

The Politics of Land Use Planning in Hazard Mitigation: Barriers to Learning

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The Problem

- Some communities have some experience with earthquakes and other hazards
- Other communities have less experience, and must learn from others
- Natural hazards are traditionally a “low salience” problem
- Experience shows that land use and other practices can mitigate earthquake damage
- Yet, **many communities resist land use changes. Why?**

Effective Land Use Regulation for Mitigation

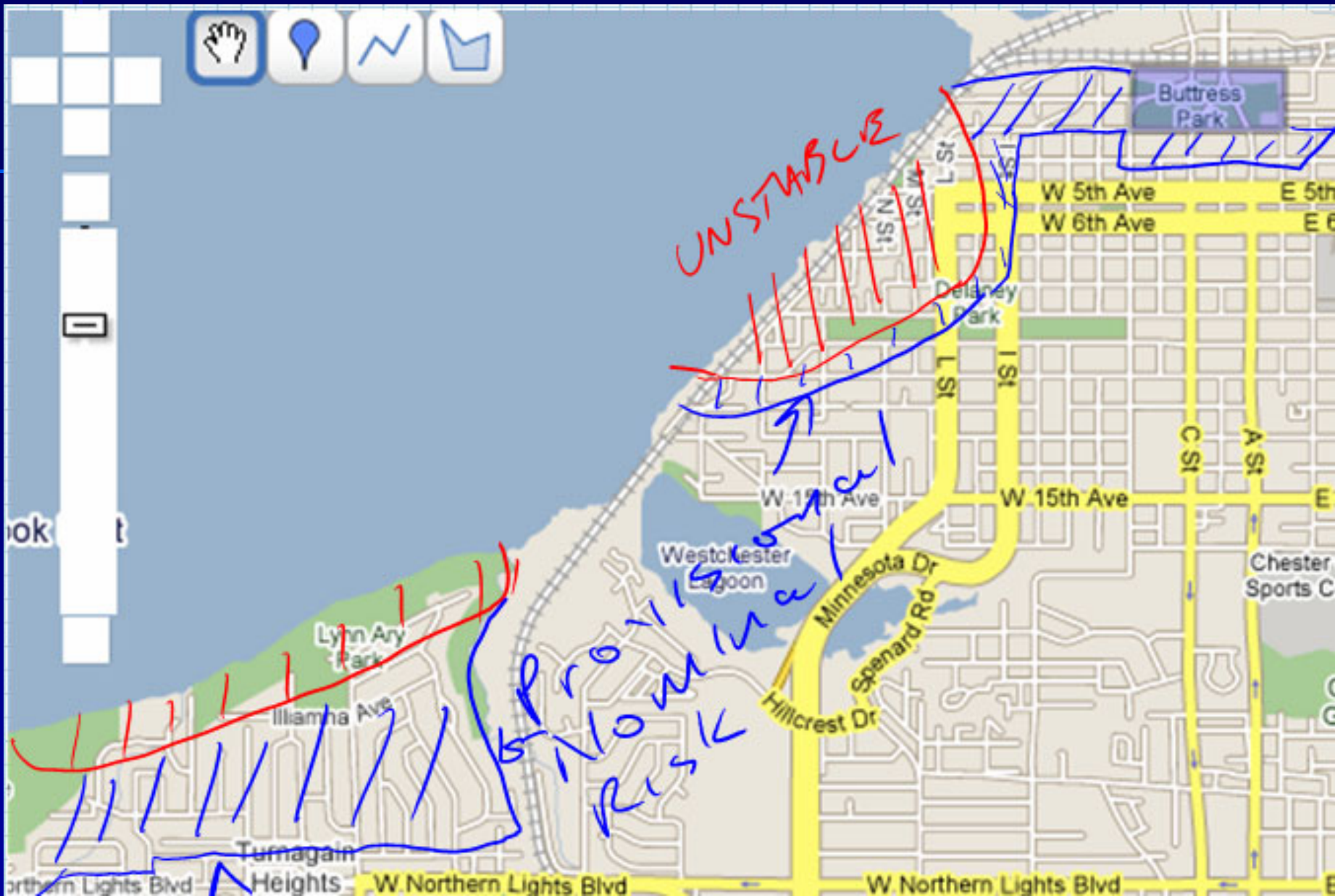
- Sensitive areas ordinances for steep slopes, poor soils, wetlands
- Building code provisions for construction in particular areas (soils, slopes)
- Disclosure requirements (Alquist Priolo)
- Open-space and zoning (coastal hazards and tsunami hazards)

The political challenges

- The cost of appropriate land-use mitigation measures
 - MMI says that \$1 in mitigation = \$4 saved
 - But is land use policy a net gain? Costs:
 - Reduced densities = reduced tax revenue
 - Zoning restrictions = less developable land, pressure to open land for development
 - *Political costs*: pressure from real estate and building interests to open up hazardous areas; citizen *opposition* to higher densities.

An example (to test): Anchorage, AK

- Major land subsidence after Mw 9.2 1964 earthquake (liquefaction, clay)
- Areas initially deemed relatively risky areas for development
- Later, areas were allowed for building
- Also, city grows into areas that were not fully assessed post-1964





Potential Challenges: Anchorage

- 1964: Area marked “unstable”
 - “It is recommended that after stabilization new buildings on Fourth Avenue, L-K Streets, and Government Hill slides *be limited to lights structures not over two stories high.*”

L Street Buildings



Potential Challenges: Anchorage

- By 1980: Many recommendations followed, but not all:
 - Larger than recommended buildings on L Street
 - Push to redevelop “undamaged” but highly vulnerable areas of the Turnagain neighborhood
- Why so much development in dangerous areas?

Challenges to land use policy; barriers to “learning”

- Development pressures
- “Property rights”, and resistance to higher densities
- Low “community memory”
 - ~25% of Anchorageites lived there in 1980, estimated <15% were in the 1964 earthquake
- Low salience of earthquake issues
- Belief in engineered solutions—differences in “social” and “instrumental” learning
- *Result: some failure to learn from earthquakes...*
 - *Institutionally*
 - *Individually*

On the other hand

- A final question: are land use restrictions realistic in many growing communities?
- Would building code adoption and enforcement make more sense?
- Are some hazards better mitigated through land use, while others through building practice and codes?