Risk Communication
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- **General observations on Risk Communications**
  - People don’t know their risk – they don’t know how far the floodplain extends, and very few have flood insurance. They need to understand their risk, and do something about it.
  - Perception of risk depends on whether you’re talking from a community leader or homeowner perspective. Homeowners don’t care about “average annual damages” a flood could cause, they care about their chance of flooding.
  - Must accept personal responsibility for a decision to live or work or develop behind the levee. People need to understand the consequences so they’re prepared to take responsibility.

- **What is residual risk? The term has many possible definitions.**
  - The risk that remains even after you construct or maintain the levee to the 100-year standard, or some other defined level of safety.
  - The damage that would occur if a flood event takes place and the levee fails or is overtopped.
  - Residual Risk is dynamic. Risk changes over time, land use, the probability that the levee will fail, watershed issues.
  - Residual, or risk?. “Residual” is a small portion of the overall flood risk communication challenge. The residual or “extra” risk isn’t as important as the fact that you are at risk. Risk itself is a nebulous term to the public.
  - The amount of risk you’re willing to accept.
  - All of the above.

- **What is residual risk? An actuarial and engineering term, but not particularly helpful for the general public’s understanding**
  - A too-technical term, when speaking to the lay person.
  - Better to think in term of vulnerability, damage.
  - We need to be able to explain risk in terms of “magnitude”. Categorize the magnitude of the event, as we do with hurricanes.
  - The challenge is to let people know that there is risk – and portray it accurately.

- **What is a levee residual risk area? The term causes some heartburn.**
  - An odd question – risk is tied to frequency and consequence/damage. Why not just call it a high- medium- or low-risk area, or a levee risk area or a levee flood hazard area?
The “residual risk” area is the area that would be inundated through some combination of levee failure or overtopping and flooding. We need to get away from confusing definitions such as “residual risk area” when talking with local officials. The issue is “acceptable risk.” Why are we trying to find this “one size fits all” definition? The residual risk depends on the community, the situation. Agree there’s risk & move on.

**Alternatively, then, what is a levee flood hazard area?**

- An area that needs to be shown differently from the usual “shaded X” area. The area “protected” by the levee should be demarcated on flood maps.
- The area that would be affected in the event of levee failure -- Maps should show this area.
- It depends on the purpose of the map. A lender wants to know the insurance requirements. Are we changing the purpose of the flood map by showing special levee risk zones?
- IDEA: define a levee flood hazard area as an “XL” zone. It’s still a moderate-risk zone for flood insurance purposes, but also sets up a special levee risk area.
- NOTE: If we rely solely on maps to communicate risk areas, we leave a lot of people out because very few people look at maps.

**How can people reduce their residual risk? “People” includes both individuals and community officials.**

- **Eliminate** (by moving), **buy down** (by mitigation), or **transfer** (by insurance) the risk.
- **Get insurance.** We want people to purchase flood insurance behind levees. To encourage this, reach people through the mandatory flood insurance purchase process. Or communities/levee owners could buy it for them.
- **Is it necessary for people to reduce their risk?** Are we punishing people for a few levee failures? Certification works. Let’s recognize the benefits of levees.
- Should we even certify levees?

**How can we more effectively communicate risk?**

- **Disclosure.** There could be a required disclosure of levee risk area before you purchase a home or rent -- at the point of listing or rental, or on flood determination forms. Inform people when property is transferred. Put it on the plat.
- **Notification – with the numbers.** California for the Central Valley created a levee flood protection zone designation, and requires annual communication of the depth to which you could be flooded.
• **Broaden the audience.** We need to include business owners, apartment dwellers, and public infrastructure in the communication. Our audience is the entire community, and community goals should go well beyond communicating "buy insurance."

• **Make it real to people.** Validate communications approaches with the public themselves (focus groups). “Bottom-up” approach.

• **Communicate the stake the entire community has** in the problem. Look beyond high risk areas and flood insurance to the larger risk to the economy, and to people’s safety.

• **Grass roots community outreach.** Do outreach through public meetings, school programs, media outreach, and stakeholder education. Go into the schools! Teach kids to sandbag. Flood awareness week. Town meetings.

• **Be honest:** levees fail below their design standard, and if you live in a floodplain you have risk.

• **Communicate the risk.** Continually let people know the depth of flooding, perhaps results of other factors such as velocity.

• **Help people visualize.** Show consequences of the flood itself (consider animation). Show personal consequences (mold, dirt, dollars, etc.). Paint high water marks on electric poles. Produce documents showing what could happen.

• **How can we more effectively communicate risk?**

  • **Start with the State and the community.** Incentivize action at the State level, perhaps tie to disaster $. Require levee EAPs.

  • **Educate stakeholders.** Lenders are also at risk. Engage the insurance industry.

  • **Elevate the discussion: attack community leaders.** Get community officials to take responsibility – perhaps changes in land use regulations. Educate your leadership.

  • **Communicate success** – the flood that would have happened without a levee being there. That opens the door to point to the larger event.

  • **Educate builders and developers.** Use likelihood statistics to show the economic consequences of development in the floodplain for public and private developers.

  • **Use programs like CRS** to get credit for communication efforts.

  • **Communicate more than insurance** – e.g., an evacuation plan!

• **The Bottom Line: How do we get people who live or work behind levees to understand their risk and do something about it?**

  • **Map the consequences.** Get away from “you’re within the line on the map, and at risk, or outside it and not at risk”. Communicate using floodplain management maps, inundation levels and flood risk maps.

  • **Create a levee zone.** Telling someone behind a levee that they’re a “zone x shaded” tells them nothing about where they are living. The
determination form should let them know they’re behind a levee. (“Y”
zone).
• **Opt out of not into flood insurance.** Change the way we show risk
behind levees. Map people in the floodplain that would exist if the levee
weren’t there and have them request to opt out of obtaining flood
insurance. Or make insurance mandatory behind any levee!
• **Show the continuum of risk.** Consider new ways to communicate levels
of risk – red/yellow/green designation, as an example

• **The Bottom Line: How do we get people who live or work behind levees to
understand their risk and do something about it?**

  • Be aware -- the bottom line is the bottom line, not the desire to address
risk. People want to hear it if it’s going to affect their economic wellbeing.
  • **Money talks. NFIP can** make flood insurance mandatory behind levees
and people will understand they do have risk.
  • **A national message is needed.** Look to driver safety campaigns.
  • **When in doubt, throw it out: Decertify** more levees. You need a strong
tool to force attention. Is certification a dis-service?
  • **States can** make levee risk zone disclosure mandatory during home
transactions.
  • **Communities can** communicate risk, evacuation plans, join CRS, provide
depth certificates to document vertical height.