Flood Hazard Area Property Values; Stimulating or Depressing the Economy?

Brian Varrella, P.E., CFM
ASFPM Reg. 8 Director
Floodplain Administrator
Fort Collins, Colorado
970-416-2217
bvarrella@fcgov.com
Flood Hazard Area
Property Values

Today’s Agenda

1. Start With Why?
2. Available Research & Findings
3. Conclusions
4. What Next?
Start With Why?:

Why are we having a conversation?
Start With Why?

Impetus for Discussion:

City Council in Fort Collins, Colorado began a review of the FC Stormwater program in 2008.

Concern Identified:

A perception exists that flood mitigation projects remove flood hazards from private lands with public revenue, thereby removing flood ordinance standards and subsidizing private development.
Start With *Why?*

**Staff Action:**

Validate the correlation between flood hazard area delineation and property value with a desktop study.

Flood Hazard Area Property Values

Available Research And Findings:

Leaping out of my comfort zone
Available Research & Findings

A Forum of Disciplines:

• Get outside my professional circle
• A forum of expertise
  – Certified Appraiser
  – Land Economic Specialist
  – Environmentalist (NBFs)
  – Policy Experts
• Regionally relevant datasets
• Hydrologically similar regions
Available Research & Findings

The Contenders:

2. Troy and Romm, 2004, *J. of Environmental Planning and Management*

Started local, moved national
Chivers and Flores, 2002 (1 of 2):

- Success or failure of home purchase info
  - When do people find out about flood risk?
  - How does it affect behavior?
- Boulder, CO – 40 miles from Fort Collins
- Findings
  - Properties in FPs actually tend to have higher value
  - Aesthetic appeal of water in arid regions affects price
- Perception; water = good
Available Research & Findings

Chivers and Flores, 2002 (2 of 2):

• **When do homebuyers discover mapped flood risk?**
  – 8% = before offer
  – 6% = before closing
  – 60% = at closing \( \Sigma = 70\% \)
  – 10% = after move-in or a flood
  – 16% = other

• **How do they find out about risk?**
  – 58% = Elevation Certificate
  – 30% = MLS
  – 7% = Lender
  – 2% = FIRM … 3% other
Available Research & Findings

Troy and Romm, 2004  (1 of 3):

- Re; Flood Hazard Disclosure Law in California
- Searched for home price + human behavior correlations
- Housing market; So. CA
  - Similar hydrology to CO
  - Similar home value to CO
- Findings
  - Flood risk does not change home prices
  - People don’t believe in risk in “flashy” watersheds
Available Research & Findings

Troy and Romm, 2004 (2 of 3):
• ... And why should they believe in risk??
• http://www.cnt.org/news/2013/05/14/urban-flooding-is-chronic-and-costly-but-not-correlated-with-floodplains/
Available Research & Findings

Troy and Romm, 2004 (3 of 3):

- “The West in general has highly seasonal precipitation patterns…that may appear misleadingly dry much of the year.”
- Property value perceptions are regionally skewed
  - Midwest / Gulf = FPs depress values
  - Arid West = FPs have affect on value
  - Visual cues change risk perceptions
Available Research & Findings

Rosenbaum, 2005 (1 of 3):

- Explore environmental impact of NFIP regs
  - Correlated NFIP standards to NBFs
  - Looked at entire nation

- Findings
  - NFIP regulations actually encourage development
  - People ignore high-risk, low-frequency events
Rosenbaum, 2005 (2 of 3):

• “The literature consistently suggests that many people put their lives and homes in jeopardy because they underestimate the risk to which they are exposed.”

• NFIP regs have limited impact on property value
  – Public outreach does not change behaviors
  – Learning about risk too late
  – Deal is done… so buyers purchase risky property
Rosenbaum, 2005 (3 of 3):

• Risk is part of our DNA
• Leads to rewards
• Natural hazards are typically perceived the same way
  – So we discount them
  – “Won’t happen to me”
Available Research & Findings

Campano, 2004:

• Professional appraisal
  – Based on comparable properties
  – Specific to Fort Collins, CO

• Findings
  – Agrees with 3 journals
  – “No price difference is shown for homes located within floodplains.”
  – Some FP homes actually had higher resale values
Conclusions:

What are all these experts collectively telling us?
Primary Conclusion #1:
Mapped flood hazards do not depress property value

- **True** in the arid West
  - Water = sparse amenity
  - Perceived beauty has $$$ value
- **False** in the Midwest & Gulf Coast
- People do not believe risk will affect them
  - Perception…
  - “That will happen to someone else on the Weather Channel”
Available Research & Findings
Primary Conclusion #2: Flood mitigation projects are not subsidizing private development with public funds

- Flood management projects provide benefits
  - Public health, safety, welfare
  - Economic vitality of community
  - Similar benefits to other Public Works Projects

- In Colorado, flood projects may reduce prop. value
  - Moving or removing an aesthetic benefit
  - Changing habitat and environmental assets
  - Offsets up-front cost of NFIP compliant construction
Primary Conclusion #3:
We have a problem of perception
• Behavioral response to risk is a human problem
• Understanding is not fact-based
• Facts are materially irrelevant
  – “Start with Why,”
    • Simon Sinek, 2009
    • ISBN 978-1-59184-280-4
• Decisions made in our “gut”
  – Tough decisions; not logical
  – Must appeal to something else
Flood Hazard Area
Property Values

What Next:
 Applied learning
 recommendations
Recommendation #1:
FP Managers; we must change our perception of risk – accept it as natural

- Our brains like it
- Part of our DNA
- http://youtu.be/UB3oEHzakOw
Recommendation #2:
FP Managers; we must defy logic to change perception
• Look for human patterns instead
• Target the decision-making core, not the brain
  – Start with Why?
Recommendation #3:
FP Managers; we must make new friends
• Get outside our own professional group
• Need a dialogue with other professionals
  – Social scientists
  – Psychologists
  – Economists
  – Realtors
• This topic needs further research, by region
What Next

Recommendation #4:
FP Managers; we must be persistent
• Lessons from the past will be re-learned
• We survive by forgetting tragic events
• Sometimes people “get it”
  – Then we all forget it
What Next

Recommendation #5:
FP Managers; we must shift our understanding of *people*

- We can and will forget our history
- Survival requires us to forget trauma
Final Thoughts (editorial): Allstate – “good life” ad campaign for risk

• “All the bad things that can happen in life, they can’t stop us from making our lives … good.”
• http://youtu.be/kl1bKm22Up0
Final Thoughts (editorial):
Let’s apply knowledge to manage our **perception** of risk

- “We love your brain!”
- “Risk can be beneficial”
- “Let’s talk mitigation”
- “Let’s talk insurance”
- “Let’s have some fun with this discussion”
- MORE RESEARCH

Yeah dude!!
Flood Hazard Area Property Values

Thanks for Listening

Questions?

Brian Varrella, P.E., CFM
bvarrella@fcgov.com
http://www.linkedin.com/in/brianvarrella/