

Before the Flood: Public (mis)perception of flood risk in the Sacramento San Joaquin Delta

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Abstract

Despite rising annual flood damages and recent devastating flood losses from Hurricanes Katrina and Rita, and the Midwest floods in 2008, we continue to build and rebuild in floodplains. Current flood policy, although intended to minimize risk actually increases the risk by encouraging development in flood hazard areas. What is worse is that current policies are set up in such a way that individual decision-makers can be left uninformed about the risk he or she is taking by living in a floodplain.

Previous studies indicate that uninformed risk taking may occur because: 1) the methods used for determining the 100-year floodplain are based on incomplete data and the results could therefore be inaccurate, 2) Special flood hazard area maps used to determine insurance rates and building requirements do not show areas that will flood when a levee fails, 3) flood insurance is not required outside of a 100-year floodplain (or behind levees) leading to a false sense of security, 4) the overall language used when determining hazard areas is that a levee "removes" the land behind it from the floodplain, and 5) many believe the government would not permit them to live behind a levee if it were not safe.

Given the fact that structural flood control measures fail and that flooding is likely to increase as a result of climate change, more properties and people may be faced with devastating losses. This is especially relevant in the Sacramento-San Joaquin Delta in California where new residential developments sit below sea-level behind aging levees susceptible to catastrophic floods. Urbanization on floodplains in the Delta is growing at unprecedented rates. To understand the resident's perception of flood risk, one flood-prone neighborhood in Stockton, California was surveyed. Preliminary results suggest risk awareness levels which range from completely uninformed to somewhat aware of the flood risk. Many state that the levee removes their risk completely. Final results are expected in early March of 2009. Implications of this study warrant a look at national floodplain planning and development policy with greater attention to human safety and to increasing risk awareness.