

Session No. 4

Course Title: Breaking the Disaster Cycle: Future Directions in Natural Hazard Mitigation

Session Title: Voluntary Buyouts as Hazard Mitigation: Implementing Buyouts

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Time: 150 minutes + 15 minute break

Objectives:

- 4.1 Review the history and context of the federal buyout option
 - 4.2 Understand the use of voluntary property buyouts as a means of reducing vulnerability to floods
 - 4.3 Assess opportunities and problems with buyouts
 - 4.4 Discuss case studies of the use of buyouts by state and local governments
 - 4.5 Participate in a team exercise on implementing buyouts
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Scope:

The first part of the session provides a summary of the history of buyouts as a hazard mitigation option. This is followed by a discussion of how buyouts can reduce vulnerability to natural hazards, particularly floods, and several brief examples to illustrate the experiences of different communities in implementing buyout programs. Following this summary is a discussion of the key advantages and disadvantages of buyout programs.

The second part of the session engages the students in a discussion of how some of the main problems posed by buyouts could be overcome. Students will be asked to decide between upgrading a dike to provide additional flood protection and implementing a buyout program to move structures out of harm's way.

Reading:

Instructor and student reading:

National Wildlife Federation, 1998. Ch. 1. The Buyout Option: History and Context, and Ch. 5. A Tale of Three Cities—Tulsa, Houston, and New Orleans, pp. 1-23, and 145-173. *Higher Ground: A Report on Voluntary Property Buyouts in the*

Nation's Floodplains. Washington, D.C.
(<http://www.nwf.org/floodplain/higherground/exec.html>)

Godschalk, David R., et al., 1999. Ch. 4. Missouri after the Midwest Floods of 1993, and Ch. 5. Iowa after the Midwest Floods of 1993, pp. 161-229. *Natural Hazard Mitigation: Recasting Disaster Policy and Planning*.

FEMA Office of Inspector General. 2001. *Buyouts: Hurricane Floyd and Other Issues Relating to FEMA's Hazard Mitigation Grant Program*. Washington, D.C.

Additional instructor reading:

FEMA. 1998. *Property Acquisition Handbook for Local Communities*. Washington, D.C.
(www.fema.gov/fima/handbook)

For information on the buyout and recovery effort in Kinston, NC, see
www.ncem.org/mitigation/case_kinston.htm

Handouts:

Community Consulting Exercise Instructions

Overheads:

- 4.1 Federal Funding for Buyouts
- 4.2 Steps in the Buyout Process
- 4.3 Buyout Requirements under HMGP
- 4.4 Pros and Cons of Buyouts
- 4.5 Criteria for Selecting Properties to Acquire
- 4.6 Kinston, NC: Location Map and Identification of Floodplain
- 4.7 Kinston, NC After Hurricane Floyd
- 4.8 Kinston, NC: Buyout Areas
- 4.9 Grand Forks, North Dakota
- 4.10 Flooding in Grand Forks, April 1997

General Requirements:

The instructor presents a lecture during the first part of the session. In the second part, the instructor engages the class in a discussion of the issues faced when implementing a buyout program. The discussion is structured around suggestions by students about how to overcome some of the key obstacles that arise during implementation of buyout

programs in order to (1) achieve multiple objectives (e.g., open space protection, neighborhood revitalization and moving people out of harm's way) and (2) to permanently reduce a community's vulnerability to flooding.

Remarks:

During previous classes, students examined the evolution of hazard mitigation as well as different approaches to mitigating natural hazards. Students were introduced to federal programs such as the Hazard Mitigation Grant Program and the Flood Mitigation Assistance Program. In this session, we will discuss a form of hazard mitigation, known as buyouts, that involves public acquisition of hazard prone property.

4.1 History and context of the federal buyout option

For most of this century, our nation's policy toward controlling floods has focused primarily on taming rivers with structures such as dams, floodwalls and levees. While this structural approach undoubtedly reduced the severity of flooding in many communities, it also destroyed the natural capacity of floodplains to attenuate floods and encouraged development in flood-prone areas by giving people a false sense of security that these areas were safe from flooding (White 1945; Burby et al. 1985; Burby et al. 1988). In addition, it has been enormously expensive. Despite billions spent on flood control measures, flood losses continue to mount, as more people and property become exposed to flooding (Godschalk et al. 1999).

In 1968, with the creation of the National Flood Insurance Program (NFIP), our national policy began to shift, albeit slowly, toward nonstructural measures such as land use controls and building standards. Under the NFIP, as discussed previously in Session 1 and in greater detail in Session 5, Congress makes affordable flood insurance available to property owners in communities that agree to adopt and enforce floodplain management ordinances that meet the minimum criteria established by the Federal Emergency Management Agency, or FEMA. Since the inception of the National Flood Insurance Program, over 18,000 communities have chosen to participate.

Critics have argued that federal flood control efforts along with the availability of relatively cheap federal flood insurance have encouraged development in floodplains, putting more people and buildings at risk and perpetuating a *disaster cycle*: a cycle of development, flood damage, flood control, further development, further flood damage, further flood control, and further development (Mileti 1999; NWF 1998). In many communities, it is not uncommon for homes severely damaged by flooding to be repaired, only to be damaged again by a subsequent flood. According to a 1998 report by the National Wildlife Federation, these so-called repetitively-damaged properties account for a disproportionate share of the losses incurred by the NFIP.

One way to break the disaster cycle is through public acquisition of developed and vacant floodplain property, also known as *buyouts*. Since the early 1970s, acquisition and

relocation programs have been implemented in hundreds of communities across the United States, including the purchase of 1,400 parcels in Rapid City, South Dakota following the 1972 flood and relocation of 80 families from the Salt Creek floodplain in DuPage County, Illinois (Burby et al. 1988).

It was not until the devastating Midwestern flood of 1993, however, that public acquisition of flood-prone property began in earnest. Since that record-breaking flood, voluntary buyouts, which include purchase of vacant property in floodplains, purchase and relocation of existing structures, and purchase and demolition of flood-damaged structures, have become a major new focus in FEMA's overall strategy to mitigate flood losses (FEMA 1998). For example, virtually all mitigation implementation in Missouri following the Midwest floods of 1993 resulted from the buyout program—over 42 communities in Missouri participated in buyouts, resulting in the acquisition of over 2,400 flood-prone properties (Godschalk et al. 1999). This could be characterized as *de-development*, in which structures within previously developed areas located within hazard zones are either relocated or demolished.

Since 1993, FEMA has purchased, from willing sellers, approximately 20,000 properties in 36 states and one territory and acquired easements on approximately 400,000 acres of flood prone farmland in 14 states (NWF 1998). Property owners were paid pre-flood fair market value for their homes.

In many localities, the effectiveness of buyout programs has already been tested by subsequent flooding—and such programs have proven successful from an economic and social standpoint (FEMA 2000). As a result of the buyouts that followed the 1993 Midwest floods, FEMA claimed that an estimated \$30 million in potential flood losses was avoided during the floods in 1995 because so much less property was vulnerable to flooding (Godschalk et al. 1999). For example, St. Charles County, Missouri, which sits at the confluence of the Missouri and Mississippi Rivers, was inundated by the 1993 Midwest flood. The county received over \$26 million in federal disaster assistance and purchased 1,374 flood-damaged properties located in the 100-year floodplain. When the town was flooded again in 1995, it suffered only minimal flood damage: most of the homes that would have been flooded had been removed as part of the buyout program. Federal disaster assistance to the county totaled only \$283,094 in 1995: a ninety-nine percent reduction from 1993. The difference can be attributed in large part to moving people out of harm's way (Missouri State Emergency Management Agency, 1995).

4.2 Using buyouts as a means of reducing vulnerability to floods

Buying flood-prone property is just one of many approaches to mitigating natural hazards. Unlike other hazard mitigation techniques, however, such as elevating homes (e.g., on pilings) above flood levels or building a dike, buyouts permanently reduce a community's vulnerability to flooding by moving people out of harm's way. When a community purchases flood-prone property as part of a FEMA-sponsored buyout, it acquires title to the land, clears any structures from the property, and preserves the property forever as open space. The purchased property becomes public open space that can be used to create parks, wildlife refuges, ball fields, etc., but it cannot be developed

or sold to private individuals or entities. Thus, buyouts can permanently reduce local government costs for emergency rescue, infrastructure repair, debris removal and emergency shelters.

Property acquisition funds are available under two programs administered by FEMA: 1) the Hazard Mitigation Grant Program (HMGP) and 2) the Flood Mitigation Assistance Program (FMAP). (*Figure 4.1 Federal Funding for Buyouts*) Under the Hazard Mitigation Grant Program, FEMA takes a percentage of the federal money spent on recovering from a disaster and uses it for projects that reduce *future* risks, as opposed to buying sandbags or water pumps to fight current flooding. FEMA can contribute 15 or 20 percent of a disaster's cost to this grant program. How this money is spent is up to the state: FEMA has regulatory oversight of the program, but states are responsible for administering the HMGP and prioritizing projects for funding. States can use the money to elevate or flood-proof homes, develop hazard mitigation programs, or purchase (and either relocate or demolish) structures damaged by floods: that is, for a buyout.

The Flood Mitigation Assistance Program provides funding to state and local governments to implement measures to reduce or eliminate the long-term risk of flood damage to structures insurable under the NFIP. Grants are available for developing flood mitigation plans, implementing measures (e.g., acquisition, elevation or relocation of NFIP-insured structures) to reduce flood losses and for technical assistance. The program is proactive and is not directly tied to the occurrence of a natural disaster. Thus, FMAP grants can be used for hazard mitigation before a disaster happens.

To be eligible for funds under either the HMGP or FMAP, communities must participate in the National Flood Insurance Program, discussed in Session 5 (communities that join the NFIP within six months of a disaster are eligible to receive HMGP funds).

Most buyouts occur under the Hazard Mitigation Grant Program. (*Figure 4.2 Steps in the Buyout Process*) HMGP buyout projects are 75 percent funded by FEMA and 25 percent by the state or local government. The 25 percent share can be fashioned from a combination of cash and in-kind sources. Funding from other federal programs cannot be used to meet the 25 percent non-federal share, except for funds provided under the Community Development Block Grant program.

Money is limited and in most cases, the amount set aside for mitigation cannot meet all the mitigation needs following a disaster. States prioritize mitigation programs-with input from the communities. The state and local communities work together to identify areas where buyouts make the most sense. Individuals may not apply directly to the state, but the community may sponsor an application on their behalf. FEMA does not buy houses directly.

The program is entirely voluntary. (*Figure 4.3 Buyout Requirements Under the HMGP*) Homeowners that participate in a buyout program are given the *pre-flood* fair market value of their home. Thus, even if a home has been completely destroyed by flooding, participating homeowners receive what their home was worth before the flood occurred.

In addition, the program pays for all appraisals, lot surveys, title searches, closings and demolition or relocation of the house. To avoid duplication of benefits, communities must subtract, from the final purchase price of a house, any disaster assistance received from other federal sources, including funds received for federal flood insurance. In some cases, local governments administering the buyout will provide grants of up to 10 – 15 percent of the pre-flood value of the home as an added incentive, usually in cases where “replacement” homes are more expensive than existing homes.

4.3 Opportunities and problems posed by buyouts

There are several good reasons for implementing a buyout program. For example, buyouts reduce the future risks and cost as well as the painful disruptions caused by future flooding. In addition, homeowners receive fair compensation based on the pre-flood value of their home, thus recouping their investment in property that has lost much of its value due to flooding.

However, buyouts also can dramatically affect the economic and social well-being as well as the character of a community. Buyout programs often involve uprooting families, relocating businesses, and converting developed areas to open space. Sometimes, they involve moving schools, churches, and even an entire downtown to a new location, outside of the floodplain. For example, after suffering extensive flooding in 1993 and again in 1995, virtually the entire town of Pattonsburg, Missouri, chose to move out of the floodplain. Two-hundred and thirty-five properties were acquired. Ten landowners, however, chose to stay. Similarly, Valmeyer, Illinois (population 900) choose to relocate to higher ground after the Mississippi River spilled over the town's levee in 1993 and inundated over 90 percent of the its homes and businesses. The entire town moved to a site about one and one-half miles from its original location. One of the first, and perhaps best-known, examples of relocation, however, occurred in Soldiers Grove, Wisconsin, located along the Kickapoo River. In the mid-1970s, the town turned down a proposed \$3.5 million Army Corps of Engineers levee and opted instead to relocate its entire downtown outside the floodplain (Godschalk, 1999). The relocation was completed in 1983.

The overall impact of a buyout program will vary among communities. For some, a buyout program can give families a fresh start in an area free from flooding, or it can create much-needed open space and improve the community's quality of life. For others however, a buyout program may mean the loss of a cherished neighborhood or business. The main advantages and disadvantages of buyout programs are described below (*Figure 4.4 Pros and Cons of Buyouts*).

Advantages

- *Saves money* – Acquiring flood-prone property, particularly repetitively damaged property, is usually cheaper in the long run than paying to repair or rebuild the same structures over and over again. Buyouts can help reduce the public costs of flooding, which include emergency services, evacuation, emergency shelters, debris removal, and the loss of tax revenues (from businesses damaged or destroyed by flooding). In addition, the social and psychological costs--due to temporary or permanent loss of home, job, disruption of the community--caused by flooding can be substantial. By acquiring flood-prone properties, a community can reduce or eliminate future flood damage and disruption. (*Figure 4.4 Criteria for Selecting Properties to Acquire*)
- *Provides permanent protection* - Unlike disaster relief, acquisition provides a permanent, rather than stopgap, solution to flood problems. By purchasing vacant, flood-prone property and prohibiting its development, or by moving existing structures out of harm's way, a community can permanently reduce or eliminate the

risk of flood damage to those properties, ensuring that virtually no additional disaster assistance would be granted in the future, and provide the local community with open space river lands in perpetuity.

- *Serves multiple objectives* - Acquisition of properties in the floodplain can serve many purposes, such as reducing future flood losses, preserving open space, protecting wildlife habitat, and providing areas for recreation.
- *Enhances natural flood protection* - Protecting floodplains from development increases their natural flood storage capacity and can reduce the need for structural flood control measures.
- *Protects private property rights* – Federally sponsored buyout programs rely on the voluntary sale of flood-prone properties at pre-flood market price. By acquiring, rather than regulating property, buyout programs posed little threat to private property rights and thus are more palatable politically.

Disadvantages

- *High Cost* – Acquisition is expensive, especially in areas where property values are high. Acquisition expenses include not only the cost of purchasing property, but program administration, property maintenance and liability expenses as well. Small governments may lack sufficient resources to develop and implement an acquisition program. In many cases, it may be cheaper, at least in the short run, to elevate or flood-proof existing structures in the floodplain than to acquire them.
- *Loss of tax base* – Acquisition removes property from tax rolls, except where a building is acquired and relocated to a flood-free location within the same jurisdiction. Any loss of tax revenues, however, may be outweighed by savings from not having to provide services to properties in flood hazard areas and from avoiding the recurring costs of disaster rescue and recovery.
- *Higher housing costs* – Housing on higher ground is generally more expensive than flood-prone land. As a result, buyout participants often have to pay more—take on bigger mortgages—when buying a new home outside the floodplain. And in some communities, particularly those with relatively little flood-free land available for development, acquisition may constrain land markets and thus increase housing costs.
- *Disruption of established neighborhoods* – People often become rooted to their neighborhood, despite the recurring disruption and loss caused by flooding. In fact, many people take great pride in having survived major floods, rebuilding their homes and lives after the floodwaters subside. Buyouts can disrupt or destroy neighborhood ties.
- *Incomplete participation* - Despite generous offers to buy their flood-damaged property, many residents in flood prone areas do not want to leave and will opt not to participate in a buyout program. The lack of full participation among residents in a

particular block or neighborhood reduces options for creating public open space. In addition, the local government would still have to provide public services to such areas, thus reducing potential savings stemming from the removal of houses from flood-prone areas.

4.4 Selected case studies of the use of buyouts by state and local governments

Buyouts have been used throughout the country as a means of reducing a community's vulnerability to future flooding. Several of these communities are profiled briefly below. For example, in North Carolina, following the devastation caused by Hurricane Floyd in 1999, the state announced its intention to buy over 10,000 flood-damaged properties—the largest buyout of flood-damaged properties in U.S. history. Flooding from Floyd damaged over 50,000 homes. Of those, about 7,000 were destroyed and another 17,000 were left uninhabitable. Applications for buyouts already were underway after Hurricane Fran ravaged the state in 1996. Through 2000, the state has approved the acquisition of over 3,300 flood-damaged properties across forty-five communities and has received applications for the acquisition of another 1,000 (North Carolina Division of Emergency Management 2000).

Kinston, North Carolina

The City of Kinston, which sits on the banks of the Neuse River in eastern North Carolina, has long been vulnerable to flooding. Most of the city lies within the 50-year floodplain. (*Figure 4.5 Kinston, NC: Location Map and Identification of Floodplain*) When Hurricane Floyd struck in 1999, causing major flooding, the city was still recovering from devastating flooding caused by Hurricane Fran just three years earlier. According to the North Carolina Division of Emergency Management, flooding from Fran caused major damage to over 400 homes, dozens of businesses and public infrastructure. (*Figure 4.6 Kinston, NC, After Hurricane Floyd*) Total losses exceeded tens of millions of dollars. Floyd also damaged hundreds of homes and submerged the Central Business District under several feet of water, causing damage to about 200 businesses. When Hurricane Floyd struck, the city had already acquired and demolished nearly 100 homes damaged by Fran, the vast majority of which would have been flooded again by Hurricane Floyd. The removal of these homes saved the city an estimated \$6 million in avoided costs.

The City's recovery effort following both Fran and Floyd has been guided by several key objectives, including reducing the city's vulnerability to future flooding, revitalizing existing neighborhoods, preserving the tax base and creating open space. That is, to link hazard mitigation with community redevelopment. The centerpiece of the recovery effort is the acquisition of more than 400 residential structures, three mobile home parks and 68 vacant lots. According to NCDEM, the buyout project will cost approximately \$31 million, half of which will come from the Hazard Mitigation Grant Program. The rest will be funded by HUD (\$12 million) and from state funds. (*Figure 4.7 Kinston, NC: Buyout Areas*)

Kinston has used the buyout program as a means to revitalize run-down neighborhoods near its downtown and to create a greenway along the river. Under its Call Kinston Home initiative, the city provided financial incentives of up to \$10,000 to buyout participants

who bought a home within the city. It also relocated numerous homes to vacant or in-fill lots in existing neighborhoods outside the floodplain. As a result, only about two percent of buyout participants left the city.

Overall, Kinston has worked to integrate hazard mitigation with affordable housing, economic development, parks and open space, and the protection of natural resources. In 1999, the city adopted a comprehensive Urban Growth Plan to guide its efforts. In particular, the city has adopted more stringent controls on development in the floodplain, expanded its buyout program, steered new development to vacant or underutilized land near its downtown, and enhanced its tax base by encouraging development within its boundaries.

Grand Forks, North Dakota

In the winter of 1997, Grand Forks suffered through one of its worst winters in its history. Eight blizzards battered the city and blanketed the region with over 100 inches of snow. When the snow finally melted in April, it overwhelmed the Red River, which flows between the cities of Grand Forks, North Dakota and East Grand Forks, Minnesota on its route to Canada. The swollen river spilled over the protective dikes and inundated much of the city. Virtually the entire city of 52,000 was forced to evacuate. (*Figure 4. 8 Grand Forks, North Dakota*)

Shortly after the flood, the city began implementing a buyout program. To expedite the buyout process, it relied on the U.S. Army Corps of Engineers to inspect homes and prepare damage assessments, which freed the city's small staff of in-house assessors to focus on home appraisals: that is, to estimate the pre-flood value of homes destroyed by flooding.

With thousands of homes rendered uninhabitable by the flood, the city faced a severe housing crunch. (*Figure 4.9 Flooding in Grand Forks, April 1997*) It also faced the loss of thousands of its residents. In response, the city developed three housing subdivisions on the west side of town. In addition, it provided financial incentives for buyout participants to remain in the city: \$10,000 if they bought an existing home within city limits and \$15,000 if they either purchased or built a new home within the city.

The buyout permanently removed hundreds of the most vulnerable homes from harm's way and created parkland near the river for city residents. However, the buyout was not without its drawbacks. For example, the buyout left many participants saddled with heavy debt from buying a more expensive home (the loss of so many homes led to an increase in housing prices).

4.5 Participate in a team exercise on implementing buyouts

The instructor should pose the following questions at opportune times during the team presentations and discussions.

1. How can a community increase participation in a buyout program: what are some of the key issues?

2. What are the pros and cons of implementing a buyout? For flood victims? For a local government? For the federal government?
3. How do buyouts compare to other hazard mitigation techniques, in terms of enhancing a community's environmental resiliency?
4. What are some of the main obstacles to implementing a buyout program?
5. How can buyouts be used to achieve multiple objectives, e.g., open space, community revitalization, etc.?
6. How do the new hazard mitigation rules affect buyout programs?
7. What guidelines can you recommend to FEMA and local governments in implementing buyout programs?

Exercise Instructions

The instructor will lead the class through an analysis that compares different mitigation options for a fictitious town of Riverside. The two main options are either to build a dike or acquire homes in flood-prone areas. Other options are possible, including a combination of the two. Students should be encouraged to examine issues such as cost, long-term reduction of vulnerability, equity, environmental impacts and whether a dike would only encourage development in the floodplain, thus putting more people at risk. They should be informed that a Flood Mitigation Plan is the first step toward buyout planning and directed to visit a state emergency management web site to view the status of buyouts (for example, the North Carolina Division of Emergency Management web site: <http://www.dem.dcc.state.nc.us/mitigation/>)

Students should work as if they were hired as a consulting team by the mayor. You may want to split the class into groups to focus on one alternative or another, or on particular issues.

Situation

The Town of Riverside (pop. 80,000) recently suffered severe flooding that severely damaged or destroyed over 300 homes, several of which are listed on the National Register of Historic Places. For decades, the town was protected from flooding by an earthen dike along the river. But the recent flood, the largest in the town's history, swept over the dike and inundated homes and businesses. Thousands of people have been displaced from their homes. Downtown businesses suffered huge flood losses. The town was just declared a disaster area by the President.

The Riverside is in the midst of a heated debate over whether to seek federal funds to shore up its aging dike, which proved inadequate in protecting the town from flooding, or to buy out homes in low-lying areas. A buyout of the most vulnerable homes (between 80 and 100 homes) would provide the most permanent protection against flooding at a cost of \$13 to \$16. The buyout would take 1-2 years to complete. In comparison, shoring up the dike will cost from \$7 - 10 million, but would take 2-4 years and require changing its alignment: building a stronger, taller dike will require moving about 100 yards away from the river where the underlying soil and rock are more stable. The dike would be designed to protect homes against a 500-year flood.

The new alignment would leave several blocks (about 35 homes) in a riverfront neighborhood of modest homes on the wrong side of the dike, i.e., unprotected from flooding. Most of the homeowners in this area are African-American. Several angry residents have asked the city to rebuild the dike in place, a move that the U.S. Army Corps called risky and ill-advised (rebuilding the dike in place would cost an estimated \$3-4 million). Others assert that the city should take a long-term view and move homes out of harm's way. This would create much needed parkland along the river. The Corps prefers to build a new, realigned dike.

The mayor, who is up for reelection this year, is seeking advice from hazard mitigation consultants. The Town's budget is limited, and the mayor is unsure how the town would

raise the necessary 25 percent match of federal funds for either project. Several possible revenue sources are being considered, including a sales tax increase (unpopular with local businesses) or a fee assessed to all homeowners (also unpopular). Both approaches (e.g., buyout or dike) are expected to take about a year to obtain state and federal permits.

You have been assigned by your instructor to small consulting teams. Your assignment is to prepare a recommendation for the mayor on how to proceed. That is, should the town upgrade its dike along the river or acquire flood-prone properties? In either case, where will the money come from?

Map of Riverside

The shaded area shows the extent of recent flooding in the neighborhood along the river.

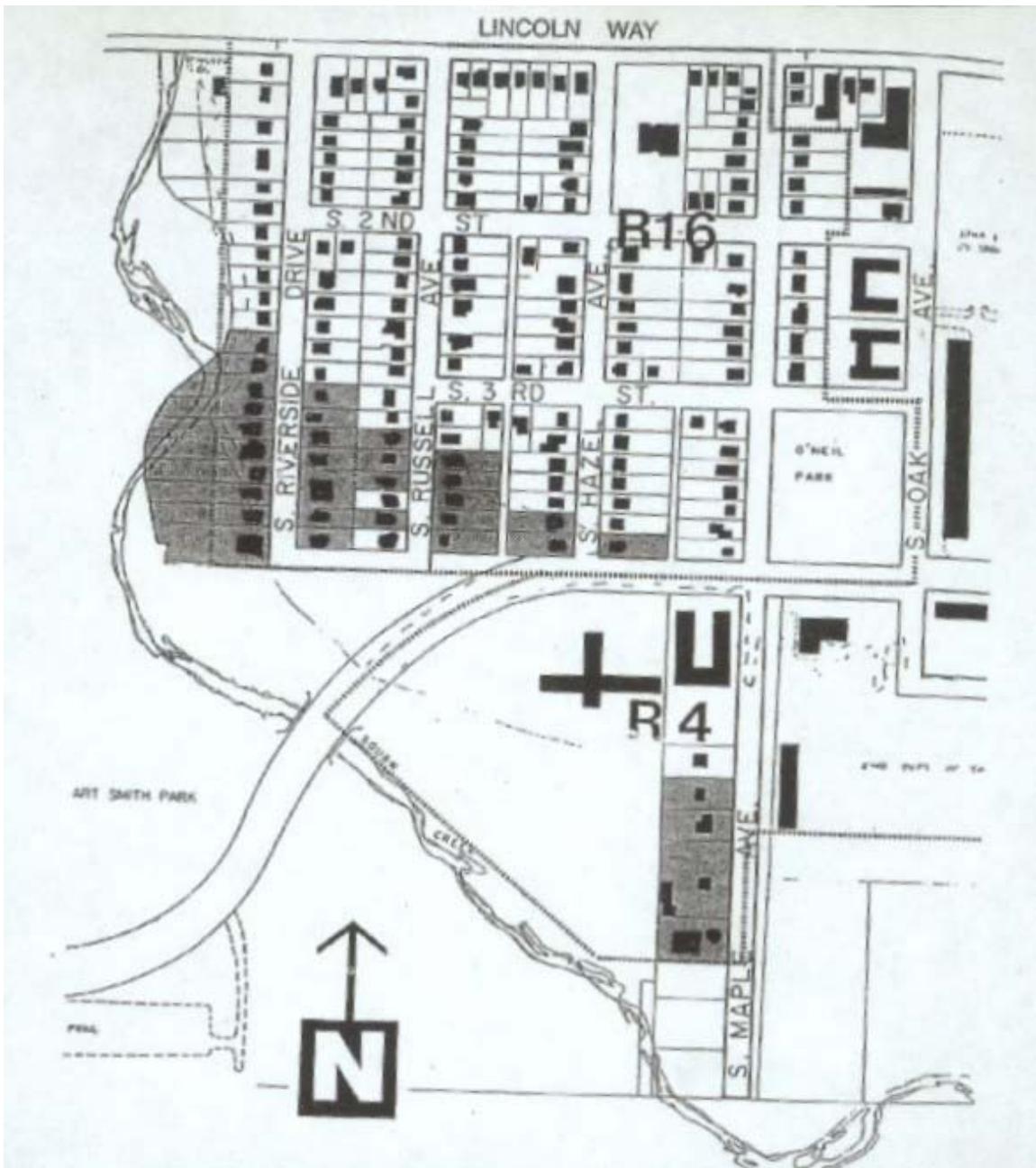


Figure 4.1. Federal Funding for Buyouts

Hazard Mitigation Grant Program

- Provides grants to states and local communities, *after* a major disaster, to implement long-term flood mitigation measures
- Up to 15-20 percent of total funds allocated by FEMA for a particular disaster can be set aside for the HMGP
- Eligible uses include elevating, flood-proofing or acquiring homes
- Funds are available only to communities that participate in the National Flood Insurance Program*

Flood Mitigation Assistance Program

- Provides grants to states and local communities to implement long-term hazard mitigation measures
- Not linked to a particular disaster declaration
- Eligible uses include preparing flood mitigation plans, elevating, flood-proofing or acquiring homes
- Funds are available only to communities that participate in the National Flood Insurance Program

* Nonparticipating communities have 6 months to apply

Figure 4.2. Steps in the Buyout Process

HMGP application is prepared by local officials with input from the community and from affected homeowners.

The state reviews the application(s) and forwards those that are consistent with state mitigation objectives to FEMA for approval.

FEMA reviews application to ensure it:

- a. Is consistent with state mitigation plan,
- b. Provides a beneficial impact to the state,
- c. Is cost effective,
- d. Is an environmentally sound use of funds, and
- e. Solves a problem independently.

If FEMA grants approval, the state authorizes the local government to begin the acquisition process.

Local community identifies willing sellers, conducts appraisals, purchases properties and takes title.

After a home is purchased, it is demolished and the land is cleared. The land must remain forever as public open space.

Figure 4.3. Buyouts Requirements under the HMGP

- All sales must involve willing sellers.
- Land and buildings must be appraised at their pre-flood fair market value.
- Costs must be shared on a 75 percent federal, 25 percent state, local or individual basis.
- Acquired property must revert to natural floodplain or be maintained as open space.
- Future disaster payments are prohibited at the purchased site.
- Displaced tenants can receive moving and replacement rental expenses, or use those funds to buy a home.
- Relocated structures must be placed outside the 100-year floodplain.

Figure 4.4. Pros and Cons of Buyouts

Pros

- Saves Money in long run (breaks disaster cycle)
- Provides Permanent Protection
- Serves Multiple Objectives
- Enhances Natural Flood Protection
- Respects Private Property Rights

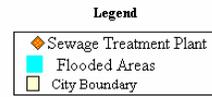
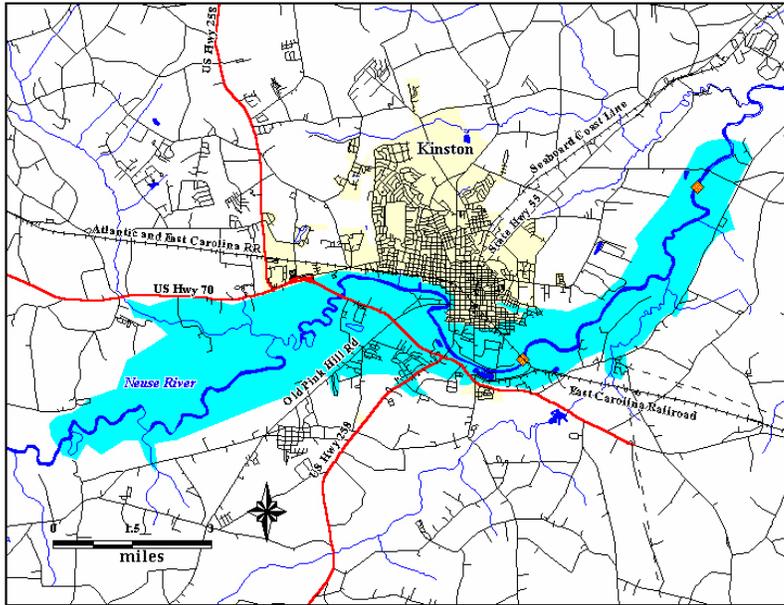
Cons

- High Up-Front Cost
- Reduces Local Tax Base
- Disrupts Neighborhood
- May Increase Housing Costs (in short term)
- Incomplete Participation Limits Effectiveness
- Higher Costs of Replacement Housing

Figure 4.5. Criteria for Selecting Properties to Acquire

- Puts human life and safety at extreme risk, e.g., is located within extreme flood, wave action, and/or wind action risk zones
- Suffers repetitive damage
- Poses a threat to neighboring areas in the event of a storm (e.g., because of the movement of dislodged debris)
- Would serve other environmental protection goals (e.g., natural resource preservation) or community goals (e.g., open space, parks)
- Would serve other hazard mitigation or floodplain management goals (e.g., increasing floodplain storage capacity)
- Is contiguous to open space or properties that will be acquired
- Is located in an area of the community that supports buyouts

Figure 4.6. Kinston, North Carolina



ITS Mapping and Analysis Center
 Washington, DC
 9/27/99 -- 1100EDT

Estimated Number in Flooded Area:
 Population: 3268 Housing Units: 1411

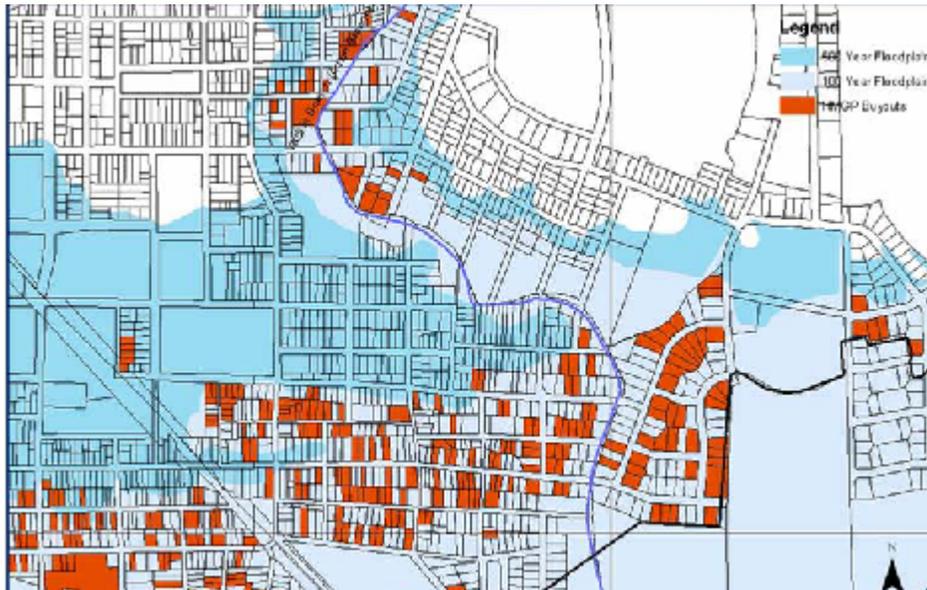
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Figure 4.7. Kinston, NC After Hurricane Floyd



Source: FEMA

Figure 4.8. Kinston, NC: Buyout Areas



Source: NC Division of Emergency Management

Figure 4.9. Grand Forks, North Dakota

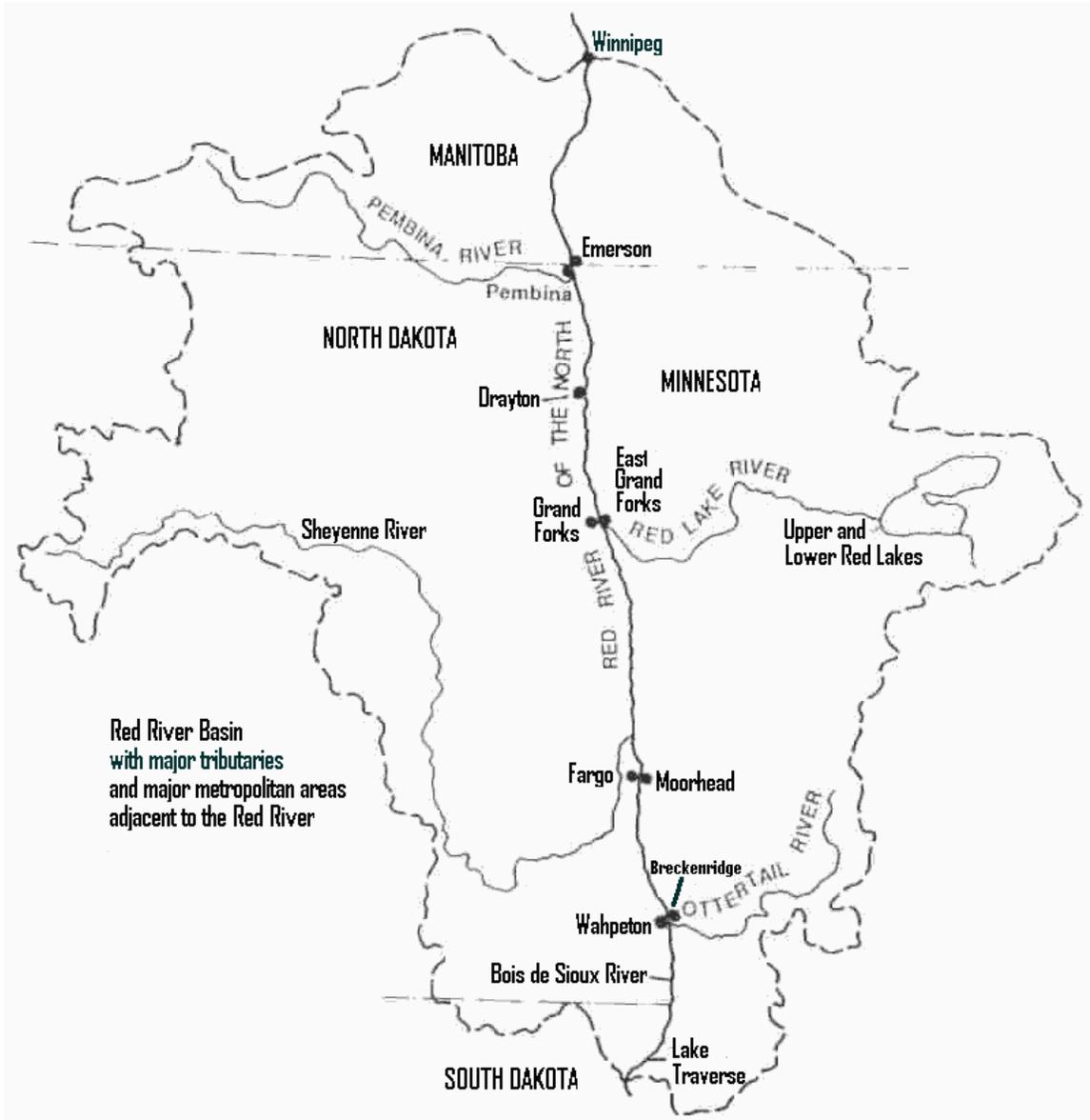


Figure 4.10. Flooding in Grand Forks, April 1997



Source: FEMA