First American
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The Impact of Property Characteristics on Homeowners Insurance

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First American Proxix Solutions

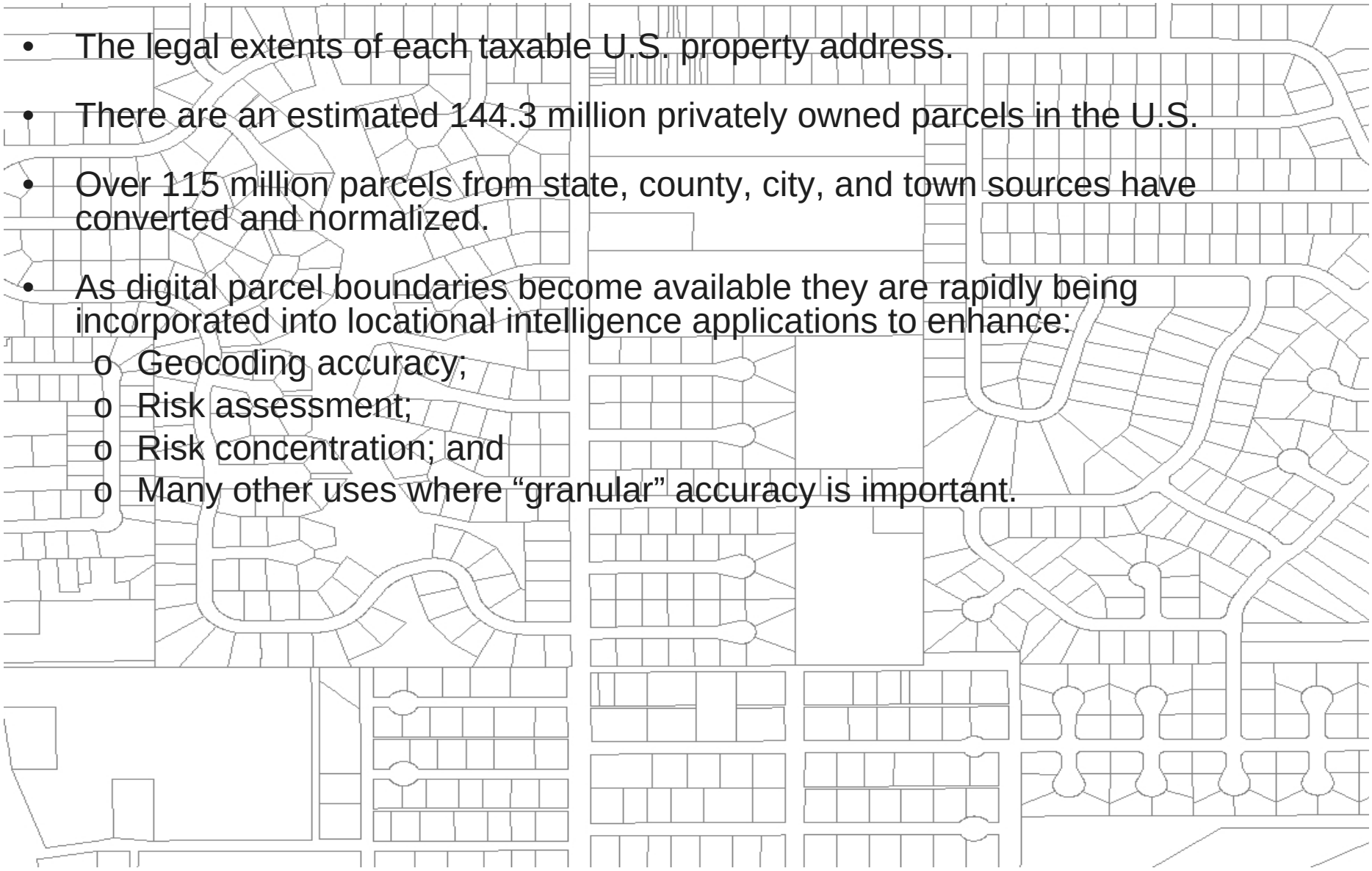
Major Geospatial Trends in Insurance

- Convergence within the insurance enterprise around the need for very granular risk assignment, highly granular hazard risk data, and parcel level real estate data.
- Utilizing hazard risks and property data to drive underwriting, pricing, rating and reinsurance answers down to the most locationally specific level possible.
- Utilizing detailed property specific data combined with geospatial tools to develop solutions for better underwriting, modeling, pricing, portfolio management, and risk transfer results.
- Showing measureable ROI results.

Trends in Data Granularity

- In the distant past, locating a policy within the correct county, city, or ZIP Code was sufficient.
- More recently, interpolated street address locations were considered to the best locational matches.
- Today, the ideal level of placement is on the correct property parcel.
- Companies are striving to geocode addresses at the parcel level at the time of policy quoting, inception, or renewal.
- Combining highly accurate locations with granular hazard risk databases, real estate information, and regulatory compliance datasets to be used throughout the insurance enterprise.
  - Actuary
  - Underwriting
  - Marketing
  - Regulatory Compliance
  - Risk Accumulation

What is Parcel Data?



- The legal extents of each taxable U.S. property address.
- There are an estimated 144.3 million privately owned parcels in the U.S.
- Over 115 million parcels from state, county, city, and town sources have converted and normalized.
- As digital parcel boundaries become available they are rapidly being incorporated into locational intelligence applications to enhance:
  - Geocoding accuracy;
  - Risk assessment;
  - Risk concentration; and
  - Many other uses where “granular” accuracy is important.

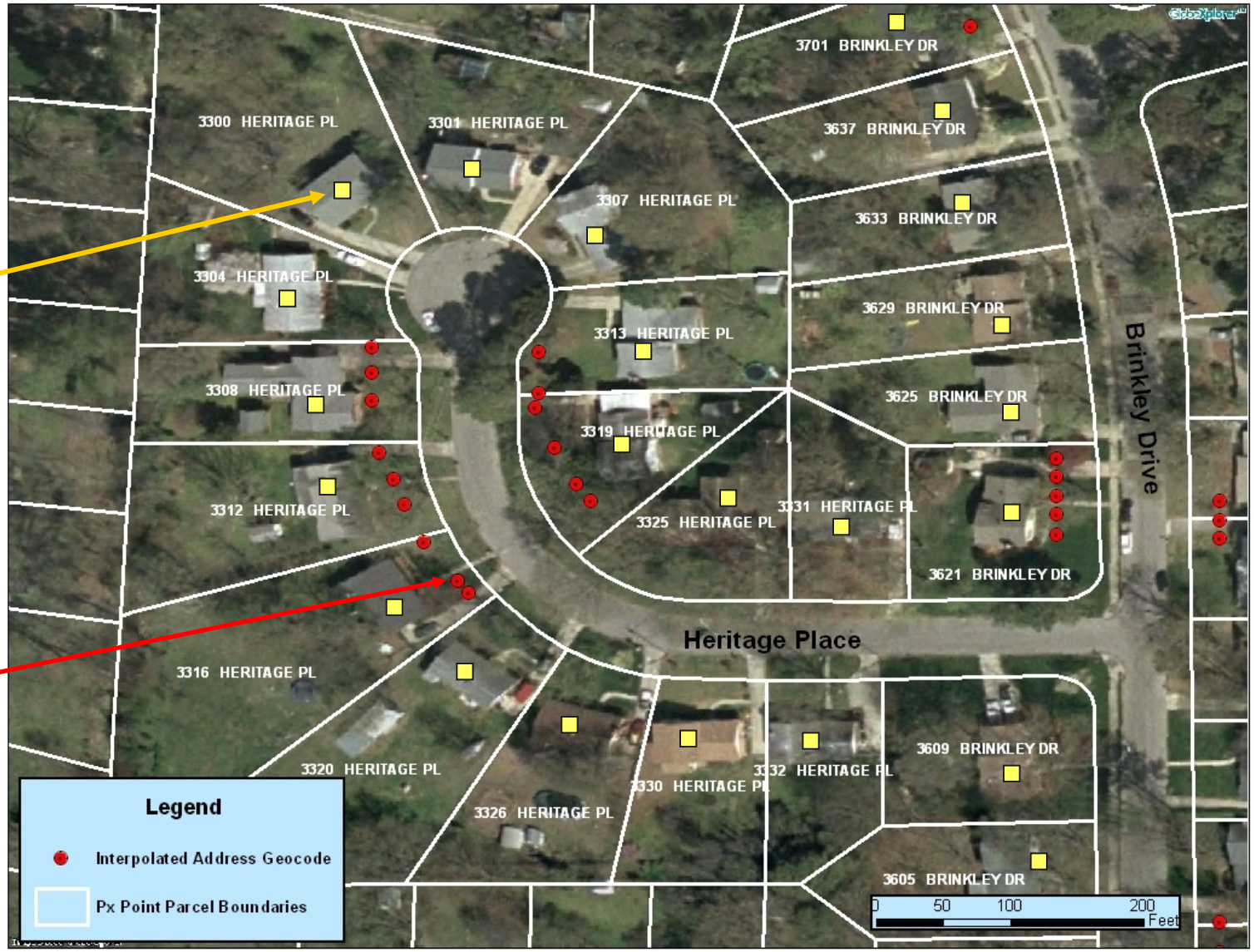
Parcel Level Accuracy vs. Address Interpolation Accuracy

Parcel Level Geocodes

(Yellow Squares)

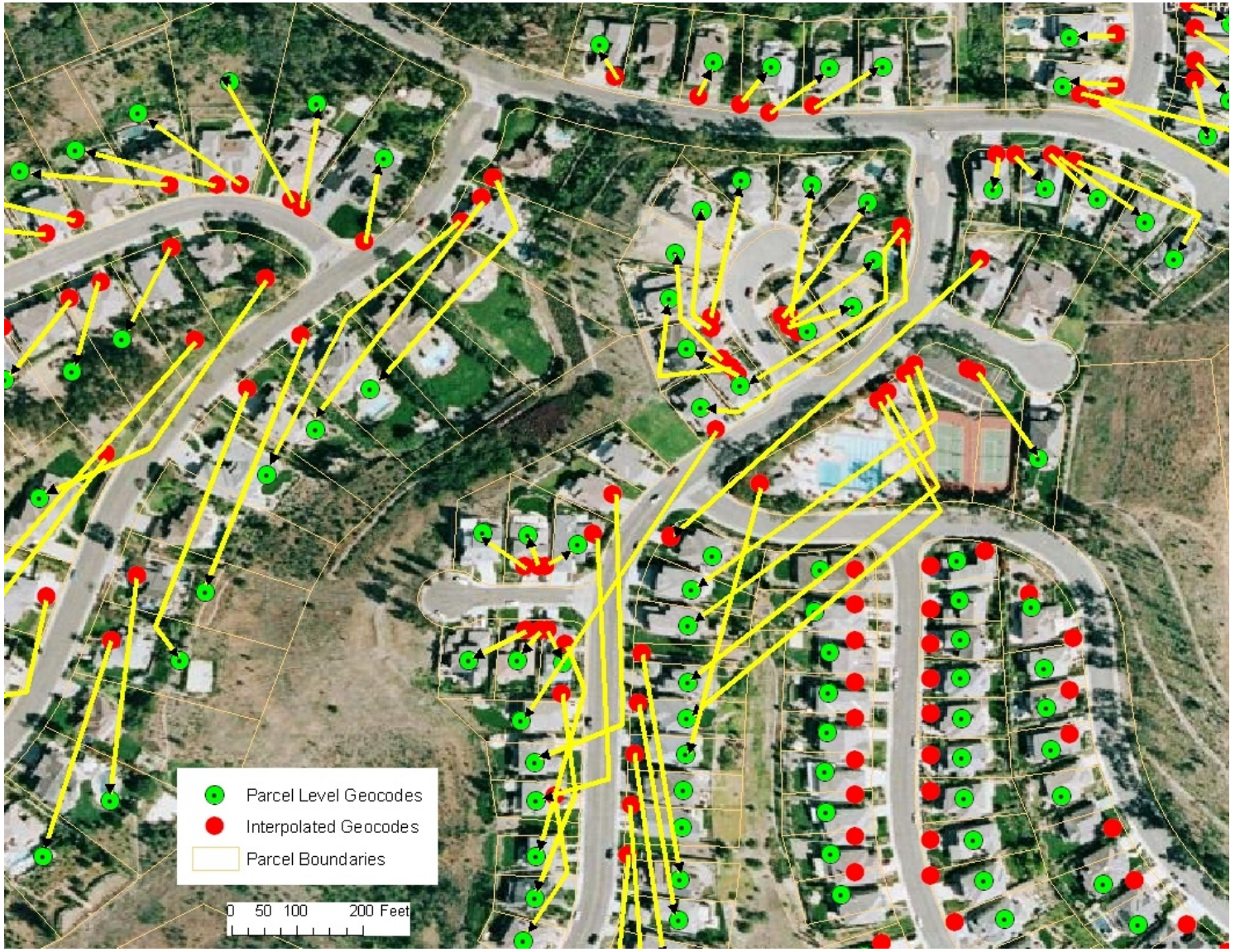
Address Range Interpolated Geocodes

(Red Dots)



The Importance of Spatial Accuracy In Eliminating False Positives

Example: Parcel vs. Interpolated Locations of Homes Destroyed in San Diego County



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

Examples of Real Estate Data Which When Combined With Detailed Property Data Drive Better Insurance Decision Making

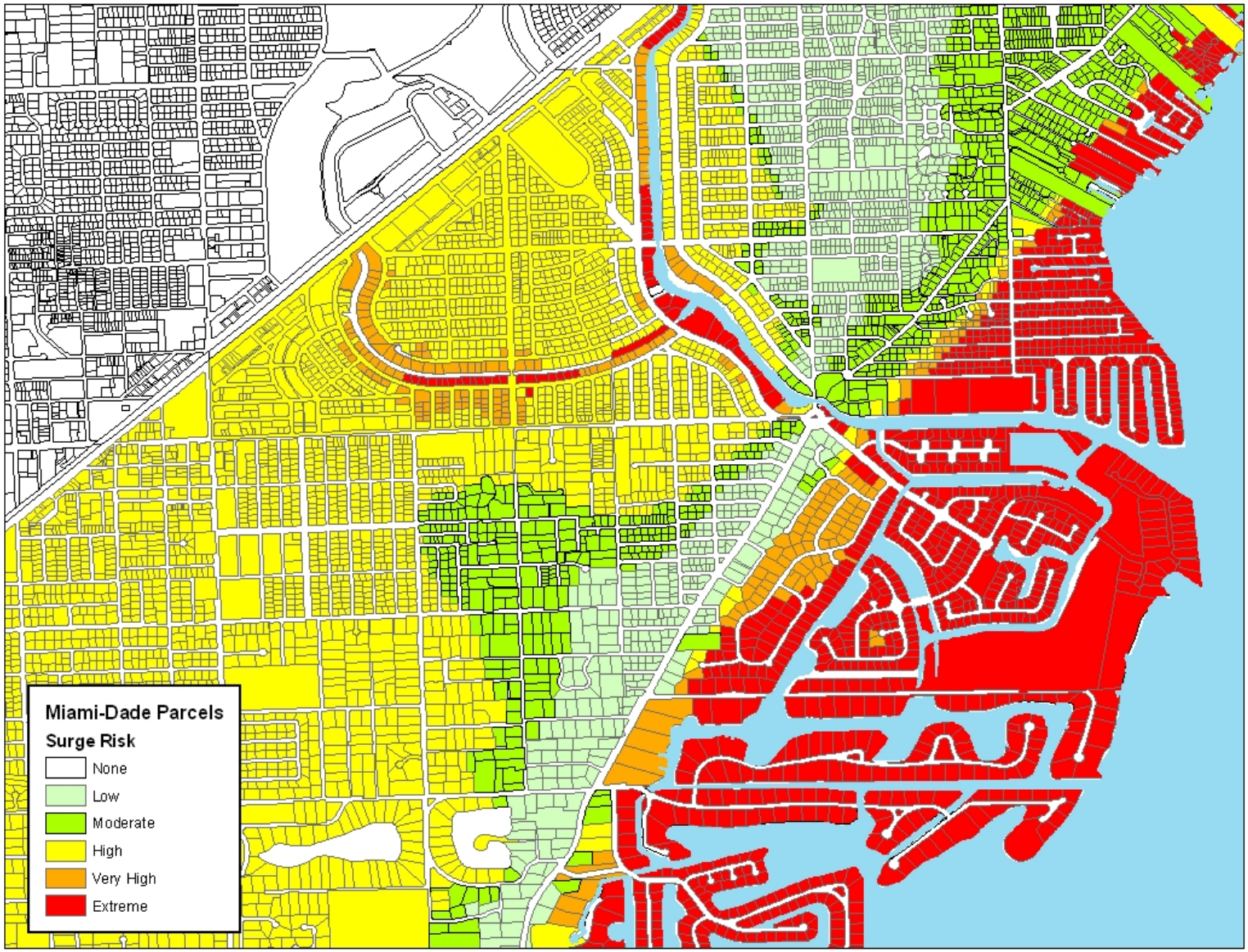
DATA ELEMENTS	*DATA ELEMENTS*
FORMATTED APN	TOTAL BATHS
ORIGINAL APN	FULL BATHS
SITUS ADDRESS	HALF BATHS
SITUS CITY	AIR CONDITIONING TYPE
SITUS STATE	BASEMENT FINISH TYPE
SITUS ZIP CODE	BLDG TYPE
OWNER NAME	CONSTRUCTION TYPE
TOTAL VALUE CALCULATED	EXTERIOR WALL TYPE
LAND VALUE CALCULATED	FIREPLACE NUMBER
ASSD TOTAL VALUE	FIREPLACE TYPE
ASSD LAND VALUE	FOUNDATION TYPE
ASSD IMPROVEMENT VALUE	FLOOR TYPE
BUILDING SQUARE FEET	ROOF FRAMING TYPE
LIVING SQUARE FEET	GARAGE / CARPORT TYPE
GROUND FLOOR SQUARE FEET	HEATING TYPE
GROSS SQUARE FEET	MOBILE HOME INDICATOR
ADJUSTED GROSS SQUARE FEET	POOL INDICATOR
BASEMENT SQUARE FEET	POOL TYPE
GARAGE/PARKING SQUARE FEET	ROOF COVER TYPE
YEAR BUILT	ROOF SHAPE TYPE
EFFECTIVE YEAR BUILT	ELECTRIC/ENERGY TYPE
STORIES NUMBER	FUEL TYPE
BEDROOMS	SEWER TYPE
TOTAL ROOMS	WATER TYPE

Examples of Hazard Risk Data When Combined With Detailed Property Data Drive Better Insurance Decision Making

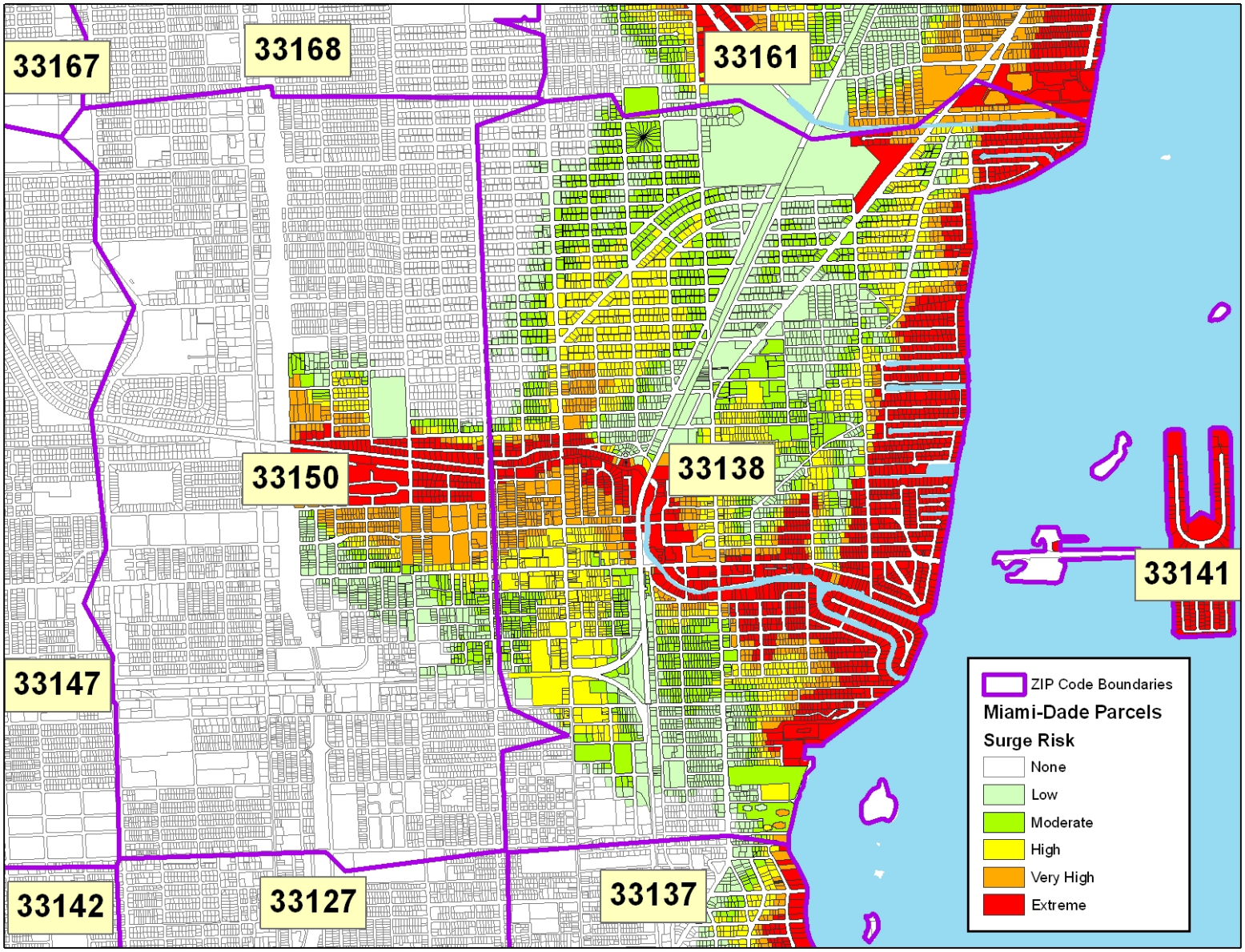
Examples:

1. Wildfire Risk
2. Coastal Storm Surge Risk
3. Mainland versus Barrier Island Location
4. Earthquake Risk
5. Damaging Winds
6. Damaging Hail
7. Flood Risk
8. Florida Sinkhole Risk
9. Mine Subsidence

Parcel Level Storm Surge Risk In Miami

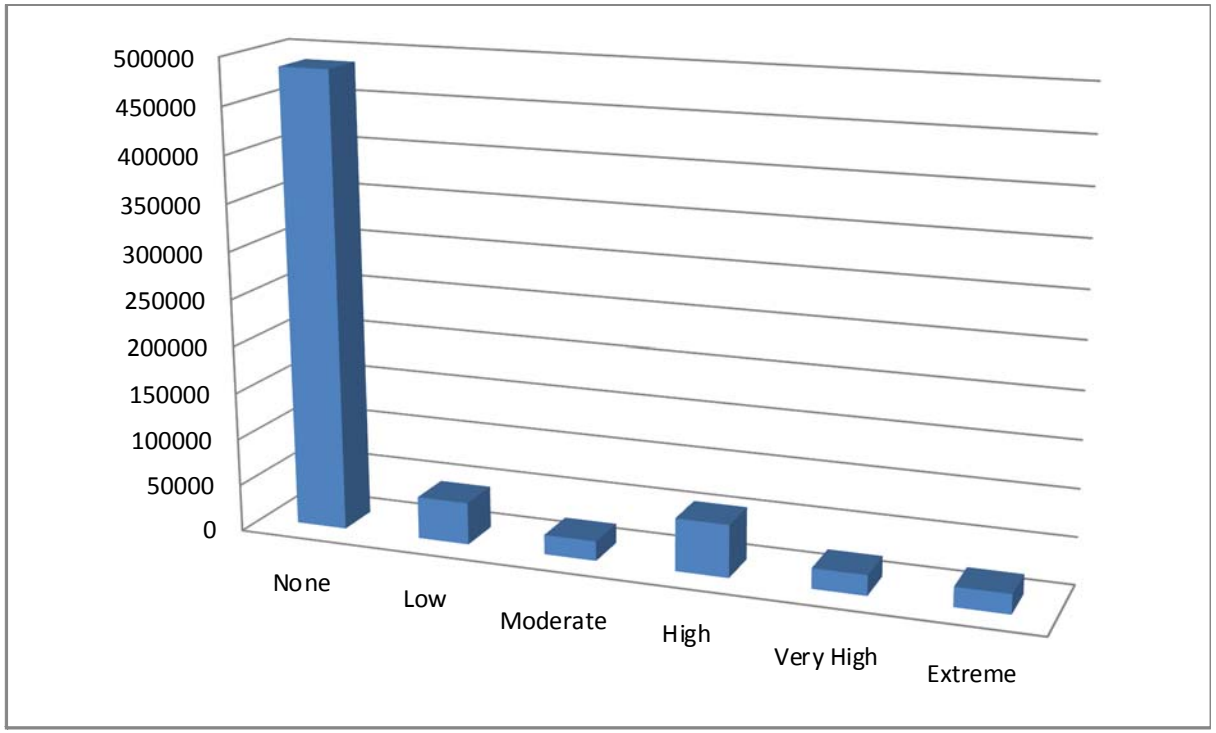


Surge Risk in Downtown Miami: Parcel vs. ZIP Codes

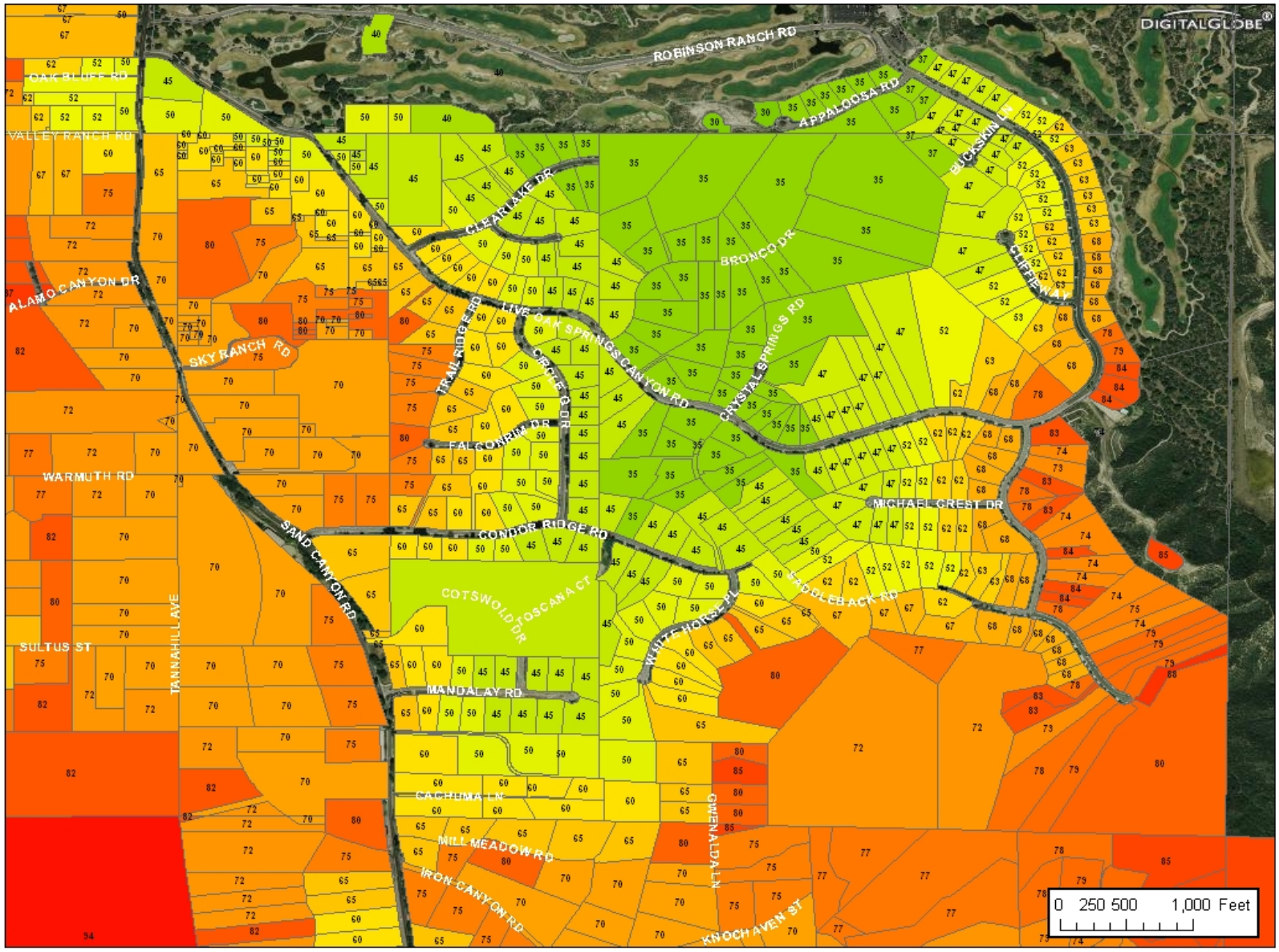


Structures At Risk From Surge Risk In Miami-Dade Co.

Summary			
Surge Risk Scores	**Structure Counts**	**Percentage**	**Building Value**
None	486,651	74.7%	$77,661,901,879
Low	44,903	6.9%	$9,463,534,243
Moderate	20,884	3.2%	$5,007,060,025
High	56,031	8.6%	$12,600,916,865
Very High	21,657	3.3%	$8,152,711,635
Extreme	20,950	3.2%	$10,397,466,673
Total	651,076		$45,621,689,441

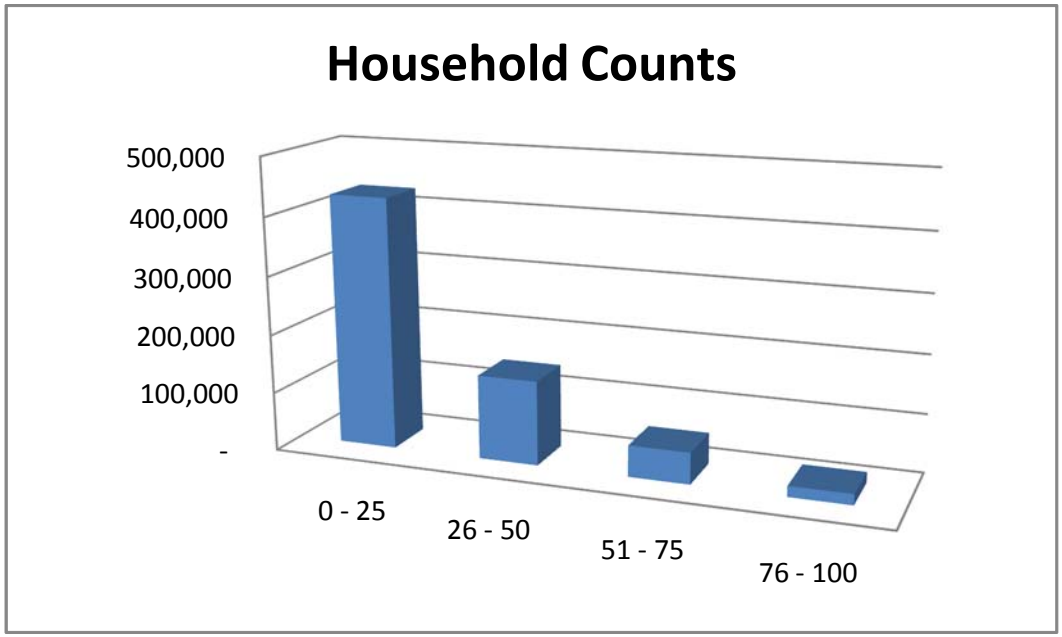


CA Property Level Wildfire Risk Scores
Robinson Ranch, Canyon County, CA

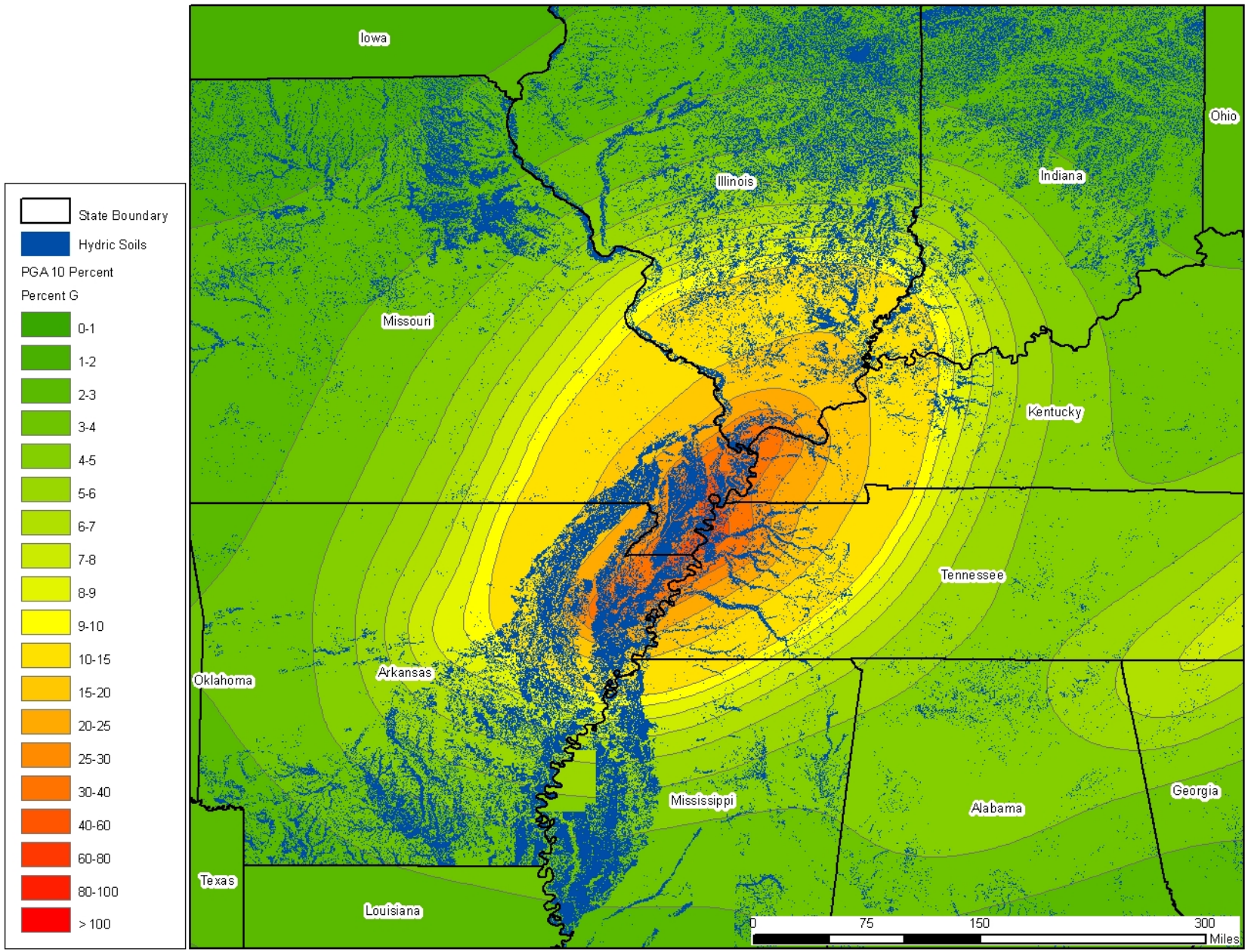


Wildfire Risk Score Distribution for San Diego Co. Homes

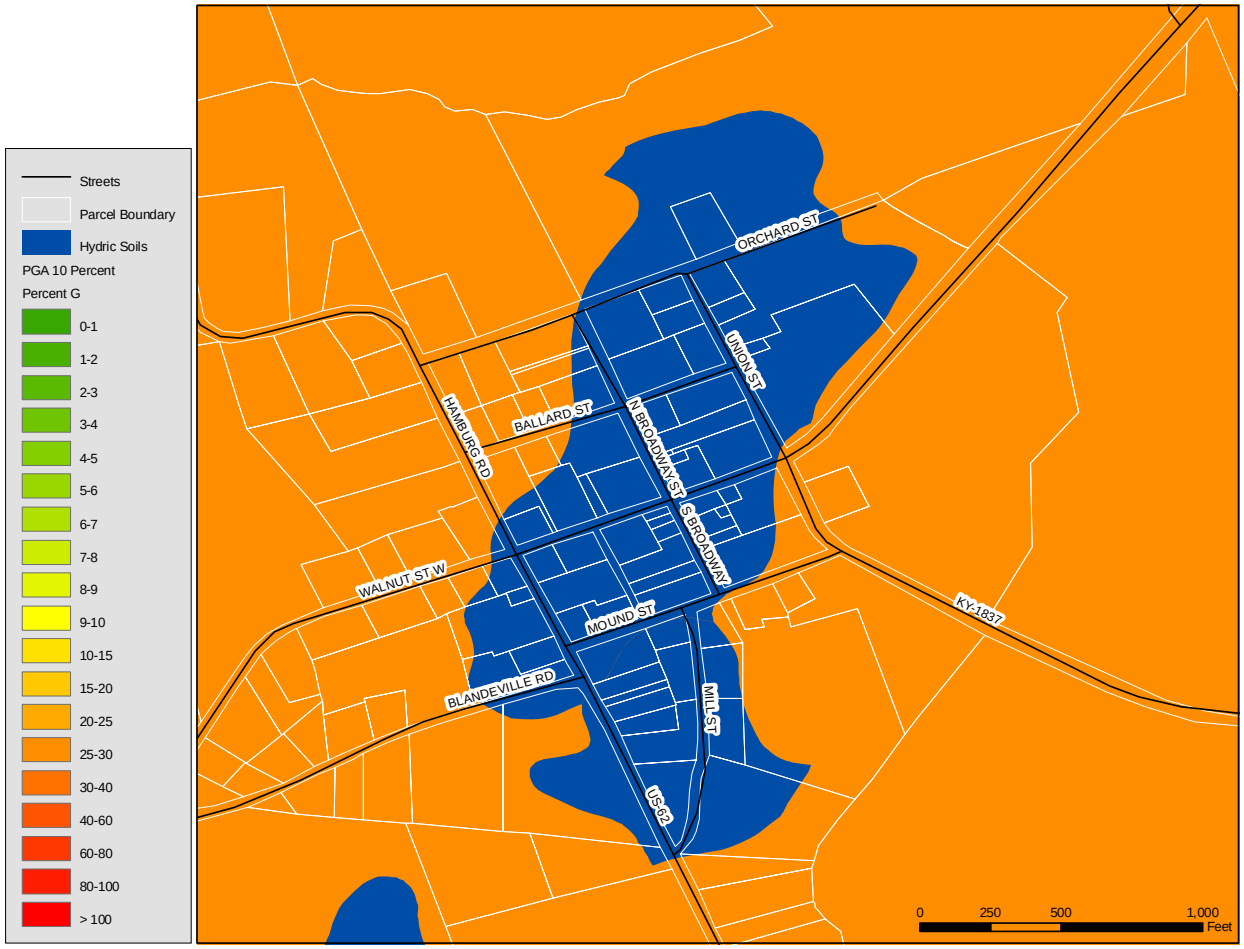
Summary		
Wildfire Risk Scores	**Household Counts**	**Percentage**
0 - 25	429,857	66.6%
26 - 50	143,746	22.3%
51 - 75	53,613	8.3%
76 - 100	18,381	2.8%
Total	645,597	



New Madrid Seismic Zone PGA and Hydric Soils

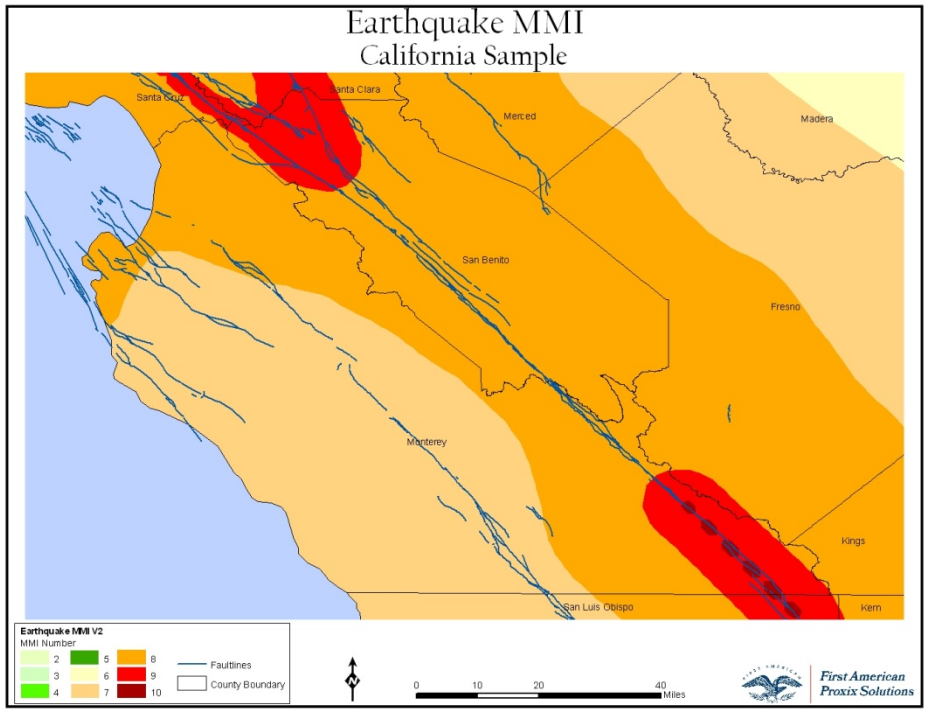


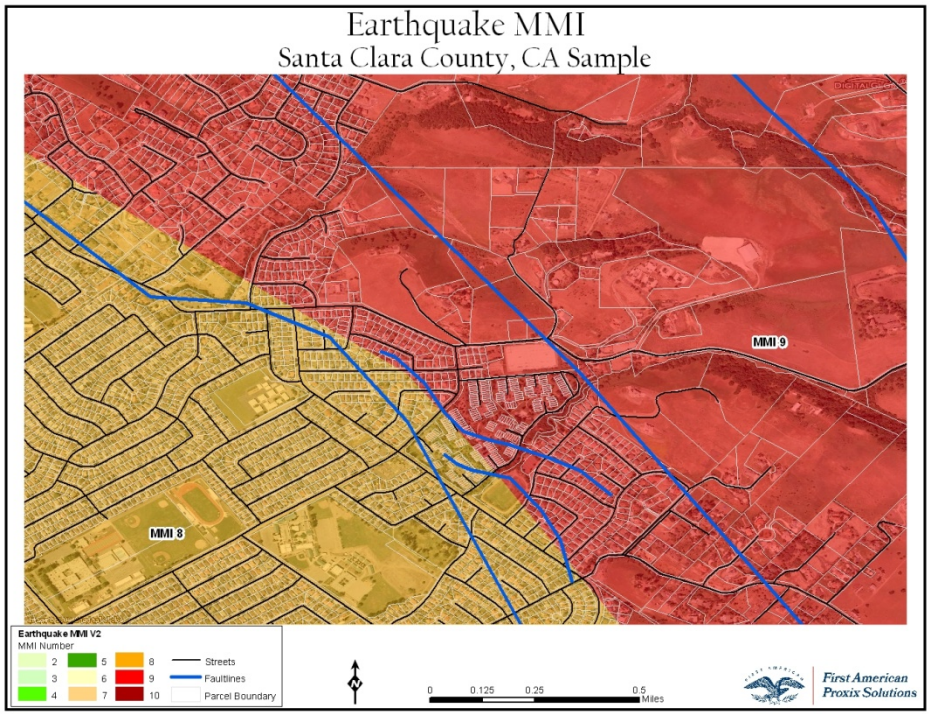
Example of the Location of High Liquefaction Potential Soils (in blue) in the New Madrid Region



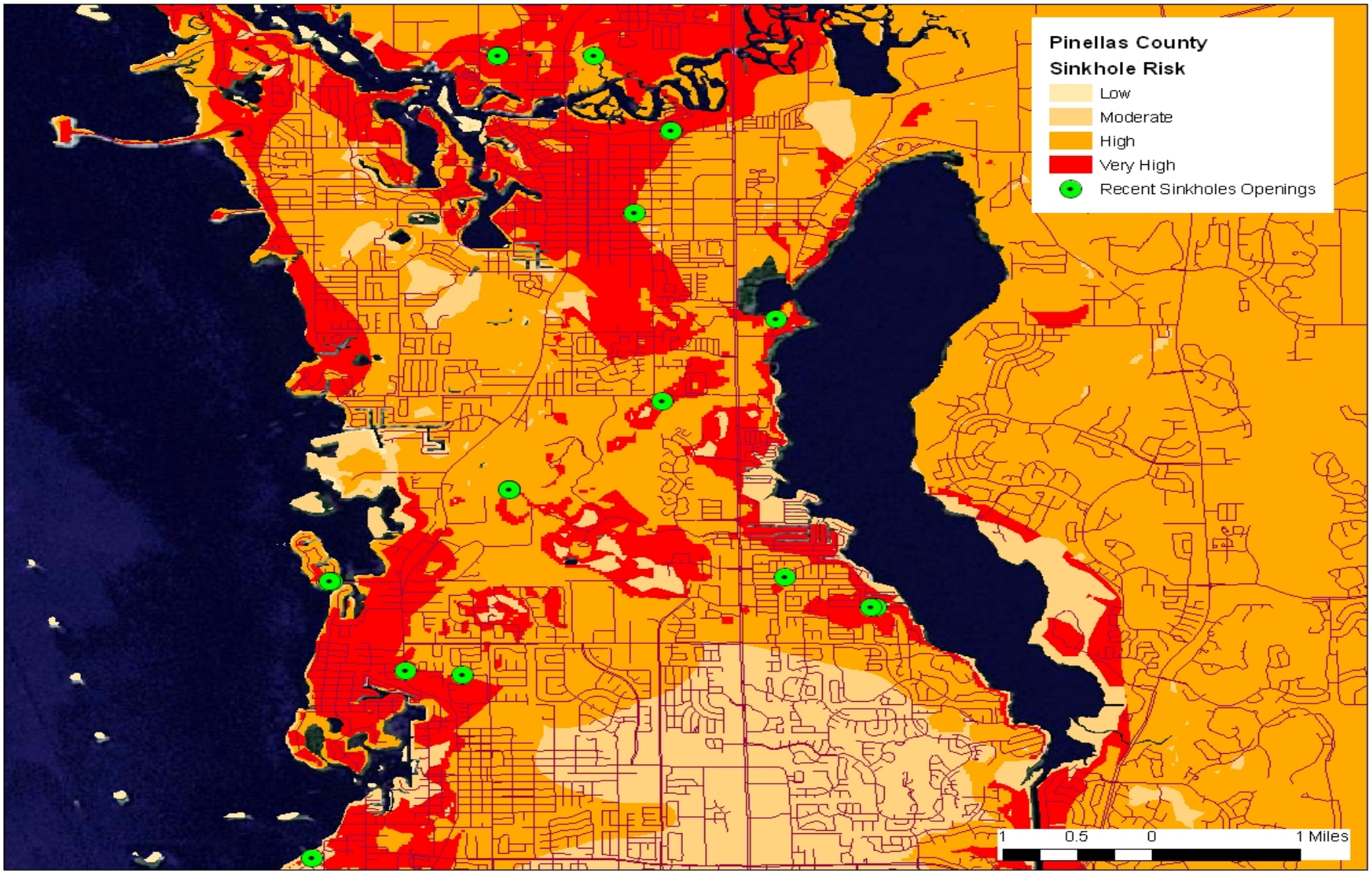
Ballard County, KY

Earthquake Risk Example: Modeled MMI Scores

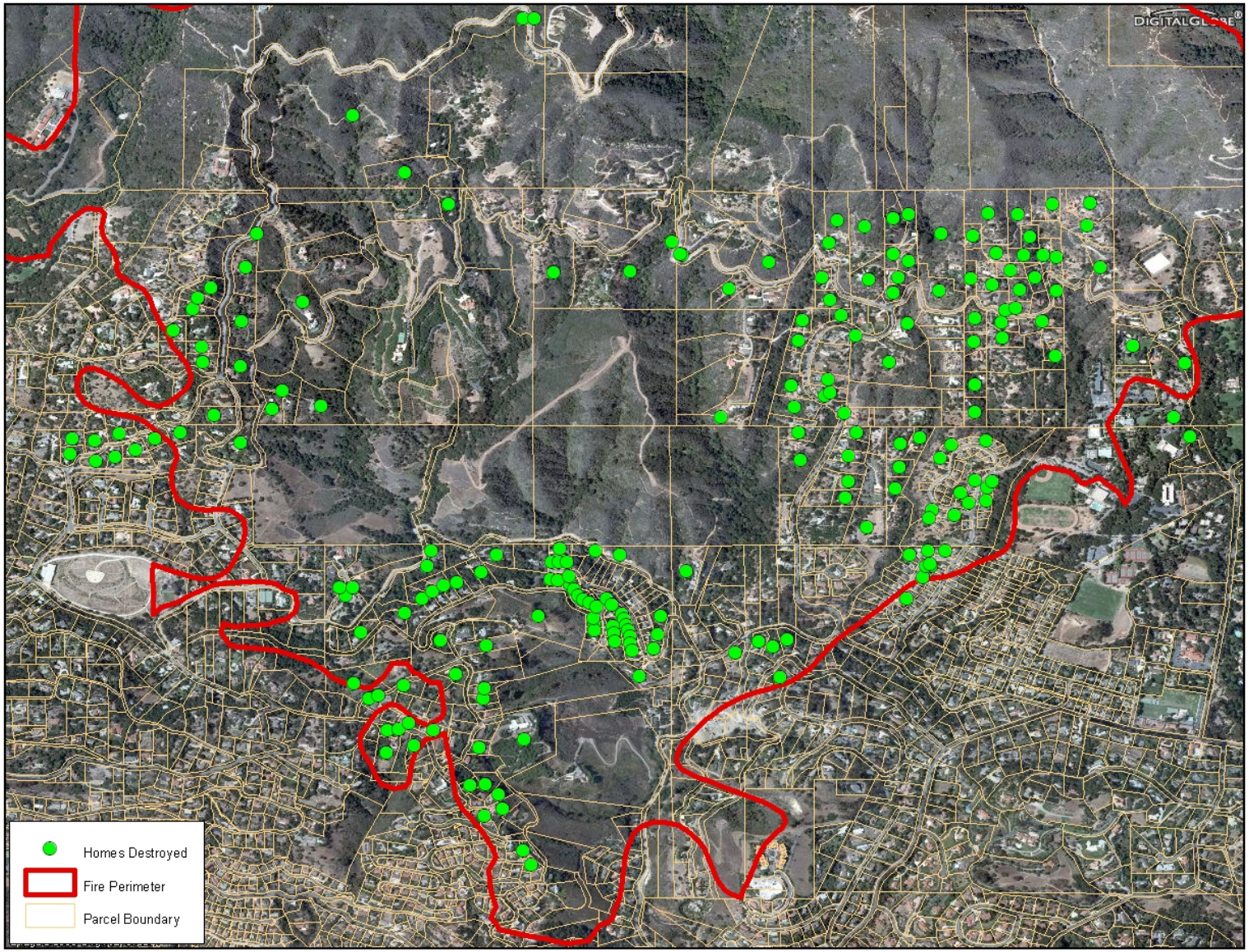




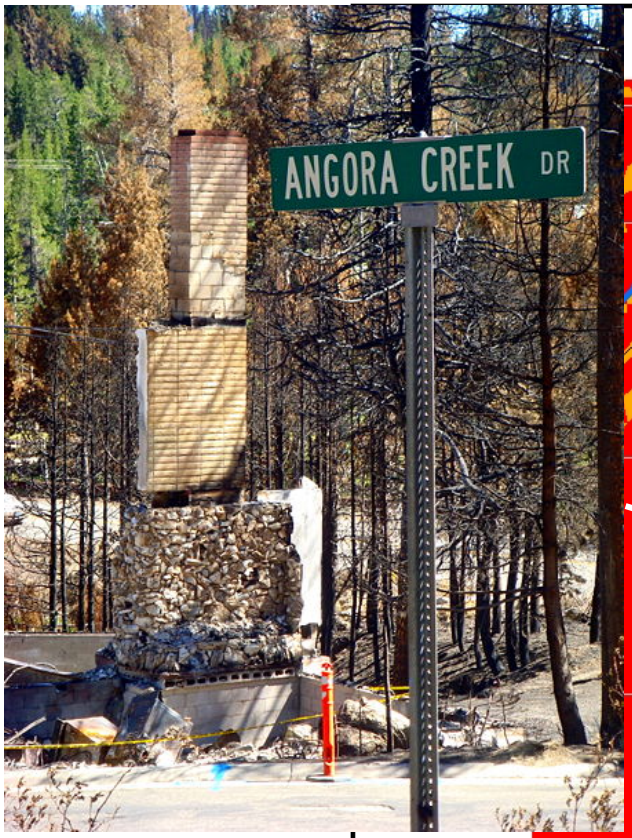
Pinellas County Sinkhole Risk Example

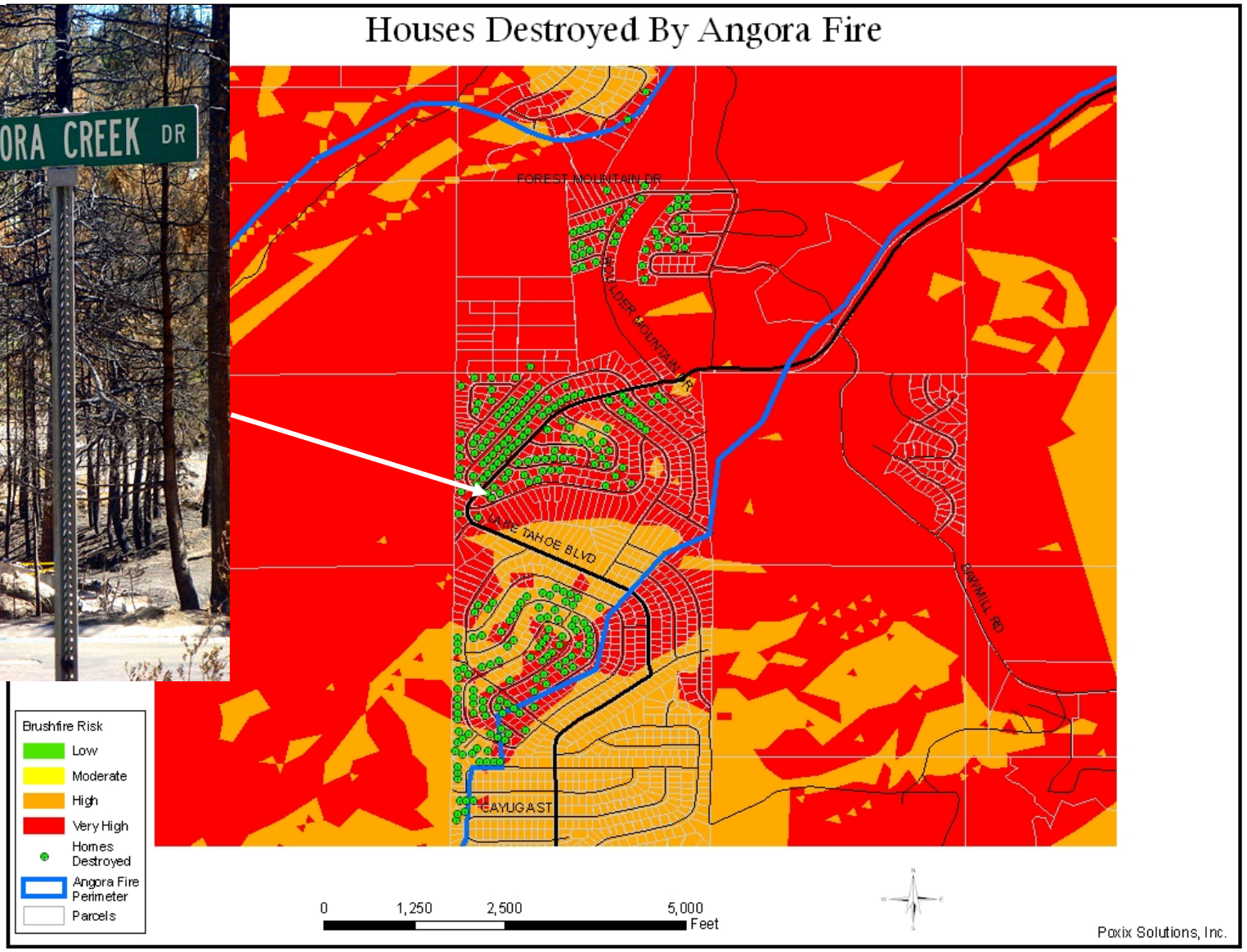


Risk Concentration – Tea Fire, Santa Barbara 2008



Risk Concentration Angora Fire, CA 2007





Data Quality and Granularity: The Solution

- Combining parcel specific real estate information with granular hazard risk information drives enhanced underwriting rules, pricing models, loss ratios, and reinsurance analysis.
- Increases accuracy.
- Provides highly accurate estimates of loss potential for a variety of perils.
- Delivers actionable information for determining policy continuation and pricing in coastal, wildfire, and other risk areas.