Division of Corporations.

C. Scope of Services

1. Clearly identify the proposed tasks, the approach used to accomplish the tasks, and relevant deliverables to be provided.
2. Provide a schedule of project milestones, including start-up and completion of each proposed task.
3. For each task, provide estimates of costs and staff hours (separated into staff categories, if applicable).
4. Provide a list of all deviations from the RFP, including specific tasks not included in the proposal.

D. Conflict of Interest

1. Provide a statement that no conflicts of interest are anticipated if work is awarded, nor do any exist pertaining to work performed for SFRPC member governments in the past 5 years; adversarial positions taken with regard to SFRPC member governments in the last 5 years; or a familial relationship with a member of the SFRPC staff or its elected Council.