AGRiP GOVERNANCE CONFERENCE 2022 | ENERGIZING THE POWER OF LEADERSHIP

MARCH 6–9   NEW ORLEANS, LA

Property Appraisals & Decision Making

Wednesday, March 9 11:15 AM – 12:00 PM CST

HCA ASSET MANAGEMENT

COVID-19 Old & New

2020-21 Impacts:

➤ Immediate
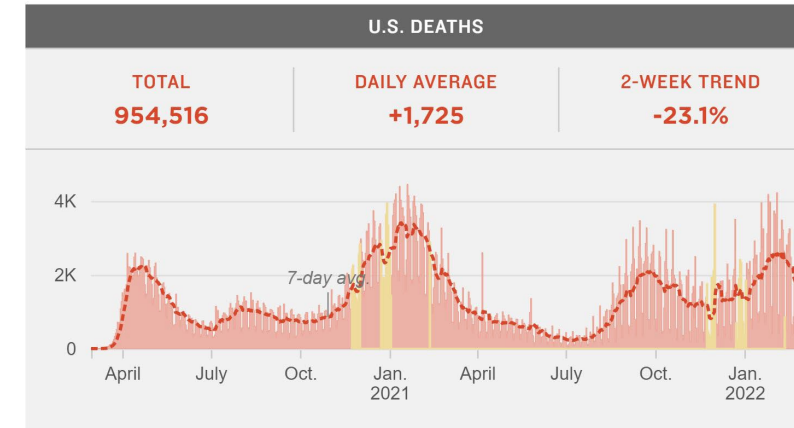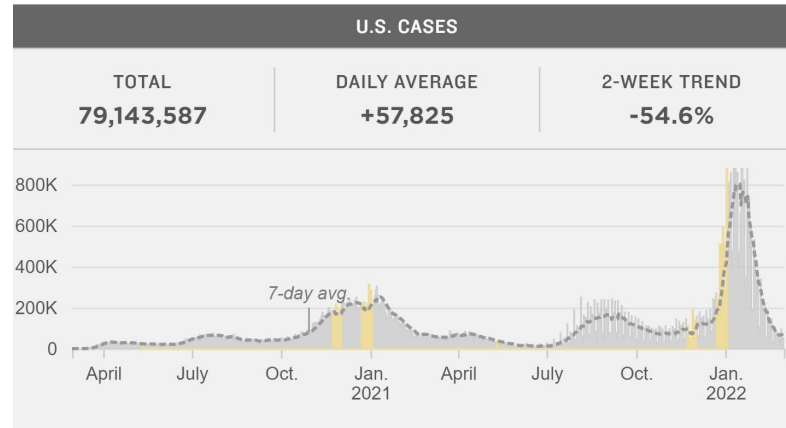- ➤ Economy Shutdown
- ➤ Supply Chains Disruptions

➤ Longer-Term
- ➤ Demand Surge
- ➤ Budget Impacts
- ➤ Changes in Labor Practices (and Costs!)
- ➤ Remote Workplace & Increase in Vacancy
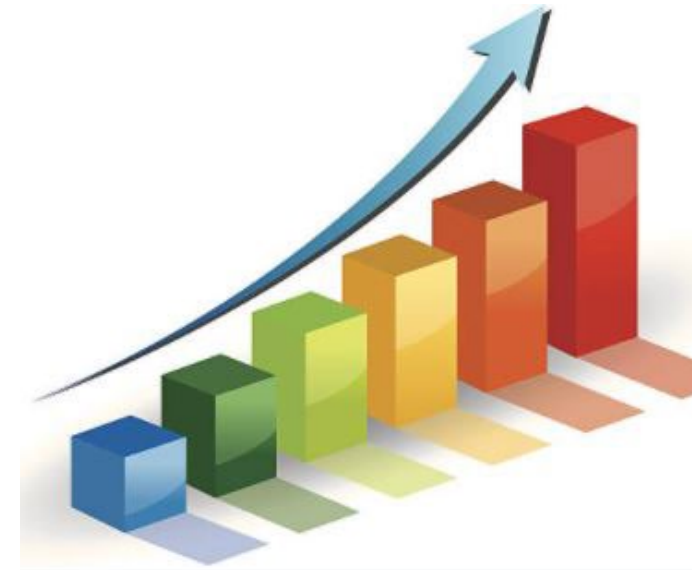
2022 Impacts: TBD

Data as of 6:21 a.m. ET on March 3

U.S. CASES		
TOTAL	DAILY AVERAGE	2-WEEK TREND
79,143,587	+57,825	-54.6%

U.S. DEATHS		
TOTAL	DAILY AVERAGE	2-WEEK TREND
954,516	+1,725	-23.1%

Data irregularities: Data reporting is often delayed on weekends and around major U.S. holidays. Additionally, some states have scaled back how often they report new data, creating more spikes and dips in the daily data.

The daily averages are 7-day averages of new cases and deaths for the week ending March 2. The 2-week trend refers to the percent change in the 7-day average vs. 2 weeks prior.

Source: Center for Systems Science and Engineering at Johns Hopkins University

WE **ENERGIZE** THE POWER OF POOLING
AGRiP
ASSOCIATION OF GOVERNMENTAL RISK POOLS

Construction Employment Surges in February to Near Pre-Pandemic Levels, Says ABC

Associated Builders and Contractors

FRIDAY, MARCH 4, 2022 9:42 AM

February Hiring Strongest Since Summer; Unemployment Falls to Pandemic Low
THE WALL STREET JOURNAL.

Healthy Economy???

➢ Overall Unemployment Rate at 3.8%
  ➢ Construction Unemployment down to 5.0%
    ➢ Suggests increases in labor costs may continue

➢ Targeted Government Spending *($$trillions)*
  ➢ *Over $4T spent/obligated in COVID relief (https://www.usaspending.gov/disaster/covid-19)*
  ➢ *Potential for more... (Infrastructure $1.2T)*

➢ Housing vs. Commercial – distinct differences

➢ Interest Rates rising, but... Historic Lows (**K12 Bond Programs are still significant**)

➢ Inflation – CPI vs. PPI

CAT Loss Models

Defined: https://content.naic.org/cipr_topics/topic_catastrophe_models_property.htm

➤Traditional Modeling
  - ➤**RMS**
  - ➤**AIR** (Verisk/ISO)
  - ➤**EQECAT** (CoreLogic)
  - ➤**Karen Clark & Co.** (RiskInsight)
  - ➤Recent Barriers to Entry crashed

➤Who Uses Them? *Every Major Insurer / Reinsurer*

➤Why? *Large Portfolios of Property Analyzed & "Modeled"*

➤History: *(3) Major Events 1989-1992, ending with Andrew ($15b)*

https://www.actuary.org/sites/default/files/files/publications/Catastrophe_Modeling_Monograph_07.25.2018.pdf
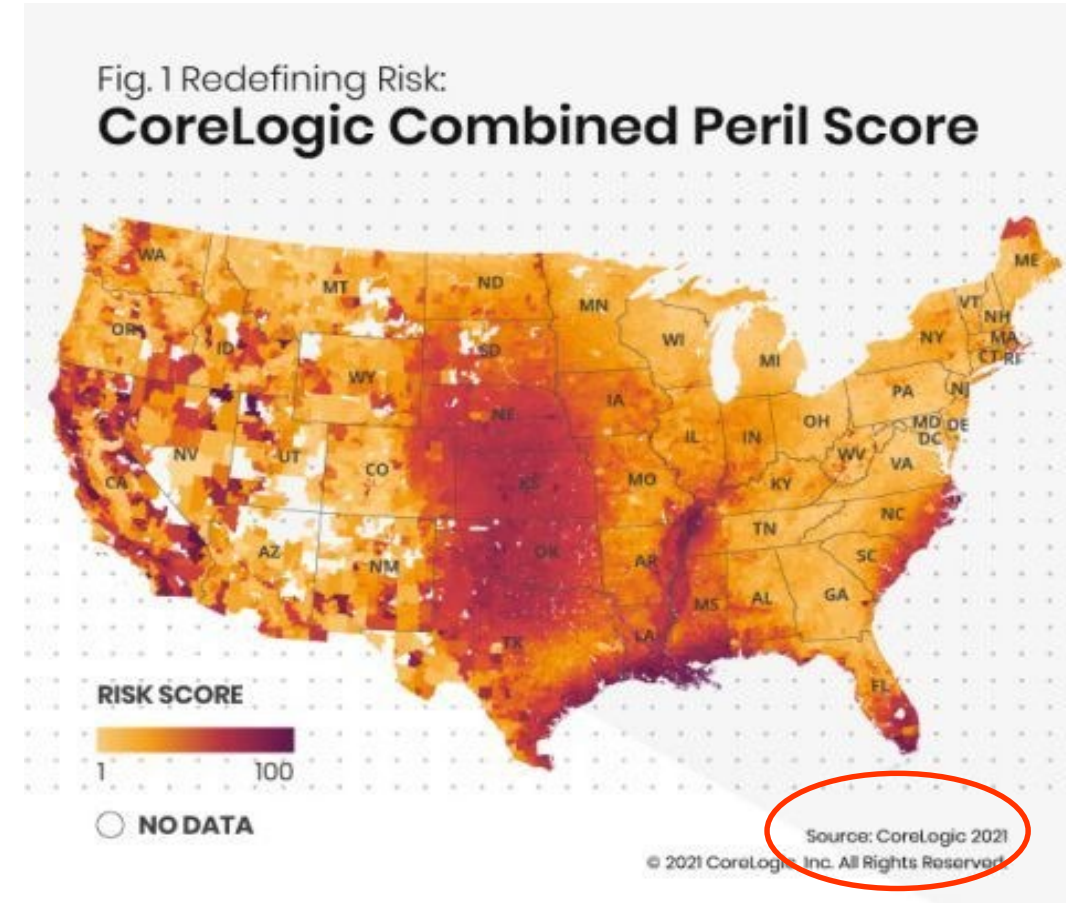
Climate Considerations

Forget Politics...

➤ Traditional Coastal Concerns
- ➤ 30 names storms in 2020!
- ➤ 2021 stayed on pace... 3rd most active ever (21)

➤ Wildfire Losses – 2020/21 record years

➤ Convective Storms – Iowa derecho ~ $11B losses

➤ Winter Storms (Uri) – approx. $15-20B insured losses
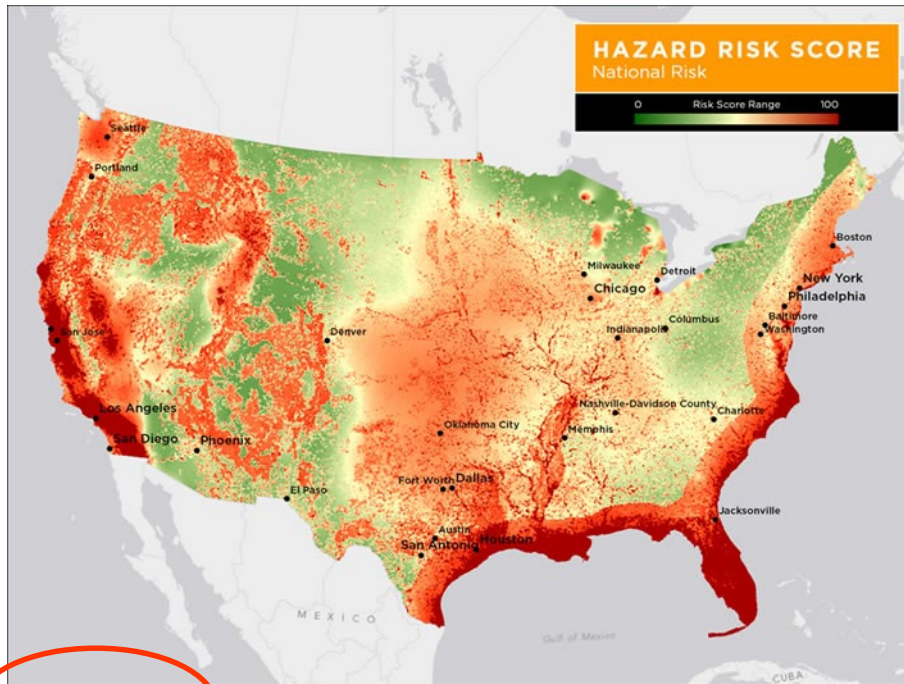
Major Risks:
- **Flood**
- **Surge**
- **Hurricane Wind**
- **Wildfire**
- **Quake**
- **Hail**
- **Tornado**
- **SL Wind**
- **Sinkhole**

Fig. 1 Redefining Risk:
CoreLogic Combined Peril Score

Climate Considerations

Underwriters taking more notice of secondary perils as losses rise: Best

Secondary peril events like **wildfires, tornadoes, and severe thunderstorms** now comprise a larger portion of insured losses, meaning both personal and commercial lines property underwriters must take this rising risk into accounts when modeling potential losses and setting rates, according to a recent report from AM Best.

Advisen Front Page News - Monday, January 24, 2022

Reinsurers may be underestimating climate change exposure by up to 50%: S&P Advisen - Monday, September 27, 2021

BUSINESS INSURANCE.

Natural disasters in 2021 second-costliest on record

Posted On: Jan. 10, 2022 11:01 AM CST

Annual Trending of Values

Variety of Sources

2021-22 Y-O-Y Changes
~ 5% - 20% Increases!

RSMeans data from GORDIAN

ENR Engineering News-Record

CoreLogic

AMERICAN CITY&COUNTY MUNICIPAL COST INDEX

Mortenson

Turner Turner Building Cost Index

Handy Whitman Index of Public Utility Construction Costs.

BNi Building News A DESIGN COST DATA COMPANY DATA YOU CAN TRUST

BUREAU OF LABOR STATISTICS Producer Price Indexes

RLB Rider Levett Bucknall

WE ENERGIZE THE POWER OF POOLING AGRiP ASSOCIATION OF GOVERNMENTAL RISK POOLS

Annual Trending of Values
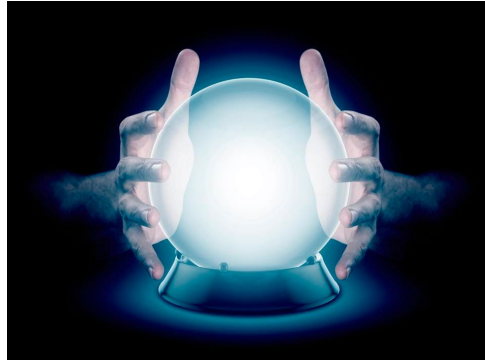
- Supply Chains

- Labor Costs

- Material Costs

- Interest Rates?

- Pandemic done?

- Infrastructure

- Stagflation?

- War?????

What's Next???

"The data continues to anticipate a healthy level of construction in 2022. As the industry, and world at large, continues to navigate both labor and supply shortages, **all growth is anticipated to be modest.**"
Dan McCarthy, President CEO of Dodge Construction Network;
Design Cost Data/*March-April 2022*

2022 Anticipate Moderating ~ 5% - 10% Increases

CONSTRUCTION MATERIALS
   Materials continue their rise with steel and lumber leading the way. The overall increase is in the 25% range with steel leading the pack at 40%. Other items such as concrete are far more stable but could turn without much notice. The result is that the general conditions of construction contracts are including more and more escalator clauses. One important thing to consider is that material is statistically 50% of the cost of building in place, so it would be wise to budget accordingly. Anything dependent on the price of oil has risen in price and will be volatile until geopolitical tensions abate.

Construction Materials
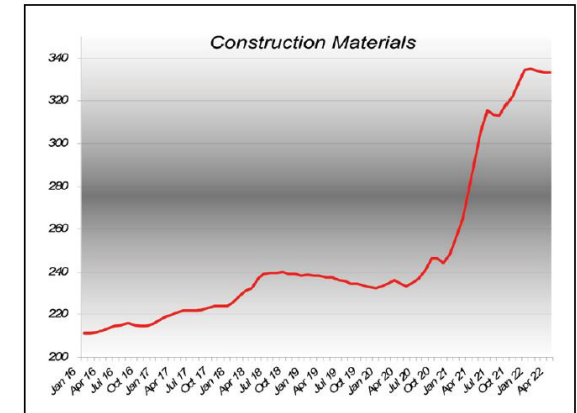
BNi Building News Construction Costs 2022
Source: US Department of Labor, Producer Price Index

WE **ENERGIZE** THE POWER OF POOLING
AGRiP
ASSOCIATION OF GOVERNMENTAL RISK POOLS

II. Key Data From The Appraisal Process

Total Insured Value (TIV)

Maintaining Accurate Property Valuations Requires Renewed Focus in a COVID World

March 10, 2021 | By *James Kenworthy* and *Shannon Dowd* | *Property* | *English*

GenRe

Accurate Property Values are Critical

"As any Property underwriter will tell you, the basic building blocks for determining an appropriate premium to collect boils down to establishing the correct rate and the **correct insured value**."

"...and more than 70% of commercial buildings are undervalued in the U.S."

Total Insured Value (TIV)

Should You Revisit Insured Property Value Estimates?

Article By: Risk Management Magazine 11-21-2021

Eight Great Issues to Consider:

1. Size of exposure and riskiness of operation (**materiality**)
2. Changes in costs (**construction cost increases**)
3. Complexity and scope of property (**unique property?**)
4. Type of capital expenditures (**amt. of recent investment**)
5. Major changes to business or operations (**vacancy??**)
6. Insurance market conditions (**rate increases???**)
7. Recent losses reveal inaccurate value estimates (**review!**)
8. Adjusting value estimates over time (**are you trending?**)

Published on *The National Law Review*

https://www.natlawreview.com/article/should-you-revisit-insured-property-value-estimates

Specific Values (by Member)
CONSISTENT Property Values also Critical

- Equitable Distribution of Contributions

- Consistent Collection of Underwriting Data & Schedules

  - Consistent, Accurate Valuation of Various Classes (think Utilities)

  - Clean up the Statement of Values! (unrecorded adds / deletes)

  - Identification of Vacant Properties

$70M unscheduled property???

Vacant for years & still on SOV!

Quality of Underwriting Data

Construction — Frame, Masonry, Masonry Veneer, Superior Construction, Mixed— Masonry/Frame

Occupancy — How The Building Is Being Used For Commercial Property And Whether It Is Owner-occupant Or Renter-occupied For Homeowners And The Number Of Families For Which The Building Is Designed

Protection — Quality Of The Responding Fire Department (Incl. Whether Paid/Volunteer, Adequacy Of Water Pressure And Water Supply In The Community, Distance Of The Structure To The Nearest Fire Station, Quality Of The Fire Hydrant, And The Distance Of The Structure To The Nearest Hydrant

Exposure — Risks Of Loss Posed By Neighboring Property Or The Surrounding Area, Taking Into Consideration What Is Located Near The Property, Such As An Office Building, A Subdivision, Or A Fireworks Factory.
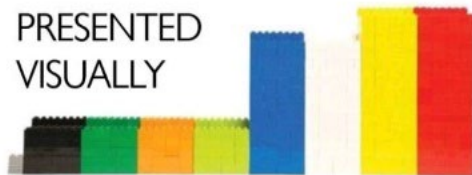
https://www.irmi.com/term/insurance-definitions/cope

Quality of Underwriting Data

"Secondary" COPE data
- Constant Evolution
- Geographically Prioritized
- Directly Related to Pricing

Specific Requirements ???
Involves Multiple Participants:
- Pool & Appraiser (start)
- Agents / Broker?
- Reinsurer?
- Modeler / Scrubber?
- RMIS System(s)?

DATA

SORTED

ARRANGED

PRESENTED VISUALLY

EXPLAINED WITH A STORY

AIR
A Verisk Business

CoreLogic®

KC &CO

RMS

WE ENERGIZE THE POWER OF POOLING
AGRiP
ASSOCIATION OF GOVERNMENTAL RISK POOLS

Quality of Underwriting Data
"Secondary" data
Each Program is "custom"

Client Custom Fields

Name	Type	Required	Comma Separated List of Values	
Basement Flood	String	☑	0-Basement with unknown flood protection	✖
RMS Const. Class	String	☑	0, 1, 1A, 1A1, 1A2, 1B, 1B1, 1B2, 2, 2A, 2/	✖
Sprinkler Type	String	☑	0 - None, 1 - Wet, 2 - Dry	✖
Security Systems	Yes/No Choice	☑		✖
Fire Alarms	Yes/No Choice	☑		✖
Roof Geometry	String	☑	Flat, Hip, Gable, Braced Gable	✖
Roof Deck	String	☑	Wood, Steel - Heavy, Steel - Light, Conc -	✖
Roof Pitch	String	☑	Flat = 1:12, Low = 3:12, Medium = 6:12, H	✖
Roof Year	Number	☑		✖
Roof Condition	String	☑	Excellent, VG, Good, Poor, Failing, None	✖
Bldg % Vacant	Number	☑		✖
Number of Buildings	Number	☑		✖
Roof Strapped	String	☑	0=Unknown, 1=Toe Nailing/No Anchor, 2=(	✖
Roof Covering	String	☑	0=Unknown, 1=Metal Sheathing with expo	✖

III. Best Practices & Decisions YOU Make

Frequency of Appraisal Cycles

Each Program is Unique - Decision Driven by:

- Underwriting Desires (internal)
- Composition of Pool & Members (internal/external)
  - Relative Size
  - Recent Loss History
  - Membership Stability Y-o-Y
  - Economy / New Construction – much ***vs.*** little
- Budget / Board Appetite (internal)
- Reinsurance Requirements (external)
- National / Local Construction Cost Changes (external)
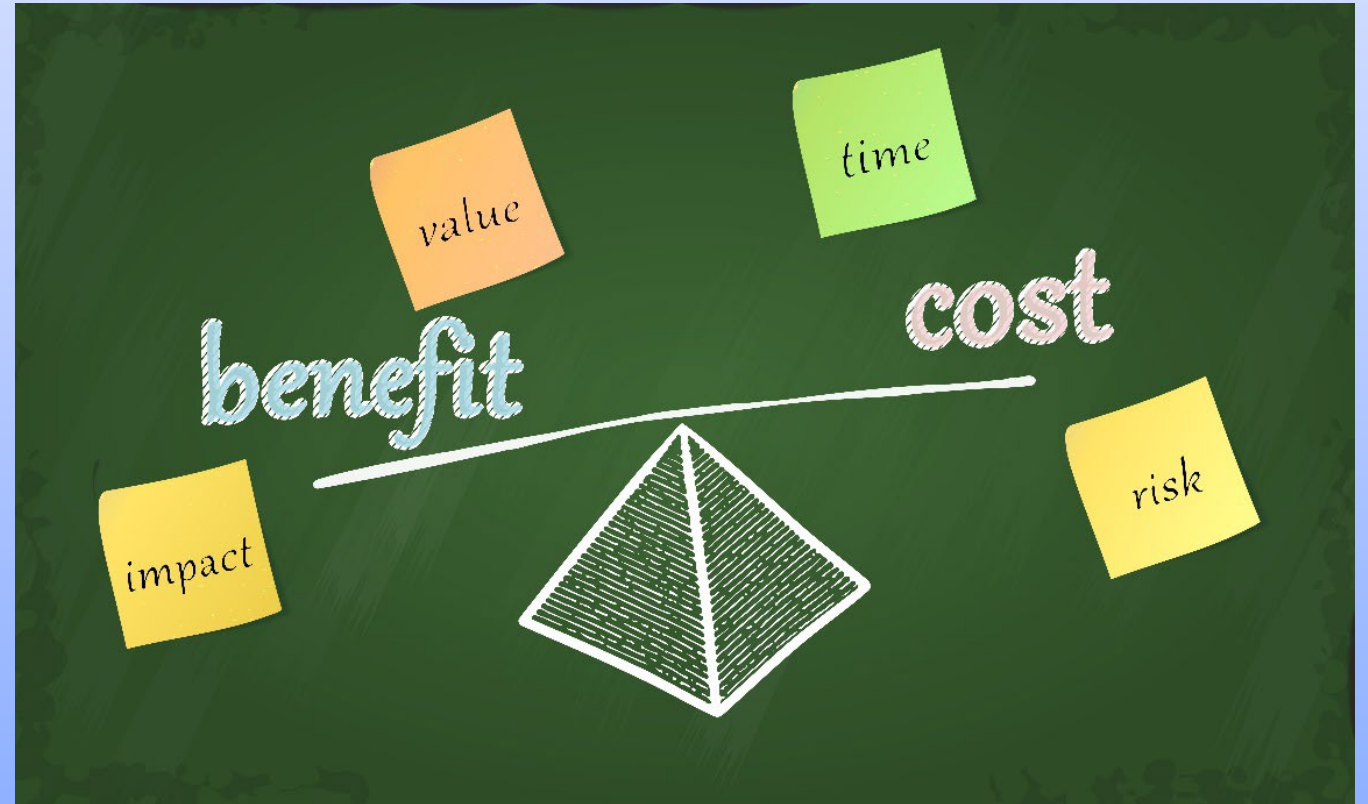
Industry Ave: 3 – 7 Years

Valuation Methodology

Appraisal Threshold for Structures:

- **Lower Threshold = Higher Investment**

- **What's the Cost???**

    To Appraise…. vs. To Omit

    HCA's Pooling Clients Range:

    $0 (all) to $1.0 million

Valuation Methodology – Case Study #1

SUMMARY OF SCOPE CHANGE

- ### ORIGINAL PHASE I SCOPE
  - $1,000,000 THRESHOLD FOR BUILDINGS TO BE APPRAISED; ALL WATER TANKS/TOWERS *EXCLUDED*
  - EXCEPTIONS: *TREATMENT PLANT STRUCTURES BELOW THRESHOLD WERE ALL INCLUDED, REGARDLESS OF VALUE.*
- PHASE I OUTCOMES:
  - 2013 – 700 BUILDINGS APPRAISED; $ 811M TIV
  - 2012 – 879 BUILDINGS APPRAISED; $1.145B TIV
  - 2011 – 791 BUILDINGS APPRAISED; $1.159B TIV
  - 2010 – 680 BUILDINGS APPRAISED; $ 595M TIV
  - 2009 – 850 BUILDINGS APPRAISED; $ 703M TIV
  - 2009 – 2013:
    - $4.413 B TIV APPRAISED;
    - 3,900 TOTAL BUILDINGS

- ### NEW PHASE II SCOPE
  - $250,000 THRESHOLD FOR BUILDINGS TO BE APPRAISED
  - EXCEPTIONS BELOW THRESHOLD (ALL INCLUDED):
  - PLANT STRUCTURES;
  - WELLS;
  - LIFT STATIONS;
  - PUMP HOUSES;
  - STATIONARY GENERATORS.
- PHASE II OUTCOMES:
  - 2017 – 2021:
    - $8.84 B TIV APPRAISED;
    - 12,704 TOTAL BUILDINGS

Valuation Methodology – Case Study #1

BIG PICTURE DATA
MAJOR CLASSIFICATIONS OMITTED *BEFORE* 2017-21 CYCLE

- **LIFT & PUMP STATIONS, WELLS** – OVERALL (5 YEARS)
  - **25.7%** INCREASE IN TOTAL VALUES; $856M APPRAISED

- **WATER TOWERS & STORAGE TANKS** – OVERALL (5 YEARS)
  - **46.7%** INCREASE IN NET VALUES; $729M APPRAISED

  - **GENERATORS** – OVERALL (5 YEARS)
    - **98.6%** INCREASE IN NET VALUES; $224M APPRAISED

BOTTOM LINE: THESE THREE CATEGORIES ~ 20% OF ALL ASSETS APPRAISED

2017 - 2021 HIGHLIGHTS
SOV ACCURACY

Added Buildings (Not Previously Reported on SOV's)

- **ADDED** Total of 2,546 Structures (20.0% of Buildings Reported)
- Majority in Classifications not in Original Scope (Utility, Generators).

Removed Buildings ("Did Not Appraise")

- **REMOVED** Total of 682 Structures (5.4% of Buildings Reported)
- Majority in Classifications not in Original Scope (Utility, etc.).

WE **ENERGIZE** THE POWER OF POOLING
AGRiP
ASSOCIATION OF GOVERNMENTAL RISK POOLS

Valuation Methodology – Case Study #2

Pool Description:
- **Municipal Program w/900+ members**
- **> $20B TIV**
- **Original Methodology (prior cycle):**
  - **Appraisal of Property > $500k;**
  - **PLUS all WWTP & WTP Structures**
- **Revised Methodology (current cycle);**
  - **Reduced Threshold to include ALL Property Line Items**

Results (current year analysis; YTD):
- **3,742 SOV Line Items, +/- $3B; 528 ADDS; 167 DELETES**
- **> 14% "added" Property Line Items; > 5% added to TIV ($154m)**
- **~ 4.5% "deleted" Property Line Items; roughly 3.5 – 4% of TIV**

Valuation Methodology – Case Study #2

Appraisal Threshold for Structures:

- **Average-sized City – (9) Lift Stations not on SOV**

- **> $250k in just this one…**

- **Frequently missed:**

  - **Lift / Pump Stations (incl Generators)**

  - **Park & Other Remote Exposures**

  - **Major Additions; Significant Renovation Data**

Valuation Methodology - Summary

Is the Juice Worth the Squeeze?

- **Not JUST about the values / TIV**
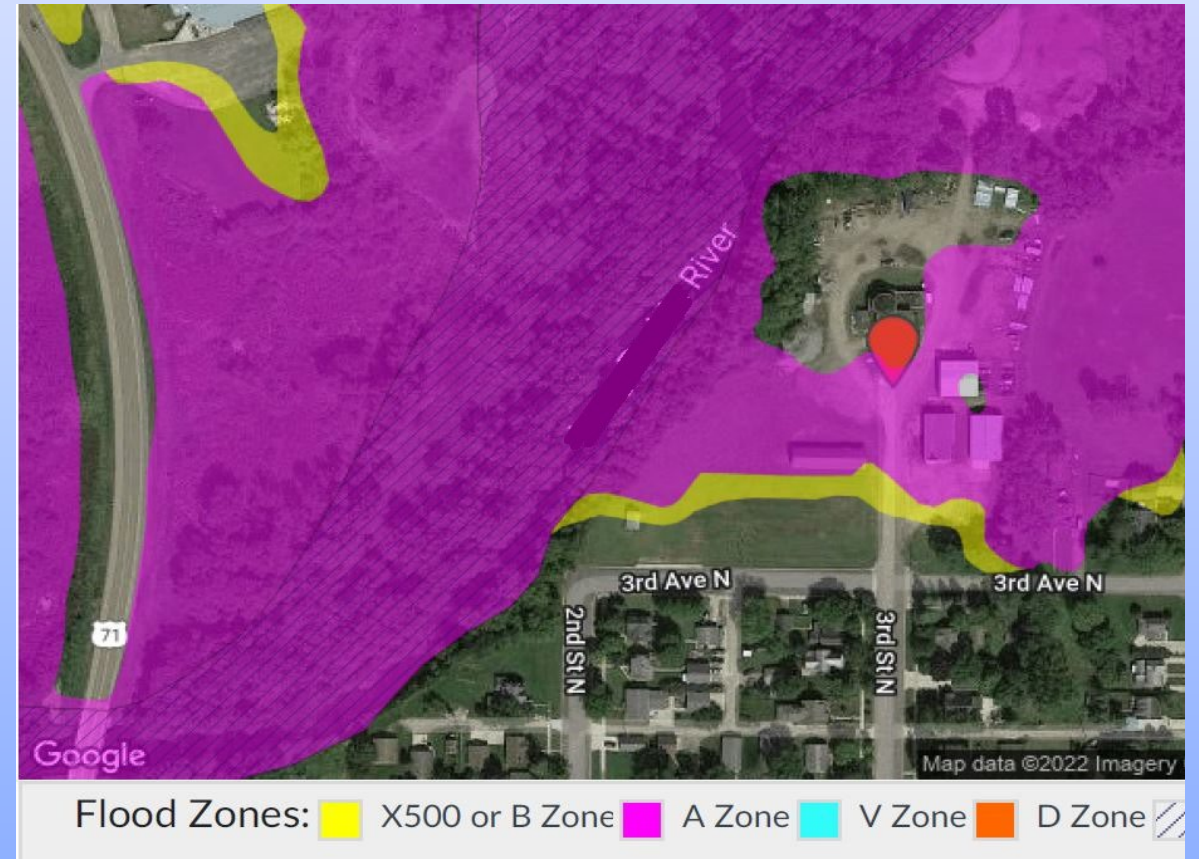
- **Driven by Underwriting / Reinsurance needs…**

    Example:

    (8) Structures @ same address

    $2.0+M Aggregate Values

    NONE were > $500k in Value

    (4) are IN Zone A; (4) are OUT…

Flood Zones: █ X500 or B Zone █ A Zone █ V Zone █ D Zone