APPENDIX C

QUESTIONNAIRES USED FOR SURVEYS OF

OWNERS OF VACANT LAND

BUILDERS AND DEVELOPERS

CONSUMERS

WHAT THIS SURVEY IS ABOUT

- This survey is designed to provide information about people's expenence and opinions concerning flood hazards
- We are particularly interested in whether flood hazards or government policies to deal with those hazards have affected your decisions about your property at the address below. We refer to that property in the questionnaire as "the listed property."

LISTED PROPERTY ADDRESS

WHAT WILL BE DONE WITH THE INFORMATION

- Statistical summaries of your experiences and opinions and those of other property owners will be put together in a report that will be presented to CONGRESS, FEDERAL, STATE, AND LOCAL AGENCIES that are responsible for programs to alleviate flood hazards
- NO INFORMATION YOU GIVE US WILL BE REVEALED TO ANYONE IN A WAY THAT CAN IDENTIFY YOU

HOW YOU WERE CHOSEN TO FILL OUT THIS QUESTIONNAIRE

- Your name was selected at random from county property records from a national sample of communities that have been classified as floodprone by the federal government
- Because individuals were selected by chance, the results will provide an unbiased picture of property owners' experience with and attitudes toward flood hazards and government programs.

HOW TO FILL OUT THE QUESTIONNAIRE

 Most of the questions can be answered by circling a number that corresponds to your answer, as follows

What is your marital status?

- 1 Married
- 2 Single and never married
- 3 Married but separated
- 4 Widowed or divorced

PLEASE ANSWER EVERY QUESTION THAT APPLIES TO YOU

IF YOU HAVE ANY QUESTIONS ABOUT THE SURVEY CALL DR BURBY OR DR KAISER COLLECT 919-962-3074

The first set of questions deals with your experience with flooding of the property listed on the inside of the cover page. We are interested in your perception of the risk of flooding in your community and in any actual flooding that has occurred on the property listed

- 1 To start, now would you characterize the threat of flooding in the city or town where that property is located? (Circle one)
 - 3 Very severe flood threat
- 2 Moderate flood threat
- 1 No flood threat at all
- 2 Over the next ten years, what would you estimate are the odds of the listed property being flooded, at least in part? (Circle one)
 - 1 Zero, no chance at all
 - 2 5 chances in 100
- 3 10 chances in 100
- 4 Greater than 10 in 100, but lesss than 50/50
- 5 Odds are 50/50
- 6 Greater than 50 chances in 100, but not certain
- 7 Almost certain
- 3 To the best of your knowledge, has the listed property flooded in whole or in part while you have owned it?

| 2 | Yes | _ | skip to question 4 answer questions a through c |
|---|-----|---|---|
| | | a | In what year was the most recent flooding of the listed |

property?
Year:

b in what year was the most serious flooding of the property?

c. What was the cost of damage, if any, from the most serious flooding of the listed property?

Estimated cost: \$ _____

- 4 Have you ever experienced flooding on other property that you have owned? (Circle)
 - 1 No
- 2 Yes
- 5 Do you know someone who has experienced a damaging flood?
- 1 No
- 2 Yes
- 6 Have friends, relatives or business associates discussed flooding with you during the past year?
 - 1 No
 - 2 Yes

OWNERS OF VACANT LAND

1 First, please look at this list of possible actions that can be taken to reduce flood threats

If you are not familiar with the action, circle 1. If you are familiar with the action and think it is or would be useful in protecting the listed property, circle 2. If you are familiar with the action, but think it either is not or would not be useful in reducing the flood threat to the listed property, circle 3.

| | | Circle One | for Each | Action |
|-----|--|------------|----------|--------|
| | , | Nat | | Not |
| | i | Familiar | Useful | Useful |
| Pri | vate Actions | | | |
| a | Add fill to raise elevation | 1 | 2 | 3 |
| b. | Elevate buildings | 1 | 2 | 3 |
| C. | Waterproof walls of structures | 1 | 2 | 3 |
| đ. | Build floodwalls or levees around | | | |
| | property | 1 | 2 | 3 |
| E. | Relocate structure on property | 1 | 2 | 3 |
| Pu | Diic Actions | | | |
| 1. | Require new buildings to be | | | |
| | elevated | 1 | 2 | 3 |
| g. | Limit building in flood hazard | | | |
| | areas | 1 | 2 | 3 |
| h. | Require large lots | 1 | 2 | 3 |
| i. | Government purchase of floodprone homes and relocation of | | | |
| | residents | 1 | 2 | 3 |
| ı. | Clear debris and obstructions in | | | |
| • | streams | 1 | 2 | 3 |
| k. | Government purchase of vacant floodplain land for parks and open | | | |
| | space | 1 | 2 | 3 |
| ı. | Require flood insurance for new | | | |
| | buildings | 1 | 2 | 3 |
| m. | Deepen, widen or line streams | 1 | 2 | 3 |
| n. | Build floodwalls and levees along | | | |
| | streams | 1 | 2 | 3 |
| 0. | Build flood control dams on main | | | |
| | streams | 1 | 2 | 3 |
| p. | Improve upland storm drainage | 1 | 2 | 3 |
| | | | | |

Which of the above actions to your knowledge are actually being used to protect the listed property? Please circle the letters (a through p above) to the left of each of the actions being used to protect the property

| 3 | How much would you be willing to pay to have government fully pro |
|---|--|
| | tect the listed property from flooding? (Circle, and if appropriate, fil |
| | in dollar amount) |

- O The listed property is not threatened by flooding
- There is some flood threat, but I can deal with it adequately by myself
- 2 There is some flood threat and I would be willing to pay the following amount to have government eliminate it:

| | |
|------|------|
| | |

Property Owner Survey

Now we would like you to think back to the time when you acquired the property listed inside the front cover. This next set of questions asks about your reasons for acquiring the property and how your plans have been affected, if at all, by potential flooding and governmental programs to deal with flood threats.

| 1. | In what year was the listed property acquired? |
|----|--|
| | YEAR: |
| 2 | How did you acquire the property? (Circle) |
| | 1 Purchase 2 Gift or inheritance 3 Spouse owned it 4 Other (specify:) |
| 3 | Which of the following were reasons for acquiring the property or, if you didn't purchase it, for holding it immediately after it was acquired? (Circle all that apply) |
| | 1 To live on property 2 To use for business purposes 3 To obtain income from renting to others 4 To obtain profit from future sale (i.e., an investment) 5 To hold for sentimental reasons 6 As a buffer or addition to adjacent property 7 To use for farm, timber, or sand and gravel production 8 To obtain profit from subdivision or development of property 9 Other (specify:) |
| 4 | Before you acquired the listed property, did you investigate in any way whether it was subject to flooding? (Circle) |
| | 1 No Skip to question 5 2 Yes |
| | a How did you do that? (Circle all that you did) 1 Asked real estate agent or broker 2 Asked people familiar with area 3 Asked previous number |

4 Asked people at city hall or county courthouse

boundaries

6 Other (specify:

5 Looked at government maps showing flood hazard

| | r knowl (Circle | - | s the listed property located within a flood hazard |
|-------|---|--|---|
| 2 Don | t know | / — sk | estion 6 ip to question 6 testions a, b, and c |
| | be 1 | subjec After it | you first find out that the listed property might it to flooding? (Circle one) was acquired — GO TO QUESTION b |
| | 2 | (1) | It was acquired — ANSWER (1) - (3) Did you learn about the flood threat. (Circle one) 1 When you first looked at the property or even before that 2 During the time you investigated and considered acquiring the property 3 After earnest money was deposited in the purchase process 4 At time of closing procedures Based on knowledge of the likelihood that the property might flood, did you make any adjustments when you acquired it? (Circle all that apply) 1 No adjustments were made 2 Reduced offering price 3 Purchased flood insurance 4 Other (specify: |
| | | (3) | Did the fact that local floodplain regulations would apply to the property lead you to make any adjustments when you acquired it? (Circle all that apply)) 1 No adjustment were made 2 Reduced offering price 3 Revised plans for property (please explain briefly: |
| | are 1 1 2 1 3 4 4 1 5 1 6 7 | a? (Ciri No one Real es A publi Friend Lender Attorne Previou | you the property was located in a flood hazard cle all that apply) , I learned by myself state agent or other broker involved c official or acquaintance y s owner specify: |

- c What has been the effect of the flood hazard and local floodplain regulations on the value of the listed property? (Circle)
 - 1 No effect
 - 2 Less than 5% loss over what the property would be worth if it were not located in a regulated flood hazard area
 - 3 5 9% loss
 - 4 10 24% loss
 - 5 25% or greater loss
- 6 How important was each of the following factors in your decision to acquire the listed property? Circle 5 if it was very important and 1 if it was not important at all. Circle 2, 3, or 4 if its importance was somewhere in between

| | | Cırcle | One M | lumbe | r for E | ach Item |
|---|---|----------|--------|-------|---------|----------|
| | | Not | | | | Very |
| | | impart | ant | | 1. | mportant |
| a. | Resource factors—soil quality, | | | | | _ |
| | timber, mineral deposits, etc | 1 | 2 | 3 | 4 | 5 |
| b. | Site factors—trees, size of parcel, | | _ | _ | | _ |
| | views, etc | 1 | 2 | 3 | 4 | 5 |
| C. | Financial factors—price, loan pro- | | | | | _ |
| | visions, down payment | 1 | 2 | 3 | 4 | 5 |
| d. | Investment factors—potential for | _ | | | | |
| | appreciation in value | 1 | 2 | 3 | 4 | 5 |
| e. | Proximity to shopping, schools, | | _ | _ | | _ |
| | employment | 1 | 2 | 3 | 4 | 5 |
| t. | Proximity to friends and relatives | 1 | 2 | 3 | 4 | 5 |
| g. | Proximity to other parcels you | | | | | |
| | owned | 1 | 2 | 3 | 4 | 5 |
| ħ. | The area nearby—friendly, pres- | | | | | |
| | tigious | 1 | 2 | 3 | 4 | 5 |
| i. | Other (specify:) | 1 | 2 | 3 | 4 | 5 |
| bei | w concerned are you about the pos ng flooded? (Circle one) /ery concerned | sibility | / of t | he li | sted | property |
| 3 1 | Fairly concerned A little concerned Not concerned at all | | | | | |
| Compared to other problems you face, how serious is the threat of flooding to the listed property? (Circle one) | | | | | | |
| 2 5 | iot serious at all Sightly serious Moderately serious | | | | | |

9 Have you considered selling the listed parcel because of the possibility of flooding? (Circle one)

4 Extremely serious

| 10. What is the main reason you are holding it at this time? (Circle |
|--|
|--|

- O Parcel has been sold SKIP TO NEXT SECTION
- 1 To live on property
- 2 To use for business purposes
- 3 To obtain income from renting to others
- 4 To obtain profit from future sale (i.e., an investment)
- 5 To hold for sentimental reasons
- 6 As a buffer or addition to adjacent property
- 7 To use for farm, timber, or sand and gravel production
- 8 To obtain profit from subdivision or development of property
- 9 Other (specify:
- 11 How much do you expect the value of the listed property to change over the next five years? (Circle one)
 - 1 Increase 100% or more
 - 2 Increase 50% 99%
 - 3 increase 25% 49%
 - 4 Increase 1% 24%
 - 5 Remain the same
 - 6 Decrease 1% 24%
 - 7 Decrease 25% or more

Now we have some questions about your actual experience with local government programs to deal with the threat of flooding and your attitudes toward those types of programs

- 1 Which, if any, of the following actions have you done in order to promote changes that might reduce the threat of flooding to your property? (Circle all that you have done, if you've done none of them, circle 10)
 - 1 Signed a petition
 - 2 Written a letter to the editor of a newspaper
 - 3 Voted for a candidate because of his or her position on flooding
 - 4 Attended a city council or other government meeting about flooding
 - 5 Spoke at a city council or other government meeting about flooding
 - 6 Talked with a neighborhood organization about flooding
 - 7 Attended any meeting in order to learn more about flooding and possible solutions for area in which property is located
 - 8 Met with city council or other government officials
 - 9 Other (specify: ____
 - 10 None of the above
- Have you ever sought approval from local government for any of the following changes to the listed property? (Circle all that apply: if none, circle 5)
 - 1 Rezoning to allow higher intensity use
 - 2 Permit to fill to raise elevation and reduce threat of flooding
 - 3 Approval of subdivision plat
 - 4 Approval of development proposal
 - 5 None of the above

| } | Do you have any suggestions for how local government could improve |
|---|--|
| | its handling of citizen's requests for changes to their property? (Circle) |

Property Owner Survey

| 1 No - 2 Yes | _ \$ | Skip to question 4 |
|---------------------|------|------------------------|
| | a | Please explain briefly |
| | | |

4 Please indicate how you feel about the following statements by selecting the numbers that best represent your opinions. If you agree with a statement, circle 1 or 2, if you are neutral or unsure of your answer, circle 3, and if you disagree with the statement, circle 4 or 5.

| | | Circle (| ne . | Number | tor | Each Item |
|----|---|----------|------|--------|-----|-----------|
| | | Strongly | ′ | | | Strongly |
| | i | Agree | | | | Disagree |
| a. | Local elected officials are doing what they can to relieve flooding problems | 1 | 2 | 3 | | 5 |
| b. | The technology exists to overcome | • | - | • | 7 | • |
| 4. | most flooding problems | 1 | 2 | 3 | 4 | 5 |
| C. | A person has a right to live wherever he chooses, regardless of the risks | 1 | 2 | 3 | 4 | 5 |
| d. | Even though they restrict some uses of floodplain property, local land use regulations are fair to property owners. | 1 | 2 | 3 | 4 | 5 |
| 8. | Individuals, rather than govern- ment, should be responsible for solving flooding problems | 1 | 2 | 3 | 4 | 5 |
| f. | In general, local governments' efforts to protect the natural environment of floodplains have been | · | - | | | |
| g. | successful Federal agencies should pay the major portion of the costs of pro- | 1 | 2 | 3 | 4 | 5 |
| h. | tecting people from flooding After a flood, property owners who benefit from roads and other public | 1 | 2 | 3 | 4 | 5 |
| | facilities located in flood hazard areas should pay the costs of re- constructing those facilities | 1 | 2 | 3 | 4 | 5 |
| i. | A person has the right to develop land that he owns. It is up to the buyer to be aware of possible | | | | | |
| | problems | 1 | 2 | 3 | 4 | 5 |

| | | Circle Strongi Agree | One ly | Number | for | Each Iten Strongly Disagree |
|----|---|----------------------------|-----------|--------|-----|-----------------------------------|
| Į. | Individual actions are more effective than government actions to reduce the threat of flooding | 1 | 2 | 3 | 4 | 5 |
| k. | Requiring people to buy flood in- surance is a fair way of distributing the costs of recovering from flood | | | | | |
| I. | disasters The federal government spends too much money on disaster relief and recovery | 1 | 2 | 3 | 4 | 5 |
| m. | Local governments should set aside money in a fund to be used for recovery from flooding rather than always looking to state and federal agencies for neip when | • | - | J | • | - |
| п | disaster strikes People who live in floodprone areas should pay whatever costs are required to solve their prob- | 1 | 2 | 3 | 4 | 5 |
| 0. | in general, local governments' efforts to reduce flood risks have | 1 | 2 | 3 | 4 | 5 |
| | been successful | 1 | 2 | 3 | 4 | 5 |

The last section of the questionnaire deals with the characteristics of the listed property and of you as a landowner. Your responses to these questions are needed so that we can present our study results separately for different types of property and landowners.

- 1 How would you describe the area in the vicinity of the listed parcel? (Circle one)
 - 1 Mostly rural farmland

OCCUPATION: _

- 2 Slowly developing urban fringe area
- 3 Rapidly developing urban fringe area
- 4 Mostly developed urban area, with some vacant land remaining
- 5 Highly developed urban area with only a few vacant parcels remaining
- 2 What is your best estimate of the market value of the listed parcel to the nearest \$5,000?

| | MARKET VALUE: \$ | (to | nearest | \$5,000) |
|---|----------------------------------|-----|---------|----------|
| 3 | What is your current occupation? | | | |

| 4 | How many tracts of land, including this one and your residence, do |
|---|--|
| | you own at this time? (Circle) |
| | 0 None — this tract has been sold |

- 1 One
- 2 Two
- 3 Three five

Property Owner Survey

- 4 Six or more
- 5. About how often do you buy or sell land? (Circle)
 - 1 Very rarely less than once every len years
 - 2 Occasionally about every four-ten years
 - 3 Frequently about once every one to three years
 - 4 Very often more than once a year
- 6 How much formal education have you had? (Circle)
 - 1 Did not graduate from high school
 - 2 High School graduate
 - 3 Some coilege
 - 4 College graduate
- 5 Graduate or professional training beyond college graduate
- 7 What was your total family or household income in 1986? (Circle)
 - 1 Under \$20.000
 - 2 \$20,000 \$29,999 3 \$30,000 - \$39,999
 - 4 \$40,000 \$49,999
- 5 \$50,000 \$74,999
- 6 \$75,000 \$99,999
- 7 \$100,000 \$149,999
- 8 \$150,000 \$249,999
- 9 \$250,000 or more
- 8 What is the age of the main wage-earner in your household?

 AGE: _______
- 9 What is your marital status?
 - 1 Married
 - 2 Single and never married
 - 3 Married but separated
 - 4 Widowed or divorced
- 10 What is your family's racial background? (Circle)
 - 1 White
 - 2 Black
 - 3 Hispanic
 - 4 Oriental
 - 5 American Indian
 - 6 Other

THANK YOU FOR YOUR ASSISTANCE. JUST DROP THE QUESTIONNAIRE IN THE MAIL. IT IS ALREADY ADDRESSED AND POSTAGE HAS BEEN PREPAID.

WHAT THIS SURVEY IS ABOUT

- This survey is designed to provide information about builders' and developers' experiences and opinions concerning urban flood hazards
- We are particularly interested in whether flood hazards or government policies to deal with those hazards have affected your building and development decisions. Also, we want to know what you think of federal, state and local policies and programs designed to deal with the threat of flooding in urban areas.

WHAT WILL BE DONE WITH THE INFORMATION

- Statistical summaries of your experiences and opinions and those of other builders and developers across the nation will be put together in a report that will be presented to CONGRESS, FEDERAL, STATE, AND LOCAL AGENCIES that are responsible for flood-related programs.
- NO INFORMATION YOU GIVE US WILL BE REVEALED TO ANYONE IN A WAY THAT CAN IDENTIFY YOU

HOW YOU WERE CHOSEN TO FILL OUT THIS QUESTIONNAIRE

- Your name was selected at random from builders and developers working in a national sample of communities that have been classified as floodprone by the federal government.
- Because builders and developers are selected by chance, the results will
 provide an unbiased picture of builder/developer experience with and
 attitudes toward flood hazards and government programs

HOW TO FILL OUT THE QUESTIONNAIRE

 Most of the questions can be answered by circling a number that corresponds to your answer, as follows

How many persons are employed by your firm?

1 Less than 5

25-9

3 10 - 24

4 25 or more

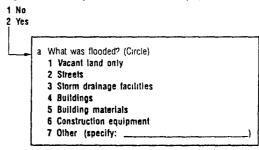
PLEASE ANSWER EVERY QUESTION THAT APPLIES TO YOU

IF YOU HAVE ANY QUESTIONS ABOUT THE SURVEY CALL DR BURBY OR DR. KAISER COLLECT 919-962-3074

Builder/Developer Survey

The first set of questions deals with flood hazards and the developability of urban floodplains. In responding to questions in this section, please refer to floodplains logated within the City of

- 1 To start, how would you characterize the threat of flooding in that city? (Circle)
 - 4 Very severe flood threat
 - 3 Moderate flood threat
 - 2 Low flood threat
 - 1 No flood threat at all
- Have you ever expenenced flooding on property, either vacant or being developed, that your firm owned in that city? (Circle)



- 3 Do you know other builders or developers who have experienced a damaging flood in that city?
 - 1 No
 - 2 Yes
- 4 Have friends or business associates discussed flood problems in that city with you during the past year?
 - 1 No
 - 2 Yes
- 5 In general, how would you characterize vacant undeveloped property along the stream listed below? Please look at each of the following sets of terms and circle the number that comes closest to how you would describe vacant property along that stream for example, if you think vacant property along the stream tends to be swampy, circle 1 or 2. If you think it tends to be well drained, circle 4 or 5 If you think it is about equally swampy and well drained, circle 3

FLOODPLAIN CHARACTERISTICS:

 SWAMPY
 1
 2
 3
 4
 5
 WELL DRAINED

 DANGEROUS
 1
 2
 3
 4
 5
 SAFE

BUILDERS AND DEVELOPERS

| DEVELOPABLE | 1 | 2 | 3 | 4 | 5 | UNDEVELOPABLE |
|-------------|---|---|---|---|---|---------------|
| EXPENSIVE | 1 | 2 | 3 | 4 | 5 | INEXPENSIVE |
| ATTRACTIVE | 1 | 2 | 3 | 4 | 5 | UNATTRACTIVE |
| MARKETABLE | 1 | 2 | 3 | 4 | 5 | UNMARKETABLE |
| GROWING | 1 | 2 | 3 | 4 | 5 | DECLINING |
| UNPROTECTED | 1 | 2 | 3 | 4 | 5 | PROTECTED |
| PROFITABLE | 1 | 2 | 3 | 4 | 5 | UNPROFITABLE |
| DIRTY | 1 | 2 | 3 | 4 | 5 | CLEAN |

Builder/Developer Survey

6. A number of actions have been suggested to reduce the threat of flood damage to properly located along streams. Please look at the following list of possible actions to reduce flood threats along the stream listed above.

If you are not familiar with the action, circle 1. If you are familiar with the action and think it is or would be useful in reducing the threat of flood damages along that stream circle 2. If you are familiar with the action, but think it is not or would not be useful in reducing the threat of flood damages, circle 3.

| | | ne for Eac | |
|--|----------|------------|--------|
| | Not | | Not |
| 0 | Familiar | Useful | Useful |
| Private Actions | | | |
| a. Add fill to raise elevation | | | |
| of property | | 2 | 3 |
| b. Elevate individual buildings | . 1 | 2 | 3 |
| c. Waterproof walls of structures | . 1 | 2 | 3 |
| d. On-site flood control (floodwalls, | | | |
| levees, channelize streams, flood | | | |
| detention ponds, etc) | 1 | 2 | 3 |
| e. Locate structure on less floodprone | , | | |
| partions of property | | 2 | 3 |
| | , | - | • |
| Public Actions | | | |
| f. Require new buildings to be | | | |
| elevated | 1 | 2 | 3 |
| g. Limit building in flood hazard | | | |
| areas | 1 | 2 | 3 |
| h. Require large lots in flood hazard | | | |
| areas | 1 | 2 | 3 |
| i. Government purchase of flood- | | | |
| prone homes and relocation of | | | |
| residents | 1 | 2 | 3 |
| I. Clear debris and obstructions in | | | - |
| streams | 1 | 2 | 3 |
| k. Government purchase of vacant | • | - | - |
| floodplain land for parks and open | | | |
| space | 1 | 2 | 3 |
| | • | - | J |

| | 1 | | e for Eac | |
|----|------------------------------------|----------|-----------|-------|
| | | Not | Useful | Not |
| | 1 | Familiar | Useful | Usefu |
| ١. | Require developers to dedicate | | | |
| | floodplain property for parks and | | | |
| | open space | 1 | 2 | 3 |
| m, | Require flood insurance for new | | | |
| | buildings | 1 | 2 | 3 |
| n. | Require flood plain boundaries to | | | |
| | be marked on recorded subdivision | | | |
| | plats | 1 | 2 | 3 |
| ø. | Deepen, widen or line streams . | 1 | 2 | 3 |
| p. | Build floodwalls and levees along | | | |
| | streams | 1 | 2 | 3 |
| q. | Build flood control dams on main | | | |
| • | streams | 1 | 2 | 3 |
| T, | Improve upland storm drainage | 1 | 2 | 3 |
| s. | Require developers to pay a por- | | | |
| | tion of the cost of off-site storm | | | |
| | drainage installed by public | | | |
| | agencies | 1 | 2 | 3 |

7. Please indicate how you feel about the following statements regarding government flood hazard management policy by selecting the numbers that best represent your opinions. If you agree with a statement, circle 1 or 2, if you are neutral or unsure of your answer, circle 3, and if you disagree with the statement, circle 4 or 5.

| | | Circle | One N | итоег | for Ea | ch Item trongly | 1 |
|----|--|--------|-------|-------|--------|--------------------|---|
| | | Stron | gly | | 5 | trongly | |
| | 1 | Agre | æ | | C | ksagree | Ì |
| a. | Local elected officials are doing what they can to relieve flooding problems | 1 | 2 | 3 | 4 | 5 | |
| b. | The technology exists to overcome most flooding problems | 1 | 2 | 3 | 4 | 5 | |
| C. | A person has a right to live wherever he chooses, regardless of the risks | 1 | 2 | 3 | 4 | 5 | |
| d. | Even though they restrict some uses of floodplain property, local land use regulations are fair to property owners | 1 | 2 | 3 | | 5 | |
| e. | | 1 | 2 | 3 | 4 | 5 | |
| ſ. | in general, local governments' efforts to protect the natural environment of floodplains have | | | | | | |
| | been successful | 1 | 2 | 3 | 4 | 5 | |

Builder/Developer Survey

8 Do you have any suggestions for how city or county governments could improve their regulations and other policies regarding flood hazard areas?...

1 No - Skip to Next Section

are required to solve their

been successful.....

flooding of nearby properties.....

o. In general, local governments' ef-

forts to reduce flood risks have

p. Floodplain development increases

2 Yes

Please describe your suggestions briefly here.

| t | The next section deals with your firm's experiences with developing property in a 100-year flood plain regulated by local governments under the National Flood Insurance Program. In answering questions in this section, please consider all of the building and development projects of your firm, not just those undetaken in the city listed at the start of the questionnaire. |
|---|---|
| 1 | Has your firm ever developed lots or constructed buildings for sa on property that is located, wholly or in part, in a 100-year floodplair (Circle all that apply) |
| | Neither — Skip to Last Section on Page 8 Developed Lots Constructed buildings |

| 2 | Please describe your firm's (most recent) project involving propert located in a 100-year floodplain. The remainder of the questions in this section should be answered with reference to that property an project. |
|---|---|
| | a. Year project completed |
| | b Type of project (Circle all that apply) |

1 Subdivision and development of raw land 2 Single family dwelling unit(s)

3 Multifamily dwelling units 4 Commercial/office building(s)

5 Industrial building(s)
6 Other (specify: _____

 Number of dwelling units or square feet of buildings if nonresidential:

d Size of site _____ Acres (or) ____ Sq Ft.
e. Percentage of site located within 100-year floodplain: ____%

3 How was the property for the project acquired? (Circle)

O Property not acquired — built on customer's land — sklp to question 7

1 Purchase

2 Joint venture arrangement with landowner

3 Other (specify:

 Before the property was acquired, did you or other members of your firm investigate in any way whether it was located in a floodplain? (Circle)

1 No 2 Yes

a How was that done? (Circle all that were done, to your knowledge)

- 1 Asked real estate agent or broker
- 2 Asked people familiar with area
- 3 Asked owner
- 4 Asked people at city hall or county courthouse
- 5 Looked at government maps showing flood hazard boundaries
- 6 Other (specify:

Circle One Number for Each Item

| 5 | or in p | art r it | your firm first find out that the property was located wholl in a flood plain regulated by local government? (Circle) was acquired — Skip to question 6 it was acquired — Answer a and b | • |
|---|---------|-------------|--|---|
| | | а | When did you or a member of your firm learn that the property was located in a regulatory floodplain? (Circle) | |
| | | | When first looked at property or even before that White considering whether to acquire it After earnest money deposited At time of closing procedures | |
| | | ъ | Who informed your firm that the property was located in a flood hazard area subject to local floodplain regulations? (Circle all that apply) | |
| | | | 1 No one, we learned about it by ourselves 2 Real estate agent or other broker 3 A public official 4 Friend or acquaintance 5 Lender 6 Attorney 7 Previous owner | |

6 How important was each of the following factors in your firm's decision to acquire the property? Circle 5 if it was very important and 1 if it was not important at all. Circle 2, 3, or 4 if its importance was somewhere in between

| | | | | | | , |
|---------|--|---------|----|---|----|---------|
| | | Importa | nt | | ln | portant |
| a. | Site factors—trees, size of parcel, views, etc | 1 | 2 | 3 | 4 | 5 |
| b. | Financial factors—price, loan provisions, down payment | . 1 | 2 | 3 | 4 | 5 |
| C. | Investment factors—potential for appreciation in value | . 1 | 2 | 3 | 4 | 5 |
| d. | Attractiveness of approach to site. | . 1 | 2 | 3 | 4 | 5 |
| 8. | Frontage on major thoroughfare | . 1 | 2 | 3 | 4 | 5 |
| f, | Proximity to shopping | . 1 | 2 | 3 | 4 | 5 |
| g. | Proximity of open space or parks. | . 1 | 2 | 3 | 4 | 5 |
| h | Quality of schools | . 1 | 2 | 3 | 4 | 5 |
| ŧ. | Availability of water/sewer | . 1 | 2 | 3 | 4 | 5 |
| j. k | Prestige of neighborhood Zoning classification (specify: | | 2 | 3 | 4 | 5 |
| | | | 2 | 3 | 4 | 5 |
| I. | Willingness of government to grant variances (describe: | t - | | | | |
| | | 1 | 2 | 3 | 4 | 5 |
| m. | Other (Specify: | 1 | 2 | 3 | 4 | 5 |

| 7 | In developing that property located in the regulatory floodplain, did your firm do any of the following? (Circle all that you did, if none, circle 11) |
|---|--|
| | Added fill to raise elevation of property Elevated individual buildings Meaning for a walk of streaming. |

- 4 Built buildings, roads, or manholes to a higher elevation than required by local regulations
- 5 Designed street and lot layout to minimize or eliminate need for fill
- 6 Excavated ponds to provide flood storage
- 7 Used floodprone portion of property for open space/recreation
- 8 Built floodwall or levee
- 9 Improved stream channel
- 10 Other building or project design adjustment due to floodplain location (Specify: ____
- 11 None of the above

Builder/Developer Survey

- 8. What would you estimate the adjustments circled above added to the total cost of that project or building? (Circle, if no adjustments were made, circle 8)
 - 1 0% No added cost
 - 2 1% 4% added cost
 - 3 5% 9% added cost
 - 4 10% 14% added cost 5 15% - 19% added cost
 - 6 20% 24% added cost
 - 7 25% + added cost
 - 8 No adjustments made
- 9 Circle all of the following adjustments you made due to added costs of the development or building attributable to its location in a regulatory floodplain (If your firm made none of these adjustments, circle 8)
 - 1 Reduced price offered for raw land/building site
 - 2 Reduced profit margin on development or building
 - 3 Increased sales price
 - 4 Offered smaller lots
 - 5 Reduced amenities
 - 6 Reduced financial incentives other than price
 - 7 Other measure to recover added costs (Specify:
 - 8 None of the above
- 10 Did customer response to this project meet your expectations? (Circle)

| res Io | | | |
|-----------|----------|--------------|------|
| a | Why not? | | |
| | | - | |
| | | | |

| in securing financing, did you experience any resistance from lenders because of the project's floodplain location? (Circle all that apply) |
|--|
| |
| No Yes — resistance to construction financing Yes — resistance to permanent financing |
| 'n your opinion, who should be responsible for informing consumers of possible flood hazards related to buildings located in a regulatory floodplain? (Circle all that apply) |
| No one, it is up to consumer to find out Local government Builder or developer Real estate agents Lenders Other (specify: |
| P'ease circle all of the following that describe local governments' oversight of the development of the project if none apply, circle 6 1 Took longer than normal to secure necessary permits because of location in floodplain 2 It was difficult to find contractors who knew how to comply with required floodplain building regulations 3 Required elevation certification was costly 4 Required elevation certification led to unnecessary delays 5 Compliance demanded by building inspectors too strict 6 None of the above |
| e last section of the questionnaire deals with the characteristics of ur firm. Your responses to these questions are needed so that we represent our study results separately for different types of firms d entrepeneurs |
| How is your firm organized? (Circle) 1 Corporation 2 Partnership 3 Proprietorship 4 Other (Specify: |
| |

| Ви | lder/Developer Survey | 9 |
|----|--|-------------------------------------|
| 4 | In how many urban areas do 1 One 2 Two 3 Three 4 Four 5 Five or more | you operate? (Circle) |
| 5 | During 1986, what was your buin the following markets | ulding and development sales volume |
| | Single family residential: | \$ |
| | Condominiums/lownhouses: | \$ |
| | Multi-family rental: | \$ |
| | Commercial/office; | \$ |
| | Industrial. | \$ |
| | Other (specify:) | s |
| 6 | What is your position with the | firm? |
| | Position. | |

THANK YOU FOR YOUR ASSISTANCE. JUST DROP THE QUESTIONNAIRE IN THE MAIL. IT IS ALREADY ADDRESSED AND POSTAGE HAS BEEN PREPAID.

WHAT THIS SURVEY IS ABOUT

- This survey is designed to provide information about people's experience and opinions concerning flood hazards
- We are particularly interested in whether flood nazards or government policies to deal with those hazards have affected your decisions about your property at the address below. We refer to that property in the questionnaire as "the listed property"

LISTED PROPERTY ADDRESS

WHAT WILL BE DONE WITH THE INFORMATION

- Statistical summaries of your experiences and opinions and those of other property owners will be put together in a report that will be presented to CONGRESS, FEDERAL, STATE, AND LOCAL AGENCIES that are responsible for programs to alleviate flood hazards
 - NO INFORMATION YOU GIVE US WILL BE REVEALED TO ANYONE IN A WAY THAT CAN IDENTIFY YOU

HOW YOU WERE CHOSEN TO FILL OUT THIS QUESTIONNAIRE

- Your name was selected at random from county property records from a national sample of communities that have been classified as floodprone by the federal government
- Because individuals were selected by chance, the results will provide an unbiased picture of property owners' experience with and attitudes toward flood hazards and government programs

HOW TO FILL OUT THE QUESTIONNAIRE

 Most of the questions can be answered by circling a number that corresponds to your answer, as follows

What is your marital status?

- 1)Married
- 2 Single and never married
- 3 Married but separated
- 4 Widowed or divorced

PLEASE ANSWER EVERY QUESTION THAT APPLIES TO YOU

IF YOU HAVE ANY QUESTIONS ABOUT THE SURVEY CALL DR. BURBY OR DR. KAISER COLLECT 919-962-3074

The first set of questions deals with your experience with flooding of the property listed on the inside of the cover page. We are interested in your perception of the risk of flooding in your community and in any actual flooding that has occurred on the property listed.

- To start, how would you characterize the threat of flooding in the city or town where that property is located? (Circle one)
 - 3 Very severe flood threat
 - 2 Moderate flood threat

Property Owner Survey

- 1 No flood threat at all
- 2 Over the next ten years, what would you estimate are the odds of the listed property being flooded at least in part? (Circle one)
 - 1 Zero, no chance at all
 - 2 5 chances in 100
 - 3 10 chances in 100
 - 4 Greater than 10 in 100, but lesss than 50/50
 - 5 Odds are 50/50
 - 6 Greater than 50 chances in 100, but not certain
 - 7 Almost certain
- 3 To the best of your knowledge has the listed property flooded in whole or in part while you have owned it?

| 1 | No | _ | skip | to | question | 4 |
|---|----|---|------|----|----------|---|
|---|----|---|------|----|----------|---|

| - | | p | | |
|---|-----|------------|------------|-----------|
| 2 | Yes | - answer n | e snoiteau | through 1 |

| _ | answer questions a mough i |
|-------|--|
| a | In what year was the most recent flooding of the listed property? Year: |
| b | . In what year was the most serious flooding of the property? Year: |
| C. | . In that most senous situation, what flooded? (Circle one) 1 Grounds but not the structure 2 Basement of structure 3 Main floor of structure |
| d. | . What was the cost of damage, if any, from the most serious flooding of the listed property? Estimated cost: \$ |
| е | How much of the damage cost was covered by flood insurance, government loans, or other sources other than yourself? |
| l | Insurance paid \$ Government loan \$ Other assistance \$ |

(continued)

CONSUMERS

| | | As a result of that flooding event on your property, did any of the following happen to you? (Circle all that apply, If none circle 8) |
|---|---|--|
| | : | Became depressed over the event Later experienced stress or fear when it rained a lot Went into debt borrowing money to recover from the flood |
| 1 | 4 | Had to use up savings to pay for losses and expenses to recover from the flood |
| | | Had to sell assets in order to pay for losses |
| Ì | ŧ | Decided to sell property because of flood hazard |
| | 1 | Looked into ways of reducing future flooding on property |
| ı | l | None of the above |

- 4 Have you ever experienced flooding on other property that you have owned? (Circle)
 - 1 No
 - 2 Yes
- 5 Do you know someone who has experienced a damaging flood?
 - 1 No
 - 2 Yes
- 6. Have friends, relatives or business associates discussed flooding with you during the past year?
 - 1 No
 - 2 Yes

The next set of questions asks about your opinions regarding various ways of reducing the threat of flood damages.

1. First, please look at this list of possible actions that can be taken to reduce flood threats.

If you are not familiar with the action, circle 1. If you are familiar with the action and think it is or would be useful in protecting the listed property, circle 2. If you are familiar with the action, but think it either is not or would not be useful in reducing the flood threat to the listed property, circle 3.

| | Circle On Not Familiar | e for Eac | sh Action Not | | |
|--------------------------------------|------------------------------|-----------|------------------|--|--|
| | Familiar | Useful | Useful | | |
| Private Actions | | | | | |
| a. Add fill to raise elevation | 1 | 2 | 3 | | |
| b. Elevate buildings | 1 | 2 | 3 | | |
| c. Waterproof walls of structures | 1 | 2 | 3 | | |
| d. Build floodwalls or levees around | | | | | |
| property | 1 | 2 | 3 | | |
| e. Relocate structure on property | 1 | 2 | 3 | | |

| Propert | y Owner Survey | | | |
|---------|---|---|---|---|
| 1. | Permanently relocate furnance, washer, etc. | 1 | 2 | 3 |
| g. | install sump pump on lowest level of building \dots . | 1 | 2 | 3 |
| P_U | iblic Actions | | | |
| h. | Require new buildings to be elevated | 1 | 2 | 3 |
| i | Limit building in flood hazard areas | 1 | 2 | 3 |
| j. | Require large lots | 1 | 2 | 3 |
| k. | Government purchase of floodprone homes and relocation of residents | | 2 | 3 |
| ı | Government purchase of vacant floodplain land for parks and open | 1 | 2 | J |
| | space | 1 | 2 | 3 |
| | Require flood insurance for new buildings | 1 | 2 | 3 |
| n. | Clear debris and obstructions in | | | |
| _ | streams | 1 | 2 | 3 |
| | Deepen, widen or line streams . | 1 | 2 | 3 |
| ρ. | streams | 1 | 2 | 3 |
| q. | Build flood control dams on main | | _ | _ |
| _ | streams | 1 | 2 | 3 |
| ŗ. | Improve upland storm drainage | 1 | 2 | 3 |

- 2 Which of the above actions to your knowledge are actually being used to protect the listed property? Please circle the letters (a through r above) to the left of each action being used to protect the property
- 3 How much would you be willing to pay to have government fully protect the listed property from flooding? (Circle, and if appropriate, fill in dollar amount)
 - 0 The listed property is not threatened by flooding
 - 1 There is some flood threat, but I can deal with it adequately by myself
 - 2 There is some flood threat and I would be willing to pay the following amount to have government eliminate it; \$
- 4 Have you yourself spent any money, other than for insurance, to protect the listed property?
 - 1 Yes (Please estimate how much: \$
 - 2 No please indicate why not (Circle all that are reasons)
 - 1 No need for it, flooding not a problem 2 I don't think there is any solution that is worth the cost

 - 3 Don't have the money, otherwise I'd take action
 - 4 I am not sure what is best action to take 5 I am waiting for government to solve the problem
 - 6 Other (specify:

| | | Circle | One 'or Each | Action |
|----|---|---------|--------------|---------|
| | | L. | Samouhat | Vanz |
| | | Helpful | Helpful | Helpful |
| а. | Low-cost roans for on-site flood protection work | 1 | 2 | 3 |
| b. | Instruction manuals about how to reduce flood threat | t | 2 | 3 |
| C. | Free on-site visit by expert for advice on cost-effective techniques | 1 | 2 | 3 |
| d | Government help in the form of labor and equipment to do flood-proofing | 1 | 2 | 3 |

- 6 Do you now have flood insurance on the listed property? (Circle one)
 - 3 Yes Skip to next section
- _2 No, had flood insurance but dropped it
- -1 Never had flood insurance on the listed property

Why have you dropped it or never had it? (Circle all that are reasons)

- 1 Haven't heard of it
- 2 Heard of it, but not interested
- 3 It is too expensive
- 4 Not worth it, flood risk is too low
- 5 Does not cover basement flooding
- 6 Other (specify:

Now we would like you to think back to the time when you acquired the property listed inside the front cover. This next set of questions asks about your reasons for acquiring the property and how your plans have been affected, if at all, by potential flooding and governmental programs to deal with flood threats.

1. In what year was the listed property acquired?

YEAR:

- 2 How did you acquire the property? (Circle)
 - 1 Purchase
 - 2 Gift or inheritance
 - 3 Spouse owned it
 - 4 Other (specify:

Property Owner Survey

- 3 Was the dwelling or other structure already built or did you build it? 1 Acquired only the land, and then built the structure-Skip to 0.4
 - 2 Structure was already built

a Were any of the following flood protection measures already incorporated into the property when you acquired it? (Circle all that apply, if none apply, circle 7)

- 1 Structure elevated on fill
- 2 Structue elevated on piers
- 3 Exterior walls of structure waterproofed
- 4 Floodwalls or levees around the property
- 5 Equipment such as furnace and washer on higher floor of structure
- 6 Sump pump installed on lowest floor of structure
- 7 None of the above
- 4 Which of the following were reasons for acquiring the property or, if you didn't purchase it, for holding it immediately after it was acquired? (Circle all that apply)
 - 1 To live on property
 - 2 To use for business purposes
 - 3 To obtain income from renting to others
 - 4 To obtain profit from future sale (i.e., an investment)
 - 5 To hold for sentimental reasons
 - 6 Other (specify:
- 5. Before you acquired the listed property, did you investigate in any way whether it was subject to flooding? (Circle)
 - 1 No Skip to question 6

2 Yes

- a How did you do that? (Circle all that you did)
 - 1 Asked real estate agent or broker
 - 2 Asked people familiar with area
 - 3 Asked previous owner
 - 4 Asked people at city half or county courthouse
 - 5 Looked at government maps showing flood hazard boundaries
 - 6 Other (specify:

6 To your knowledge is the listed property located within a flood hazard area? (Circle one)

- 1 No skip to question 7
- 2 Don't know skip to question 7
- 3 Yes answer questions a, b, and c

- next page

a. When did you first find out that the listed property might be subject to flooding? (Circle one) 1 After it was acquired - GO TO QUESTION b 2 Before it was acquired - ANSWER (1) - (3) (1) Did you learn about the flood threat (Circle one) 1 When you first looked at the property or even before that 2 During the time you investigated and considered acquiring the property 3 After earnest money was deposited in the purchase process 4 At time of closing procedures (2) Based on knowledge of the likelihood that the property might flood, did you make any adjustments when you acquired it? (Circle all that apply) 1 No adjustments were made 2 Reduced offering price 3 Other (specify: (3) When you acquired the listed property, did the mortgage lender require flood insurance? 1 Yes, mortgage lender required flood insurance 2 Not required, but I purchased it volun-

b Who told you the property was located in a flood hazard area? (Circle all that apply)

3 Neither, I didn't purchase flood insurance when I acquired the property

- 1 No one, I learned by myself
- 2 Real estate agent or other broker
- 3 A public official
- 4 Friend or acquaintance
- 5 Lender
- 6 Attorney
- 7 Previous owner
- c What has been the effect of the flood hazard and local floodplain regulations on the value of the listed property? (Circle)
 - 1 No effect
 - Less than 5% loss over what the property would be worth if it were not located in a regulated flood hazard
 - 3 5 9% loss
 - 4 10 24% loss
 - 5 25% or greater loss

7 How important was each of the following factors in your decision to acquire the listed property? Circle 5 if it was very important and 1 if it was not important at all. Circle 2, 3, or 4 if its importance was somewhere in between

| | | Circle | One | Number | *or | Each Item |
|------------|--|--------|-----|--------|-----|-----------|
| | | Not | | | | Very |
| | | Import | ant | | | important |
| 3. | Resource factors—soil quality, | • | | | | |
| | timber, mineral deposits, etc | 1 | 2 | 3 | 4 | 5 |
| b. | Site factors—trees, size of parcel, views, etc | . 1 | 2 | 3 | 4 | 5 |
| c . | Financial factors-price, loan pro- | | | | | |
| | visions. down payment | 1 | 2 | 3 | 4 | 5 |
| d. | Investment factors—potential for appreciation in value | 1 | 2 | 3 | 4 | 5 |
| 8. | Proximity to shopping, schools, | | | | | |
| | employment | 1 | 2 | 3 | 4 | 5 |
| f. | Proximity to friends and relatives | 1 | 2 | 3 | 4 | 5 |
| g. | Proximity to other parcels you | | | | | |
| | owned | 1 | 2 | 3 | 4 | 5 |
| h. | The area nearby-friendly, pres- | | | | | |
| | tigious | 1 | 2 | 3 | 4 | 5 |
| i, | Dwelling characteristics—appearance, layout, space, equipment, | | | | | |
| | etc. | 1 | 2 | 3 | 4 | 5 |
| j. | Other (Specify:) | 1 | 2 | 3 | 4 | 5 |
| | | | | | | |

- How concerned are you about the possibility of the listed property being flooded? (Circle one)
 - 4 Very concerned
 - 3 Fairly concerned
 - 2 A little concerned
 - 1 Not concerned at all
- Compared to other problems you face, how senous is the threat of flooding to the listed property? (Circle one)
 - 1 Not serious at all
 - 2 Slightly serious
- 3 Moderately serious
- 4 Extremely serious
- Have you considered selling the listed property because of the possibility of flooding? (Circle one)
 - 1 No
 - 2 Yes

1 Increase 100% or more

2 Increase 50% - 99% 3 Increase 25% - 49%

4 Increase 1% - 24%

6 Decrease 1% - 24%

7 Decrease 25% or more

5 Remain the same

circle 10)

1 Signed a petition

flooding

flooding

9 Other (specify:

10 None of the above

c. A person has a right to live

| γ_A | \sim |
|------------|--------|
| //1 | |

The last section of the questionnaire deals with the characteristics of the listed property and of you as a landowner. Your responses to these questions are needed so that we can present our study results separately for different types of property and landowners

- 1 How would you describe the area in the vicinity of the listed property? (Circle one)
 - 1 Mostly rural farmland
 - 2 Slowly developing urban fringe area
 - 3 Rapidly developing urban fringe area
 - 4 Mostly developed urban area, with some vacant land remaining
 - 5 Highly developed urban area with only a few vacant parcels remaining

(to nearest \$5,000)

2. What is your best estimate of the market value of the listed parcel to the nearest \$5,000?

3 How many people live in your household?

NUMBER OF PEOPLE: __

4 How many are under age 187 NUMBER UNDER AGE 181 _

MARKET VALUE: S.

5 How much formal education have you had? (Circle)

- 1 Did not graduate from high school
- 2 High school graduate
- 3 Some college
- 4 College graduate
- 5 Graduate or professional training beyond college graduate
- 6 What was your total family or household income in 1986? (Circle)
 - 1 Under \$10,000
 - 2 \$10,000 \$19,999
 - 3 \$20,000 \$29,999
 - 4 \$30,000 \$39,999
 - 5 \$40,000 \$49,999
 - 6 \$50,000 \$74,999
 - 7 \$75,000 \$99,999 8 \$100,000 - \$149,999
 - 9 \$150,000 or more
- 7 What is the age of the main wage-earner in your household?

AGE: .

- 8. What is your marital status?
 - 1 Married
 - 2 Single and never married
 - 3 Married but separated
 - 4 Widowed or divorced

- 9 What is your family's racial background? (Circle)
 - 1 White
 - 2 Black

Property Owner Survey

- 3 Hispanic
- 4 Oriental
- 5 American Indian
- 6 Other
- 10 What type of structure is it that you own on the listed property? (Circle one)
 - 1 Mobile Home
 - 2 Single family, detached house
 - 3 Two-, three-, or four-family house
 - 4 Condominium
 - 5 Apartment building
 - 6 Retail business structure
 - 7 Office building
 - 8 Wholesale or industrial structure
 - 9 Other (Specify: _

Please use the space below and on the last two pages for any additional comments you care to make about flood hazards and how they are dealt with in your community. When you've finished, just drop the questionnaire in the mail. Postage has been prepaid

Comments: