MIAMI BEACH
BUSINESS CASE ANALYSIS
OF THE
STORMWATER PROGRAM
Key Questions to Answer

- What is the effectiveness of the City’s planned infrastructure improvements (e.g., raising roads, increasing drainage capacity) at reducing flood risk?
- How much would additional private sector investments in flood mitigation reduce flood risk overall?
- What is the effect of these investments on property values?
- What are the other benefits of reduced flooding?
- Overall, what is the business case for public and private sector stormwater resilience investments?

Business case components:
- Expected losses/property damage
- Changes in property values
- Insurance premiums
- Property tax revenues
- Tourism revenues
- Operational/response costs
- Traffic disruptions
- Business closures
- Resilience construction
INTERDISCIPLINARY EVALUATION COMMITTEE
Team Roles

Overall project management, vision, oversight
Property value analysis
Economic analysis
Citywide risk modeling
Expected damages
Flood risk effects on insurance premiums
Integrated flood modeling
Communications
Adaptation strategies for individual property owners
Support property value analysis
Qualitative analysis
Advisory support
FUNDING

$110K + $285K = $395K

STORMWATER FUND  BUDGET SURPLUS  TOTAL
<table>
<thead>
<tr>
<th>Consultant</th>
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<tbody>
<tr>
<td>WOOD</td>
</tr>
<tr>
<td>AECOM</td>
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<tr>
<td>BALMORAL GROUP</td>
</tr>
<tr>
<td>HAZEN AND SAWYER</td>
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<td>CH2M HILL (JACOBS)</td>
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<td>ARUP</td>
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T1 – User Engagement and Data Collection
- Documentation of user needs
- Data inventory

T2 – Citywide SLR and Storm Surge Risk Model
- Expected annual coastal flood losses with and without SLR
- Extent and depth of surge under various scenarios

T3 – Integrated Flood Modeling (First Street neighborhood)
- Inundation extents/depths under baseline, public investment, and private investment scenarios

T4 – Determine Property Value Impacts
- Hedonic pricing model linking property values to flood risk to property and nearby roads

T5 – Individual Property Business Case
- Calculate costs and benefits of different homeowner resilience investment options

T6 – Neighborhood-level Business Case
- Calculate costs and benefits of public and private resilience investment options

T7 – Citywide Business Case
- Estimate Citywide cost of inaction; appropriate level of investment in resilience

T8 – Communicate Business Case
- Communication products (2-pager, presentation)
## Schedule

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
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### Stage 1
- **Jan**:  
- **Feb**:  
- **Mar**:  
- **Apr**:  
- **May**:  
- **Jun**:  
- **Jul**:  
- **Aug**:  
- **Sep**:  
- **Oct**:  
- **Nov**:  
- **Dec**:  

### Stage 2
- **Jan**:  
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- **Sep**:  
- **Oct**:  
- **Nov**:  
- **Dec**:  

### Stage 3
- **Jan**:  
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- **Apr**:  
- **May**:  
- **Jun**:  
- **Jul**:  
- **Aug**:  
- **Sep**:  
- **Oct**:  
- **Nov**:  
- **Dec**:  

### Stage 4
- **Jan**:  
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- **Apr**:  
- **May**:  
- **Jun**:  
- **Jul**:  
- **Aug**:  
- **Sep**:  
- **Oct**:  
- **Nov**:  
- **Dec**:  

**Stars** indicate key milestones or critical paths.
THANK YOU!
Eric Carpenter, PE
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