CoreLogic®

Locational Level Pricing

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Agenda

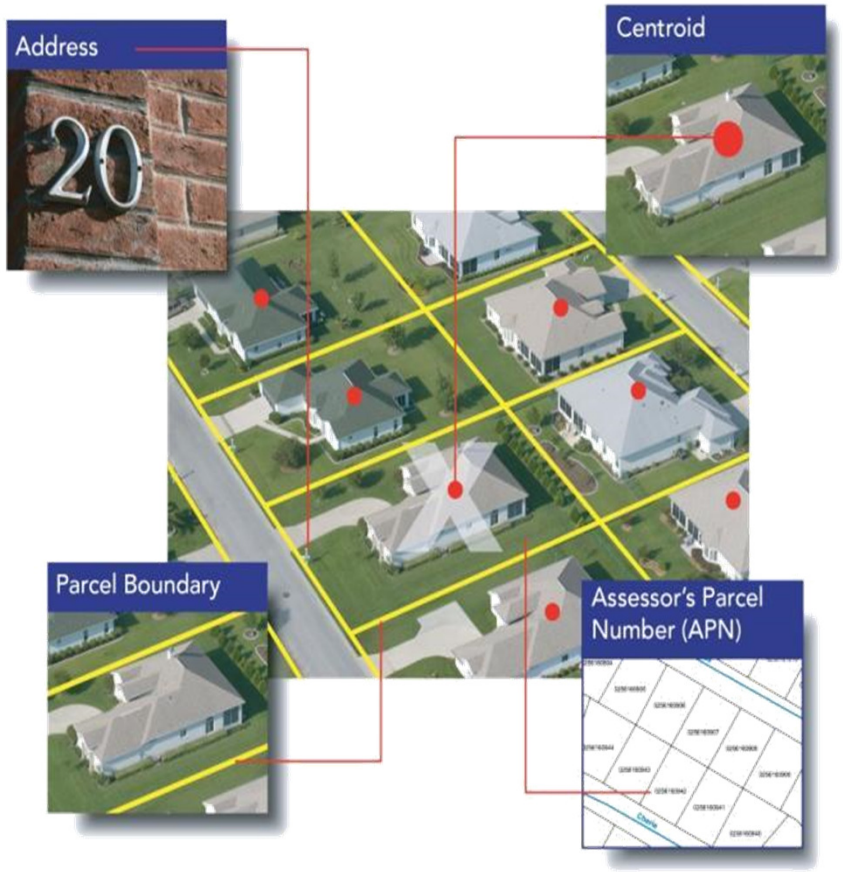
- Importance of location level detail – big data
- Hazards where location level detail is important
  - Crime
  - Wildfire
  - Flood (inland, coastal storm surge)
- Example of how to use location level data in Pricing
  - Flood

Importance of Location Level Data

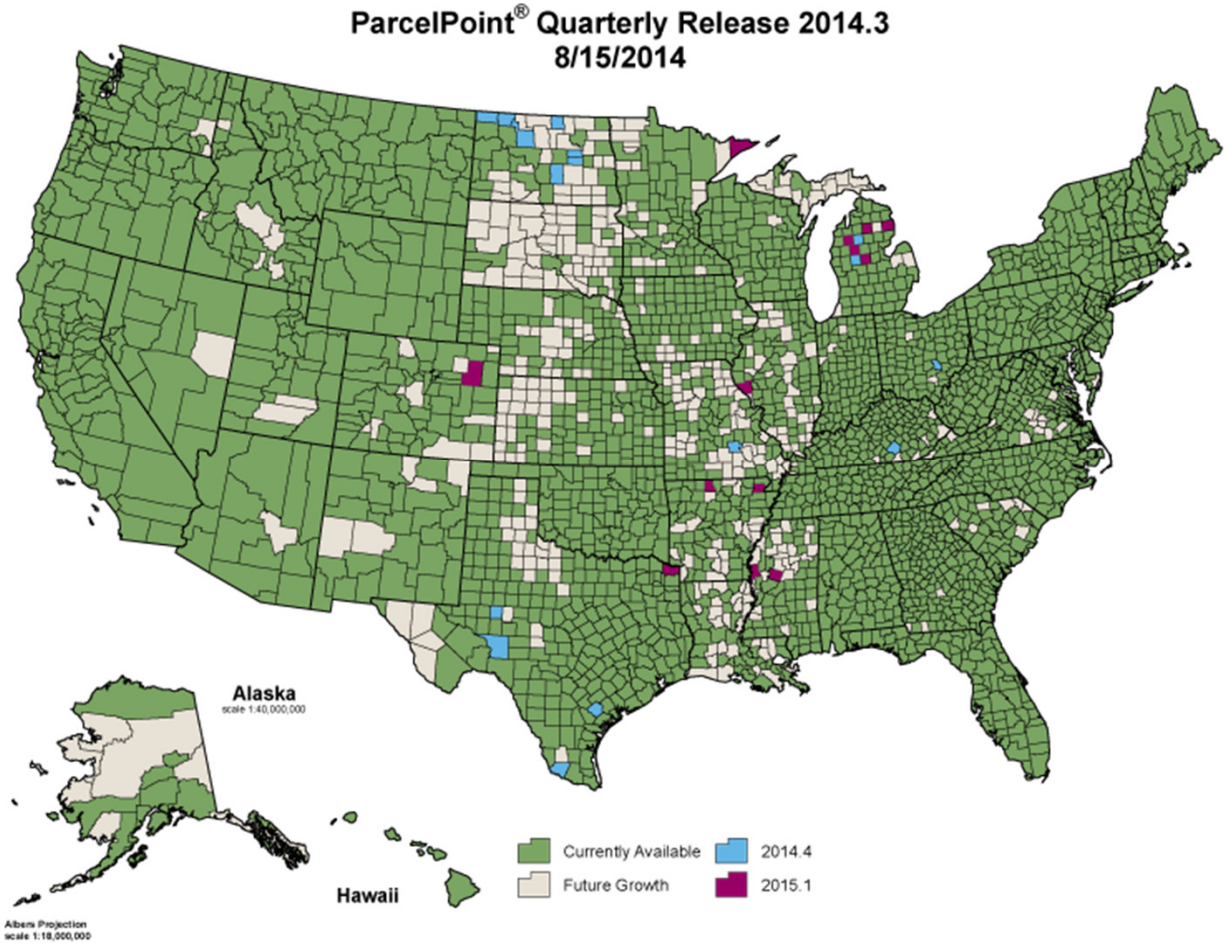
It Starts With Accuracy Locational Assignment

The most extensive and current parcel boundary map in the U.S.

- There are an estimated 144.3 million privately owned parcels in the U.S.
- CoreLogic has converted and normalized over 140 million parcels
- This is combined with an innovative and proprietary geo-coding engine
- Together, these tools go beyond county, zip or estimated accuracy to enable property level:
  - Geocoding accuracy
  - Risk assessment
  - Risk concentration
  - Granular and accurate results

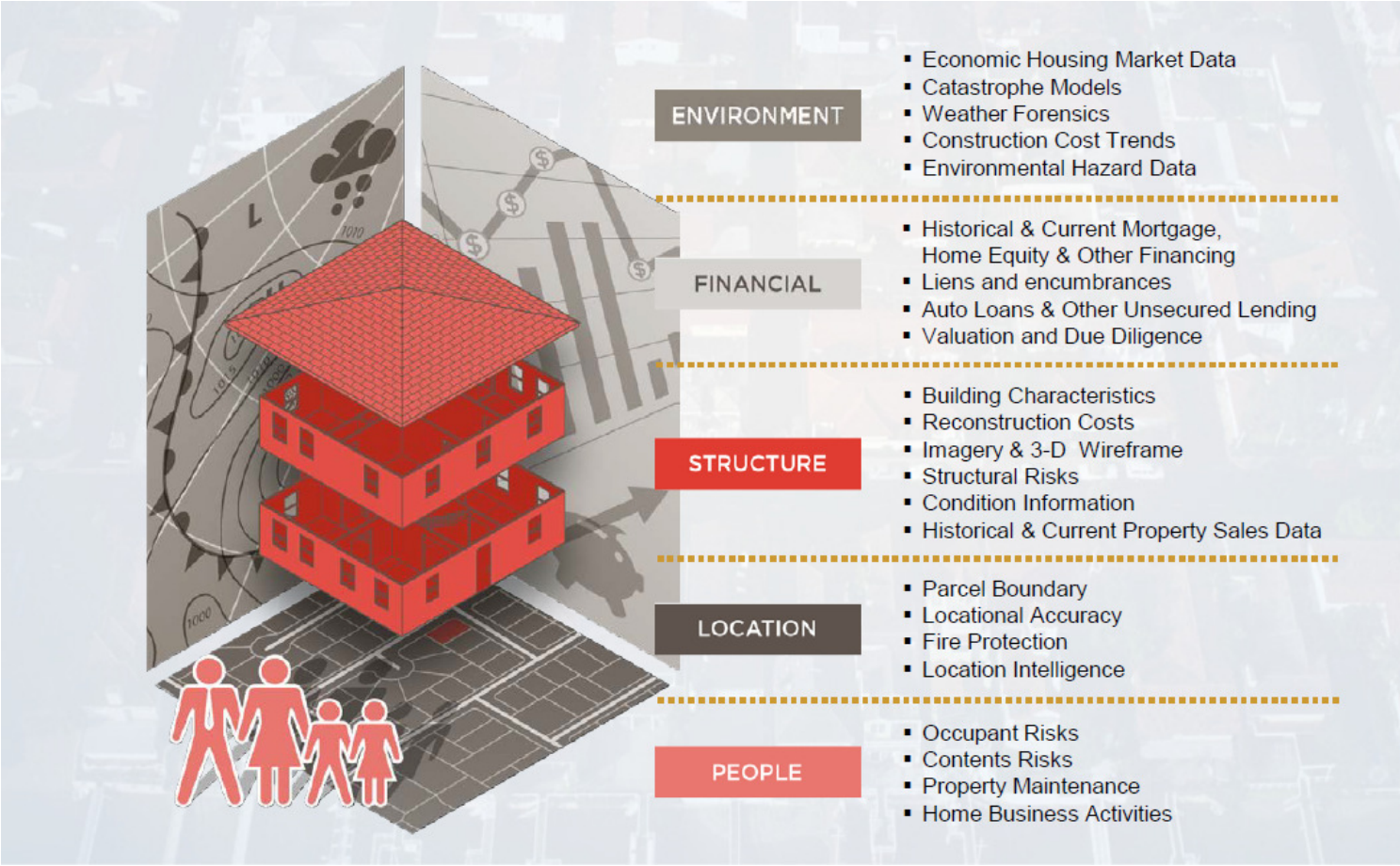


CoreLogic Maintains the Most Extensive and Current Parcel Boundary Map in the U.S.



Geocode Comparison

Building a Data-Enabled View of Property Risk and Condition



Parcels as the Relational Link

Geocode	
Latitude	25.898951
Longitude	-80.126806
Address Line	276 BAL BAY DR
City/State Zip	MIAMI BEACH FL 33154
PxPoint Data Set	PARCEL
Elevation, Slope, and Aspect	
Elevation (Feet)	1.31
Slope (Degrees)	0
Aspect	Flat
Mainland Determination & Distance	
Distance to Seaward Water Feature	101 feet
Seaward Water Feature Name	Biscayne Bay
Mainland: Yes or No	No
Coastal Storm Surge	
Risk Value	5
Risk Level	Extreme
Hurricane Landfall Probability	
% Tropical Storm Risk (Winds 39 - 73mph)	5.3
% Tropical Storm Risk (50-yr)	93.5
% Hurricane Risk (Cat 1-5 Storms)	1.6
% Hurricane Risk (50-yr)	56.3
% Intense Hurricane Risk (Cat 3-5 Storms)	0.4
% Intense Hurr. Risk (50-yr)	19.9
Flood Risk	
Flood Hazard Zone	AE
Undeveloped Coastal Barrier Area	COBRA_OUT
Special Flood Hazard Area (SFHA)	IN
Damaging Winds	
Straight Line Wind (SLW) Risk	Moderate
SLW Frequency	1 Event Every 4 - 6 Years
Hurricane Risk	Very High
Hurricane Frequency	1 Event Every 3 - 5 Years
Tornado Risk	Moderate
Tornado Frequency	1 Event every 5 - 8 Years
Sinkhole	
Risk	Low
Distance to Very High Sinkhole Risk	Greater than 10 miles
Wildfire Risk	
Brushfire Risk	Urban
Nearest high-risk value	Very High
Distance to High/Very High	> 1 mile

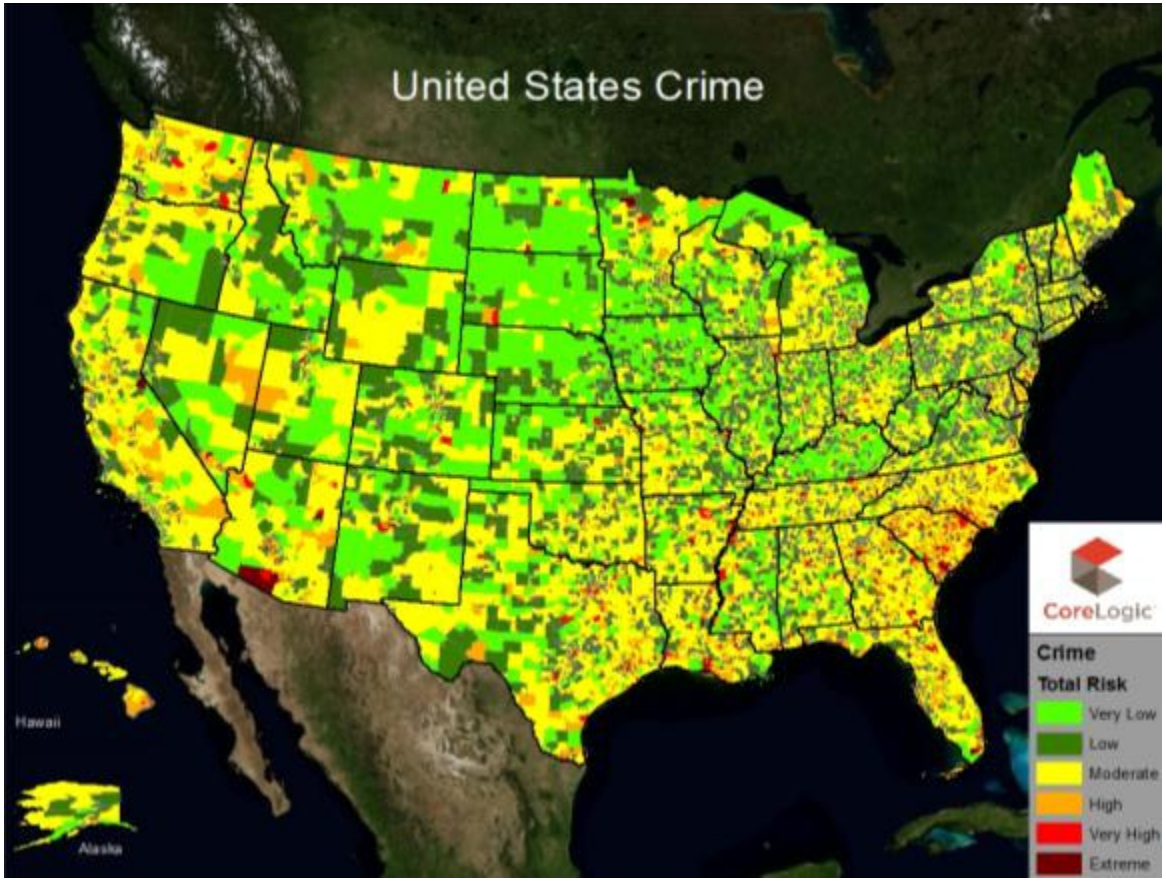
- The Parcel Identification Number (PIN) or Address links the physical parcel to real estate data; and
- Latitude/Longitude links the hazard risk and reg. compliance data to the parcel.

Parcel Information	
PIN:	**1222260022310**
Address Line:	**276 BAL BAY DR**
City/ State/ Zip:	**BAL HARBOUR FL 33154**
Latitude:	**25.898951**
Longitude:	**-80.126806**

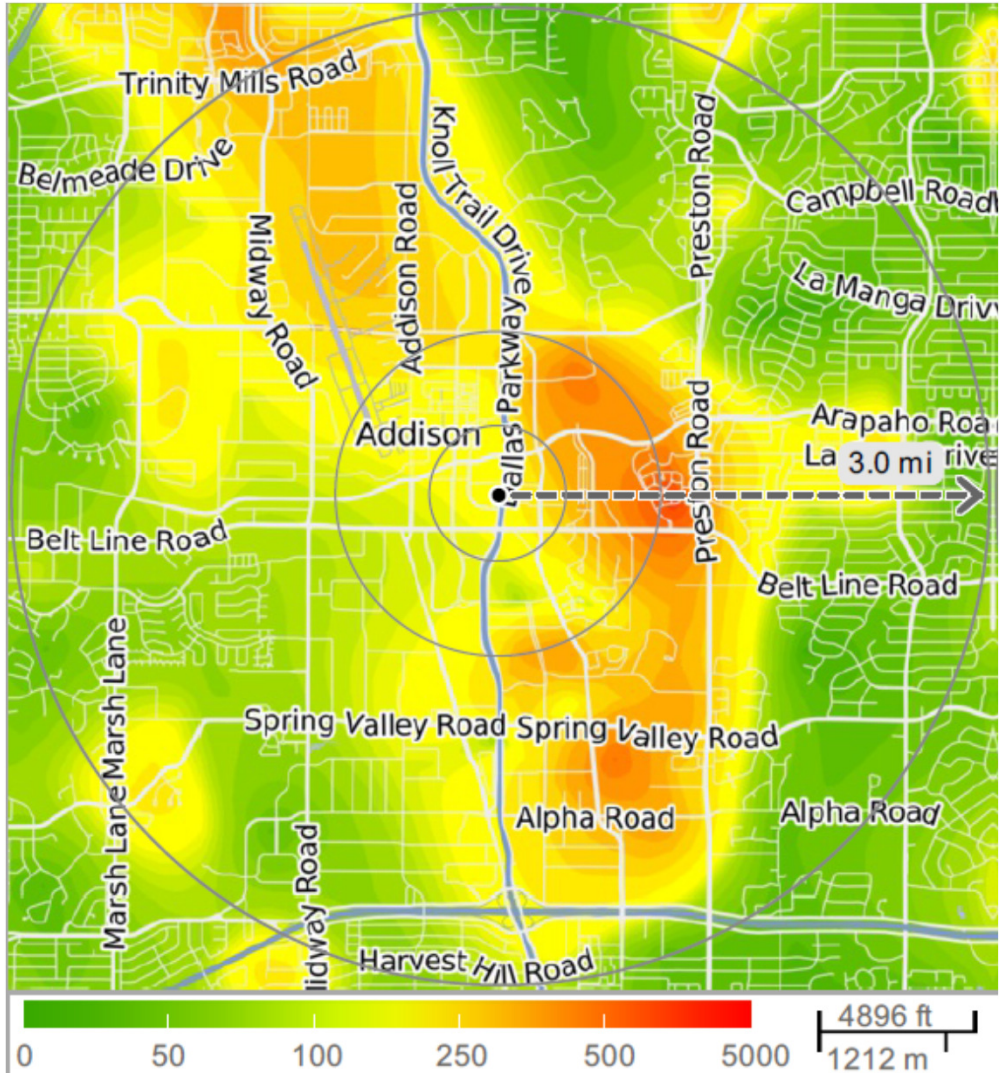
PIN:	1222260022310
Property Address:	276 BAL BAY DR
Owner:	BEV SIEVERT
Land Value:	$9,892,934
Building Value:	$2,349,327
Market Value:	$12,242,261
Assessed Value:	$9,375,066
Adj Sq Footage:	9,988
Year Built:	1977
Bedrooms:	9
Baths:	10
Stories:	2
Living Units: 2	2
Adj Sq Footage:	9,988
Lot Size (Sq Ft):	46,279
Year Built:	1977
Construction:	Composite
Pool:	In Ground
Roof Cover:	Tile

Hazards – Importance of Location Level Accuracy

Crime Risk



Crime Risk – Hotel Address



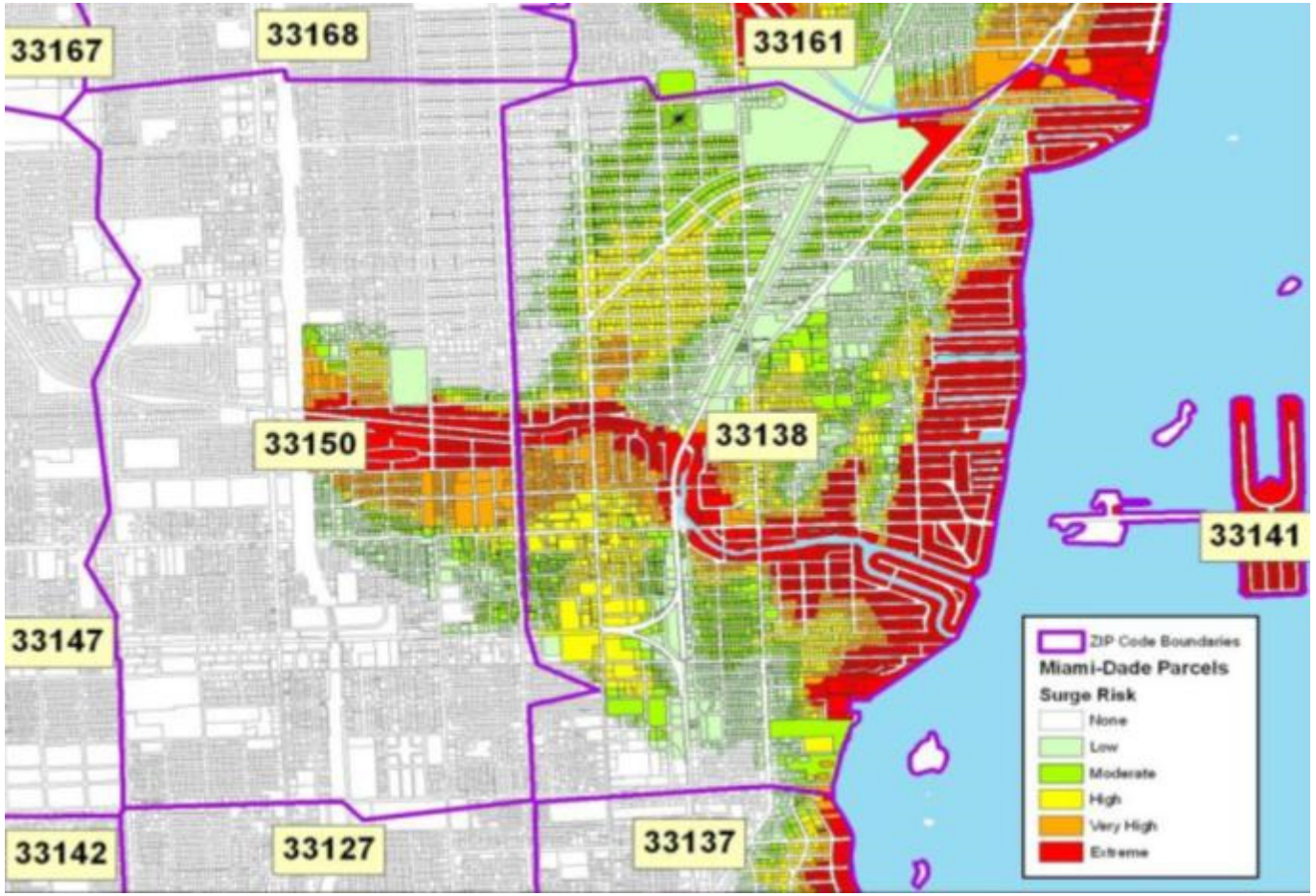
	National	State	County
TOTAL VIOLENT CRIME	**139**	**135**	**107**
Homicide	53	57	37
Rape	155	141	135
Armed Robbery	192	186	112
Aggravated Assault	157	147	175
TOTAL PROPERTY CRIME	**177**	**154**	**115**
Burglary	123	105	79
Larceny-Theft	271	228	216
Vehicle Theft	136	126	76

Brushfire Risk Level

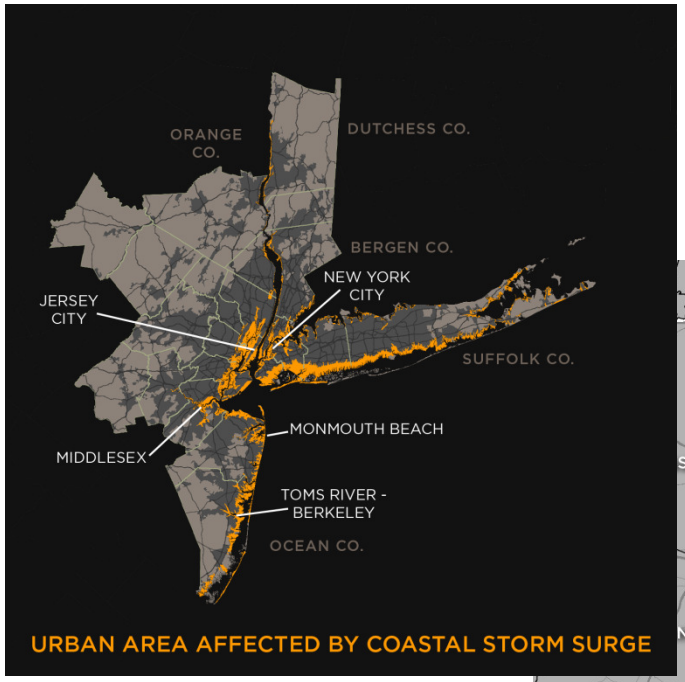
Wildfire Risk

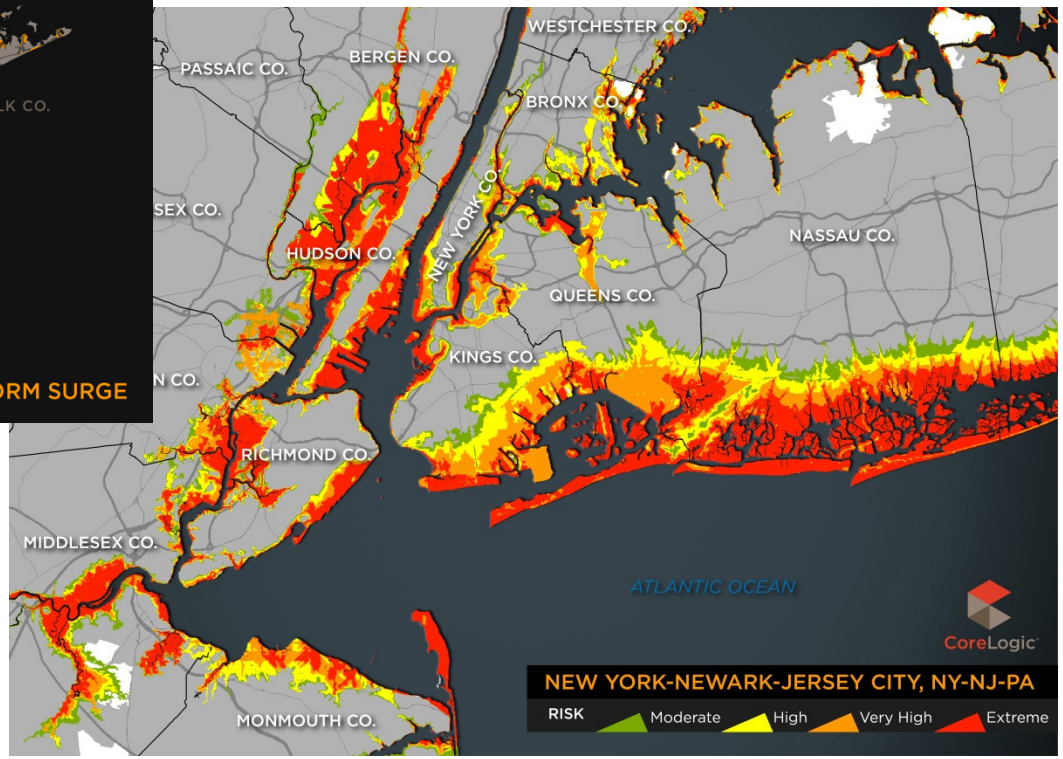
Windblown embers ignited the structures pictured above.
Waldo Canyon, CO (2012)

Surge Risk in Downtown Miami: Parcel vs. ZIP Codes



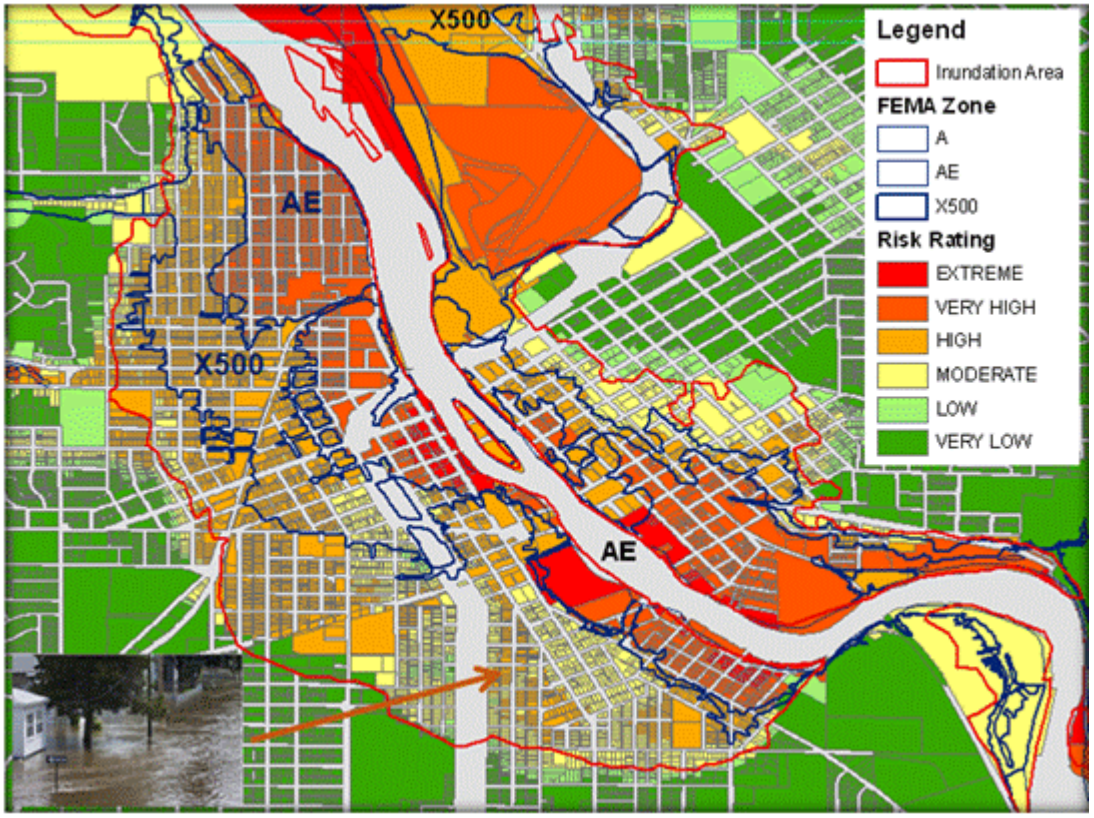
Surge Risk in Greater New York City





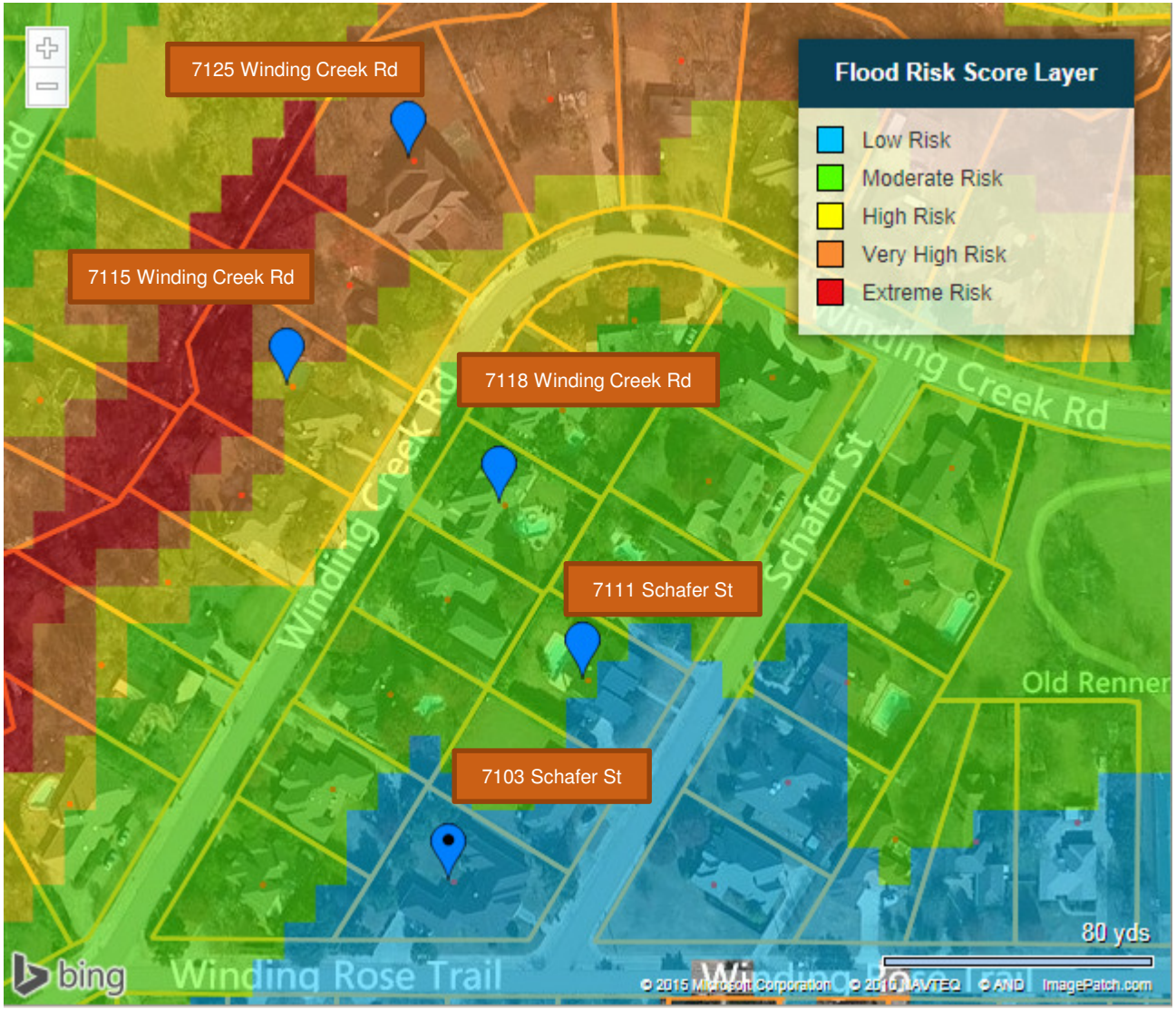
Flood Risk Score Analysis: The 2008 Midwest Flood in Cedar Rapids

- This is an example FRS analysis
- The land parcels were colored by flood risk rating
- Property risk lined up with the inundation boundary from FEMA nicely
- A large number of properties beyond X500 were rated as “Moderate and Higher” risk



Examples Using Location Level Data in Pricing - Flood

Flood Example – North Dallas



Flood Example – Using Risk Scores and Relativities

Flood Risk Score (FRS)	Flood Annual Probability	Est Loss Severity $1000 TIV
	0.0%	$ 150.00
0	0.0%	$ 150.00
10	0.0%	$ 200.00
20	0.0%	$ 200.00
30	0.1%	$ 200.00
40	0.3%	$ 220.00
50	0.6%	$ 250.00
60	1.3%	$ 300.00
70	2.5%	$ 350.00
80	6.0%	$ 400.00
90	15.0%	$ 500.00

Address	FRS	Annual Prob	Avg Loss Severity per $1000 TIV	$ 250,000 Insured Value	Annual Flood Loss Cost
7125 Winding Creek Rd	60	1.30%	$ 375.00	$ 250,000	$ 1,218.75
7115 Winding Creek Rd	50	0.60%	$ 312.50	$ 250,000	$ 468.75
7118 Winding Creek Rd	40	0.25%	$ 275.00	$ 250,000	$ 171.88
7111 Schafer St	30	0.13%	$ 250.00	$ 250,000	$ 81.25
7103 Schafer St	20	0.03%	$ 250.00	$ 250,000	$ 18.75

items in RED come directly from the model

Flood Example – Using Simulation Model Results

Address	Model return period (years)	Annual Prob	Est Loss Cost per $1000 TIV	$ 250,000 Insured Value	Annual Flood Loss Cost
7125 Winding Creek Rd	166	0.60%	$ 4.437	$ 250,000	$ 1,109.30
7115 Winding Creek Rd	76	1.31%	$ 9.725	$ 250,000	$ 2,431.18
7118 Winding Creek Rd	934	0.11%	$ 0.723	$ 250,000	$ 180.71
7111 Schafer St	2,896	0.03%	$ 0.187	$ 250,000	$ 46.67
7103 Schafer St	5,578	0.02%	$ 0.072	$ 250,000	$ 17.90

items in RED come directly from the model

Questions?