Transaction disclosure of the qualities of real property is critical to maintaining efficiency in land and housing markets. Insufficient information can lead buyers to pay more or less than their purchase is worth, producing social misallocations of land and resources. One key example is the vulnerability of a house to natural hazards such as earthquakes, fires and floods. If buyers are unaware of this vulnerability, their bids will not adequately reflect the costs and risks associated with residence in a particular location. This leads to distorted price signals, which can lead to over-development of hazardous areas.

In 1998, California passed the Natural Hazard Disclosure Law (state bill AB1195), requiring residential home sellers to inform potential buyers in statutory flood, wildfire and seismic zones of the hazards that may affect the property by making available a written disclosure statement prior to closing. We use this as an opportunity to test (1) the adequacy of disclosure under previously existing hazard policies, such as the National Flood Insurance Program (NFIP), (2) the quality of disclosure under AB 1195, (3) the degree of social bias in the disclosure mechanisms under prior policies, 4) the degree to which AB1195 corrected those biases, and 5) the influence of recent experience with hazards on the effects of disclosure.

This study looked at the impact of hazard disclosure on housing prices in statutory flood and fire hazard zones and at the distribution of those impacts among social groups. We hypothesized that, all else equal, housing prices in hazard zones declined after AB 1195 and declines were largest among populations where information was least available prior to AB 1195. Housing transactions from 63 zip codes across California and from between 1997 and 2000 were sampled and statistically analyzed. Mail surveys were also used to determine the extent and timing of disclosure, the influence of prior knowledge of hazards, and perceptions of hazard types.

The study found that prior to AB 1195 the average floodplain home was worth the same amount as a comparable non-floodplain home. Flood disclosure under AB 1195 reduced the value of the average floodplain home by 4.3% relative to non-floodplain homes. After AB 1195, the average floodplain home sold for $8,150 less than a comparable home outside the floodplain, indicating that price of floodplain homes now better internalizes the costs of living in the floodplain.

The price effects of flood hazard disclosure were unaffected by income levels within a census tract, but strongly affected by racial characteristics. The study found an inverse relationship between floodplain housing prices and the percentage of Hispanic residents by tract for homes selling after AB 1195, while this relationship did not exist prior to AB 1195. All else equal, the average floodplain home in a tract with only 5% Hispanic population lost only $1,102 in value due to disclosure, while the average home in a tract with 60% Hispanic population lost $13,644.

Differences in mortgage origination mechanisms between whites and Hispanics appear to account for this disparity in information under NFIP. We analyzed Federal Financial Institutions Examination Council’s (FFIEC) Home Mortgage Disclosure Act (HMDA) data, as well sub-prime mortgage origination data from the Department of Housing and Urban Development (HUD). The analysis indicates that Hispanic homebuyers obtain financing disproportionately from unregulated sources, including federally unregulated mortgage companies and, in particular, sub-prime mortgage companies. FEMA requires regulated lenders (banks, S&Ls, credit unions, etc.) to make flood
determinations. While many mortgage companies do perform flood designations prior to transaction, their requirements to do so are more ambiguous, and they are subject to much less regulatory oversight. Hence, many mortgage companies only make flood designations when they sell investment grade mortgage portfolios to Government Sponsored Enterprises (GSE’s), such as FNMA or FHMC, or to federally regulated banks, all of whom require a federally compliant mortgage contract. In these cases, homeowners will not learn of their home’s hazard status until long after the time of transaction.

Moreover, Hispanic homebuyers are far more likely than whites to originate their mortgage with “subprime” lenders, who specialize in high-interest loans to homebuyers with impaired credit histories. As GSEs traditionally have not been involved in purchasing subprime portfolios, subprime lenders have been subject to very little regulatory oversight and are less likely to resell their loans to an institution requiring the federally compliant mortgage contract. They are notorious for pressuring homebuyers and not adequately explaining the terms or conditions of the loans. It would not be surprising if they were lax in requiring designations and disclosure of flood hazard. Using a list of subprime lenders from HUD, in conjunction with the FFIEC’s Home Mortgage Disclosure Act (HMDA) database from 1998, we found that, in 8 sample Metropolitan Statistical Areas (MSA) in California, Hispanics were nearly twice as likely as whites to originate their mortgage with a subprime lender. These results are consistent with other studies that have found high rates of Hispanic subprime borrowing in California.

While African-Americans are also more likely than whites to originate with subprime lenders, the differential effect of AB 1195 did not appear for them or other minority groups. This is because Hispanics are the only minority group that has a large share of population in floodplains. In fact, Hispanics are more likely to live in floodplains than any other racial group, including whites. The average non-floodzone property in our data set occurs in a census tract that is 17.5% Hispanic while the average floodzone property is in a 31% Hispanic tract.

Did AB 1195 cause the discrepancy in floodplain price effects between otherwise-equivalent Hispanic and non-Hispanic tracts, or did it correct a discrepancy existing prior to its passage? We hypothesize that AB 1195 corrected pre-existing disparities in disclosure between races that existed because of the NFIP’s reliance on the mortgage origination process rather than on the actual transactions to trigger flood disclosure. AB 1195 corrected this disparity by requiring flood disclosure in all transactions regardless of financing. If such a disparity existed prior to AB 1195, why was there not a negative floodplain premium in highly white neighborhoods, given that such a premium is an indicator of good information on hazards? This can be explained partially by the fact that of the floodplain properties in the state, so many are in heavily Hispanic neighborhoods that any effects from highly white neighborhoods before the law could be statistically “swamped out.” It may also be because of an unmeasured positive amenity associated with floodplains in certain highly white neighborhoods—such as canyon or riverside views—that statistically cancels out the negative effects of floodplain disclosure.

The price impact of fire hazard disclosure is more equivocal than flood hazard disclosure. Statutory fire zone location is actually associated with a 3% positive premium both before and after AB 1195. However, proximity to recent fire perimeters, in combination with post-AB 1195 disclosure, does have an effect. If a house is within five km of a major fire in the last five years, it sold for 5.1% less in a fire zone after the law than a house in a zoned location without recent fire history. This translates into a $10,600 loss for these homes. Such an effect did not exist before the law, indicating that prior state-level fire disclosure requirements were inadequate.
Insurance pricing and availability appears to play a large role in the effects of fire disclosure. Historically, fire insurance has been difficult to obtain or very expensive in many urban-wildland interface zones in California. Actuarially based insurance pricing and availability reflected the inherent risks of living in such areas, probably discouraging economically inefficient development. California's FAIR Plan (Fair Access to Insurance Requirements Plan) has offered basic property insurance to property owners in brush fire zones who are unable to obtain it in the private market. For the time frame of this study (January 1997 to February 2000), FAIR Plan coverage was only available in selected parts of Los Angeles, Santa Barbara, Ventura, San Bernardino and Orange Counties. However, in June of 2001, Insurance Commissioner Harry Low expanded Fair Plan brush fire coverage to all parts of the state. Fair Plan coverage distorts the market-based allocation of risk by effectively spreading its costs to all ratepayers to, in effect, subsidize greater development of high-hazard areas than the market would otherwise encourage. Had FAIR Plan been available throughout the state at the time this study was conducted, we suspect that the strong price effect of fire disclosure in areas with recent fire history would be greatly reduced.

While the response rate on the survey was not high enough to be considered statistically unbiased (18%), the preliminary results it yields are of interest in understanding the efficacy of AB 1195. Firstly, it indicates that a large majority (75%) of respondents remember seeing the AB 1195 disclosure form in their home buying transaction. Second, most respondents said that the form did not make them bid less on the house, but enough did to have, if representative, some effect on housing prices in hazard zones across the state. Third, of all hazard types, it appears that flood elicits the most concern. Fourth, people are incurring many expenses associated with natural hazards, and of those expenses, NFIP insurance is one of the most prevalent and expensive.

This study has several policy implications. First, the negative price effect of flood disclosure under AB 1195 strongly suggests that NFIP flood disclosure requirements were inadequate; changes to NFIP disclosure-triggering mechanisms are needed at the federal level. Second, hazard disclosure in fire zones has little effect on consumer behavior without evidence of near and recent fire. People wish to live in ‘natural’ settings which, in California, tend to be associated with hazard. The availability and pricing of insurance appears to be more effective influences on residential choices with respect to fire hazard. As the FAIR Plan encourages development in fire-prone conditions, it should be limited to existing structures and geographic limits should be reinstated on FAIR Plan coverage for new development. Insurance availability could be used to direct and focus new development within defined urban-wildland fire hazard zones in which risk can be relatively well managed. If geographic limits are applied only to new structures, coverage will be available to all who currently cannot get insurance through private markets, diminishing the inequities caused by current insurance access. Finally, AB 1195 transfers liability for errors and omissions from sellers and agents to third party mapping contractors, increasing sellers’ and agents’ incentives for disclosure. This is a possible reason for the success of the law, and a potential exemplar for other states and for other types of property disclosure within California.