



COASTAL RISK FLOOD AND CLIMATE RISK ASSESSMENT™

131 Alton Road, Miami Beach, Florida 33139

November 29, 2019



THIS REPORT IS PROVIDED SUBJECT TO THE COASTAL RISK CONSULTING, LLC. TERMS AND CONDITIONS OF USE, WHICH IS AVAILABLE AT WWW.COASTALRISKCONSULTING.COM. THIS ANALYSIS IS FURNISHED "AS IS" FOR THE PERSONAL USE OF THE CONSUMER AS OF THE DATE PROVIDED, IS APPLICABLE ONLY FOR THE ADDRESS OR ADDRESSES PROVIDED BY THE CONSUMER AND IS NOT TRANSFERABLE OR ASSIGNABLE TO ANY OTHER ENTITY.





11/29/2019

Dear Albert Slap,

Thank you for requesting the **Flood and Climate Risk Assessment™** report from Coastal Risk Consulting, LLC. Congratulations on taking a vital, first step in becoming better informed of and better prepared for the risks of flooding and other natural hazards at your home or business. We take pride in offering the world's first automated, online flood and natural hazard risk communication report for property at the parcel level. This **Flood and Climate Risk Assessment™** identifies your property's risk from river and stream flooding, storm surge, heavy rainfall and tidal flooding, extreme winds and other natural hazards, if applicable. This report will help you make informed decisions (buy, sell, protect and insure) regarding your property's flood and natural hazard risks today and over the next 30-years or one mortgage cycle. If your **Flood and Climate Risk Assessment™** indicates that your property faces risks of flooding, then, you should adequately insure your investment, as well as taking steps to increase your flood preparedness. Coastal Risk's Help Desk service can provide you with information on available flood defenses and resiliency measures that may help you to mitigate future damages and loss of property values. Coastal Risk can also help you with questions about your insurance and even financing of risk mitigation investments, if needed. If you have any questions about your **Flood and Climate Risk Assessment™**, please contact Coastal Risk Consulting, LLC at 844-SEA_RISE (732-7473) or write us at customerservice@coastalriskconsulting.com.

Sincerely,

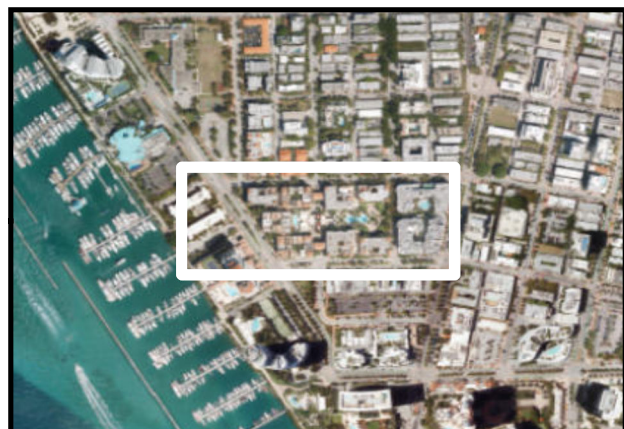
Albert J. Slap

Albert Slap

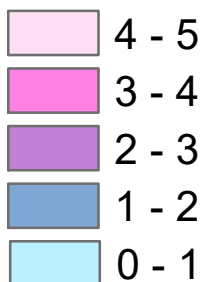
1-844-SEA-RISE (732-7473)
customerservice@coastalriskconsulting.com
2385 NW Executive Center Drive Suite 100
Boca Raton, FL 33431
© 2019 Coastal Risk Consulting, LLC



HEAVY RAINFALL (PLUVIAL) FLOOD RISK and POOR DRAINAGE AREAS



PLUVIAL MAX INUNDATION DEPTH (METERS)



POOR DRAINAGE HOTSPOTS



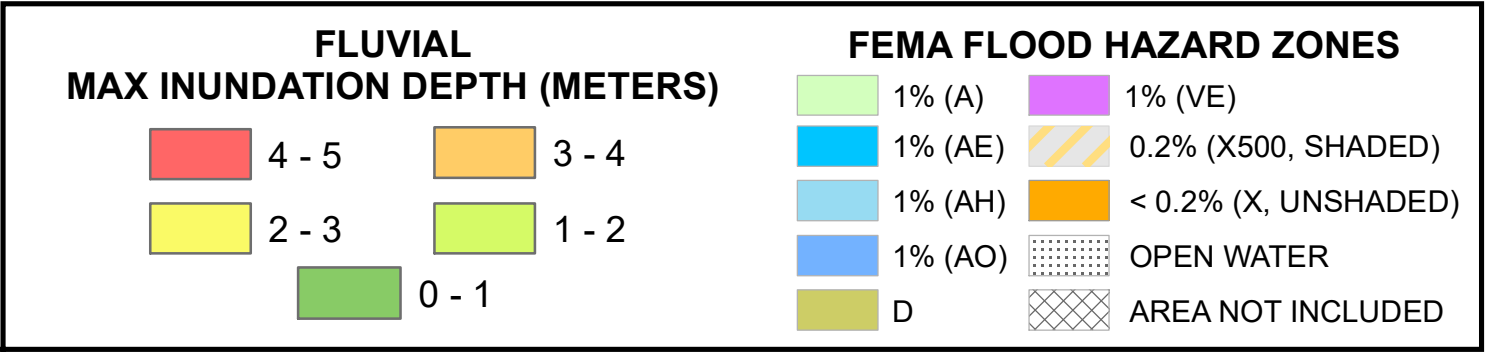
1000-Year Interval Pluvial Flood Risk



Poor Drainage Hotspots



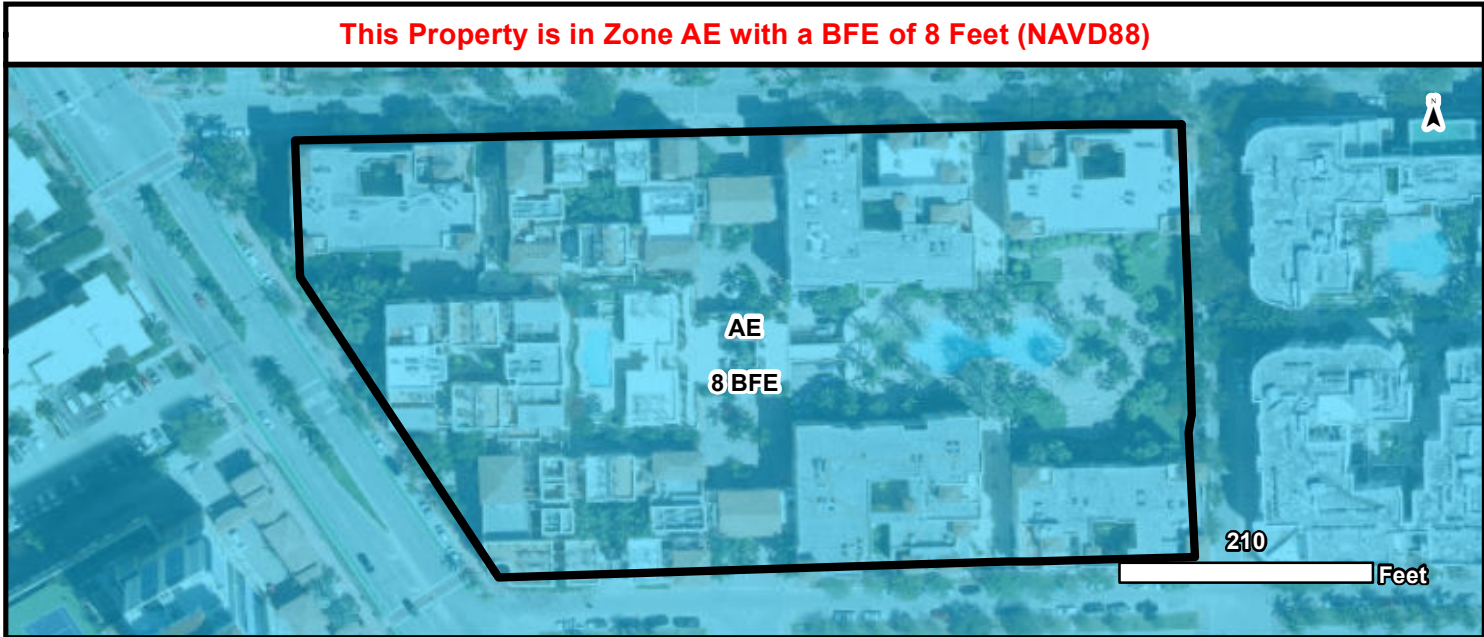
RIVERINE (FLUVIAL) FLOOD RISK and FEMA FLOOD HAZARD ZONES



1000-Year Interval Fluvial Flood Risk

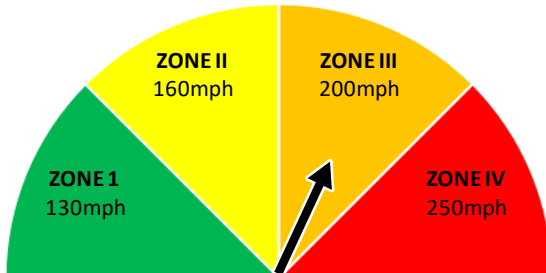


FEMA Flood Hazard Zones



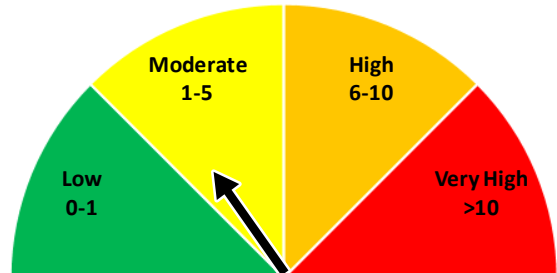
Risk Categories

Wind Zone: III



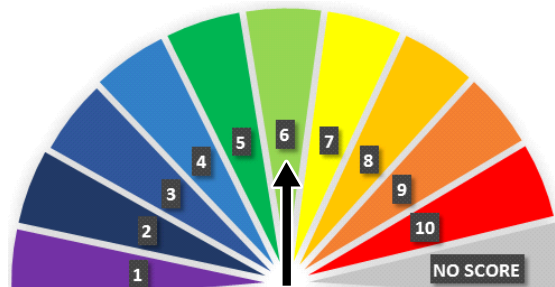
Design building code requirements can be located at <https://hazards.atcouncil.org>

Tornado Risk: 2 per year



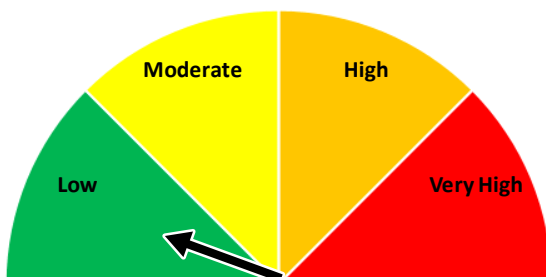
This area (1000 sq. mi.) records 2.0 tornadoes per year and is considered Moderate risk

Community Rating Score: 6



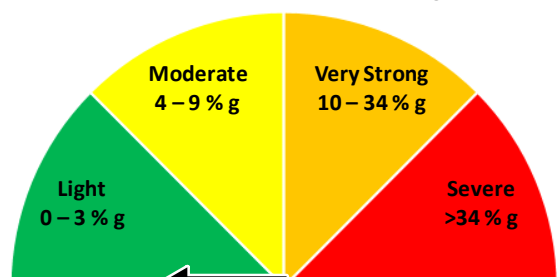
This property is eligible for a 20% reduction in flood insurance

Wildfire Potential: Low



Wildfire Hazard Potential (WHP) is a qualitative measure of wildfire likelihood and intensity

Earthquake Intensity: 0% g



This area is likely to experience No ground shaking in the next 50 years

Special Flood Hazard Area (SFHA):

This property is in a SFHA

Property Elevation:

The land elevation within the property boundary ranges from 1.9 ft to 7.1 ft (NAVD88). The average elevation of this property is 3.6 ft (NAVD88).

Tidal Flooding

Maximum Inundation Due to Sea Level Rise

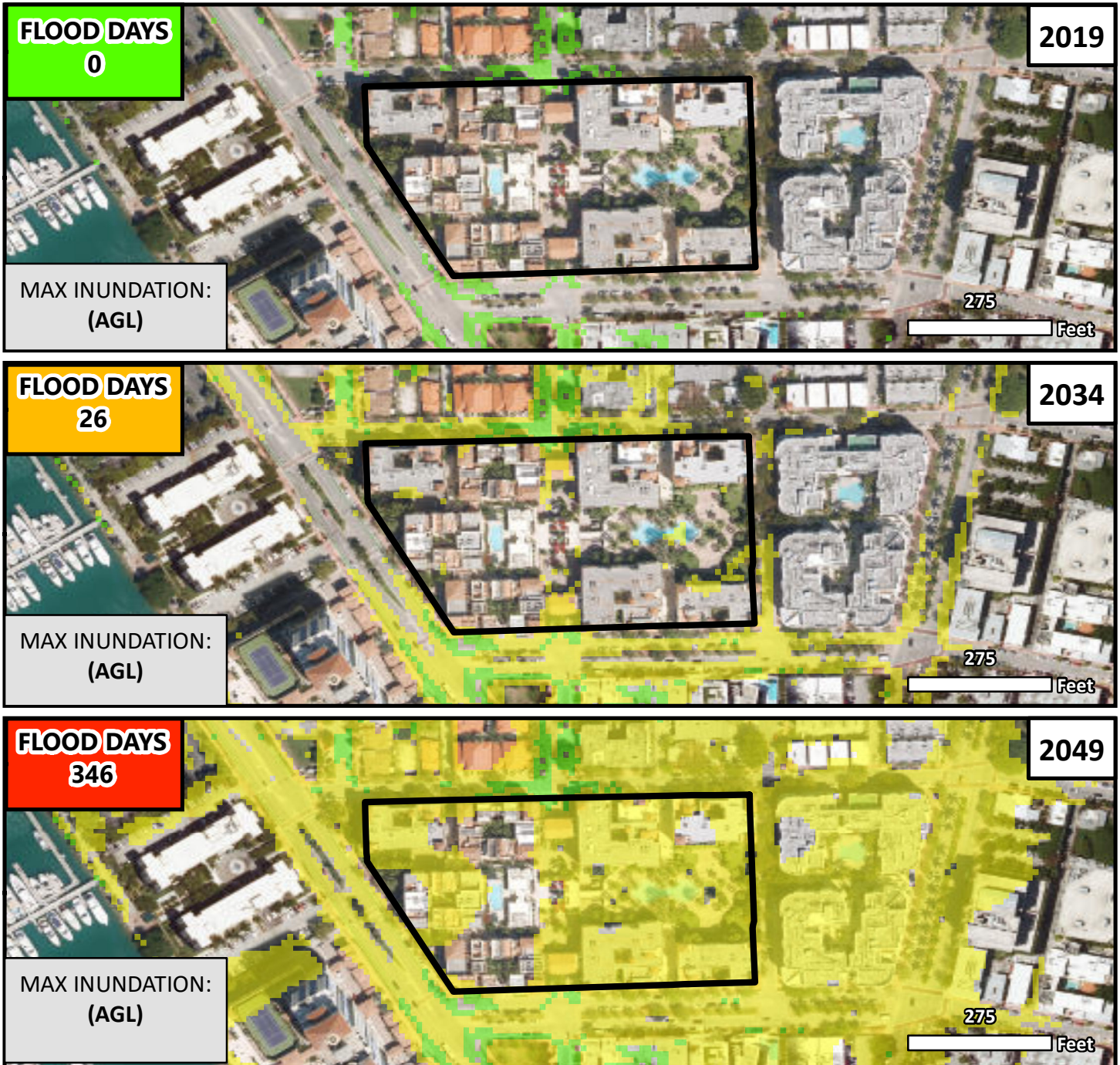
Maximum Inundation represents the highest modeled value of tidal waters within property boundary

Flood Days are reported when at least 10% of property has been inundated

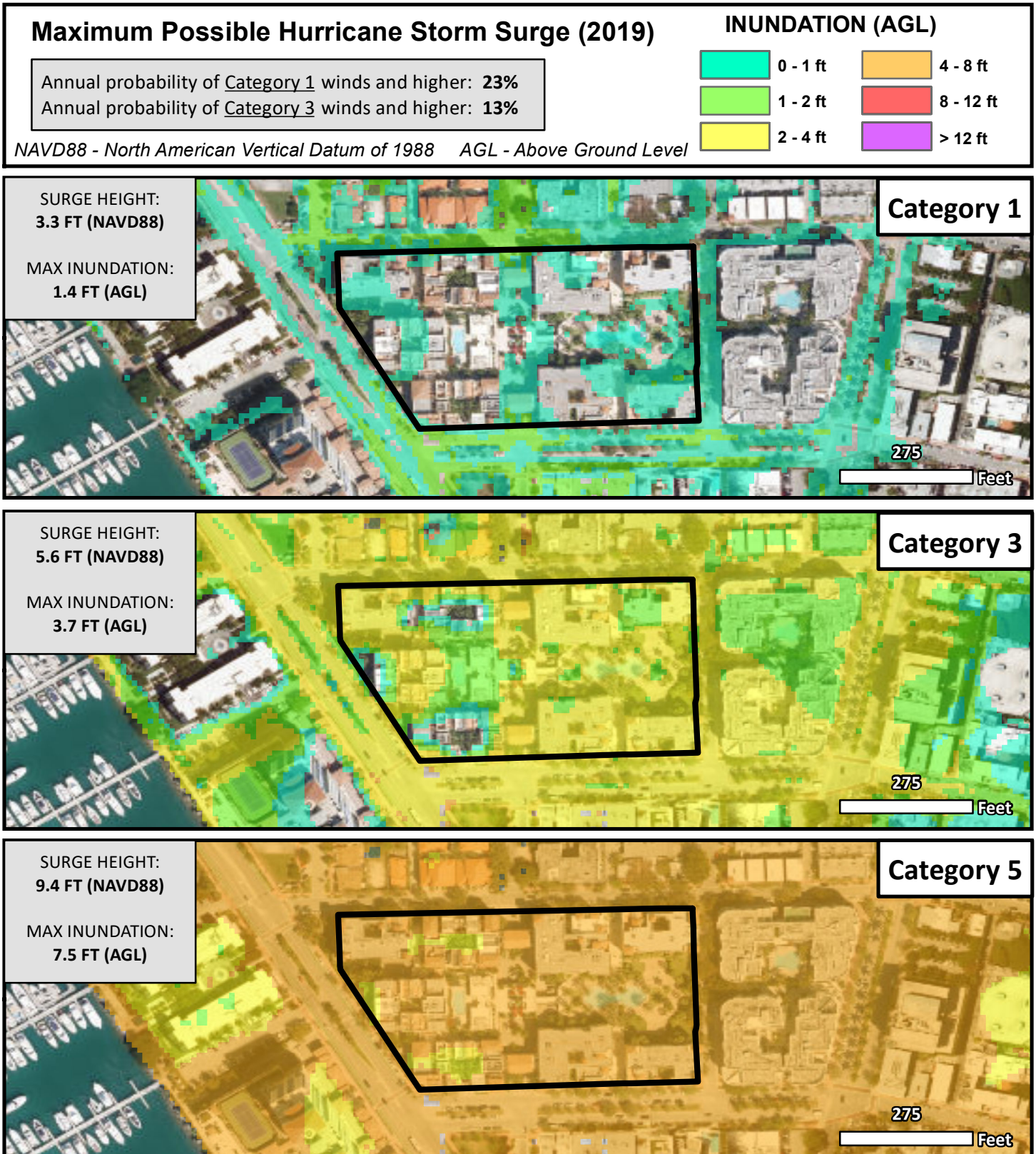
INUNDATION (AGL)

0 - 1 ft	4 - 8 ft
1 - 2 ft	8 - 12 ft
2 - 4 ft	> 12 ft

NAVD88 - North American Vertical Datum of 1988 AGL - Above Ground Level



Storm Surge



COASTAL RISK

Sources

FATHOM PLUVIAL (HEAVY RAINFALL) & FLUVIAL (RIVERINE) FLOOD PROBABILITY

[\(website\)](#)

Over the last decade, Fathom has pioneered methods to model flood risk across river channels of all sizes - for both fluvial and pluvial perils. The dataset we use from Fathom-US incorporates the latest available inputs, has been validated via the peer-review process and published in world-leading journals.

POOR DRAINAGE HOTSPOTS – [\(NRCS drainage classes\)](#)

Coastal Risk uses a high-resolution elevation model along with soil and groundwater data from the Natural Resources Conservation Service to assign risk within our proprietary flood hotspot methodology.

FEMA FLOOD HAZARD BOUNDARIES– [\(overview\)](#) [\(definitions\)](#)

These zones are derived from the National Flood Hazard Layer (NFHL) depicted on a community's Flood Insurance Rate Map (FIRM). Each zone reflects the severity or type of flooding in the area.

FEMA WIND ZONES – [\(map\)](#)

The United States is divided into four Wind Zones created by FEMA for construction purposes throughout the country. Buildings in their respective wind zones must be able to withstand the max wind speed as indicated by FEMA.

COMMUNITY RATING SYSTEM – [\(definitions\)](#)

The Community Rating System (CRS) awards points for steps taken by municipalities to manage the flood plain to reduce the community's risk. Flood insurance rates are discounted within participating municipalities that have accumulated points for steps taken, thereby saving on homeowner's flood insurance, as well as insurance on municipal infrastructure.

TIDALLY INFLUENCED FLOODING – [\(website\)](#)

As sea levels continue to rise, concern exists as to when more substantive impacts from tidal flooding of greater frequency and duration will regularly occur. Coastal Risk applies local NOAA tidal gauge data to model inundation onto your property due to "nuisance" flooding in correspondence with future projected sea level rise.

HURRICANE STORM SURGE – [\(overview\)](#)

Coastal Risk utilizes NOAA National Storm Surge Maps (V2) to identify maximum Inundation levels for each property. The data is derived from The Sea, Lake and Overland Surges from Hurricanes (SLOSH) model that estimates storm surge heights resulting from hurricanes by considering the atmospheric pressure, size, forward speed, and track data. These parameters are used to create a model of the wind field which drives storm surge.

HISTORIC HURRICANE STRIKE PROBABILITY – [\(overview\)](#)

Coastal Risk's Hurricane Strike statistics are derived from 10 years of climatological data from the National Hurricane Center.

WILDFIRE POTENTIAL – [\(website\)](#)

Based on the Forest Service's Wildland Fire Potential map product. The specific objective of the dataset was to depict the relative potential for wildfire that would be difficult for suppression resources to contain.

TORNADO, HAIL and SEVERE WIND FREQUENCY – [\(website\)](#)

Tornado, Hail and Severe Wind Frequency is based on the NOAA National Weather Service (NWS) Storm Prediction Center's (SPC) severe report database which compiles historic paths from 1950-2018.

EARTHQUAKE INTENSITY – [\(website\)](#)

Based on the USGS Earthquake Hazard Program - National Seismic Hazard Mapping Project (NSHMP) and depicts areas using peak ground acceleration (PGA) as its parameter and standard gravity (g) as its measure.

COASTAL RISK CONSULTING, LLC. – [\(Terms and Conditions\)](#)