

MIAMI BEACH
RISING
ABOVE

**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



STORMWATER FUND



BUDGET SURPLUS



TOTAL

POOL OF QUALIFIED CONSULTANTS



WOOD

AECOM

BALMORAL GROUP

HAZEN AND SAWYER

CH2M HILL (JACOBS)

ARUP

Scope of Work

Stage 1

T1 – User Engagement and Data Collection

- Documentation of user needs
- Data inventory

Stage 2

T2 – Citywide SLR and Storm Surge Risk Model

- Expected annual coastal flood losses w/ 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

Stage 3

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

Stage 4

T8 – Communicate Business Case

- Communication products (2-pager, presentation)

Schedule

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Stage 1	T1: User Engagement / Data Collection	Active	Active	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed
	T2: Citywide SLR & SS Modeling	Completed	Active	Active	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed
Stage 2	T3: Integrated Flood Modeling (1 st St)	Active	Active	Active	Active	Active	Active	Completed	Completed	Completed	Completed	Completed	Completed
	T4: Property Value Analysis	Active	Active	Active	Active	Active	Active	Active	Active	Completed	Completed	Completed	Completed
Stage 3	T5: Individ. Property Business Case	Completed	Completed	Completed	Completed	Completed	Active	Active	Active 	Completed	Completed	Completed	Completed
	T6: Neighborhood-Level Business Case	Completed	Completed	Completed	Completed	Completed	Active	Active	Active	Active	Active 	Completed	Completed
	T7: Citywide Business Case	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Active	Active	Active 	Completed
Stage 4	T8: Communicate Business Case	Completed	Completed	Completed	Completed	Completed	Completed	Active	Active	Active	Active	Active	Active 



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THANK YOU!

Eric Carpenter, PE

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