Chapter 6

BUILDERS' AND DEVELOPERS' DECISIONS

For floodplain property to progress from an undeveloped state to consideration for development, a landowner, land developer or builder must see the potential for more intensive use of the property as a finished residential, commercial or industrial site, and must purchase the land or an option on it. In this chapter, we focus on the major determinants of location and design decisions by builders and developers, and on the role floodplain land use management policy can play in such decisions.

By decreasing the potential profit from development, floodplain land use management programs should discourage intensive uses of flood hazard areas. Programs can reduce profits by increasing land development and construction costs and by reducing revenue. Programs can increase costs by requiring mitigation measures, such as elevation of structures, roads, and utilities. They reduce revenues if those measures alert people to the nature of the hazard and decrease the attractiveness of floodplain property to consumers. In addition, location of public facilities (such as roads and schools) some distance from the floodplain and public information about the hazard may also limit the attractiveness of the floodplain to consumers, or zoning can increase minimum lot size (decrease allowable density) and reduce the potential returns developers can realize from building in the floodplain.

Several factors other than floodplain management programs will influence location, development, and construction decisions (Baerwald, 1981; Chamberlain, 1972; Goldberg, 1974, 1976; Miles and Wurtzbach, 1977; Rolph, 1973). Classified here as community context (population growth, median housing value) and firm characteristics (size, diversity of services, sales volume), these influences are explored to identify their association with decisions to build in the floodplain and to mitigate the hazard.

Survey of Builders and Developers

We sent mail questionnaires to builders and developers operating in the ten cities in order to examine the following subjects:

1) Perception of flood hazard and developability of urban floodplains in the ten cities;

2) Familiarity with private and public actions that can be taken to

protect against flood damage;

3) Firm's experience with developing property in a floodplain regulated by local government under the National Flood Insurance Program, including important factors in decisions to purchase property in the floodplain, adopt mitigation measures, and incur costs of adjustments, and the firm's perceptions of government oversight of project development;

4) Characteristics of the firm, including size, services provided, and sales volume in 1986.

Survey questionnaires were sent to approximately 40 builders and developers in each of the cities using survey procedures perfected by Dillman (1978). One followup post card and two followup letters with replacement questionnaires were sent to each firm in the sample. Firms were selected randomly from local phone directories and lists provided by Chambers of Commerce. Telephone calls were made to identify the principals of firms, to whom we addressed cover letters and follow-up correspondence. Since the number of builders and developers varied among sample cities, more questionnaires were sent to some cities than to others.

We had no prior knowledge as to whether the firms had built or developed in the floodplain. A total of 297 questionnaires reached an accurate address. Of those, 106 were returned (a response rate of 36%). The low response rate was not unexpected, since we asked builders to complete a long questionnaire (nine pages) dealing with a subject that was not likely to be of great interest to them. Nevertheless, readers should exercise caution in interpreting the results, since they may not be representative of the entire population of builders and developers operating in the ten cities. Because of the low number of responses per city, the sample is not adequate to describe accurately builder and developer characteristics for each city in the sample. It is adequate, however, to reveal associations among firm, community, and program variables when all observations are pooled across cities.

Decisions to Buy and Develop Floodplain Property

Firms' Perceptions of Floodplains as Building Sites

Overall, firms viewed floodplain property as desirable for development and construction. Twice as many firms rated floodplains as "profitable" (36%) than as "unprofitable" (18%), and over two times as many firms said floodplain land

is "marketable" (53%) rather than "unmarketable" (23%). Although one of four respondents indicated floodplains were, in the firm's opinion, relatively undevelopable, twice that percentage, fully 49% of the firms, perceived such land as "developable." Thus, while the hazards associated with the floodplains of the ten cities were an obstacle to some firms, nearly half of the firms viewed those obstacles as surmountable.

Two factors are associated with firms' perceptions of the floodplain as a location for residential development: size of the firm and the date of the most recent flooding in the community where the headquarters is located (see Table 6-1). The largest firms in the single-family residential market in 1986 (those with sales volumes of over $2.5 million) were most likely to view floodplain property as "developable" or "marketable" (62% rated floodplains as developable; 69% as marketable). In such firms, the vertical integration of services provided (such as site planning, engineering, real estate sales, and property management) probably eased the process of development in the floodplain. When recent (1985 or after) flooding occurred in a firm's headquarters city; however, only 36% rated floodplains as developable, compared to 53% in cities without recent flood experience.

Building in the Floodplain

Forty-five percent of the builders and developers surveyed in the ten cities said they had developed lots or constructed buildings on property located, wholly or in part, in a 100-year floodplain: 40% of the firms had constructed buildings in the floodplain, while 24% had developed lots there. Firms with sales volumes over $1 million in the 1986 single-family housing market were more likely to build in the floodplain than firms with smaller sales volumes: 60% of the large-volume firms built in the floodplain, while 40% of the small-volume firms had done so. Larger firms seem more able to absorb additional front-end costs associated with development in flood hazard areas.

Two-thirds of the firms which had built in the floodplain had done so most recently in either 1986 or 1987. Those projects included single-family housing developments (52%), subdivisions (38%), and commercial/office construction (27%). Multi-family dwellings accounted for 8% of the recent projects, and industrial development accounted for 5%. Firms were able to market projects located within flood-hazard areas; only 8% reported customer demand for the finished project did not meet their expectations.

We asked firms about 12 factors that are potentially important in a firm's decision to acquire land in the floodplain for development, and we asked them to rate each from 1 ("not important") to 5 ("very important"). The following qualities, in order of their average importance ratings, were rated by firms:

	Mean Response
• Site physical factors (trees, parcel size, views)	4.3
• Investment (potential for appreciation)	4.1
• Availability of water/sewer	4.1
• Zoning classification	3.9
• Attractiveness of approach to site	3.8
• Prestige of neighborhood	3.7
• Financial factors (price, loan provisions, down payment)	3.6
• Proximity of open space or parks	3.2
• Proximity to shopping	3.2
• Quality of schools	3.1
• Frontage on major thoroughfare	2.9
• Government willing to grant variances	2.8

That the willingness of government to grant variances was least important indicates physical and locational characteristics of the site, appreciation potential, and current zoning are more important to development and building firms than the malleability of local policies.

Eighty-seven percent of the firms investigated the possibility of flooding prior to purchasing property in the floodplain. In comparison, as we reported in Chapter 5, only 37% of the individuals holding vacant land in the floodplain had investigated flooding before purchasing their property. Developers' keen awareness of flood hazards means that the location of the parcel relative to flood hazard areas is an item of information frequently incorporated into the land purchase decision process. Furthermore, knowledge that the property is in a flood hazard area comes early in the process. Over 90% of the firms which investigated the potential for flooding prior to purchase found out that the property was in a regulated floodplain either when they first looked at it or while considering whether to acquire it. Very few firms discovered potential flooding problems after earnest money was deposited or at the time of closing procedures.

Effect of Floodplain Management Programs on Location Decisions

Floodplain land use management programs have had a negligible influence on firms' evaluations of floodplain development opportunities and on their

TABLE 6-1

FACTORS ASSOCIATED WITH BUILDERS' AND DEVELOPERS' PERCEPTIONS OF FLOODPLAIN LAND

Factors	Gamma Measure of Association with Perception of the Floodplain as: Profitable	Developable
Community Context		
Acres of floodfree developable land in the community	.04	.10
Community context (index of flood-free land, lack of political op-position to pro-gram, past floods)	.18	.27
Recent flooding	-.45	-.19
City growth rate	.28	.18
City median housing value	.32	.36
Firm Characteristics		
Perception of community flood threat	-.32	-.10
Flood experience	-.37	-.02
Know builders who have experienced flooding	-.28	.10
Sales Volume, 1985	.08	.12*
Number of urban areas in which firm operates	.02	.01

TABLE 6-1 - continued

FACTORS ASSOCIATED WITH BUILDERS' AND DEVELOPERS' PERCEPTIONS OF FLOODPLAIN LAND

Factors	Gamma Measure of Association with Perception of the Floodplain as:** Profitable	Developable
Floodplain Program		
Overall program index	.32	.36
Construction index	.29	.28
Location index	.34	.31
Enforcement index	.29	.23*
Implementation index	-.01	.20
Flood control expenditures, 1976-85	.07	-.08

*Chi-square statistically significant at .05 level of confidence.

**Land evaluated on scale from 1 (unprofitable or undevelopable) to 5 (profitable or developable).

subsequent floodplain development activity. There were no significant differences in the percentage of firms involved in floodplain development between cities with strong and weak floodplain management programs (47% of firms in cities with weak programs; 43% of firms in cities with strong programs). The amount of flood-free developable land in a city is an important contextual factor associated with varying levels of developer activity in the floodplain. In cities with greater than a 25-year supply of developable land outside the floodplain, 32% of firms had developed in the floodplain. In cities with a shorter supply of flood-free sites, 57% of firms had been involved with floodplain projects.

To affect developers' location decisions, floodplain management programs have to reduce developers' perceptions of the profitability and developability of the floodplain. In fact, that has not happened in cities with stronger programs, as shown earlier in Table 6-1 and below in Table 6-2. The reasons for developing in the floodplain--"profitability" and "developability"--are actually greatest in cities with stronger programs. The higher perceived profitability of floodplain property in cities with stronger floodplain management programs is due to the overriding importance of housing demand and median housing value (see Table 6-3).

There was high congruence between program strength and city growth between 1976 and 1985. Four of the five cities with the strongest programs also had the highest percentage increase in housing construction between 1976 and 1985: Arvada 54% increase, Fargo 44%, Palatine 41%, and Scottsdale (78%). The increased perceived profitability of floodplain development in those cities can be attributed to exceptionally strong residential and commercial demand.

The cities with the stronger programs also had the highest 1980 median housing values in the sample--Palatine $89,000, Wayne $86,000, Scottsdale $75,000, Arvada $72,000, and Fargo $56,000. Those higher housing values provided a larger margin for firms to pass the higher costs of building in floodplains on to consumers. Because of the strong demand for housing and the marketability of housing products produced in those cities, builders and developers also encountered less resistance from lenders due to a project's floodplain location than in low-growth cities (18% to 27%, respectively).

The strong residential and commercial markets in cities with strong floodplain management programs are apparent in two additional findings--builders were more likely to perceive floodplain development as growing in such cities than they were in cities with weaker programs (61% vs. 37%), and developers were more likely to say floodplain property was "expensive" in fast-growing cities than they were in slower growing cities (57% vs. 47%). The relative scarcity of flood-free building sites also influenced developers

TABLE 6-2

ASSOCIATION BETWEEN STRENGTH OF LOCAL FLOODPLAIN PROGRAM AND PERCEIVED PROFITABILITY AND DEVELOPABILITY OF FLOODPLAIN

Perception of Floodplain	Percent of Builders/Developers Operating in Cities With: Stronger Programs*	Weaker Programs**
Floodplain Perceived as "Profitable"	50%	28%
Floodplain Perceived as "Developable"	68%	38%

TABLE 6-3

ASSOCIATION OF FLOODPLAIN PROGRAM STRENGTH AND MEAN CITY GROWTH RATE AND MEDIAN HOUSING VALUE

Indicator	Stronger Programs*	Weaker Programs**
City growth rate (dwellings) between 1976 and 1985	44%	10%
Median Housing Value, 1980	$75,600	$38,400

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* Stronger = Palatine, Scottsdale, Fargo, Arvada, and Wayne.
** Weaker = Omaha, Tulsa, Toledo, Cape Girardeau, Savannah.

evaluation of the cost of floodplain property. In cities with limited development opportunities outside the floodplain, 61% of the firms rated floodplain land as expensive. In cities with a 25-year or greater supply of developable flood-free sites, only 38% of the developers rated floodplain land as expensive.

Developers also viewed floodplain property in cities with stronger programs as more "developable" than in cities with weaker programs (68% to 38%). Two reasons may account for that: first, firms incorporate profit criteria in their judgment of developability; and second, floodplain management may increase the perceived developability of the floodplain by reducing risk. Although we are unable to state which of those reasons is the dominant one, or whether there may be another reason, we suspect that both increase perceived developability of floodplains in cities with stronger programs.

Decisions Regarding Site Design and Construction

Once a firm decides to buy and develop floodplain property, decisions regarding site design and building construction can play an important role in decreasing the potential for future damage due to flooding. The major concern of government at this point is to ensure that adequate mitigation measures are incorporated into the design of the site and into structures built on it.

Firms building in flood hazard areas employed an extensive array of flood damage mitigation adjustments in their floodplain projects, although adding fill to the site and elevating individual buildings are clearly the predominant means of mitigating flood hazards (see Table 6-4).

On average, firms used three different mitigation measures of a possible ten about which we inquired. Two factors affected the number of mitigation measures adopted--firm sales volume and strength of the floodplain land use management program (see Table 6-5). Firms with larger sales volumes were more likely to have adopted measures to protect floodplain projects from damage. Fifty-two percent of the firms with total sales over $2.5 million, for example, adopted three or more mitigation measures when developing or building in the floodplain, whereas 39% of small-volume firms (under $2.5 million sales annually) used that range of protective measures. The financial resource base available to the large-volume firms means that they are better situated to absorb the front-end costs associated with the adequate protection of floodplain property. As seen earlier, large-volume firms were also more likely to view floodplain land as developable; however, they were also more likely to protect structures built in the floodplain.

TABLE 6-4

MITIGATION MEASURES INCORPORATED INTO FLOODPLAIN PROJECTS

Mitigation Measure	Percent of Builders and Developers
Site Design	
Added fill to raise property elevation	71%
Designed street/lot layout to minimize fill required	38%
Used floodprone portion as open space	29%
Excavated ponds to provide flood storage	25%
Improved stream channel	17%
Built floodwalls/levees	13%
Building Construction	
Elevated individual buildings	64%
Waterproofed structure walls	31%
Built structures, roads, or manholes to higher elevation than required	27%
Other measures	6%

TABLE 6-5

FACTORS ASSOCIATED WITH ADOPTION OF HAZARD MITIGATION MEASURES

Factors	Gamma Measure of Association with Adoption of Three or More Mitigation Measures**
Community Context	
Community context (index of flood-free land, lack of political opposition to program, past floods)	.20
Recent flooding	.08
City growth rate	.20
City median housing value	.43
Firm Characteristics	
Perception of community flood threat	-.15
Flood experience	.42
Know builders who have experienced flooding	-.35
Sales volume, 195	.47*
Floodplain Program	
Overall program index	.43
Construction index	.45
Location index	.43
Enforcement index	.06
Implementation index	.22
Flood control expenditure	-.01

*Chi-square statistically significant at .05 level of confidence.
**Mitigation measures are listed in Table 6-4.

Development in flood hazard areas requires added costs on the part of the developer due to site and building hazard mitigation measures. Among the firms surveyed, added costs of site design and building construction adjustments averaged between 5% and 9% of total project cost. Those results are consistent with the findings of Sheaffer and Roland (1981), who found that mitigation measures increased construction costs between 6% and 16% in Jersey Shore, Pennsylvania, and of Burby and French and their associates (1985) who found a 10% increase in Raleigh, N.C. The breakdown of added costs is shown below.

	Percent of Developers and Builders
No added cost	4%
1-4%	30%
5-9%	20%
10-14%	20%
15-19%	20%
20% and above	11%

Developers and builders have three basic options when faced with added development costs: 1) absorb the costs through decreased profits; 2) pass the costs forward to consumers through higher prices; or 3) pass the costs backward to landowners through lower purchase prices. The response to added costs on the part of builders and developers will determine who actually pays the added costs. Since both previous research and our earlier findings indicated that housing consumers are often unconcerned about flood risk, conventional thinking would be that developers would be unable to pass along the added costs of flood mitigation to consumers. If added development costs due to flood hazard mitigation are absorbed by the developer, however, reduced profit would tend to dissuade firms from building in the floodplain. Thus, we expected developers to pass costs back to landowners. The following data, however, show that the incidence of added costs falls predominantly on the consumer:

Response to Added Cost	Percent of Firms
Increased sales price (passed on to consumer)	55%
Reduced profit margin (absorbed by developer)	28%

Offered reduced price for land (absorbed (by pre-developement land owner)	17%
Offered smaller lots (passed on to consumer)	14%
Reduced amenities (passed on to consumer)	14%
Reduced financial incentives other than price (passed on to consumer)	14%

In 55% of the cases, developers and builders passed the added cost of mitigation measures on to the consumer through higher sales prices. Consumers also absorbed added costs through smaller lots, reduced amenities, and reduced financial incentives (higher down payments). In 28% of the cases, the developer absorbed the added cost by reducing the profit margin of the project, and 17% of developers said they passed added costs backward by offering landowners a lower price for their property.

Developers were less likely to pass added costs forward to consumers through increased sales prices as the costs of flood adjustments increased. For example, 64% of the firms increased sales price when mitigation costs added less than 10% to total project costs, but when mitigation added 10% or more to total project cost, 47% of the firms increased sales price.

The ability of developers to pass along costs to consumers through increased sales prices was also a function of the strength of residential and commercial demand in a city. The increased costs of mitigation in fast-growing cities did not appear to be cutting into the profit margin of developers and builders, but instead could be passed on to consumers because of the strong demand. In cities with fast-growing populations, 67% of the firms increased sales prices due to added mitigation costs, while 36% of firms in slow-growing cities passed along the added costs to the consumer.

Over and above money costs associated with the incorporation of mitigation measures in site design and building construction, there are potential time costs involved in securing various regulatory approvals from government, and in arranging construction and permanent financing. If floodplain regulations add significantly to the processing costs involved in land development and building, or if it takes longer to obtain financing for floodplain parcels than for non-floodplain parcels, developers may find it more profitable to locate elsewhere. The developers and builders we surveyed indicated that, in fact, time costs can be involved in floodplain development. Thirty-nine percent of the firms stated it took longer than normal to secure necessary permits because of a project's location in the floodplain, and 29% said that the required elevation certification led to unnecessary delays. However, a majority of the firms developing floodplain property (51%) had experienced neither of those

regulatory problems.

One out of four firms encountered resistance to construction financing from lenders because of a project's floodplain location, but lender resistance, as reported earlier, was lower in fast-growing cities and markets. In fast-growing markets, financiers may have been influenced more by the marketability of projects than they were by the risk associated with a project's location in a floodplain.

Whereas floodplain management programs had a minimal influence on floodplain encroachment by builders and developers, programs did influence incorporation of flood hazard mitigation measures for those projects built within the regulatory floodplain. In the five cities with stronger floodplain land use management programs, the likelihood of a firm using three or more mitigation measures in site design and building construction was much greater than in cities with weaker programs. In particular, the construction requirements of a floodplain land use management program (consisting of regulatory floodplain definition that exceeds NFIP minimum standards and floodway and floodplain elevation requirements in excess of NFIP) influence the number of protective measures adopted.

In the three cities with the strongest construction requirements (Palatine, Scottsdale, and Wayne), all of the firms surveyed who built in the flood hazard area adopted three or more mitigation measures. In the seven cities with less stringent construction requirements, 56% of surveyed firms incorporated three or more protective measures. Thus, cities that adopt elevation requirements in excess of NFIP standards and define the 100-year regulatory floodplain based either on ultimate development conditions or greater than the 100-year flood are most successful in the protection of floodplain development from future flood damage. In cities without such stringent construction requirements, 15% of firms adopted only one mitigation measure in site design and building construction, and 26% adopted two protective measures.

Awareness and Perceptions of Flood Hazards

As we saw earlier in this chapter, builders and developers found out about flood potential prior to purchasing land in the floodplain 90% of the time. In addition to being aware of the flood hazard, builders and developers were familiar with public and private actions that could be taken to protect against flooding. Eighty percent or more of the firms were familiar with each of 19 flood hazard mitigation measures we asked them about, 95% of the firms were familiar with regulatory standards for building in flood hazard areas, and 94% were familiar with the requirement that floodplain boundaries be marked on subdivision plats.

Flood experience for builders and developers is similar to that of the owners of vacant property analyzed in Chapter 5 (37% to 43%, respectively), but is greater than that of building owners, whose decisions we analyze in the following chapter (24% had flooding on their property). Flood problems are salient to builders and developers. One-half of the firms had discussed flooding with business associates or friends in the past year. Also, 53% characterized the community flood threat in their city as either "very severe" (15%) or "moderate" (38%). Only 3% of the firms characterized the flood threat in the city as non-existent (compared to 27% of vacant land owners and 32% of building owners).

Attitudes Toward Floodplain Management Policy

Compared with persons who own vacant property in flood hazard areas, builders and developers were less likely to think that individuals have a right to live in or to develop flood hazard areas, but, once development occurs in the floodplain, they tend to believe that responsibility for dealing with flood problems should be shared by government and the private sector (see Table 6-6). Builders and developers are even more certain than landowners that technology can solve flood problems. They are also somewhat more likely--probably because they are free to choose flood-free sites for development projects--to believe that floodplain land use regulations are fair to property owners. Also reflecting their lower stake in the floodplain, builders and developers are more likely than landowners to say that local elected officials are doing all they can to relieve flooding problems.

Again compared with floodplain landowners, builders and developers are more likely to view site-specific measures as useful in dealing with flood problems, and they are less likely to rate areawide protection measures, such as dams, improved storm drainage, and stream channel improvements, as useful (see Table 6-7). That difference is perhaps due to differences in who bears the costs (property owners or society) of solving flood problems. In addition, builders and developers probably have greater technical sophistication than landowners, and therefore they may be more knowledgeable about on-site measures.

Policy Implications

We found that floodplain management policy had little influence on whether developers did or did not build in the floodplain, but it had a significant effect on the extent to which structures built in the floodplain were protected from future flood damage. The negligible effect of local programs

on floodplain encroachment is due to the overriding importance of community context: in particular, population growth of a city and the related demand for residential and commercial sites. Those cities with the strongest floodplain land use management programs were also those with the greatest demand for new housing and the highest median housing values for existing structures. In such fast-growing cities, public attempts to limit the attractiveness of floodplain development are ineffective in decreasing developers' and builders' perceptions of the developability and profitability of floodplain projects.

While strong floodplain land use management programs have little effect on the location of development, strong programs lead builders and developers to make adjustments in site design and structures built in the floodplain. Firm characteristics also have important influences on the likelihood that mitigation measures are incorporated into the design of a project. Development firms that had higher sales volumes tended to incorporate more mitigation measures, on the average, into their projects. Such firms were more likely to develop in the floodplain, as we reported earlier, but such development also tended to be protected from future flooding by more mitigation measures than projects built by smaller volume firms. In addition, firms that had encountered a flood in the past tended to adopt more mitigation measures.

TABLE 6-6

COMPARISON OF BUILDERS' AND DEVELOPERS' ATTITUDES ABOUT RESPONSIBILITY FOR DEALING WITH FLOOD HAZARDS WITH THOSE OF LANDOWNERS

Attitude	Percent Who Agree: Developers	Landowners
Individual Freedom to Use Flood-Hazard Areas		
A person has the right to live wherever he chooses regardless of the risks.	37%	52%
A person has the right to develop land that he owns. It is up to the buyer to be aware of any problems.	28%	46%
Individual Responsibility for Dealing with Flooding		
Individuals, rather than government, should be responsible for solving flooding problems.	13%	13%
People who live in flood-prone areas should pay whatever costs are required to solve their problems.	27%	25%

TABLE 6-6 - continued

COMPARISON OF BUILDERS' AND DEVELOPERS' ATTITUDES ABOUT RESPONSIBILITY FOR DEALING WITH FLOOD HAZARDS WITH THOSE OF LANDOWNERS

Attitude	Percent Who Agree: Developers	Landowners
After a flood, property owners who benefit from roads and other public facilities located in flood hazard areas should pay the costs of reconstructing those facilities.	15%	19%
Requiring people to buy flood insurance is a fair way of distributing the costs of recovering from flood disasters.	20%	37%
Government Responsibility for Dealing with Flooding		
The technology exists to overcome most flood problems.	71%	60%
Federal agencies should pay the major portion of the costs of protecting people from flooding.	26%	33%
Even though they restrict some uses of floodplain property, local land use regulations are fair to property owners.	39%	33%
Local elected officials are doing what they can to relieve flooding problems.	46%	27%

TABLE 6-7

COMPARISON OF BUILDERS' AND DEVELOPERS' EVALUATIONS OF SPECIFIC MEASURES TO DEAL WITH FLOOD PROBLEMS WITH THOSE OF LANDOWNERS

Measure	Percent Who Rated Measure as Useful: Developers	Landowners
Clear obstructions in stream	88%	84%
Relocation of structures at owners' expense	85%	31%
Improve upland storm drainage	81%	86%
Addition of fill	78%	66%
Build floodwalls or levees around individual parcels	77%	50%
Government purchase of vacant floodplain land for open space	75%	71%
Limit building in floodplain	73%	71%
Deepen, widen or line streams	73%	82%
Require new buildings to be elevated	71%	60%
Elevate existing buildings	70%	62%
Require flood insurance for new buildings	70%	58%
Build flood control dams	67%	73%
Build levees along streams	67%	66%