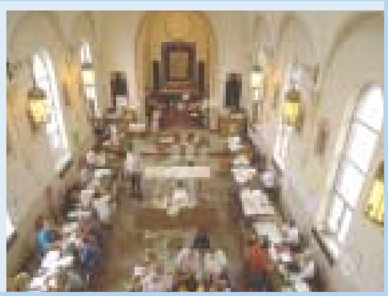
Stemming the Tide of Flood Losses

Stories of Success from The History of Missouri's Flood Mitigation Program



Missouri State Emergency Management Agency

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Overview of the Missouri Flood Buyout Program

From April of 1993 to May of 1995, the State of Missouri experienced unprecedented flooding of virtually all areas of the state. This situation resulted in Presidential Declarations on five separate occasions. These declarations became the basis for rather large dollar amounts of assistance for individuals and public entities alike. As provided by the Stafford Act, hazard mitigation grant program funds also became available on a formula basis for declared states. The focus of this report is the process and policies that evolved in Missouri to put these mitigation funds to use in the shortest possible time. Hopefully, this report will be useful as an historic document, but more importantly, it will serve as a "blueprint" for future similar programs should flooding again reach the 1993 and 1995 levels.

Prior to the 1993 major flood event, the Missouri State Emergency Management Agency (SEMA) had, for unknown reasons, passed the responsibility for the Hazard Mitigation Grant Program (HMGP) to the Department of Natural Resources. With the 1993 flood event, that responsibility was returned to SEMA. Arguably, it should always remain the responsibility of SEMA. The position is enhanced by the fact that Missouri has funded a State Hazard Mitigation Officer Position within the SEMA personnel structure. With that as an aside, the State was faced with an unprecedented task of administering a hazard mitigation program that eventually exceeded $100 million. The purpose of this overview is to provide a narrative concerning how the various processes and policies were developed and put into place.

As the individual and public assistance efforts during the later summer of 1993 progressed, it became obvious that the State would have significant funding for HMGP activities. An early estimate was $10-12 million. At the same time, the U.S. Congress began to address various flood assistance issues with one of the major efforts being the enactment of the "Volkmer Bill" which changed the formula for HMGP funding. That bill became law in mid-December 1993, and the HMGP fund forcast was suddenly $30 million. The awesome HMGP task was now even a greater challenge.

Following this realization, the State's first overt act was to send a letter to known eligible applicants informing them of the program with a further comment requesting communities to submit project applications. No further guidance was provided - no standard application or direction regarding the State's priorities was given. Consequently, a "flood of requests" in varying detail was received. Project scopes ranged from very large structural projects, including levees, storm water drainage systems, and a buyout project for one dwelling. The total project requests exceeded $300 million. The dollar amount and diversity of the projects increased to a significant degree the already difficult task of determining which projects to pursue.

During late 1993 and early 1994, FEMA Director James Lee Witt and others began to place emphasis on acquisition of flood damaged property.

Given the fact that the State only had $30 million available, and that buyout projections were exceeding that figure by a three to one margin, the decision was made to focus the HMGP effort on permanent primary residential structures. Necessity forced the exclusion of business properties, vacation homes, mobile homes, and building elevations.

A review of the projects received revealed that they included requests for "buyouts" that would cost $100 million. The "fog factor" was now being diminished to some degree and a logical approach to project approval emerged.

All the eligible applicants who were proposing acquisition were told to revise their applications for residential buyouts only and to be prepared to travel to Jefferson City to present their applications. In hindsight, SEMA has since determined and followed a better procedure wherein SEMA personnel travel to each buyout location to work the process. Applicants also were informed that all projects for other than residential buyouts would be passed on to Missouri's Department of Economic Development for subsequent resolution in the event that funds should become available through that channel at a later date.

Beginning in very late December 1993, and in January and February 1994, meetings were scheduled with the affected communities to review projects for possible funding recommendations to FEMA Region VII. These meetings were hosted by a very small select committee empowered by the Administration to review all project proposals and make specific recommendations to the Governor's Office. Committee members included Mr. Dick Moore, former Executive Director of the Missouri Housing Development Commission; Mr. Dick Gross, then Director of the Missouri Housing Development Commission; Mr. Terry Martin, Community Development Block Grant Coordinator; and Mr. Buck Katt, SEMA, and the buyout project coordinator for Missouri. This small but effective committee listened to all proposals and took action in several ways on each project.

The committee recommended that some projects be forwarded to FEMA for funding without modification. This recommendation was applied to projects that were "clean," meaning projects that met all necessary criteria including a reasonable cost benefit. (At that time, FEMA had no cost benefit model guidance available; the State of Missouri created its own to gain at least a basic insight regarding the cost benefit for specific projects. Since that time, FEMA has developed several computer-based models and continues to refine them.)

In addition, the committee suggested that certain projects be modified. This came about especially for communities that had included churches, schools, and commercial buildings in their list of projects. Coupled with the foregoing, some communities had commercial projects so large that they would have required 75-100 percent of all the funding available to Missouri. The committee believed that funding only one or two very large projects would not have proven to be the most enhancing for the HMGP statewide effort. Many projects were therefore only forwarded to FEMA after the scopes were adjusted. The committee also rejected a small number of projects because they largely did not meet the requirements of Section 206, 434 CFR 44.

The process moved quickly, at least for that time frame. Methods have now been devised, which if followed properly would cause the process to move even more rapidly. When "buyouts" are anticipated, all efforts must focus on shortening the amount of time involved in the administrative process. Homeowners, when buyouts are addressed to them, have only two questions - "When and how much?" They perceive all other issues, especially those that generate delays, to be the result of bureaucratic inefficiency.

Applicant briefings and reviews really began in earnest in early January 1994. By July 1994, all projects, 51 in number, were approved for funding. The Bellefontaine Neighbors project was among the first to be funded and the first to be completed. On July 9, 1994, Governor Carnahan, FEMA Director James Lee Witt, and others participated in a ceremony at Bellefontaine Neighbors in which homeowners for 22 properties received checks for their buyout property.

Demolition of the site followed immediately. On the same day, the group traveled to Pattonsburg, Missouri, to announce approval of $3.8 million for acquisition and relocation of properties in what is now referred to as "Old Town." By all standards to measure progress for such projects available at that time, the effort was acclaimed a great success. Lessons learned since that time, if applied appropriately, can shorten the buyout process by several months for future disaster events.

Once the projects were processed and approved for funding, SEMA's management emphasis shifted to the execution of the projects. Subpart N, Section 206.433 establishes in part the responsibility of the State - the "grantee" once projects are funded. Section 206.433(a) reads:

> ***(a) Grantee: The state will be the guarantee to which funds are awarded and will be accountable for the use of these funds. There may be subgrantees within the state government.***

The process moved quickly, at least for that time frame. Methods have now been devised, which if followed properly will aid the process to move even more rapidly.

SEMA's management took the foregoing at face value and therefore established various policies and procedures which were designed to ensure proper use and accountability of funds. As each community was approved for funding, a mandatory meeting was scheduled with local officials. The purpose of these meetings was to convey the process to be followed for actual acquisitions, draw-down of funds, and resolution of other issues that surfaced.

FEMA VII officials were invited to attend these meetings; to their credit, they did attend many of them - a course of action that continues to be advisable for future programs. The emphasis at these meetings was on the controls and requirements that would have to be met before funds could or would be released. For example, funds could be requested based upon anticipated needs. This prevented a cash flow problem for small communities that would have had to borrow money if the approach had been on a reimbursable basis.

SEMA, however, made sure that the anticipated need was based on specific acquisitions - i.e., specific dwellings to be purchased, along a specifically required time line. This process was extremely successful, and also should be followed for future HMGP projects.

Another item that received intense management, once communities were funded, was a process that became known as a Duplication of Benefits (DOB) determination. CFR 44, Section 206.434 (f) is quoted as follows:

> ***"Section 404 funds cannot be used as a substitute or replacement to fund projects or programs that are available under other Federal authorities, except under limited circumstances in which there are extraordinary threats to lives, public health or safety or improved property."***

The depth to which the above applied to an actual acquisition of a dwelling was not understood by many, nor did all agree with the policy once it was explained. To the specific credit of FEMA VII, a special action office was established to "clear" the DOB issues - which had to be accomplished for each property to be acquired. The clearance process had to be completed before any specific offers could/would be made to owners. Small Business Administration (SBA) loans, for example, had to be paid off to the extent possible before a homeowner was paid for their buyout property. In addition, all proceeds from National Flood Insurance Policy (NFIP) claims were deductible unless owners could show proof that funds had been spent on the dwelling in question.

The important point to be made here, however, is that the only efficient manner to "clear" DOBs was for FEMA to do so because of their access to NFIP, SBA, and other data bases. Another key lesson learned that surfaced in this process was that appraisals had to be in hand <u>before</u> DOB information was released to homeowners and community officials. Strange as it may seem, the value of a property changed once the actual deductions became known - if the appraisal was not already in the file.

The process by which the value of a dwelling was determined is another area deserving of special comment. At the outset, pre-flood fair market value was to be the price paid to an owner. What was not clear was the process used to determine this value and the method by which the inevitable disputes would be resolved. Very early, some communities were allowed to use the accessed fair market value plus a factor which offset any recognized community-wide shortfalls noted in the assessment. Although this approach worked for the most part, it became increasingly clear that the most appropriate process was to use board-certified appraisers to establish values.

Even this process had flaws because many appraisers wanted to use comparables located outside of a flood hazard area. This, of course, created a false value since the property in question was subject to flooding, a fact that in turn surely had a negative impact on worth. Even though SEMA used board-certified appraisers, problems still surfaced. To secure expert advice on disputed properties and to settle disputes in a credible fashion, the State retained an independent appraiser with a known favorable reputation. This process worked. Not all property owners got what they wanted, and some eventually refused the final buyout offer, but at least the process was one that could be explained successfully to elected officials and others who had an interest. The message is: use a board certified appraiser only and have a process to settle disputes.

Several additional related issues also are worth a mentioning. The DOB process must for the sake of adequate control of the situation be processed through the SEMA. With the need for a speedy resolution of the situation for earlier projects, communities were encouraged to pass DOB requests directly to FEMA. In return, FEMA would then pass its response directly to the requesting community. This process in fact was counter-productive in that it slowed progress. FEMA Region VII's DOB office was very small - two people at the most.

Because of this, communities at times had to wait several weeks for FEMA's response - a delay that was unknown to the state. Many times, once SEMA became involved with a problem, questions could be cleared up rapidly. A good case in point involved the official close out papers; the documents, usually no more than two pages, which contained a summary of the actual property transaction. Earlier in the process, communities were told to forward close out paperwork directly to FEMA Region VII. If the regional office received a close out with an irregularity - maybe a departure from state policy - FEMA's regional office had to call the state for clarification.

This added to the delays associated with processing the action. The state, of course, was suffering from an unintentionally self-inflicted problem, because in trying to make the process as easy for local communities as possible, it had allowed an unfortunate bypass of necessary information to flow around itself. The message here is simple - ***all information simply must flow through the state coordinator.*** This may seem like a lot of work and needless layering, but most assuredly, the effort will pay big dividends in the long term.

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Buck Katt,
Deputy Director
Missouri State Emergency Management Agency

The flood of '95 was significantly equal to the flood of '93 in the majority of communities undertaking a flood buyout program after the '93 flood.

The cost of human suffering was dramatically reduced in '95, however, thanks to the buyout and demolition of about 2/3 of the flood-prone homes after the flood of '93.

The reason is simple; fewer people were in harms way during the flood of '95, thanks to Missouri's highly successful buyout program.

Flood insurance payments paid out on flood buyout properties, more than $22.6 million for the '93 and '95 flood events, are flood payments that will NEVER be paid out again.

A Buyout Success Story

	Total	**1993**	**1995**
Total Number of Buyout Projects	48	45	3
Number of Parcels Acquired *	4,193	4,044	149
Hazard Mitigation Grant to the State **	$32.1 Million	$30 Million	$ 2.1 Million
Total Cost of Buyout Projects	$59.1 Million	$56.8 Million	$ 2.3 Million
Total Flood Insurance Claims Paid ***	$22.7 Million	$22.1 Million	$563,393.00
SBA Loan Liens (on Property Acquired) ****	$12.2 Million	$11.9 Million	$321,542.00
SBA Loans Repaid (45%)	$ 5.7 Million	$ 5.4 Million	$321,542.00
Property Acquired: Fair Market Value	$78.1 Million	$75.2 Million	$ 2.9 Million

* The state of Missouri only received $2.1 million in HMGP funds in '95 as compared to $30 million after the '93 flood.

** Through local governments, the state of Missouri was able to acquire 4,044 properties after the flood of '93 for roughly $56.8 million. This is an average cost of $14,045. Although the properties had an average pre-flood fair market value of $18,500, because of flood payments paid prior to the closing and deducted from the pre-flood value, the cost to acquire flooded properties was considerably less to the State.

*** (SBA) Small Business Administration -- The flood claims paid out on property acquired through the buyout in '93 was more than $22.1 million. Only $563,393 was paid out in '95 on the homes that were eventually acquired after the '95 flood. Additional assistance of more than $4 million was also paid by FEMA to property owners participating in the buyout. Again, these payments will NEVER be paid again.

**** Of the more than $11.9 million in SBA loans paid out on flood damaged property, $5.4 million was repaid by property owners at the time of the buyout closing. In 1995, 100 percent of SBA loans paid out on flood damaged property was repaid at the time of closing.

The 1993 disaster related buyout effort was considered a success even in 1994. In fact, however, the effort had its detractors and skeptics. Negative comments for the most part centered around a few issues – destruction or reduction of the visibility of communities; the inability of business to survive if the residents should be relocated away from them; and the loss of tax base revenues should residents move to a different community entirely.

The state understood these critics but chose to stay the course. Events of May - June 1995 served to answer almost completely these critics. During this time frame, many of the communities devastated by the 1993 flood once again suffered under the raging surge of the "Wide Missouri" and the "Mighty Mississippi." Recorded flood waters in many locations were the third highest on record.

In Cape Girardeau and Commerce, Missouri, the 1995 flood waters actually reached levels above the 1993 crest. Following the 1995 event, Missouri officials wisely produced a small but very effective paper entitled ***"Out of Harm's Way: the Missouri Buyout Program."***

This paper serves to showcase the 1993-1995 effort. This small but powerful piece is significant in that it page by page records the reduction in misery and effort that is apparent when the buyout effort for 1993 is considered against the 1995 event.

Buck Katt, Deputy Director, Missouri State Emergency Management Agency

Above: Neosho city parklands converted from previously frequently flooded areas. Right: Community park in Levasy (Jackson County).

Buyout Program Breaks the Repetitive Flood Cycle in....

Frequently Flooded Missouri Communities

LEFT: Open space overlooking the Mississippi River in Commerce (Scott County). Below: Recreational pavilion in Fredericktown (Madison County).

Experts disagree about how big the Flood of 1993 really was. Various researchers rank it as the second, third, or fourth largest flood in Missouri history.[1] Nobody argues, though, that in terms of property destruction and economic loss it was the worst. Terms like "hundred year flood" and "feet above flood stage" are vague ways to measure magnitude, since some "hundred year floods" occurred in the same place in both 1993 and 1995,[2] and the government has periodically adjusted the heights that it considers a "flood stage" at most locations in the 136 years since it instituted that kind of measurement.[3] It is safest, therefore, to ignore these calculations of magnitude and to concentrate instead on what is certain: the flood of 1993 ruined more crop land, destroyed more residences and businesses, and cost the taxpayers more money than any other flood in the state's long history.

Former Cedar City during the '93 floods.

In August, 1993, the New York Times published statistics of flood damage in nine Midwestern states including Missouri. The statistics for Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin clearly show the unfortunate fact that Missouri suffered more damage in terms of dollars than any other state.[4] This is not surprising because both the Mississippi and Missouri Rivers flow through the state. However, between 1927 and 1993, the federal, state and local efforts had variously built 742 flood control levees throughout the state. This fact perhaps led some Missourians to believe that it was safe to build homes and to plant crops on these floodplains.[5] By 1993, Missourians had built over 216,000 households on the state's floodplains in the form of either single family dwellings, apartments, or trailers. During the 1993 flood, 37,000 people who lived within these areas were forced to leave their homes. Over 12,000 homes were damaged and over 3.1 million acres of cropland, representing 34% of Missouri's overall cropland, were covered with water and their bounty was ruined.[6] Some counties were hit especially hard. Flood waters covered 43% of St. Charles County for instance.[7] This extensive damage was made worse by exceptionally heavy rains, which caused this flood to last for eight months—longer than any other in Missouri history. During the five year period that preceded 1993, Kansas City averaged 13.39 inches of rainfall between May and the end of July. In 1993, however, the same three

Damage Estimates for 1993 Midwest Flooding in Millions of Dollars

State	Total Damage	Agriculture Damage
Missouri	3,000	1,800
Iowa	2,200	1,200
Illinois	1,535	605
North Dakota	1,500	705
Minnesota	1,023	800
Wisconsin	909	800
South Dakota	595	595
Kansas	574	434
Nebraska	347	292

month period brought 24.92 inches. In St. Louis, the five year average for the same period was 10.90 inches and in 1993 the May through July average was 15.76.[8]

These high levels of rainfall were matched by equally high costs to the state in terms of rescuing and providing emergency services for flood victims, building emergency levees and later repairing damages, cleaning up, and providing for flood victims return to normal living. The 37,000 Missouri families whose homes were damaged or destroyed received a total of over $72.9 million dollars in emergency relief payments: $41.7 million in Disaster Housing (DH) assistance, $23.4 million in Individual and Family Grants (IFG) for uninsured homeowners, and $7.8 million in disaster unemployment payments. In addition to these payments, Missouri businesses needed $40.1 million through Small Business Administration loans to repair the damage they had suffered. In addition to these payments to individuals deprived of their homes and businesses, taxpayers had to pick up the tab for $130 million spent to repair damaged public facilities such as roads, water, and sewer treatment plants.[9] The cost of such repairs is staggering. Only 1,500 feet of highway on US 54 north of Jefferson City cost $750,000 to repair.[10] Fourteen miles of Interstate 635 near Kansas City cost $21 million to repair. When the final bill was calculated, the Flood of 1993 cost the taxpayers, the state, and the federal government $4 billion![11]

Over and above that $4 billion dollars loomed the statistical probability of future floods. Since 1973, large floods in Missouri have compelled the President of the United States to issue thirteen separate disaster declarations. The future would certainly not be different.[12] With that reality in mind, Missouri's Governor Mel Carnahan and officials at the Missouri State Emergency Management Agency are determined to take a new approach to minimizing the impact of floods on Missouri citizens, which would also reduce the economic impact on taxpayers from floods that are certain to occur in the future.

Their solution was the creation of the Missouri Community Buyout Program, a plan that removed the threat of repeated flooding from people's lives by simply offering them a means to leave their ruined homes and move out of the floodplain. These "at risk" properties would be turned into public land that would not need to be protected from future floods. The idea was not new; in fact, it had been available since Congress had passed the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974.[13] However, before 1993, victims living in the floodplains were reluctant to take advantage of the program because they believed, despite evidence to the contrary, that flood destruction to their home was a one time event, if at all. In 1993, however, the flood lasted for eight months, and the subsequent long-term displacement and disorder flood victims suffered convinced many that anything was better than living in emergency housing for an extended period.[14] Congressional legislation, sponsored by Missouri Congressional Representative Harold Volkmer and signed into law by President Clinton on December 2, 1993, amended the Stafford Act, and offered Missouri officials increased funding for buying property. This legislation revised the formula that determined the amount of money the Federal Emergency Management Agency could receive in order to distribute it to the individual State Emergency Management Agencies for the purpose of buying threatened property. This act eventually made $134.9 million available to the nine Midwest states that had been devastated by the 1993 flood. Missouri alone received $30 million. A supplemental appropriations bill from the Department of Housing and Urban Developments (HUD) Community Development Block Grants (CDBG) added $41 million to the total amount available. In addition, the Federal Emergency Management Agency (FEMA) supplied money for the demolition of structures that had been deemed a public danger.[15] The money generated by this legislation was specifically earmarked to buyout property on the floodplains. An important provision of this economic help was that the state would have to match the hazard mitigation money on a 75% to 25% ratio.[16] Congress would later make other, separate money available to help floodplain businesses impacted by the flood.[17]

Federal Expenditures by State for Hazard Mitigation Funds In Millions[18]

MO	30.0
IA	27.0
IL	26.3
KS	15.2
NE	10.0
MN	9.7
WS	8.0
SD	4.5
ND	4.2
Total	134.9

All nine Midwest states that suffered flood damage took advantage of the offer of Federal money to persuade people to move from the floodplains, but Missouri utilized the program the most. No doubt this was due to the extremely large number of buildings that the floodwaters had damaged compared to other states. A National Flood Insurance Program (NFIP) study of insured buildings with repetitive losses between 1978 and 1993 revealed that there were 3,268 such buildings in Missouri—a figure far above similar losses in other states. Most importantly, Missouri's State Emergency Management Agency estimates that many of the owners of these properties have made "as many as 23 claims within a fifteen year period and, in some cases, the dollar value of the repeat claims have exceeded the market value of the property several times."[19] Furthermore, these figures represent only those homes insured by the NFIP and exclude the vast majority of homes on Missouri's floodplains that were uninsured. Out of the 216,000 households affected by the flood, only 22,000 had flood insurance.[20]

National Flood Insurance Program's Insured Buildings with Repetitive Losses [21]

State	Buildings with Repetitive Losses
Missouri	3,268
Illinois	1.351
Iowa	287
Nebraska	247
Minnesota	201
Kansas	175
North Dakota	142
Wisconsin	66
South Dakota	16

Governor Carnahan decided to concentrate on buying the ruined family residences rather than business properties. This decision was based on sound economics, since using government money to buy family dwellings resulted in moving people out of the threatened floodplains. As Destin Frost, SEMA's State Hazard Mitigation Officer put it, "we could have purchased a $500,000 warehouse, or we could use that same amount to buy over 100 houses and so impact many more people."

The ratio between the number of people helped and the amount of available money was further increased by the low market value of the average house on the Missouri floodplains. The price the state offered to pay was always based on the fair market value of the home before the flood. Yet the location and age of most of the houses dictated a market value of between $5,000 and $25,000 per home.[22] Again a comparatively modest amount of money could impact a large number of people, move them off the floodplain, and potentially save millions of dollars in emergency relief and rescue operations in future floods.

By the fall of 1993, SEMA had created policies and procedures for buying flooded property and had communicated these policies to flood damaged cities and towns throughout Missouri.[23] These regulations set forth strict guidelines. First, the local community, not the State should identify primary residences that were structurally damaged within the floodplain and approach the owners with the offer of a buyout—the decision being the homeowners alone.[24] In every way the Governor wanted the decisions to be made by communities and local citizens. Missourians are conservative and individualistic, and are suspicious of government interference. The program had to be voluntary or it would not work. Secondly, once the local government acquired the property, the land had to be dedicated in perpetuity for open space and/or recreational uses or turned back into a natural wetlands area. Third, no buildings except those consistent with recreational practices could be built on the land. Fourth, each individual community that participated in the program had the right to decide within the law what it wanted to do with the land included in the buyout program. Arnold, for instance, turned the land into recreational area, by building baseball or soccer fields. [25] Others built municipal picnicking facilities, fitness trails, or community garden plots.[26] Still others, like St. Charles County, used the land to create outdoor educational facilities for local schools and colleges where students could undertake environmental studies.[27] A number of communities such as Neosho and Ste. Genevieve used buyout money to purchase and demolish at risk homes. Then with other state, local, and federal funds, these local governments built flood retention basins, drainage ditches, and levees in order to make the rest of their town more secure from future floods.[28]

While Missouri's offer to help people leave their at-risk homes on the floodplain was generous, it had built in safeguards that prevented any one homeowner from realizing an unwarranted profit. The most important of these safeguards was the requirement contained in SEMA policy that people who accepted buyout money had to resettle outside the floodplain, or be compliant with the NFIP. Since housing outside a floodplain is generally more expensive than that within, the amount of money they received in the buyout program would usually not completely cover the cost of new housing. Despite this inequity many people accepted the buyout money anyway, realizing that it would make a sizable installment on a new home located in an area where they would no longer, as homeowners, face the uncertainties of flooding and all the accompanying disruptions. In 1993, SEMA learned that communities had identified nearly 2,400 primary residences, 1100 mobile home pads, 4 apartment buildings, and 385 vacant lots that were candidates for the Flood Buyout Program. The vacant lots were those scattered among primary residences, and the communities believed it was necessary to buy these also, to prevent future building.[29] The program was always voluntary, and in most communities, most people voted to participate in the Flood Buyout Program, some individuals did not. Also, some communities, such as McBaine, decided not to participate in the program.[30] However, most people saw the advantages to themselves and to their communities, and chose to go along with the offer of the program.

The program proved so successful in 1993, that Missouri decided to continue the program in 1994, using their Community Development Block Grant (CDBG) monies. The state made nearly $7 million available to 13 communities to buy an additional 435 at risk homes on the floodplains.[31]

Then in May, 1995, another flood provided dramatic proof that the Flood Buyout Program could dramatically reduce the strain on taxpayers, since ultimately, it is they who must pay for disaster flood relief. Although 1995 crests were generally two to four feet lower than they had been in 1993, much of the same land that flooded in 1993 was covered again in 1995. It was possible after the flood of 1995 to compare the cost of emergency relief with that of 1993, and see a dramatic cost reduction. For instance, in St. Charles County the price tag for disaster assistance in 1993 for disaster housing, grants to dispossessed families, and loans to small businesses to rebuild was $26,076,311. In 1995, the cost for the same services was $67,000.

What had changed was that 1,374 houses in St. Charles County, damaged by flood waters in 1993, were gone. The Flood Buyout Program had paid the owners for their homes, the owners had relocated to higher ground, and when the water rose in 1995, there were fewer people to evacuate and care for at public expense.[32] This same impressive result was repeated in town after town throughout the state. In each of the Missouri communities that had taken advantage of the Flood Buyout Program in 1993, the cost of disaster relief and emergency assistance had been drastically reduced.

The successes in these communities persuaded other communities to examine the Flood Buyout Program. Several other communities decided to join after the flood in 1995. Their decision was a wise one since in all probability, Missouri rivers will leave their banks again at some time in the future. The U.S. Army Corps of Engineers (COE) reported in August, 1998, that the Mississippi River has been flowing at a higher level since 1993. On the upper portions of the river a light rain causes the river level downstream to move close to flood stage "almost overnight...Another unusually rainy spring and summer—and the whole nightmare could happen again."[33] Governor Carnahan's determination to stress this novel program proved to be a positive example of how the Federal and State government working through communities and individuals could achieve dramatic results. Their stories deserve to be told and lessons learned from them.

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Open Space in Arnold, Missouri

Alexandria and Clark County

The small farming community of Alexandria is situated at the confluence of the Des Moines and Mississippi Rivers. Most Missouri towns have to contend with flooding from a single river, but Alexandria has to face water coming from two. Because of this enhanced threat, a total of three miles of levees had protected the town on three sides. When the waters of both rivers began to rise in May, 1993, Alexandria's citizens, supported by Mennonite volunteers and 271 members of the Missouri National Guard, raised the height of those levees three feet to try to keep the rivers out of the town.[1] Unfortunately their efforts failed. On the night of July 6th, with water already within inches of the levee tops, an additional six inches of rain fell, pushing the water over the top and into the town.[2] Even bulldozers pushing rock and sand to the top could not raise the levees quickly enough, and all 390 of the town's residents evacuated on July 7.[3] By the end of that day, the town was completely covered with 20 feet of water that stayed in place for over three weeks.

Every single one of the 123 households within the town sustained damage that made the buildings uninhabitable.[5] When the residents could finally return, they found a stark landscape of mud and piles of debris lodged against their water-logged houses.[6] The damage was so severe that even a year after the flood, the town lacked potable water in homes, and people had to drink bottled water supplied free of charge by Anheuser-Busch Brewery in St. Louis.[7]

Some of Alexandria's citizens found help through Missouri's Flood Buyout Program. Even before the Congress had passed Representative Harold Volkmer's Hazard Mitigation and Relocation Assistance Act, some Alexandria residents were hopeful that it might help them. Many of the town's inhabitants met in the Community Center on November 10 to discuss its proposed provisions.[8]

Alexandria, Missouri flood workers load equipment.

Since early September, Representative Volkmer, or members of his staff, had been touring Missouri's flood damaged communities to explain the proposed legislation. Wiley Hibbard, Volkmer's assistant, explained the rudiments of the plan to the Alexandrians. He pointed out that the proposed buyout program was voluntary, that people did not have to have flood insurance to participate, that the plan was based on a 75% to 25% Federal/State and local funding division, and that no permanent dwelling could be built on the property once ownership went to the local government entity.[9]

On December 20, 1993, Representative Volkmer, along with officials from the Federal Emergency Management Agency, the Missouri Emergency Management Agency, the Missouri Housing Development Commission, and the Northeast Missouri Regional Planning Commission met 100 citizens from Alexandria and rural Clark County at Running Fox Elementary School in Weyland, Missouri, to hear details. They learned that Volkmer's bill had not only passed both houses of Congress, but that President Clinton had signed it into law on December 2.

By the end of the three hour meeting, people had a basic understanding of how Volkmer's buyout program would work and how to apply for it. Many were worried that the government was forcing them out of their homes and not allowing them to rebuild. Herman Skaggs of FEMA explained that people could stay in their flood damaged homes, but if their home had been damaged by more than 50% of its pre-flood assessed value they would have to raise their home's foundation one foot above the 100 year flood level to qualify for federal flood insurance.

If they did not get the insurance, then the government would make no further payments to them in future floods. Others were concerned about the mechanics of filling out the forms, and Representative Volkmer told them that the Missouri Association of County Governments (MACOG) would allow personnel of Missouri's various regional planning commissions to assist homeowners with

Flood waters destroy a small shed in Alexandria, Missouri.

paperwork. Others had heard rumors that Alexandria could not participate in the program because their Mayor, Robert Davis, was against the program and would not sign the papers to begin the application process. Mayor Davis assured the people that, although he was not in favor of the buyout, he would nevertheless sign the necessary papers.

Immediately after the meeting, Alexandria's city council met and voted unanimously to begin the process of applying to the Missouri Department of Economic Development for a Community Development Block Grant (CDBG) to get the money for the matching funds to qualify for the federal buyout money. At the same time, David Shoush, representing Clark County as the director of the Northeast Missouri Regional Development Commission—of which Alexandria is a part—informed the city council that he would begin the process of applying for buyout funds to buy flood damaged property in Clark County which had also been hit hard by the flood waters. Acres of farmland that totaled 32,000 were covered with water, and 50 residences had been damaged.[10]

Under the direction of David Davison and David Shoush, the Northeast Missouri Regional Planning Commission began the process of applying for buyout money. Initially, 110 of the 114 property owners in Alexandria, and twenty-five of fifty Clark County residents whose homes had sustained damage, expressed interest in the buyout program. On January 26, 1994, Davison and Shoush, members of the Alexandria city government, and the three county commissioners for Clark County appeared before Governor Carnahan's Review and Hazard Mitigation Committee to consider claims for buyout money. The committee heard requests and passed on those they considered worthy to the Governor, who in turn passed the requests on to the Federal Emergency Management Agency—that ultimately supplied the buyout funds.

Davison submitted a request for $4,767,200, while Shoush's application asked for $1,000,000. Davison, acting on behalf of La Grange, Missouri, a Mississippi River town in Lewis County, about forty miles south of Alexandria, also requested $1,649,800 to buy out homes in that town.[11]

Support for the buyout program was not unanimous at this meeting. Alexandria's Mayor, Robert Davis, told the committee that he opposed the buyout, and that he based his opposition on the fact that many Alexandria residents had already purchased building permits to rebuild within the town, an action, he felt, indicated their desire to return.[12] However, Alexandria alderman Tom Alberts and the town's city clerk Julie Wilson, countered the mayor's remarks by stating that most town residents had applied for building permits in order to qualify for free building supplies to make temporary repairs to their flood damaged homes. Both felt there was genuine interest in the buyout program.[13] The Governor's committee did not require a community's unanimous support for the buyout program and felt that Alexandria's request deserved the Governor's consideration.

As the Governor considered Alexandria's request for funding, Alexandria's City Council continued to work on other requirements of the buyout program. Even if FEMA approved the town's application, Alexandria would still have to match one quarter of the amount the federal government supplied. The City Council invited the Missouri Department of Economic Development's Sally Hemenway to tour Alexandria to estimate the extent of damage to Alexandria and determine whether the town was eligible for a CDBG grant.

During her visit, Hemenway made it a point to stress the voluntary nature of the buyout program, pointing out in a discussion with town residents that any applicant was free to back out of the program up to the final moment when they signed their land over to the city. She also assured the townspeople that each homeowner would be contacted individually to discuss the buyout process. She did warn the residents they needed to make a decision soon, because there was a limited amount of money available for the buyout program and that fifty-five Missouri communities were making applications similar to Alexandria.[14]

On February 14, 1994, Governor Carnahan announced that he was recommending Alexandria and fifteen other sites for buyout funding from FEMA. The governor's approval of funding for Clark County came several weeks later.[15]

After approval, events moved quickly. On March 31, the governor announced that Alexandria had received approval for buyout funding. On April 7, the Alexandria City Council in consultation with SEMA established the buyout criteria for the town's homeowners. The council set up categories and procedures for buying homes, appraising their values, and dealing with disputed appraisals.[16]

A further meeting between city officials and state representatives finalized the details of the buyout.[17] A similar process took place outside Alexandria and by May 25, Clark County residents were able to submit applications for buyout funds.[18]

Finally, in February, 1995, Alexandria residents who had agreed to participate in the buyout began to receive checks for their property. By February 1, 1995, nine Alexandria residents had sold their homes to the city for amounts ranging from $8,000 to $25,000. By February 7, 1995, ten more residents had turned their homes over to the city and received checks, and by December 31, 1995, forty residents had accepted government checks for their homes.[19]

Today, Alexandria is a vital and growing town. Despite the fears that the buyout might cause a crippling population decline that could hurt the tax base, the town continues to grow. Perhaps one reason for this is the extensive help Alexandria received from outsiders. In the midst of the devastation, Alexandria had found outside help. The town was adopted by the citizens of Mt. Airy, Maryland, and Croton, Ohio. Both of these towns sent workers to help with rebuilding. The citizens of Mt. Airy even collected $50,000 through private donations, dances, and various church sponsored activities. One Mt. Airy bartender offered to shave his head if his patrons would contribute $4,000 to the cause of flood relief for Alexandria. They did and he had his head shaved.[20]

Another source of help to the town came from the Mennonites, who live on farms in the area. During the flood, they had worked hard filling and moving sandbags to the tops of the levees.[21] After the flood, when Alexandria needed help rebuilding, the Mennonites came back to help repair the destruction. This extensive outside help allowed Alexandria to rebuild. Largely because of all the help, many residents decided to stay, and to meet federal regulations by raising the foundations of their new homes one foot above the established 100 year flood mark.[22]

Along with the rebuilding came new town ordinances that were promoted by Mayor Robert Davis. Now there are strict rules about trash and refuse removal, the height of grass on private lawns, and rules governing the type of dwellings people can build. There are also numerous sites, scattered throughout the town that provide sites for picnicking and recreation.[23] Many of these sites now contain picnic tables, basketball goals, and open sided shelters.[24] The town looks good and Alexandria has a revitalized spirit of pride.

Buyout area in Alexandria, Missouri, adjacent to the former Elementary School offers plenty of room to play or to develop future sports fields.

Arnold

Near the site where the Meramec River empties into the Mississippi, a bend has formed a peninsula; Arnold, Missouri, is on this peninsula. Since 1973, Arnold has been the site of nine major floods. Consequently, the citizens of Arnold have a progressive attitude toward "flood proofing" it. Eric Knoll, the long time City Administrator of Arnold, is a walking encyclopedia concerning river heights, federal flood control programs, state flood regulations, flood prevention, and ideas about making his town more secure from rising water. Arnold was one of the first towns to participate in the early federal flood buyout program in 1980, officially termed the 1362 program.

Under Knoll's leadership, Arnold also has passed local ordinances that made further efforts to protect the town.[1] For instance, developers must adhere to strict building codes. They must observe rigid easement regulations along the Meramec River shore. Since 1980, all new construction must have valves installed in plumbing systems to prevent the contamination of the city water system and protect sewer lines in the event of flooding.[2]

In 1993, Arnold faced its toughest battle against flooding on record when the rising Mississippi River caused the water of the Meramec River, which flows on the northern boundary of Arnold, to back up into the town. From July 7 through August 8, 100 houses and businesses were hurt by rising water. The nation became aware of Arnold's plight when President Clinton, Vice President Gore, six Cabinet members, and a collection of senators and representatives met in Fox High School's cafeteria to discuss the flooding in the Midwest.[3]

While the politicians were talking, Mayor Marion Becker and her fellow townspeople were building sandbag levees. Wherever the natural lay of the land in the Pleasant Valley and Bayshore subdivisions seemed to present a good line of defense against flood waters, people stacked sandbags. A good portion of the time the temperature hovered around 100 degrees. On July 28, Mayor Becker issued an appeal for sandbaggers to raise levees high enough to protect against a 44 foot crest.[4] A few days later, she asked people to raise the level another foot. To be on the safe side, 500 families evacuated the area. Most levees stood the pressure, but on August 1, a twenty foot section collapsed along the Starling Airport Road and flooded the Community Airport Road Mobile Home Park.[5] Then, when levees broke on the Illinois side of the Mississippi River downstream from the mouth of the Meramec, the water level fell two feet, and the threat to Arnold was gone.[6]

Ground preparation for a soccer field in Arnold.

Even before the water level began to drop, Eric Knoll and the city council had begun to explore the buyout option. On July 29, Knoll contacted the Federal Emergency Management Agency (FEMA) to request information about the federal purchase of flood damaged property under the original 1980 buyout legislation. He told FEMA that as many as 100 homeowners might be interested.[7] Many Arnold citizens such as the Flanagan family were tired of the constant threat of flooding. With eight inches of flood water on the floor of their house, Kathie Flanagan told a St. Louis Post Dispatch reporter, "We're hurt emotionally. It's time to find another place to live."[8]

The announcement of Representative Volkmer's buyout plan, followed by President Clinton's signing of the act, and Governor Carnahan's promise to lobby officials for money while attending the National Governor's Conference in Washington, all encouraged Eric Knoll to begin the application process for some of the promised buyout money. Knoll began the application process by surveying the flood damaged areas to find damaged houses. He then contacted the owners by mail to inform them of the plan and to invite them to several public meetings to expand on the idea. The city then submitted the material to SEMA.[10]

On January 25, Governor Carnahan's office announced that Arnold would receive $4.1 million to buy 89 houses in the floodplain plus a number of mobile home pads.[11] Some of the applicants decided not to sell; they chose to rebuild instead.

On April 15, 1994, another flood hit Arnold, and many people who had rebuilt realized that they had made a mistake. Even though the water was not as deep, and it stayed only three days instead of a month as it had in 1993, it was enough to damage 20 rebuilt houses.[13] These people were glad, after this 1994 flood, to join the buyout, which brought the total number of single-family dwellings, where homeowners had accepted the buyout offer, to 72.[14]

But that was not the end of the buyout program in Arnold. In May 1995, the Meramec flooded Arnold once again. This disaster brought river levels only a few inches less than in the '94 flood, but it was the final straw for those who had chosen to remain in the floodplain.

Gaylord and Norma West had resisted the buyout in 1993 and 1994. Just before the '93 flood they had spent $100,000 on remodeling. The damage was severe, but they could not bring themselves to leave such a heavy investment. In '94 the house was damaged again, but still the couple decided to stay. In '95, however, after sustaining $45,000 in damage, they were convinced. The buyout offer amounted to only $69,000, but they were willing to take the loss to be out of the floodplain.[15]

Other residents like Joe Moore had taken the initial flood buyout offer after the '93 flood and were living high and dry when floods came again. He remembers driving back to his old home site on the floodplain and actually laughing at the rising water.

I felt relieved. I was laughing. I even drove down to the old house. I could see the water coming up. I didn't have to sandbag... I was happy because I was bought out and I'm gone. I don't have to worry about it the rest of my life.[16]

Fortunately, for people like the Wests who missed the opportunity after the '93 flood, there was additional money available for buyouts after the '95 flood. On August 27, 1995, Governor Carnahan announced that the federal government had made an additional $1.3 million available to buy homes on the floodplains of Missouri. Arnold would get $275,000 to buy 16 more single family homes.[17]

While Arnold was buying single family dwellings from 1993 through 1995, the city was also eliminating mobile homes from the floodplain through another buyout program. Since mobile home owners often did not own the land that their home sat on, and because under Missouri law a mobile home is classed as a motor vehicle, the federal buyout program could not apply to them. But the State Emergency Management Agency was able to find money through a separate program of the Federal Emergency Management Agency, to help these mobile home owners move.[18] Mobile home owners could also receive help through the vehicle insurance that many carried on their mobile homes. In addition, the city of Arnold also made money available to these people. On August 14, 1994, after the second big flood, the Arnold city council voted to give each mobile home owner in the Riverside Mobile Home Park $2,000 from federal community development block grant money to pay for new utility hookups, awning removal, shed and air conditioner removal, and occupancy permits.

Beautiful open space improves the quality of life in Arnold, Missouri.

At the same time, the council voted for a housing assistance grant from the Missouri Housing Development Commission to help with relocation expenses. Individual mobile home owners could get up to $20,000 to help bridge the gap between leaving the property and moving to higher ground.[19]

The results of these buyout efforts were impressive. By the end of 1995, Arnold had purchased 202 single family dwellings and 155 mobile home pads on the floodplain. The almost yearly flood threat to Arnold is no longer there.

Eric Knoll feels the program was such a success that he has continued buying out additional properties on the rivers edge. In 1998, he negotiated with two homeowners for their houses, and as of May 25, 1999, he has closed on five more buyouts. As of this writing, he is negotiating for two more.

As for the land acquired in the buyout, negotiations are under way in conjunction with the Jefferson County Youth Association to build on a portion of it, a football field and bleachers. The Association has already leased the land for ten years for one dollar, and the non-profit organization currently runs a football program there for 400 kids.

Most importantly, Arnold has prospered since the flood. Unlike some communities that suffered from the recurring floods, Arnold did not lose population. Most of the people who accepted buyout money stayed in Arnold. The population increased from 18,828 in 1993 to 20,473, according to the last figures of the U.S. Census Bureau. The tax base has remained healthy enough for the town to pass a tax levee to buy a 120 acre tract near the center of town for development as the Strawberry Creek Nature Area.[20]

The National Association of Floodplain Managers has recognized the success of Arnold's use of buyout program funds. In 1997, the Association singled out Knoll for his innovation and leadership during this time and recognized him with its annual award.[21]

The Jefferson County Youth Association plans to build a football field in Arnold to support their program for 400 youngsters on this buyout property.

Buchanan County

Both Sugar Lake and Rushville are unincorporated settlements that are located 30 miles northwest of Kansas City near the Missouri River. Sugar Lake is a collection of approximately 160 houses built around a lake of the same name. Rushville is a settlement of about 60 houses that were built along U.S. Highway 59 and Missouri Highway 45. Most of Rushville's residents either farm or work in Atchison, Kansas, across the Missouri River. Homes in the area are inexpensive, averaging about $31,000.[1]

Neither of these areas was a stranger to flooding. The latest disaster had been in 1984 when water from the Missouri River broke through the Rushville-Sugar Lake Levee and covered the land for 22 days before receding.[2] Yet even this unpleasant experience was minor compared to four repeated floods that inundated the towns in July and September of 1993.

The first flooding came on July 6, when the Rushville-Sugar Lake Levee broke and the Missouri River swept through the gap. The land in the area is so flat that once that levee broke, even a normal spring rain could cause flooding. More than the usual spring rains fell in 1993, and the area flooded again on July 26, September 2, and September 23.

Each flood caused residents to evacuate and to seek shelter with relatives, in local churches, or in emergency shelters that the Federal Emergency Management Agency provided.[3] Such frequent flooding was unprecedented, and the people of Rushville and Sugar Lake decided they had suffered enough.

Even before Representative Volkmer announced his new buyout legislation and Governor Carnahan gave it his unqualified support, many Rushville-Sugar Lake residents were clamoring for information concerning buyouts under the original 1980 legislation. Approximately 150 people showed up for a meeting about flood relief on October 7. Many of them wanted to know about the flood buyout program. It took Bud Crockett, the Western District Commissioner for Buchanan County by surprise. He had only the barest knowledge of the program.

Yet, his cursory explanation and promise to find out more, was enough to encourage 42 people to put their names on a list indicating they were interested in a buyout. Once Crockett had done some research and shared this information with those initial applicants, 34 said they were definitely interested in pursuing the matter further.[4]

With this list, Crockett contacted the MOKAN Regional Council, an organization that was in business to help residents of the Missouri counties of Buchanan, Andrew, DeKalb, and Clinton, along with Doniphan and Atchison Counties in Kansas, access government programs. By the time Crockett had submitted these preliminary buyout requests to MOKAN, that agency had some of the details of Volkmer's new buyout plan which were encouraging.[5] When SEMA decided to extend the application period statewide until February 14, 1994, fourteen more residents of Sugar Lake and Rushville decided to add their names to the list, also.[6] Following this show of interest, people met several times in the area to acquaint residents with the new buyout program.

Shelley Temple of MOKAN hosted most of these meetings in order to lay out the ground rules. First, the program was voluntary, and applicants were free to drop out whenever they wished. The county would make formal appraisals, which would be based on the pre-flood value of a house, minus whatever the homeowner had already received from flood insurance or other payments from the government. Once the property was sold, the houses would be demolished and the land would be returned to its natural state.[7]

Good news came on July 3, when Bud Crockett learned through MOKAN that FEMA had approved a total of $473,000 to purchase land and homes damaged in the flooding. A short time later, Missouri awarded Buchanan County $471,000 in a community development block grant.[8] With that funding assured, the buyout process could begin.

Several meetings followed. The largest one, held on August 29 at the Rushville Christian Church, drew 100 people. Shelley Temple told the people that within the next several weeks appraisers would contact them to make a formal appraisal. A few weeks later they would receive a formal offer, at which point they would have two weeks to consider. If they accepted, they signed a letter of intent, and they would hopefully receive their money by February 1995.

Temple also made some statements about the property once it was sold. Nothing could be built on the land, but since the individual lots that most houses stood on averaged only one-half acre, they could be leased to adjoining landowners who had not sold out or who had cropland adjoining; this land then could be used either for planting crops or for a garden.[9]

From there, things moved quickly. On December 17, the 34 property owners who were still considering the buyout option received the government's offer. Shelley Temple told them they had two weeks to consider the offer, but after the meeting, Bud Crockett told reporters that most people seemed happy with their offers. Twenty-seven had accepted immediately and six wanted to consider the offer before making up their minds. Only one had absolutely refused the offer.[10]

Homeowner Doug Olson, a cabinet maker, was happy with his offer; he thought it was fair. In an earlier interview, after he had applied, but before he received any money, Olson told a Kansas City Star reporter, "It's stupid to be down there. [Without the buyout] I'd probably end up selling the land to somebody else and then they'd be in to bail him out in 10 to 20 years."

On February 14, 1995, four property owners got their first checks, and within the next two months, 24 other people sold their land to the county.[11] By the end of the year, six more residents had sold out, making a total of 36 participants in the Buchanan County buyout program.[12]

Of course not everyone thought the buyout was a good idea. About a dozen families in Rushville (out of 60 before the flood) decided to stay, no matter what. Roger and Marilyn Chatman used cinder blocks to raise their trailer home six feet off the ground, and then hired a bulldozer to push dirt underneath. They will stay no matter what.[13]

The Chatmans were lucky. Rains brought flooding to Rushville and Sugar Lake again in 1995. But this time the water did not enter their home. The cinder block base had not saved it but the fact that the Corps of Engineers and the local levee board had repaired the Rushville-Sugar Lake Levee did. A strenuous effort by Larry Frakes, secretary-treasurer of the Rushville-Sugar Lake Levee Association, and Shelley Temple of MOKAN had raised money through contributions and a community development block grant to meet the 20% in matching funds required by the Corps of Engineers to rebuild the levee. By January 12, 1995, the Corps had finished repairs to the levee and added a topping of 2,700 tons of stone.[14]

Today, most of the bought out land is covered with grass or is leased by farmers who incorporate it into their total cropland. At Sugar Lake, the area made up of several lots has been used to build an access road into Sugar Lake. Residents have talked about building a boat dock on the lake frontage of one of the lots.[15]

Rushville, Missouri is home of Missouri's Lewis and Clark State Park.

Cape Girardeau

Like most towns along Missouri's Mississippi River boundary, Cape Girardeau suffers from frequent flooding. However, unlike the other river towns, "Cape"—as the locals call it—did not participate in the '93 floodplain buyout program.[1]

The reason for Cape's not participating was not because the flood damage in '93 was slight. One hundred sixty homes flooded, and residents sandbagged furiously around houses in the Red Star neighborhood north of town and in Meadowbrook to the south. A permanent flood wall had been built to protect the downtown area from crests as high as 54 feet–'93's crest was 47.9 feet.[2]

Cape Girardeau's city council briefly talked about the buyout program at the council's meeting in October, but determined not to pursue it. Their reasoning revolved around a misunderstanding of the "100 year flood" concept, as both the press and the Corps of Engineers referred to the '93 flood. In a literal sense, the phrase seems to imply that such a flood would happen only once in a century. In fact, the precise meaning of the phrase is that in any one year there is a one percent chance of such a flood happening, and in a century such a flood is an absolute certainty. No guarantee exists that similar floods cannot happen even more frequently.[3]

Still another reason for the non-participation might have been that the flooded areas received a tremendous amount of help from outside sources. Hundreds of volunteer sandbaggers helped to man the temporary levees, tons of free food and supplies poured in from all over the nation, and after the flood, hundreds of volunteers showed up to help clean and repair the damaged houses. Mennonites volunteered to shovel mud out of people's homes, various church groups sent contingents to rebuild and repair structures, and groups such as the Salvation Army supplied money to help people find temporary shelter.[4]

Unfortunately, the flood of '95 was different. The flood waters were nearly as high—46.7 in '95—but the outpouring of help did not materialize, and fewer volunteers came to help. Then, too, the '95 flood was much more sudden. In '93 people had time to build substantial sandbag levees around houses, but the water rose too quickly in '95, and dozens of homes flooded much more quickly and seriously as a result.[5]

By May 28, 100 homes had flooded in the Cape Girardeau neighborhoods of Red Star, Smelterville, Meadowbrook, and Highway 177 (the area is named for the highway), and city officials were ready to consider the buyout.[6] If fact, in Jefferson City as Tom Uhlenbrock of the Post Dispatch was interviewing Buck Katt, the Deputy Director for the State Emergency Management Agency (SEMA) about the buyout program, he was interrupted by Cape Girardeau officials calling about the program.[7]

Unfortunately for a time, it seemed that Cape would not get any help, because the initial federal disaster declaration did not include Cape Girardeau County. Inclusion on the list was necessary for an area to qualify for buyout funds. By June 20, the county was on the disaster list, and Cape was eligible to apply.[8]

The announcement of buyout eligibility sparked action. Ken Eftink, Cape's Development Services Coordinator, scouted through the recently flooded areas looking for damaged houses. He found nearly 150 that had sustained some damage. He also categorized each house by its elevation in the floodplain area. Those that stood lowest had suffered the most damage, and Eftink reasoned, would be the most eligible for buyout relief.[9]

At a city council meeting on July 17, the councilmen decided to submit a formal application to the Governor's buyout review committee in Jefferson City requesting funding. Ken Eftink told the council that as a result of his survey there were potentially 80 houses that were damaged badly enough to qualify: 42 in the Red Star area, 22 in Smelterville, 14 in Meadowbrook, and 2 in Highway 177. Thirty owners had already contacted him with expressed interest.

The councilmen were aware that property purchased through the buyout had to be devoted to "greenway" uses, and that no structures could be built on it. City Manager J. Ronald Fischer suggested that some of the flood prone land in Red Star might be ideal for a park and a boat dock.[10]

By August 8, the city council was ready to act. In the ensuing weeks after the July 17 council meeting, Ken Eftink had done additional research which he later used as a base for the council's formal application. Cape Girardeau would ask for $1.6 million in federal and state money to buy a total of 66 homes: 38 in Red Star, 15 in Meadowbrook, 11 in Smelterville, and 2 in Highway 177. Eftink had even calculated the ongoing cost to the city of maintaining the lots after the houses were demolished; it would cost the city $13,000 a year to mow the lots, and the city would lose $1,000 a year in real estate taxes. Since the houses occupied an area that had flooded 15 times in the last 20 years, those projected costs were acceptable.

Buyout area in Cape Girardeau helps relieve city congestion.

The only debate on the matter involved whether or not the city itself should dip into its own funds to help finance the buyout. The assumption on the part of some councilmen was that such an offer might help the application gain approval on the state level. However, Chauncy Buchheit, of the Southeast Missouri Regional Planning and Economic Development Commission (SEMO) reminded the council that such local funding was not necessary to gain approval. On this advice, the council decided to submit the application without the offer of local funds.[11]

That decision was the only part of the buyout that drew public criticism. An August 16, editorial in the Southeast Missourian praised the buyout program but criticized the decision not to offer city funds in its implementation. The editorial said "that to do otherwise smacks of the kind of free handout that has put the federal government in the red ink mess that it is in. . . It should hurt a little to take these government handouts."

On October 17, the Southeast Missourian reported that Governor Carnahan had approved the city's application and would submit it to the Federal Emergency Management Agency for final approval. Unfortunately, the Governor had not approved the whole $1.6 million amount, but instead had given Cape $1.2 million, $742,000 would go to buy the houses and $450,000 to relocate residents.[12] The state had reduced Cape's request because in 1995 it had only $4 million dollars for this buyout cycle instead of the nearly $100 million that it had to spend in 1993, and the $4 million needed to stretch in order to help other communities as well.[13]

The amount of money the Governor had recommended would cover the purchase of only 49 houses in the Smelterville and Red Star areas. Those in Meadowbrook and Highway 177 had been dropped because they sat higher on the floodplain and had not been as severely damaged.[14] The town of Commerce, some twenty miles south of Cape, was in much greater need of buyout funds, and therefore got $1,756,707 to fund its buyout.[15]

Still, $742,000 would go a long way toward ending the damage from flooding in Cape, and officials set to work to implement the buyout. On December 21, the city council held a meeting in the basement of the Red Star Baptist Church to explain the buyout concept. More than 100 residents showed up. Officials from SEMA and SEMO were there to field questions. At that meeting Ken Eftink revealed that there was only enough money to buy 50 houses, and that these would be purchased in strict accordance with the degree of damage each house had sustained. In other words, the properties that were damaged the most would be the first bought. If a homeowner refused an offer, then that money would be used to make an offer to another homeowner further down the list. The process would continue until there was no money left.[16]

The problem remained of getting the information about the buyout disseminated in the most effective way possible. Many people in southeast Missouri had a rural suspicion of the government, and Ken Eftink realized that many homeowners would not trust a formal letter that explained how the government was willing to buy their damaged property. He, therefore committed himself and his staff to personally visiting with each potential candidate, explaining the buyout program face to face, and even transporting the potential seller around town to view potential and affordable homes outside the floodplain. This approach lessened peoples' mistrust and Eftink speculates, might have informed potential sellers who were functionally illiterate. In any event, the buyout program began to experience a high rate of success.[17]

Beside the personal approach that Eftink proposed, the Cape Girardeau program had other "user friendly" aspects. The Salvation Army and the church-based Interfaith Disaster Response Network both helped buyout candidates with extra money for moving out of the floodplain. The Salvation Army spent $82,000 and the Interfaith Disaster Response Group spent $83,700 to help people with initial down payments, closing costs, repairs to their new homes, and the myriad financial obligations that make any move stressful.[18]

The goal of the Interfaith Disaster Response Group was to help people for whom the buyout would have been impossible without a little extra financial help. The group helped about 20 families with grants of between $5,000 and $7,000.[19] Because of these many layers of support ranging from appropriations of federal money to personal one-on-one contact with flood victims, the Cape Girardeau program was accomplished with more positive feelings than perhaps anywhere else in the state. Not everyone accepted the buyout offer, but most did, and did so gladly because they were assured it was being made with the purest of motives.

The first homeowners to receive a buyout check were Henry and Oma Copeland on March 21, 1996. The city made offers on 15 other homes during the same week. By May 2, 1996, the city had made 28 offers and only one offer had been declined.[20]

On September 6, with its money running out, Governor Carnahan announced that Cape Girardeau was getting an additional $738,585 to expand their buyout program. This money had been previously allocated as buyout money for a number of other towns, but it had been returned. In some places the buyout procedure was not as successful, and for one reason or another, potential sellers backed out. This “de-obligated” money can be allocated to another buyout project. Cape’s success record made it a good candidate for these extra funds.[21]

The additional money made it possible to include Meadowbrook, an area that had applied for buyout money in October, but was cut from the program. Now with the high risk homes in Red Star and Smelterville rapidly being bought up, the extra money made it possible to make offers on property in lower risk areas. By the end of October, 65 homeowners had received offers. Some of them like, Jimmie Fisher and his neighbor Mike Maglone, had been flooded out year after year. Fisher acknowledged that it would be hard to leave the home he had lived in for 57 years, but he was looking forward to a year when he didn’t have to find a place to stay... when the water gets high. [22]

By the time the program ended on January 1, 1997, Cape Girardeau had made offers on 114 properties. Twenty homeowners whose homes are flood risks refused the offer to move from the floodplain. Still, the situation has changed radically in Cape Girardeau. On August 8, 1998, the Cape Girardeau city government invited the personnel from SEMA, FEMA, the Missouri Department of Economic Development, the Salvation Army, and The Interfaith Disaster Response Network, all who had helped make the buyout program a success, back to Cape Girardeau for a fish fry with the buyout recipients. The letter of invitation to these organizations from Mayor A.M. Spradling, III said this was “an opportunity for the Flood Buyout recipients to personally thank you ... who have made the Program the success it has been.”

Ironically, it rained, but, given everyone’s mutual experience with the flood of ‘95 the mood was convivial. Martha Lemonds, a buyout participant who sold her house on the floodplain and now lived high and dry, said “We can enjoy the rain now. We live on a hill. We can sit in our family room and enjoy every minute.”[23]

Flooded Cedar City during the 1993 flood.

Cedar City after the Buyout.

Cedar City

Cedar City is located just across the Missouri River, immediately north of Jefferson City. Most Cedar City residents believed that the flood of 1993 was the largest flood that had ever impacted their town, and that the flood in 1995 was only a little less severe. In both 1993 and 1995, water rose in Cedar City to between 25 and 30 feet deep, which classified both occurrences as "100 year floods."[1] Before the 1993 flood, Cedar City was home to about 400 people in 115 houses and a number of businesses. Besides three convenience stores and two gas stations, an antique store, a mechanic's shop, businesses associated with the small Jefferson City Memorial Airport, Roettgen Auto Repair, Capital Steel, and Lauf Equipment formed the economic base of the town. The largest employer in Cedar City was ABB Transformer and Distribution Company that employed over 700 workers who manufactured electrical transformers for small businesses and homes.[2]

In contrast to the calculated average fair market value of the homes in Cedar City—$15,669.00,[3] residents felt a deep attachment to their community. They reported the kind of town where everyone knew everybody else, where front doors were habitually left unlocked, children played in the streets, and people spent pleasant summer evenings visiting from their front porches. It was the kind of place, where long-time resident, Linda Nichols, remembers children enjoying simple pleasures like riding bicycles without concern for cars, trick or treating door to door on Halloween, and climbing apple trees.[4]

Yet, despite these bucolic memories, Cedar City was an area that had repeatedly suffered from floods. The postmistress of Cedar City, June Sundermeyer, remembers that before 1993, the town had flooded in 1942, 1943, 1944, 1947, 1951, 1973, 1983, 1986, and 1990. By 1993, Ms. Sundermeyer was ready to move. She was one of 98 homeowners, along with the membership of both the Methodist and the Baptist Churches who decided to take the buyout money to move to higher ground.[5]

In January, 1994, the City Manager's office in Jefferson City informed property owners in Cedar City that federal and state money was available to buy out property that had been severely damaged by the flood, and that the proposed prices would be assigned on the pre-flood value of the home. If residents were interested, the letter invited them to ask for an application. The response was immediate. The city also hired a professional appraisal service to establish the value of the homes—an appraisal for which the city paid, and also provided an appeal process if the homeowner disagreed. This price, minus any deductions of earlier financial payments from FEMA to the homeowner for emergency housing and structural repairs, plus a moving allowance, was the final sum offered to the homeowner. In return for this money, the homeowner turned the property over to Jefferson City, of which Cedar City was a suburb, and agreed that once the house is cleared from the land, that the area will be used only for "uses compatible with open space, recreational, or wetlands management."[6]

Only a few Cedar City residents had the foresight to buy flood insurance from the National Flood Insurance Program before the flood.

One senior citizen had conscientiously paid her premiums for years and had also maintained and created an "extremely well maintained property." The buyout program acknowledged her efforts, by offering pre-flood fair market value, which, with the insurance payoff, allowed her to move to a desirable property out of the floodplain. The officials at SEMA were generally willing to adapt the buyout program to fairly compensate citizens who had accepted responsibility for living on land that was vulnerable to flood waters.

Cedar City was a kind of testing ground for the buyout program, because Jefferson City was the first municipality to offer the program to its citizens. Cooperatively, Jefferson City and SEMA worked out some "kinks." For instance, officials discovered that county assessors in Cedar City had seriously underestimated the value of property in the years before the flood, and the "fair pre-flood market price of the property" was about 15% undervalued. SEMA, therefore allowed a 15% mark-up in the offering price to offset this difficulty.[7] This kind of flexibility and fairness has been typical of the Flood Buyout Program generally. SEMA officials realized that to make the program a success, it had to be sensitive to local conditions.

By March 1, 1994, the first buyout had been approved, followed by the first payment to an owner on May 11.[8] Most of Cedar City's houses were empty of people by May, 1995, when the water rose again. The effectiveness of the program was immediately apparent when the floods came this second time. In 1993, 473 citizens of Cedar City had applied for individual assistance during the flood. The total cost to the taxpayer for disaster housing, Individual Family Grants, and Small Business Administration (SBA) loans was $1,435,149. When the floods came again in 1995, most residents were gone, and consequently the number of people applying for emergency aid was less. In 1995, only 53 people applied for individual assistance which totaled $176,902. The two floods covered almost the same areas in Cedar City, but because of the buyout program, the taxpayers of Missouri were able to save $1,258,247. After 1995, most of the remaining citizens of Cedar City decided that they too would take advantage of the buyout offer. Today, only six people live in Cedar City, and the emergency cost of helping them has been greatly reduced.[9]

Pavilion adjacent to the Katy Trail State Park in Cedar City.

What has happened to the land where housed once stood? Jefferson City has built a picnic pavilion on part of it along with an extension of the KATY Bike Trail that connects that trans-Missouri bicycle path with the Missouri River. Jefferson City's Park and Recreation Department has rented garden plots to individuals for a token rent of $15.00 a year.[10] A few previous landowners worked out special arrangements with the Jefferson City Parks and Recreation Department, whereby they were allowed lifetime gardening rights on their old garden sites.[11] The most original use of the land, however, has to be on the six acres rented to Harry Thompson and his son Ben. Ben was the president of his local Future Farmers of America (FFA) chapter, and the group needed a fundraising project. The Thompsons teamed up with the organizers of the Jefferson City River Rendezvous Festival, in October 1998, to produce a truly amazing attraction. First, they planted corn on six acres of land and then cut out of the 12 foot high field of corn a gigantic 500 by 350 foot crop art representation of the Missouri State Capitol Building. This giant image was only visible from the air, but visitors to the Rendezvous Festival could enjoy the "sculpture" in yet another way. At ground level, the image, cut from the live corn, was actually an intersecting maze of paths 7-12 feet wide. Visitors to the Rendezvous Festival could pay a fee and try to negotiate their way through the maze. Unfortunately, four days before the festival, a flash flood on the Missouri River threatened to drown the whole area in water, and the festival had to be moved to higher ground. It was not a total loss, for the threatened flood did not overtop the levee system, and the resourceful Thompsons were able to harvest and sell the corn in the field. Adapting to the sudden change in location they were also able to build a smaller maze out of hay bails at the new Rendezvous site, which still made money for the FFA chapter.[12] Cooperation, innovation, community spirit, feelings of security instead of dread, relief to taxpayers—these are a few of the results that have made the Flood Buyout Program such a success in the Cedar City/Jefferson City area of Missouri.

Due to low elevation and close proximity to the Missouri River, Cedar City was subjected to catastrophic flooding.

Closed Gone Fishing.

Even when facing certain disaster during the floods, Missourians exhibited a strong spirit and were able to maintain an excellent sense of humor.

Today Cedar City is mostly vacant lots. The ABB transformer plant is still there as are most of the businesses that were there before the flood, including the airport, but every empty lot marks the site of a home that will never again need to be defended from the rising waters of the Missouri.

Open Space surrounding the Commerce Post Office.

Commerce

Commerce, Missouri, 20 miles southeast of Cape Girardeau on the Mississippi, was famous for two things in the 19th century: it was the largest river port between New Orleans and St. Louis, and it flooded constantly. In more recent history, it has lost the first designation, but retains the second because it floods, on the average of every two years.[1]

In 1993, the flooding began in April and some Commerce residents spent the entire month out of their homes. In July, however, the Mississippi flooded the town again, and by July 15 water had covered every street in the lower part of the town, flooding over 70 houses. Of the 94 houses in Commerce, only 17 are built out of the floodplain. Half the residents moved to higher ground, and the rest, whose homes still had any dry floor space, lived without electricity or potable water.[2]

Unlike many flooded Missouri towns, the flood waters did not recede quickly from Commerce. In September, the streets and yards were still covered with mud, there was still standing water in the city park, and some homes were without electricity.[3] Some residents thought it was time to seek a solution through the federal buyout program.

As early as August 2, at least 40 residents attended the regular Commerce village board meeting to voice their opinion and to hear debate about selling out through the buyout program. Under the terms of the early, pre-Volkmer buyout programs, the state might buy some homes in the floodplain that had sustained more than 50% damage.

Debate was fierce, with the board members and residents clearly divided into two groups. The anti-buyout forces were informally lead by Ann Huck, the town's 79 year old mayor, who had lived in Commerce for 55 years. She asked the assembly to consider not only how much might be lost in revenue, but the expense of tearing down the empty houses once the city owned them. With a yearly real estate tax revenue of only $1,000 to $1,200 dollars, she doubted the town could afford to tear them down.

The pro-buyout group found a spokesman in board member Roy Jones, who felt that the buyout option offered a chance to escape an ongoing cycle of flooding. As to the expense of tearing down the houses, David Mayberry, a supporter of the buyout option said: "This town already has some abandoned houses. What's a few more? You're talking about cost to tear down houses—how much does a book of matches cost?"

Mayor Huck told the audience that she had talked to Bill Emerson, the town's Congressional Representative, and there had been some talk about trying to get the Corps of Engineers to build a levee in front of the town, but, "with the assessed value of the area so low [she] didn't see a strong possibility for a levee being built here anytime soon."[4]

After the heated meeting, the pro-buyout group, suspecting that the majority of people in the town supported them, circulated a petition among the townspeople, asking the council to pursue a buyout. Although 80% of the residents signed that document, when it was presented at the village board's October meeting, that group voted 3 to 2 against pursuing a buyout. Ominously, flood waters returned to Commerce in October for three weeks.[5]

For the time being, the pro-buyout forces could do nothing, since a town could only apply for a buyout with the approval of its governing body. In November and December, 1993, many townspeople decided it was time to change the composition of the village board. This group found a leader in board member Roy Jones, who campaigned for re-election to the board as a pro-buyout candidate, along with three other Commerce citizens. In January, 1994, all four were elected to the board. The next time Commerce faced a destructive flood, the board would be ready to favorably consider a buyout option.[6]

The "next time" came in May, 1995, when flood waters returned to Commerce, in quantities much larger than 1993. The reason was that the Ohio River, which empties into the Mississippi down river from Commerce, was high and acted as a kind of barrier to the Mississippi, in turn backing its waters into towns like Commerce. This meant that every house that had been damaged by water in '93 in Commerce, was damaged again, plus a few more. Residents knew the damage was greater.[7] According to resident Connie Thompson, "It's worse than '93. The water this year has gotten places it has never gotten before. The town's going to have to have financial help to get back on its feet."[8]

By May 25, the State Emergency Management Agency (SEMA) in Jefferson City was getting calls from Commerce residents asking about joining the buyout program this time.[9]

The village board took action. Acting on the strength of the response, the board took a survey of damage in Commerce and found between 40 and 50 houses that had sustained damage. The board also found over 20 vacant lots in the floodplain, and hoped to include the purchase of these in a proposal to SEMA. Hoping to do everything right, the village board asked SEMA for personnel to help them with the paperwork, and the agency sent representatives to the town. With their help, Commerce sent a buyout application to Jefferson City on November 8, hoping for a positive response from the Governors Buyout Review Committee.[10]

Open space in Commerce, Missouri, overlooking the Mississippi River

The application coincided with the grant of additional money to Missouri to fund another buyout program that was similar to the one in 1993. This additional money became available because the state, using research compiled by SEMA, had begun to notice drastically reduced costs for emergency flood relief when compared to relief figures after the '93 flood. While the '95 flood waters were generally lower, they were not that much lower, yet the cost in '95 was only $23 million dollars as compared with $390 million in '93.

The reason was simple: there were fewer valuable properties in the floodplain for flood waters to destroy.[11] In fact, between the two floods, Missouri counties and towns had purchased 3,260 homes in the floodplains and were finalizing purchases of 1,000 more. Officials in St. Louis County estimated that by May 1995, they had spent $2.7 million to buy and eliminated 295 houses, which, in turn, had saved the county $7 million in emergency flood relief payments during the '95 flood.[12] With savings like that, Governor Carnahan was amenable to continuing the program.

The federal government accommodated the Governor by allocating $2.6 million to Missouri for a fresh round of buyouts. That was enough money for another 125 Missouri families to escape living in a floodplain. Commerce was the single largest recipient of that grant and was allocated $1,756,767. The state would provide an additional $680,000 to help Commerce pay the 25% matching share.[13]

SEMA assisted Commerce by holding a local public meeting to explain the program and sent personnel to help fill out the application forms. By November 30, approximately 20 people had signed up as potential customers of the buyout program.[14]

After the initial help of SEMA, Commerce hired a grant administrator, Laurel Moldenhauer, to administer the program. From her office in St. Paul's United Methodist Church in Commerce, Moldenhauer signed up an additional 20 residents.[15]

By the time the program was completed in May, 1996, only 31 Commerce homeowners had accepted a buyout offer.[16] One of them was ex-mayor Ann Huck, who had opposed the buyout in '93. She had accepted $15,000 to move her house five blocks to the top of a hill overlooking the town. She told Laura Johnson of the Chaffee Scott County Signal, "I've been in the floods since I was a little girl. . .We should have done this years ago."[17] Roy Jones, the man who had run for mayor on a platform of accepting the buyout, was also one of the first to accept a buyout offer.

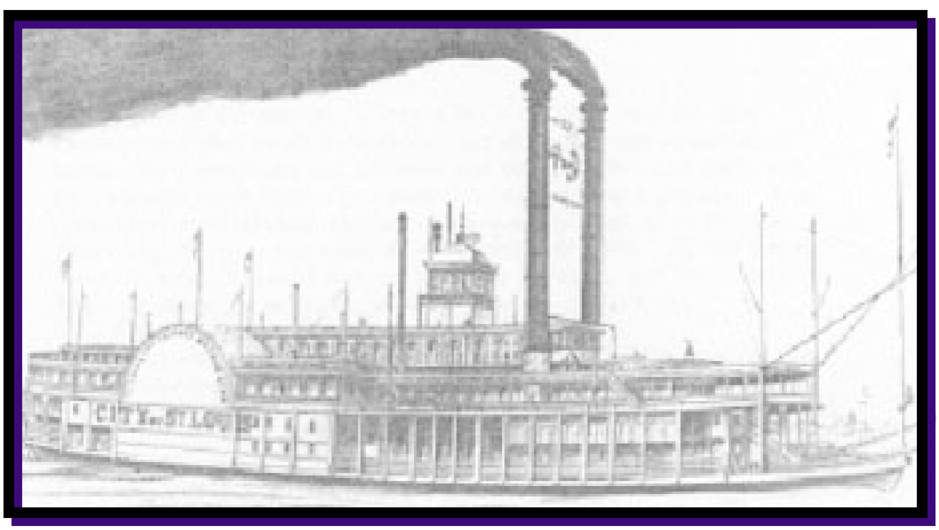
Although most people were happy, some were not. Many felt the government offers were too low, and in fact four residents left a meeting with SEMA officials on February 16, at St. Paul's Church when they found out what the appraised value of their home was.

Tommy and Joyce Cox received a $57,000 offer on their house that they considered worth $89,000. Official assessors felt that the home may have been worth that if it had been situated outside of a floodplain, but the threat of almost yearly flooding considerably reduced its value.

In the end, 27 property owners out of 58 applicants rejected the buyout price, and 19 residents did not choose to participate. Many were motivated by a fierce affection for their town and feared the buyout would encourage too many people to leave, diminishing the town.[18] Dixie High felt that people who accepted the buyout, "didn't care what happened to Commerce, they wanted to sell their homes and get out."

Yet, the current mayor, Allen Wright, who owns an auto repair shop in town, did not believe the buyout "hurt us that bad." Wright points out that some new businesses came to Commerce: a Bed and Breakfast, a winery, and a new tavern. Ann Williams is the owner of the new KDs Tavern, and says business is good. Also, for the first time in years, somebody is building a new house in Commerce, well above the flood plain.[19]

Commerce flooded again in May 1996. When it did, some people began the almost yearly ritual of cleaning out their home once again. However, 31 homes will not have to be cleaned out this time because nobody lives there. At the time of this writing, the 31 homes are just the shells of houses waiting for the wreckers.[20]



Excelsior Springs

Throughout every other town in Missouri that suffered from the great deluge, flood waters gradually rose past the ability of protecting levees. In Excelsior Springs however, the damage was caused in one cataclysmic flash flood that roared through the center of town at 11:15 p.m. on August 12. Less than three hours later the rains stopped and water levels began to slowly recede.[1] Excelsior Springs, a town of 11,000, situated north east of Kansas City, is not on the Missouri River where so much of the flood damage took place. Rather it lies on the Fishing River whose two branches, East Fork and Dry Fork meet in the center of town. At this point lay the town's main business area, its municipal buildings, and the Elms Hotel where generations of tourists have stayed while they enjoyed the famous springs that give the town its name.[2]

When the flooding began in early July throughout Missouri, it seemed that Excelsior Springs might escape serious damage, despite the evacuation of both Missouri City and Orrick which are south of Excelsior Springs. The flood waters came to within four miles of Excelsior Springs, and the water crews carefully watched the town's well fields that supplied water to Excelsior Springs. In mid-July crews built temporary sandbag levees around these well heads.[3] Assistant City Administrator Molly McGovern and her husband, Police Chief John McGovern, began to hope that perhaps this time, Excelsior Springs might escape flood damage.[4] Instead, the town got the "worst flood in history," according to then city manager, Craig Hubler.[5] Almost all of the city's services were destroyed. Municipal water was not only contaminated, but the city water system lost all pressure. City Hall, called the Hall of Waters, after the springs that flow into pools in the basement and give Excelsior Springs its name, was flooded. In addition, the telephone system, police station, and fire station all flooded, as was the lower level of the Daily Standard newspaper, along with Roosevelt Middle School. In addition, the city's three Omni buses were swept down stream.

Hall of Waters in Excelsior Springs. (Photo by Liz Roll of FEMA.)

Local businesses also were ruined by the flash flood. John Davis, the owner of United Auto Services, a local repair shop, lost his shop and tools but was able with the help of friends to drive most of the cars out of the building to safety. An added tragedy for the town was the flooding of the lower floor of the Elms Hotel that ruined the indoor track and swimming pool. A week later, hotel staff were using nets to capture catfish that were caught in the pool.[6]

But the center of town also was the site of sixty homes and apartment buildings, built along Kennedy Street and South Marietta Street, that were filled with sleeping people when the flash flood hit. Nobody was killed, but a 5 ½ foot wave that struck with tremendous force damaged all structures in its way. Jerry Gartner was in his house when a wall of water tore out the back wall, filled the living room, and swept his couch with Patches, the family cat, aboard outside and down the river. "...it sounded like a freight train rolling through the house," was the way Mr. Gartner described the event. The next day his couch was found one-half mile down the river lodged ten feet up in a tree. Patches returned home that evening.[7]

By the next day, city officials had met with representatives from FEMA who briefed them on emergency housing, food, and medical care.[8] A week later, other government officials explained the procedure for getting flood buyout money and loans from the Small Business Administration, although officials cautioned that loans were scarce.[9] Clearly there was need for a better financial solution, especially when a similar flood rocked the town again on September 22, creating similar havoc in the same area.[10]

Of course an answer came to many Excelsior Springs residents when Harold Volkmer's legislation to expand and simplify the buyout program was enacted. Before Christmas, 1993, Molly McGovern, as Assistant City Administrator, began processing applications for residents interested in the buyout program. With the assurance on May 6, 1994, that at least some of the funds had been approved, McGovern was able to arrange for Excelsior Springs to borrow money to begin the buyout process. Most people who had lost or seen their homes damaged in August and September were willing to apply. A few hold outs were convinced to join when in April, 1994, another flash flood crashed through the center of town, and devastated the same area once more.[12]

Excelsior Springs Buyout Property flooded in 1998 floods (photo by Liz Roll of FEMA).

Initially, some of the homeowners were suspicious. Some questioned the wording of an informational letter McGovern had sent explaining the buyout program. They were disturbed by a statement that said a homeowner's future use of the property could be compromised if their home had received greater than 50% damage in last year's flood. Of course this only meant that it would be difficult to live in such a home, not that the government was using the 50% damage mark to force people out.

At an August 7 meeting, McGovern stressed the voluntary nature of the buyout program. At the same time she clearly stated the obvious, that damaged "homes would probably not find [other] buyers... because they are in the floodplain..." It was possible she said that if they did not take advantage of the offer "they could lose their entire investment" and would eventually have to "just walk away from a home." She reassured the owners that the damage estimates to their homes were done by the local fire department, and that those who stayed in the area would have to raise their homes above the usual level of a flood.

Another group of homeowners had heard rumors that money had been received in May and were angry because it had not been distributed. Obviously this rumor was related to the May approval of the grant; no money had, at this point, been received.

McGovern also told her audience that 12 homeowners had expressed interest and three had gone so far as to request appraisals. Furthermore, one family had already closed the deal for the buyout the day before.[13]

The buyout program soon gained momentum in Excelsior Springs. On August 16, the City Council approved a new application for a $360,000 grant to assist property owners who had been flooded out and who wanted to move out of the floodplain. This was supplemental to the earlier approved funds and was made to the Missouri Housing Development Commission. Its goal was to provide gap financing, or the difference between what a family received from the buyout and the price of a replacement home. At the same meeting, the Council took control of two properties sold in the buyout program.[14]

From that point the program took off, and subsequent issues of the Daily Standard listed house after house —frequently with pictures—being torn down by wreckers.[15] An article in the January 16, 1995, issue of the Daily Standard reported that a total of $1.8 million had been approved at state and federal levels. The article also said that more than 70 properties had been purchased, with 14 already demolished. The article granted the process was slow "given the necessary paperwork, like appraisals and title work, yet the tone of the article was positive."

A detailed article appears in the Daily Standard on May 8, 1996, under the title "Flood buyout program about to end." The article, written by Gene Hanson, who had done some of the first reporting on the flood and the buyout, gave a detailed breakdown of the money spent so far to move 78 families out of the floodplain.

It listed the total amount spent so far as: $1,190,583 spent for acquisition of sites, $199,349 spent for demolition, relocation costs of $156,985, title work $14,122, appraisals $2,650, administrative costs $52,657, and National Flood Insurance Program refunds at $3,180. FEMA through Missouri's State Emergency Management Agency supplied $897,000 for the program and community development block grants provided the remainder.

SEMA officially listed the buyout project closed on October 6, 1996. The "payoff" for this buyout project came during the first week of October, 1998, when Excelsior Springs suffered another flash flood. This time only two residences were at risk instead of more than 70 that had stood in the area in 1993. Using the amount of water in the basement of City Hall as a guide, Assistant City Manager Molly McGovern estimated that the latest flood and the one in 1993 involved roughly the same amount of water. Obviously the buyout program had once again proved to be effective.[16]

Hannibal

Hannibal, Missouri, was one of the lucky towns that faced destruction from a flooded river and survived. That this happened was due to Tom Sawyer and Huck Finn. Ever since Mark Twain wrote about these two mid-nineteenth century boys, Hannibal has derived a good part of its income from the tourist trade. The townspeople have carefully nurtured the historic buildings in the town to create a historic atmosphere. More than 100 buildings in the downtown area are on the National Historic Register.

Flood Disaster Relief Center in Hannibal, Missouri

Yet, the Mississippi River has always been a real threat to this tourist Mecca. As far back as 1950, the Army Corps of Engineers had recommended that Hannibal build a flood wall to protect its historic downtown. Townspeople were reluctant because of the projected cost of such a structure. That reluctance gradually changed when the Mississippi River threatened to inundate the town eight times between 1960 and 1986.[1] In l989, local businessmen, banks, and the city government raised $850,000 as the city's share of the $5,800,000 price tag for a flood wall. The Federal government had already agreed to pay most of the cost.

Construction began in April 1990, and was completed barely one year before the 1993 flood began. The flood wall sits 12 feet high and 3,650 feet long.[2] It runs from just north of the Mark Twain Memorial Bridge between the Mississippi River and the town for 25 blocks and then turns west for six blocks along the north edge of Bear Creek.[3] After the '93 flood, the Corps of Engineers estimated that the flood wall had more than paid for itself by preventing more than $14,500,000 in damage to downtown Hannibal.[4]

But the flood wall did not protect all of Hannibal. South of the flood wall , along the northern bank of Bear Creek, were hundreds of homes, that sustained substantial damage in the flood of '93. As early as April 15, 1993, the Mississippi River rose nearly six feet above flood stage which caused the waters of Bear Creek that run into the big river to back up, overflow the rivers banks, and wash into homes on Jefferson and Ely Streets. This became only a taste of what was to come. Heavy rains throughout April and on into May and June raised the Mississippi to 28.7 feet. This was higher than the 28.59 feet recorded in the 1973 flood, and the Corps of Engineers estimated the river would go higher still. This record level spurred the people of Hannibal to action. Many feared that floodwaters might reach 32 feet and overtop the levee. So by July 10, volunteers began to fill and stack sandbags on top of the levee raising it another two feet.[5]

Other volunteers also put a protective collar of sandbags around the city's electrical substation at Cave Hollow and around the water pumping station at Bridge Street.[6] These protective measures paid off. On July 25, floodwaters reached 31.6 feet with every indication of going still higher. Then, Hannibal got a break at the expense of people living across the Mississippi in East Hannibal and in Hull, Illinois. The Sny Levee guarding those two towns broke and water covered 45,000 acres of Illinois farmland. That break, however, caused the river level at Hannibal to drop four feet in eight hours.[7] Although the river would rise again, it never again came close to the 31.6 feet mark.

Nevertheless, a lot of damage had been done. In August when City

Engineer, Bob Williamson, inspected homes in the Bear Creek area between Collier Street and Woodrow Avenue, he found 100 homes that had been flooded for more than a week,[8] Williamson made a later appraisal of flood damage and found that 77 of these homes needed to be condemned.[9]

Over 400 people who had lived in other inundated structures were forced to find emergency shelter, returning to their homes would require extensive repair.[10] Before the flood, city ordinances had been in effect that required residents forced by a flood to evacuate their homes and to raise their foundations above the 100 year flood mark, if those homes had sustained damage of more than 50%. Most of the homes along Bear Creek had.[11] For many of these people, the buyout program would be a godsend.

The number of homes damaged in Hannibal was so large, that state government moved quickly to offer help through the buyout program. On December 10, 1993, Governor Carnahan's office announced that Hannibal could get as much as $1.5 million through a hazard mitigation grant from SEMA and a community development block grant from the Department of Economic Development to buy flood damaged homes, if the owners would sign the property over to the city and move out of the floodplain.

Hannibal's Mayor, Richard Schwartz, was supportive of the program. He felt the buyout could "immunize the community from future destruction."[12] The Mayor hoped that as many as 200 families would relocate out of the Bear Creek area.[13]

Because of the historical significance of Hannibal, the Department of Natural Resources had to study the condemned homes, but only a few of the Bear Creek houses were historically significant, and the buyout program continued without significant delays. Williamson and city officials distributed questionnaires, held meetings, and explained the process to homeowners.

The conditions were the same in Hannibal as for so many other Missouri towns. Homes were purchased at their fair market, pre-flood value. The dollar amount given the homeowner at closing had deducted from it any previous federal insurance payments and emergency advances for temporary repairs. The city received title to the land with the stipulation that no dwellings or business buildings could be built there in the future.

Bob Williamson also applied for more money, and in April, 1995, Hannibal received word that an additional $376,000 was coming from SEMA to add to the block grant money. The money meant that Hannibal could buy additional property, and Williamson added 25 additional properties to the 80 the city had originally designated for the buyout.[14]

By April 18, the city had finished negotiations and paid for 14 flood damaged homes, and was negotiating for 10 more.[15] These homes were purchased with the block grant money. On May 21, however Hannibal used some of the SEMA money to buy five more homes. These payments were delivered to the owners on the steps of City Hall with Representative Volkmer handing checks to each owner collectively totaling $42,600. At that time, Bob Williamson estimated the city would buy 38 more homes by June 3.[16]

The closing on houses continued until January 23, 1996, by which time Hannibal had purchased 116 properties.[17] By that time, Hannibal had experienced another flood when in 1995 the Mississippi River and Bear Creek once more overflowed their banks. This time, as had happened in so many other Missouri towns, no people were driven out of their homes, and no homes were ruined. The people had moved to higher ground and the houses had been bulldozed down.[18]

Hannibal has plans for the land that had once been vulnerable floodplain housing. On 7th Street, near Bear Creek, Hannibal has just closed the city dump that operated there since 1995. The land will be raised seven inches to get it above the usual flood level, and then three soccer fields and six basketball courts will be built with accompanying parking lots and restroom facilities. Soccer has recently become popular in Hannibal among the young, and the land that once was a burden, can now be an asset.

Along the riverfront, in front of the levee that saved the town, the city acquired more lots with the buyout program. The city will use the land to build a public recreational trailer park/campground where tourists can stay while participating in the National Tom Sawyer Days Festival that runs from July 1-4 every year. Hannibal's normal population of 18,000 swells to nearly 90,000, as people come to watch or participate in fence painting and frog jumping contests, buy crafts, tour historic homes, and watch or participate in the Tom Sawyer/Becky Thatcher contest.[19] Once this project is completed and the trailer park/ campground is finished, land that once cost the City of Hannibal and the State of Missouri money, will generate dollars instead.

Hartsburg and Boone County

The south Boone County town of Hartsburg, population 131, sits about three-fourths of a mile from the Missouri River. This picturesque town's residents either farm or commute to jobs in either Jefferson City or Columbia, both of which are about fifteen miles away - Columbia to the north; Jefferson City to the south. In 1993, about the only businesses in town were two restaurants whose best customers were bicycle riders who rode the KATY Trail from Jefferson City or Columbia.

Before 1993, a flood had not found Hartsburg for 30 years. High water had threatened, but a Corps of Engineers levee had kept Hartsburg dry for years. Throughout June in 1993, however, Hartsburg residents watched the Missouri rise. Citizens organized into shifts to raise the Corps' levee even higher. This worked, until five inches of rain fell over the area in less than 24 hours between Wednesday July 7, and Thursday July 8. The Missouri crested Thursday morning at 33 feet, one foot higher than the height of the levee and its additional sandbag reinforcement. A hole 400 feet wide opened, letting water pour through. Next, part of the levee south of town also broke and 2-8 feet of water soaked all but 12 out of 50 houses in the town.[1]

By July 22, it seemed to be over. The water dropped a foot, and some families began to cautiously creep back to their homes to survey the damage. Then on July 25, the heavy rains came back, and the water started to rise again; this time it rose even higher. Both the Baptist Church and United Church of Christ had only endured flooded basements in the first onslaught. This time water rose into the sanctuaries, and church members hauled the pews and pianos out of both buildings to high ground. Mayor Floyd Steelman ordered the sewer pumps shut off, and Union Electric Power Company shut off electricity and gas in the town. The Post Office closed temporarily while the postmaster moved operations to Ashland, seven miles away.

Yet, the town's people refused to give up. Instead they retreated to the center of town and hastily built a sandbag wall five feet high, to protect the twelve buildings that had escaped the first flood. Termed the "Hartsburg Wall" by the approximately 90 people who maintained it, the wall ran from the Hartsburg Hitching Post Café several blocks through town to the Senior Citizens Center.[2]

By July 31, the water was dropping—this time permanently. By August 12, the water was out of the town. Somebody put up a sign on main street: "Hartsburg Thanks Everyone, Hell of a Try!"[3]

People patiently began to rebuild. Many houses were not covered by flood insurance because the residents honestly believed that their homes were not in the floodplain.[4] Most people in Hartsburg had really not considered flooding a threat. They neither knew where the floodplain was, nor were they familiar with flood regulations. Many were incredulous when the Federal Emergency Management Agency's Sharon Reigel came to town to inform them during a town meeting, that in order to rebuild a house in the floodplain that had sustained damage of over 50%, the owner would have to raise it a foot above the 100 year floodplain level. In most of Hartsburg, that meant four feet. Nancy Grant, the town's Flood Relief Coordinator, feared that the independently-minded citizens might simply defy that rule and rebuild without raising their homes.

Grant reminded the citizens that failure to comply could result in the town being dropped from the National Flood Insurance Program. To compound these problems, Mayor Floyd Steelman resigned and the most active of the town's city councilmen, Glen Klemme died.[5]

In the midst of this disorganization and confusion, some residents received first word of Representative Volkmer's new buyout program. At first, the program received little support. Linda Hilgedick, a Hartsburg resident, felt few people would apply because the majority of people had already moved into their homes or were in the final stages of painting and carpeting.[6]

On December 16, The Hartsburg Hot Line, written for the Ashland Boone County Journal by Nancy Grant and Shirley Thomas mentioned that the Hartsburg City Council was studying Volkmer's buyout bill. Two weeks later, on December 30, the Ashland Boone County Journal mentioned in a front page article that Southern District Commissioner Karen Miller would hold a meeting on January 5 in Hartsburg to inform flood victims about the buyout program. She reminded people that the buyout application deadline was January 15, and that this meeting would provide information for Hartsburg and Boone County citizens alike who might want to apply for assistance under the program. Miller noted however, that many Hartsburg families had already rebuilt their homes. A separate note stated that the city council had already begun to contact homeowners whom they suspected might be potential candidates. It further invited people who might be interested to contact the city council.[7]

On January 5, the city council talked to a number of residents who were interested in the buyout. Commissioner Miller's presence was helpful and necessary because a number of houses in the Hartsburg settlement area were actually not in the corporate limits of the town, but in Boone County. She reminded people that the rules of the buyout program stipulated there must be separate applications for houses in Boone County and ones in Hartsburg, even though the houses might sit next to each other. This meeting made clear the basic rules of the buyout program, and five Hartsburg residents began the application process at the meeting, along with twelve people whose houses were in Boone County.

At this meeting, the councilmen and Commissioner Miller informed the residents that they estimated the houses outside of Hartsburg in Boone County were collectively worth $350,000 and those in Hartsburg $195,000. These would be the values they would forward with the applications. However, they warned the applicants that FEMA's appraisal might determine the houses to be worth less. John Thomas, a councilman told applicants that the property, if sold, would revert to the city or county. He speculated that the lots, once cleared, might be used as a park or a parking lot for one of the local churches.[8]

The buyout process became a major news item in the <u>Ashland Boone County Journal</u>. An article from the January 20 issue explained that the local officials and the State Emergency Management Agency in Jefferson City were helping residents fill in the 404 Hazard Mitigation Grant Application, and although it had been a complicated process, the documents were finished by the January 15 deadline.[9] By February 10, the Journal noted that "all applications and information have been forwarded to the various agencies for consideration on the buyout process. It is now a wait and see attitude for the ... residents affected."[10]

By February 15, the <u>Journal</u> carried the news that the Governor's Buyout Review Committee in Jefferson City had recommended funding for three homes in Hartsburg and seven in Boone County. The Governor had accepted this recommendation and had moved the applications on to FEMA.

The buildings that did not receive the committee's approval were businesses that did not qualify for the program; the buyout targeted only primary residential dwellings. Hartsburg Mayor Mike Rodemeyer cautioned residents that FEMA still needed to review the applications. However, if they were accepted, and the buildings were torn down, the city council hoped to definitely use one of the lots for a church parking lot, another for a small park next to the KATY Trail bicycle path, and the third as a green space between two houses. The Governor recommended a total of $100,500 to buy the houses in Hartsburg, and $221,000 to buy the Boone County homes.[11] At that point, the formal assessment of the property began. City officials presented the owners with an offer based on their pre-flood assessment of a house's value, minus money that might have been received previously from FEMA or paid out in flood insurance.[12] Over the ensuing month, the owners considered and accepted the offers.

On February 2, 1995, Mayor Mike Rodemeyer presented each owner with a check.[13] According to Buck Katt, Deputy Director of SEMA, in an interview with the <u>Columbia Missourian</u>, the average price paid was $25,000.[14]

By May 18, 1995, Hartsburg had contracted with Enoch Construction Company to tear down the four houses at a total cost of $23,400, with demolition to start by May 27.[15] Ironically the demolition had to be delayed until June 1.

On May 25, the Hartsburg area flooded again. Happily most of the town was safe behind the next levee that the Corps of Engineers had completed in September 1994, but twelve houses, whose owners had decided not to participate in the buyout, sustained minor damage from water.[16]

Broken flood control levee

Herman purchased whole blocks of flood-prone properties under the buyout program.

Open space enhances the appearances of privately owned homes in the community of Hermann, Missouri

Hermann

Hermann, Missouri, the county seat of Gasconade County, is no stranger to flooding, but the flood of ‘93 was memorable. The water levels were higher than ever before, more commercial and residential property was devastated, and the flood waters stayed for weeks instead of days. The flood waters of 1986, the second worst flood in Hermann’s long history covered parts of the city for only four days; whereas in 1993, the river at Hermann was above flood stage for 51 straight days. Furthermore, the flood waters seemed to recede only to suddenly reappear - three times between July 6 and 31, and once again in September.

The town was also nearly isolated by water and was cut in half when water from Frene Creek, which flows into the Missouri, overflowed the bridges on East First and Sixth Street.[1] Hermann’s police chief, Bob Sitton, supervised the building of emergency roads to keep the city connected. The town lost its phone system, the schools had to be closed since one quarter of the students lived across the Missouri River, and some worried that giant fuel tanks floating down the river might destroy the Highway 19 Bridge over the Missouri.[2]

Yet, Hermann is resilient; its inhabitants are the descendants of German settlers who came to central Missouri in the mid-nineteenth century. An editorial, appearing in the November 23, 1993, issue of the Hermann Advertiser Courier, written by Mayor John Bartel, takes the crisis of the flooding in stride. He thanked the community for their united efforts in battling the flood, he characterized the summer of flooding as an exciting and challenging time, and he invited Hermann’s citizens to become part of the solution.

A good portion of that solution proved to be Hermann’s wholesale acceptance and participation in the buyout program. Not only did Hermann’s residents quickly and successfully apply for money to purchase residential homes habitually threatened by the floods, but they also took advantage of additional government money to protect the commercial basis of the town.

Like any town afflicted with natural disaster, Hermann quickly applied to FEMA for disaster relief money, and by November 23, it had received the first payment from that agency to repair infrastructure that the flood had ruined.[3] But the town was also interested in the long-term solutions, and so the city council was also interested in the buyout program.

Officials from Hermann heard the first rumors about the buyout program on September 7, 1993, when they, along with leaders from neighboring communities met with personnel from Missouri’s State Emergency Management Agency.[4] On October 24, Harold Volkmer, whose congressional district included Hermann, Missouri, explained his proposed plan to improve the existing legislation governing buyouts of property on floodplains. His plan made more federal money available for the program, and revised the formula by which the Federal Emergency Management Agency calculated how much it could distribute to state emergency management agencies for use in buying flood threatened properties. To everyone's surprise, Volkmer's bill moved quickly through the House and the Senate, and was signed into law by President Clinton on December 2, 1993.[5]

Hermann's City Council, lead by City Administrator Terry Helton, moved just as quickly to apply for the buyout money. On February 22, 1994, the Council submitted the paperwork to the federal government through the Meramec Regional Planning Commission for $2.2 million in buyout funds.[6] The request asked for money to repair infrastructure and to buyout residential and commercial property.[7]

Hermann's prospects for receiving money improved when in the last week of May 1994, Missouri received additional money from the Federal Department of Housing and Urban Development. Jill Friedman assured the reporter that Governor Carnahan was committed to funding the residential buyout program first, and that "commercial property would be helped after the residential requests were addressed."[8]

By July 5, Hermann's application for money was approved, and on August 9, 1994, the first residential buyout money arrived. Hermann received $494,750 to buy residential property, along with $150,000 from another government grant to pay for demolition of the houses.[9] Later, in October, 1994, Hermann received additional money to fund a buyout of commercial property from the Missouri Department of Economic Development.[10]

In May 1995, Hermann once more faced record floods. This time the floodwaters were not as high, but they remained over flood stage for 85 straight days—a month longer than in 1993.[11] Despite these repeated inundations, there was room for optimism.

Before the 1993 flood, 69 property owners had flood insurance. An article in the Advertiser Courier on September 6, 1995, reported that now there were 58. The article stated that the reason for the decline could "be attributed to property owners participating in the federal and state buyout programs."

By October 4, 1995, the first buyout homes in Hermann were being demolished on West Eighth and Ninth Streets. An additional thirteen residences were on the list for demolition, and Barbara Bohley, the administrator of Hermann's buyout program, reported that Hermann had requested additional money to buy "five or six more homes."[12]

At the end of the buyout program, 22 residential properties had been purchased.[13] The only problem with an otherwise smooth buyout occurred when demolition bulldozers demolished a home at 200 E. Fifth Street. Although a pre-demolition investigation indicated that the house was a modern structure, the inner core of the house was actually an "old frame house dating to 1840." The destruction was unfortunate, but unavoidable, since the historic section of the house had been completely covered by later construction, and was only discovered after destruction of the house had begun.[14]

Today, the land that was previously devastated by flood waters in 1993 and 1995 is empty, except for a few holdouts who have raised their houses to what they hope will be a level above the next flood. Most of the land is covered with grass. A portion has been turned into a soccer field, and another part is being used as a parking lot for businesses located on nearby higher ground.[15]

Jefferson County

(Including Festus and Crystal City)[1]

Floods have always threatened Jefferson County because three rivers flow through its area. Six times between 1973 and 1993, flood waters from the Mississippi, Meramec, and Big River have devastated the county's towns and unincorporated areas. The worst was in 1993. Although the threat began in May, by July floodwaters threatened most of the county.

In Arnold, 500 families evacuated areas near the Meramec River on July 28, and on August 1, a main levee along the Starling Airport Road collapsed which released flood water over a mobile home park. In Festus, 37 businesses and 35 houses were flooded. Crystal City lost its water treatment plant, its post office, the main intersection in town was flooded, and 30 families were forced from their homes. In tiny Kimmswick the threat of flooding, at one point, caused the entire population to evacuate.

In Herculaneum, flood waters covered the town's main intersection, caused the evacuation of two trailer courts, and forced The Doe Run lead smelter, the towns largest employer, to shut down. At Kimmswick and Herculaneum, the Mississippi rose to 45 feet which was six feet higher than its record crest in 1973; this water forced hundreds from their houses and flooded the downtown areas of both towns.[2]

The unincorporated parts of Jefferson County were also flooded. Rising water from the Big River forced 200 people out of trailer courts and isolated houses. Flood water covered roads and isolated people including the 30 residents of the hamlet of Sulpher Springs. All along the banks of the Mississippi, Meramec, and Big River, throughout the month of July, hundreds of Jefferson County residents joined together in spontaneous groups dictated by geography to build makeshift levees protecting mobile homes and houses.

On Sunday, July 18, Jefferson County officials met in Hillsboro to assess the damage, and to make contingency plans for recovery. The county's economic development director, Patrick Lamping, reported that 350 businesses in the county had been forced to close, sewers had collapsed or were backed up, 3,000 workers were involuntarily idle, $800,000 in wages had been lost, and retail sales had declined by $2.5 million.

Bill Koehrer, the county's director of public works reported that 14 roads in the county were underwater, and an official from Union Electric reported that 400 people were without power. Jefferson County Presiding Commissioner, Elizabeth Faulkenberry noted that by July 20, the county had spent "$975,000 on flood prevention and emergency services."[3]

By the evening of July 31, county officials told levee builders and residents to stop working and to evacuate. With river crests predicted to rise another two feet during the next two days, with leaks appearing along three week old levees, and with more rain predicted, the situation at the end of July appeared hopeless. Faulkenberry believed "it was all about to go under." Everyone agreed with her.[4]

However, levees in Columbia and Valmeyer, Illinois, broke. This ruined thousands of acres of Illinois farmland, but it eased the pressure on dozens of Jefferson County levees. Water levels dropped at Arnold, Festus, Crystal City, and Kimmswick. The dropping level of the Mississippi also eased the backflow on the Meramec and Big Rivers. On Monday, August 2, it looked as if the worst was over. Kimmswick Mayor Martha Patterson could boast, "We've fought it, and we're winning."[5]

During the next week, the threat of flooding seemed to be passed. The cities and hamlets of Jefferson County began to clean up. In Crystal City and Festus, city officials called for volunteers to remove the sandbags, and Rick Turley, City Administrator for Festus, invited other municipalities to bring their discarded sandbags to Festus. The sand could be used to build an extension onto the runways at the Festus Municipal Airport.

Herculaneum officials cleaned up refuse from the flood off their streets, and Elizabeth Faulkenberry and the other Jefferson County

Commissioners contracted with Meramec Hauling to collect and haul away debris throughout the county.[6]

These clean up efforts also caused county and municipal officials in Jefferson County to think about prevention. In fact, as early as the Hillsboro conference on July 18, Elizabeth Faulkenberry, had broached the topic of a possible buyout of houses, along the Meramec and Mississippi Rivers, as a means of minimizing future flood damage.[7]

The buyout idea quickly became a "hot" topic throughout the county. On September 10, at the Festus City Hall, county officials as well as officials from Crystal City and Festus held a meeting with SEMA officials to discuss various kinds of relief. A buyout was at the top of the list. Commissioner Faulkenberry and Festus City Administrator Rick Turley were both interested. SEMA officials explained that the buyout option was available only to flood victims, and that, while the buyout program would pay the pre-flood value of a home, the county or municipality would have to secure a 25% match.

After the meeting, Turley told reporters that perhaps Festus could seek a community development block grant to pay its share, but "it was unclear if a town could use that for its share." Mayor Clifford Bins of Crystal City said that he would not seek a buyout, although 30 to 40 individual homeowners in Crystal City had asked for one.[8]

Following that meeting, the concept of a buyout attracted more attention. Citizens of Arnold encouraged the idea. Arnold, the largest town in Jefferson County had been actively interested in the buyout option for over a decade. Over one-half of the 65 buildings in the Arnold floodplain had been bought out since the US government first initiated a buyout program in 1980. The cleared land totaled 400 acres and had been turned into a greenway made up of wildlife and recreation areas. Eric Knoll, Arnold City Administrator, saw the flood of '93 as an opportunity to continue the buyout policy that he felt would eliminate the flood problem for Arnold completely. He had plans to remove more than 200 houses and mobile home pads from the floodplain.[9]

With this endorsement, other Jefferson County officials and residents were bound to be interested. At first, FEMA officials gave little encouragement. In an interview with the St. Louis Post Dispatch, Stephen Harrel, a FEMA official from Kansas City explained. . . [that a] "buyout will come slowly." . . . [He was] "concerned that a whole lot of people are getting their hopes up for something that may not materialize."

Harrel did, however, correct the false impression that only homeowners with flood insurance could apply for the program. He clarified that it was possible for uninsured homeowners to participate too. He also cited Arnold as "the region's buyout expert," because it had gotten "federal aid for three floodplain buyouts in the last decade." Of course, when the Post interviewed Harrel on September 20, he was speaking of the flood buyout program that was already in place. Representative Harold Volkmer's bill had not yet been introduced to Congress.[10]

Even in the wake of this discouraging announcement, the buyout idea continued to grow, especially when newspapers began to carry accounts of the progress of Volkmer's bill through Congress. Encouraged by the possibility of the bill's passage, Jefferson County, Festus, and Crystal City began surveys of flood-damaged property within their boundaries in anticipation of the bill's passage into law. When President Clinton did sign the bill on December 2, people in Jefferson County were ready to participate.[11]

In Festus, Rick Turley had compiled a list of 25 possible buyout properties as early as November 5. It included houses in the vicinity of South 4th Street and South Adams and estimated the city would need $894,000 to buy the homes and $100,000 to tear them down.[12]

Jefferson County also had identified 554 structures in unincorporated areas of the county that might be buyout candidates. Tabulation of the positive responses to a questionnaire sent to the owners of these properties revealed that 106 property owners of 266 of the structures might be interested. The questionnaire also revealed that only 22 of those 106 owners had flood insurance. Many of the structures, the documents revealed, had been repeatedly damaged over the last decade by flooding.

The specific sites included mobile homes at Covered Bridge Mobile Home Park in the northeast corner of the county; 41 houses and lots in the River Bend Subdivision near the Big River; trailer homes at the Blue Bell Mobile Home Park off Old Highway 141; and 19 other properties scattered throughout the county. The estimated cost of the buyout was $3.5 million.

Although Crystal City's Mayor, Clifford Bins, had earlier indicated his town would not participate, some residents had been insistent, and 17 of them had persuaded the city government to investigate the buyout option and to put their names on a list as interested candidates. Their 17 houses were valued at $343,000. Crystal City's City Clerk, Debbie Johns, felt that "this was an opportunity for them [the owners] to have a base to purchase a house somewhere else."[13]

One reason for the generally positive response to a buyout was the attitude many Jefferson County residents had towards SEMA and FEMA, the two agencies they knew would administer any buyout program. In the '93 flood both agencies had collectively been responsible for finding most of the relief dollars to help flood victims.

Red Cross volunteers deliver meals to victims and emergency workers.

For instance, Stephen and Donna Roberts, whose mobile home was in Fenton (part of the town is in Jefferson County), praised FEMA for helping them with emergency money to repair their mobile home and help them with rental of a new mobile home pad. "They [FEMA] came down to McDonald's in Arnold and the place was full of families. But in 10 minutes we gave them all the information they needed and [we] were on our way."[14] FEMA's word of mouth reputation had already gone a long way towards legitimatizing the buyout process. People in the area had every reason to expect a similar level of help from the two agencies during a buyout effort.

With a head start, Jefferson County, including Festus and Crystal City, sent its municipal officials to Jefferson City to meet with Governor Carnahan's Buyout Review Committee on December 29, 1993.[15] Once that committee heard a presentation, it either rejected an application, or recommended it to the Governor. The Governor then made the request to FEMA.

By March 5, all applicants had received positive answers from FEMA. Jefferson County received $3.5 million. The grant allowed Jefferson County to begin negotiations on 91 flood damaged houses as well as Covered Bridge Mobile Home Park and Blue Bell Mobile Home Park.

Elizabeth Faulkenberry told the Post that the money would "help a lot of people and will prevent properties from being flooded again in future years with the government paying for repairs." Arnold, Festus, and Crystal City submitted requests, and these towns received positive news also.

Arnold received $4.1 million to buy 89 homes as well as several trailer courts. Crystal City received $232,800 to buy 17 homes, and Festus received $288,000 to buy 15. These three cities and Jefferson County submitted requests for community development block grants to add to this buyout money. Some community development block grant funds could be used for buyouts, and some could be used to pay for administrative costs, demolition, and moving expenses of buyout participants.[16]

A reminder of what the buyout program was supposed to prevent came in April, 1994, when three days of heavy rain dropped ten inches of rain over the Big River and Meramec River basins. The threat of flooding returned to some areas in Jefferson County. Along the Big River, the tiny settlements of Cedar Hill and Morse Mill experienced the waters rising so suddenly that residents had to be evacuated by helicopter or boat.

At Arnold, floodwaters rose to within three feet of the crest in 1993, and several residents who had resisted the idea of a buyout said they would reconsider. Jerry Dunn, who spent April 10 and 11 sandbagging his house near the Starling Airport Road, told Tim O'Neil of the Post Dispatch that he had moved back to his house after the flood of '93 "because he never could get much information about federal buyouts." He said, "[he'd] study it harder this time."[17]

Soon after the flooding in April, Jefferson County and its municipalities began the mechanics of the buyout process. Festus, Crystal City, and Jefferson County all hired appraisers to assess the pre-flood value of houses.

In Festus, under the National Historic Preservation Act of 1966, some houses were old enough to make a historical study mandatory, and the city had to hire historians from the State Historic Preservation Office to make analyses. After these preliminaries, the city officials gave each homeowner a price value and time to evaluate.[18]

In Crystal City, the city administration followed the same procedure. Fourteen of the original 17 applicants accepted the governments offer. In Festus, all applicants had accepted the offer.[19]

Jefferson County also followed the same procedure, but because of the large numbers of applicants, the process took longer. Of the 106 homeowners who had originally expressed an interest in a buyout, the state approved funds for 89. Later, funds were available for an additional 41 houses whose owners had expressed interest in the program in June 1994. By May 28, 1995, Jefferson County had closed on 75 houses and was negotiating with 11 more homeowners.[20]

As Jefferson County was negotiating for these houses, another bout of heavy rain had caused flooding of the Meramec and Big Rivers. Many of the people whose homes were threatened had decided to take the buyout offer and were already gone, but the onslaught frightened some additional people into exploring the buyout program.[21]

To help these individuals and others throughout the state who had also been victimized by floods in 1995, Governor Carnahan announced he would try to find additional funds to accommodate any homeowner who had missed an opportunity to try the buyout in 1993.[22] True to his word, the Governor found additional money. For Jefferson County, that meant an additional $900,000.[23]

By February 1997, Jefferson County had finished its buyout program. It had acquired 131 properties along with a total of 118 pads at two mobile home parks and one large apartment complex.[24] The cost of these purchases had been $3,122,758, ranking Jefferson County third in buyout funds expended after St. Charles County ($14,617,424) and St. Louis County ($ 5,502,746).[25]

Lincoln County and Winfield

Lincoln County lies just north of St. CharlesCounty and has a 25 mile border with the Mississippi. The floodplain along the great river is a rich agricultural area with a few small towns scattered among its fields. Winfield with 592 citizens in 1993, was the largest of these towns, but Old Monroe, Silex, and Foley formed satellite communities.

Each of these farming communities had experienced frequent flooding. The last big one before 1993 had been in 1973, when the Pin Oak Levee some three miles east of Winfield had been overtopped and hundreds of local farms flooded. Still, the residents were confident that this time the seven large levees maintained by the Corps of Engineers along the rivers edge would hold.

On June 30, however, exceptionally heavy rains began accompanied by high winds that blew the roofs off some trailers in Winfield. The river level steadily rose because after weeks of rain the ground could absorb no more. By July 1, when weather forecasters predicted a 36.3 foot crest, just 6 tenths of a foot below the breakthrough crest of 1973, nervous county residents gathered to reinforce local levees.[1]

Their efforts were no match for the force of the water. During the night of July 3rd, part of the levee located 1.5 miles from Mississippi Lock and Dam 25 gave way. By Sunday morning, floodwater had cut a 400 foot hole through the levee and the eastern edge of Winfield was covered. At least 150 people fled their homes, and 4,000 acres of farm land were covered. Sandbaggers, joined by National Guard troops of the 3175th MPs (Warrenton), fell back to the Pin Oak Levee and began to try to stop the water. But on July 10 this levee gave way, flooding more farmland and forcing another 100 people to evacuate Winfield. North of Winfield, flood waters covered almost all of Foley and Silex, forcing all of its residents to leave. South of Winfield, Old Monroe’s levee held, but residents prepared to leave.[2]

From then on, levee after levee collapsed, 1100 homes suffered flood damage (200 in Winfield), 2,700 parcels of farmland went under—representing 30% of the farm land in Lincoln County, with an appraised value of $29,304,310—and most of the county’s roads were covered.[3] Sandbaggers did manage to save part of Winfield by building a levee along the top of Highway 79, and in Elsberry, 12 miles north, workers saved the town by using cranes to lift and place concrete highway dividers for a makeshift levee atop the Burlington Northern Railroad embankment.[4]

Residents moved into trailers supplied by FEMA and into shelters maintained by the Red Cross, and waited for the waters to go down.[5]

On August 11, 1993, the <u>Troy Free Press</u> carried a story about Representative Harold Volkmer’s “Relocation” bill. That bill would eventually help 323 Lincoln County and Winfield residents to relocate out of the floodplain. The article generated interest among flood victims, and within a week, residents were calling county surveyor Bill Shea to ask for details.[6]

Other Lincoln County residents were calling The Boonslick Regional Planning Commission, where Andrew Riganti placed their names on a list and forwarded it to the State Emergency Management Agency. By November 30, Riganti had a list of 83 people who had expressed interest.

At this time much of the information that people were getting was confusing. Newspaper accounts show that the information was a combination of what Representative Volkmer proposed in his as yet unpassed bill, and what the original buyout bill stipulated that had been passed back in 1980.[7]

Finally, once President Clinton signed the bill on December 2, Congressman Volkmer scheduled a meeting for officials from all over the state on December 10 on the Columbia Campus of the University of Missouri, to discuss details. At this meeting people learned that the old federal/state cost share of 50/50 had been changed to 75/25, and that the 25% could be financed with money from a variety of sources including community development block grants.

The same meeting also laid down rules about the voluntary nature of the bill, outlined the process of inspection and appraisal for each property, and emphasized that any homeowner could appeal the appraised price and back out at any time during negotiations. In addition, the buyout would concentrate on homes instead of businesses.[8]

The county commissioners selected the personnel at Boonslick Regional Planning Commission, headquartered in Warrenton, to organize and administer the buyout. Residents of Winfield, with a local government separate from the county, had to file a separate buyout application through its city council. The council also selected Boonslick Regional Planning Commission to guide them through the process.[9] No matter who administered the buyout procedure, the process was the same in both Lincoln County and Winfield.

First, a survey had to ascertain damage. In Lincoln County, a survey in March, 1994, revealed that 1,100 homes had sustained damage, and nearly 300 homes scattered throughout the eastern edge of the county had suffered more than 50% damage.[10] An earlier inspection in Winfield revealed that about 100 homes, mainly in the Winfield Acres area, had suffered damages above 50%.[11]

The initial survey was followed by a contact through the mail to owners whose property qualified for a buyout. The questionnaire asked people whether they were interested in the program; it also asked them to supply financial information about the home. Owners had 30 days to return the application.

In the initial mailing, 243 homeowners in the county and 50 homeowners in Winfield received questionnaires. Once returned, properties were appraised and assigned a value based on the market value of the house prior to the flood. This value, minus any prior government payments such as flood insurance or money to repair the home, was the price offered to the homeowner. The owner was free at that point to accept the offer, reject the offer, or appeal the offered price.[12]

SEMA approved funds for numerous buyouts in both Lincoln County and Winfield. Initially SEMA had offered $3,479,360 to buy 243 homes in Lincoln County, and $713,000 to buy 30 homes in Winfield.[19] In October, 1994, Lincoln County and Winfield received approval for each to spend an additional $1 million if necessary to buy homes.[20]

In one original program, encouraged by Boonslick Regional Planning Commission, Winfield offered a new lot, well out of the floodplain, as an even exchange for the floodplain lot of any homeowner flooded out in ‘93. There were 75 lots available.[17] About 12 floodplain victims took advantage of the offer.[18]

By February 7, 1995, Lincoln County had completed 140 buyouts.[21] The first buyout took place on July 26, 1994, when Alice Reimers signed her flood damaged home over to the county. She had lived there for 15 years. She owned Alice’s Restaurant on Highway 79, and the business, spared by floodwaters, had been an unofficial meeting place for people participating in the buyout program. She moved to a new home in the nearby Darla Home Subdivision in Winfield. She told reporter Gregg Ochoa of the Lincoln County Journal after she received her check, “I’m happy. I could have ended up with nothing.” She also credited county officials with how they had helped her with the buyout process.[22]

By November 7, 1995, Lincoln County had purchased 270 homes, at an average cost of $13,000 each.[23] A month later that number had grown to 280, and the county had received an award for its handling of the buyout program. The award was the gift of the Missouri Association of Counties and praised Lincoln not only for the efficiency of the buyout process but also for its unique demolition process of the ruined homes.[24]

The award winning demolition technique was the brain child of Chuck Freidrichs, Lincoln County’s engineer and buyout coordinator. He felt the usual demolition method which involved a bulldozer smashing a ruined home to rubble and carting the ruined remains off to a landfill was wasteful.

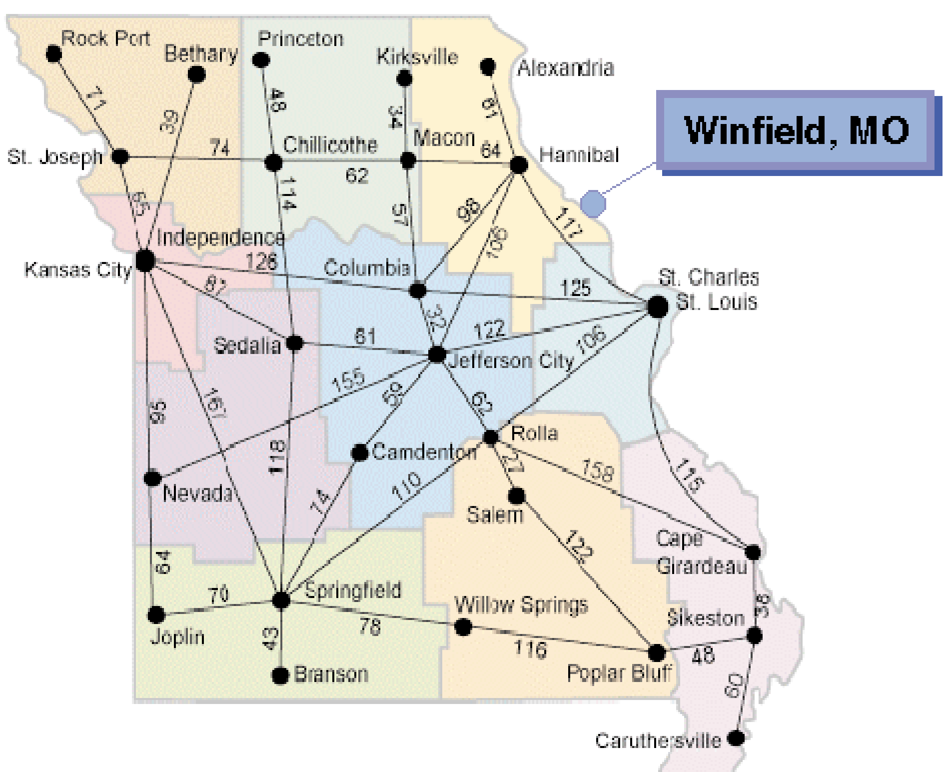
Realizing that up to 80% of a home could be recycled, the materials used to build new houses, he hired 30 people, most of them unemployed, to take each home apart and separate reusable items from the non-usable. Then the items were sold to people who wanted to rebuild or repair a home. Freidrichs told reporters from the Post Dispatch that doors, ceiling joists, bathtubs, vinyl siding, toilets, sinks, attic insulation, plywood, two-by-fours, and roof trusses were “hot items.” “Everything has a value to somebody,” he said. “Other places burn and bury, or come in with a high lift and crush an entire house and put it on a truck. It’s stupid. These are good materials.” The program raised a half million dollars, paid the demolition costs, and managed to tear down 260 houses.[25]

By October 26, 1996, when buyout program ended, 323 houses had been sold to the county.[26] In Winfield, the program resulted in the buyout and demolition of 37 homes that traditionally had been most at risk during floods.[27]

Unlike other areas, where the effectiveness of the buyout could be measured during floods in 1994 and 1995, neither Lincoln County nor Winfield suffered much. This time when the flood waters came, the levees that the Corps of Engineers had repaired, held and there was little damage to homes in Lincoln County or Winfield.[26]

The only exception was in Silex, a small unincorporated town near Winfield that had escaped serious damage in the '93 flood. In 1994, however, the threat came not from the Mississippi breaking through levees, but from the Cuivre River, where heavy rains on April 12, 1994, sent a sudden flash flood through the town causing the evacuation of most town residents.[29] In 1995, Silex escaped serious flood damage as did most of Lincoln County and Winfield.[30]

Since the flood of '93, Lincoln County has prospered. The population has grown, and the assessed valuation of property has increased.[31] However, people do still live in the floodplain. A recent investigation by the National Flood Insurance Program, reveals that many who have rebuilt have done so either without securing a valid permit that requires homes there be elevated one foot above the 100 year flood mark, or have elevated their homes using shoddy and inadequate building materials and methods. In January, 1996, high winds actually twisted one such home off its foundations and broke it in half.[32]



Neosho, Missouri

Neosho, Missouri, located in Newton County is in extreme southwestern Missouri about 15 miles from the Oklahoma border. Because Neosho is more than 150 miles south of the Missouri River and nearly 300 miles from the Mississippi River, flooding would not seem to be a problem for this community. Yet, Neosho lies at the bottom of the watershed for Hickory Creek, and a branch of Hickory Creek, known locally as High School Branch. Being at the bottom of this combined watershed area has brought flooding to Neosho 15 times since 1979. As the city grew, the problem increased, and by the 1990s, the periodic floods were causing an annual average damage to the city of $855,000 a year. The annual average damage to homes, businesses and public buildings was $760,000 and $95,000 was the annual average damage to roads and bridges.

Faced with this reoccurring problem, the City of Neosho, in conjunction with the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Services (NRCS), conducted a series of studies between 1949 and 1989 that resulted in a suggested solution known as the Neosho Watershed Plan. It involved building two dams, 11 retention ponds, and a concrete waterway 45 feet wide and 8 feet deep running from south to north through the northern part of Neosho called Wheeler's Addition. Designers envisioned the waterways directing the runoff, which usually became Neosho's floodwater, through the city to Hickory Creek north and east of the town. Several times throughout the years, the various members of the city government submitted the plan to the City Council only to have it rejected as "desirable but too expensive (in 1949 the projected cost of the project was $18,000—in 1986 the projected cost of essentially the same plan was $13.5 million).[1]

The most expensive part of the plan was purchasing 52 residential properties, with a present day average fair market value of $26,388.29 each.[2] These properties had to be destroyed in order to make way for the waterway. Unfortunately, the price tag had always seemed out of the reach for Neosho; the community simply did not have an adequate tax base. The solution was obvious, but there was no way to fund it.[3]

Then came the flood of '93, and soon after the announcement of Missouri's State Emergency Management Agency (SEMA) of the Flood Buyout Program. Jim Cole, City Manager of Neosho, saw an opportunity since Newton County had been declared a disaster area. Cole reasoned that Neosho might be eligible for money because of its long standing problems with periodic flooding. He contacted Buck Katt, Assistant Director of Missouri's SEMA, to inquire about the possibility of Neosho being eligible for help with its waterway project. When he learned that the answer was yes, Neosho could qualify, he presented the idea to the City Council during its regular February meeting. After more meetings, the community eventually approved the plan, and 100% of the people living in the path of the periodic floods accepted a buyout of their properties.[4] Subsequently, SEMA awarded Neosho a $1.4 million grant. This money, plus a grant from the NRCS, and $400,000 that Neosho City officials were willing to pledge gathered from State Disaster Relief Money and Community Development Block Grant money, gave the city the funds needed to begin the project.[5]

When the floods came again May 1995, most of the residents in harm's way had moved out. This saved hundreds of thousands of dollars in emergency relief payments.

The buyout prior to 1995 saved the taxpayers money in emergency relief, but it also reinforced the wisdom of the Buyout program. The citizens of Neosho now hoped to end the flood threat to their city, permanently. After the 1995 floods, 26 additional property owners living on the margins of the flood plain area also wanted to take advantage of the Buyout option, but there was not enough buyout money to purchase their homes. To meet this additional need, the citizens of Neosho passed a 3/8th cents sales tax on themselves by a 75% margin to continue the buyout program on their own.

The new tax continues to produce over $600,000 annually.[6] It is money divided into three parts: a third goes to park development, a third to city recreation programs, and a third to pay for continued development of the Floodplain Waterway Project. With this money serving as a base, Neosho adds an additional $120,000, raised by an already existing transportation tax, to pay off a $1.5 million bond issue financed by the local Nation's Bank that will pay for the purchases of more properties and complete construction of the Flood Plan Waterway.[7]

The Neosho Flood Plain Waterway is an example of how a local community was able to turn the tragedy of the 1993 and 1995 floods into a positive and successful community solution.

Planned recreational facilities include a community soccer field, baseball diamonds, hiking and fitness trails, and a handicapped fishing area.The fishing area, when complete, will include a level concrete slab, with a guard rail that will allow individuals in wheelchairs to safely fish from the banks of Hickory Creek.[8]

Jim Cole's realization that the Flood Buyout Program could help his town, and his skill at presenting it to his fellow citizens, so impressed Jerry B. Uhlmann, Director of Missouri's SEMA, that in November 1998, he nominated Jim Cole for FEMA's Outstanding Public Sector Employee.[9]

Pattonsburg

While the concerns of most Missourians were fixed on the Mississippi and Missouri Rivers, Pattonsburg in the northwestern corner of Missouri was threatened by the rising waters of the Grand River. Originally settled a mile and a half north of its position in 1993, in 1871 the town moved south to the banks of the Grand River to be close to the railroad.[1] Unfortunately, that prosperity never came, chiefly because of constant floods that have inundated the town 33 times in the last 100 years. Still, it was home to 512 people. The town was centered around a three block main street. Its economy depended upon soybeans and corn.[2] That fragile economy was ruined in July 1993, when the Grand River overflowed its banks, broke through two levees, and flooded the town with three feet of water. This first flood lasted only two days, July 6 and 7, before the waters receded. On July 23, however, the river rose again and once more flowed through town with a crest 16 inches higher than on July 6 and 7.[3] Most residents assumed the worst was over and had already begun to clean up when the second flood hit. This second flood was the worst in living memory. Gene Walker, the local superintendent of schools lived in a house that had not flooded since 1875. He described the floodwaters in the following way: "The mud sticks to everything, the smell sticks to everything....It's not just water, it's floodwater. It's slick, slimy and you have no idea what's in it."[4]

Old Pattsonburg became the setting for a civil war film, "Ride with the Devil."

The history of repeated flooding, and the dreaded job of cleaning up twice in two weeks, convinced many people in Pattonsburg that it was time for a change. On November 3, about 200 Pattonsburg residents met in the school cafeteria with Denise Stottlemeyer of the Green Hills Regional Planning Commission, David Warford, Pattonsburg's mayor, and State Representative Phil Tate.

Ms. Stottlemeyer had the idea to approach Missouri's SEMA with the idea of moving the town away from the floodplain using money from the FEMA and HUD's Community Development Block Grant program. The citizens learned that the program was voluntary, that the planned location would need 90% resident approval, and would take two to five years to complete.[5] Furthermore, if the citizens made the decision to relocate the town, there was federal money available to build new sewers, streets, and utilities.

Representative Tate and Mayor David Warford were positive about the proposal. Representative Tate told the audience that "a relocation would not close the book on Pattonsburg, but it might open a whole new chapter."[6]

A survey of all the town's citizens found that 92% approved of the idea.[7] The townspeople drew up a proposal, submitted it to SEMA, and after approval by FEMA, the first homeowner received a check on September 21, 1995.[8] Most of the people moved into contemporary houses or mobile homes, but 14 of the houses, whose owners, for a variety of reasons, did not want to part with their homes, were moved to the new site.

The average cost for moving a house was $20,000, not including the cost of building a new foundation, basement, and hook up of utilities.[9] The new site lay two miles closer to Interstate 35, a location that the townspeople hoped would attract new businesses.

The move was not accomplished without problems and complaints however. The move was stressful, chiefly because of the confusion of government paperwork, and there were times, in the words of the present Mayor Mark Smith, when, ". . . this thing could have died ... if people hadn't been hardheaded and persistent."[10]

The move was especially hard on Pattonsburg senior citizens that made up 75% of the town's population. At a time of their lives when order and stability are reassuring, the flood and the process of recovery threw their lives into disorder. They also resented the fact that they lost money on the move, especially those who were living in homes that were paid for. Yet, all in all, they, along with most of Pattonsburg's citizens, later felt that moving the town was a better idea than keeping it where it was — according to Mayor Smith who now has a new automobile repair shop. His business is "about the same as before."

In the end, acquisition and relocation cost $ 3,851,920, most of which was spent on acquiring 235 damaged properties.[12] Part of that sum came from an unlikely source, proceeds from the sale of houses and their contents. Ten houses were auctioned off to non residents of Pattonsburg who then moved the house away. This money was added to the funds available for buying other homes or for moving houses to the new site of Pattonsburg.[13] The new Pattonsburg sits on 600 acres with 100 new houses plus 24 houses moved from the old location. One hundred vacant lots optimistically await new arrivals, and there is room for optimism in Pattonsburg. New businesses have moved in on the new main street including a convenience store, four craft shops, an office supply store, a bank, and a bakery. Nearby is a new filling station.[14]

A new elementary school, built in a unique style that includes three insulated domes designed to cut down on heating and cooling costs, is also part of new Pattonsburg. Down in the old site of Pattonsburg there are eight families who choose living amid about 40 derelict houses waiting to be destroyed,[15] and some of the land has been leased to a local farmer who now grows soybeans and corn on the floodplain.[16] Whatever happens, the harmful cycle of flood and rebuilding has ended, and it seems a new era in Pattonsburg has begun.

There is a final chapter in the history of old Pattonsburg. During the summer of 1998, a Hollywood film crew used the abandoned buildings as a movie set in filming "Ride With The Devil," a dramatic recreation of William Quantrill's infamous raid on Lawrence, Kansas, in the midst of the Civil War. The filming offered a chance for Pattonsburg's citizens to gain something from this flood disaster, when many were hired as extras in the film or temporary workers to perform the many jobs of a movie set.[17]

Perry County

Perry County lies along the Mississippi River south of Ste. Genevieve. It is a rich agricultural area producing corn, soybeans, and wheat. Much of this agricultural wealth consists of an area northeast of Perryville, the county seat, called The Bottoms. The Bottoms totals 26,000 acres of mostly crop land, farm steads, and five small unincorporated settlements; Menfro, Clayville, Belgigue, McBride, and Sereno. The huge 50-foot high Bois Brule Levee, protects The Bottoms area from periodic flooding of the Mississippi River. This massive levee had successfully held back the river for years, but the flood of '93 was larger than any previous flood, and on the night of July 25, 1993, the southern end of the Bois Brule Levee broke.

Witnesses reported that the initial break was 300 to 400 feet wide, but the water rushed in like a "tidal wave" according to one witness. The water came so suddenly that Harold Smith, an employee of the U.S. Army Corps of Engineers was swept off the top of the levee in his truck and washed a mile downstream.[1] Smith was able to escape the onslaught, but the breech in the levee soon widened to 1,200 feet, and within a few hours, 90 homes and businesses were flooded and settlements like McBride were covered with 10 feet of water.

Workers rushed onto the central and northern part of the levee to strengthen it with rock, fearing that if more of the structure collapsed, water might reach all the way to Perryville. They were successful in saving what remained of the levee. Yet the damage was still considerable, and the State Emergency Board for Perry County estimated the loss in sorghum, wheat, soybeans, and corn at $13 million.[2]

The land behind the Bois Brule Levee was much too rich an agricultural area to abandon, and the levee there had protected the farm land – with this single exception – since it was built in 1947. Almost immediately Perry County received assurances that the levee would be rebuilt, and by October 26, the county had the specific promise of $7 million in federal money for rebuilding.[3] Yet while this assured the land would be saved for farming, the sudden and unexpected rupture of the levee convinced most residents that The Bottoms was too dangerous an area in which to live. Fortunately, a week before the levee break, 54 families, living closest to the levee itself, evacuated their homes for higher ground, but everyone realized that next time the loss of life was a possibility.

Yet, residents of The Bottoms were faced with a dilemma. They had nowhere else to live, and most lacked the resources to move away. However, local ordinances passed in 1986, made it financially difficult to move back. Perry County, like many other counties in Missouri, had passed an ordinance mandating that no repairs to a flood damaged home could be made if the cost of repairs was higher than 50% of the assessed fair market value of the home. The excessive force of the water breaking through the levee on the night of July 25, followed by the fact that water stood for a month on the flood site, so severely damaged the structures that nearly all were damaged beyond the 50% level.[4]

Faced with this dilemma, Representative Volkmer's legislation – proposed in October, 1993, and signed into law on December 2nd – proved a godsend. It gave the residents of The Bottoms a way out. On January 25, 1994, Presiding County Commissioner Karl Klaus, and Kathy Mangels of the Southeast Missouri Regional Planning Commission, went to Jefferson City to submit a request for $1,644,065 which would buy out 54 homes and businesses in The Bottoms. Klaus and Mangels submitted this request to the Review and Hazard Mitigation Committee that Governor Carnahan had appointed to oversee the program.[5] The proposal included requests for money to buy 39 flood damaged residences, 14 agricultural tracts, and four businesses.[6]

The request was initially denied because the buyout program was specifically designed to buy residences. However, when the Southeast Missouri Regional Planning Commission resubmitted the proposal, omitting the businesses, the Review and Hazard Mitigation Committee approved it, and on February 14, 1994, Governor Carnahan approved $578,303 to buy 40 homes in The Bottoms.[7] A month later, on March 9, Perry County received an additional $296,352 in the form of a community development block grant.[8] Yet, the county could not begin the buyout program until the Missouri Department of Economic Development approved a community development block grant of $144,000 which would allow the county to meet the local matching funds requirement for the federal buyout program. When that approval came and the money became available in early December, Perry County officials closed on the first property buyout on January 10, 1995.

Although the county originally planned to buy 40 residences, eight homeowners backed out of the buyout because they felt the buyout price was too low. This “change of heart” was entirely in keeping with the basic philosophy of the buyout program that mandated the program be voluntary and flexible enough so that homeowners could back out of the program right up to the actual receipt of a check.[9]

Because some residents chose to back out at the last minute, the county did not have to spend all the money that the government had given it, and in 1996, the SEMA was able to “de-obligate” $40,000 from the program and reallocate it to other buyout projects.[10]

The county completed demolition of 32 homes by August 6, 1996, and in most cases leased the land back to the original owners as agricultural land since most home sites were contiguous with farm land that the homeowners still owned. In May, 1995, the Mississippi River once more reached flood stage in Perry County, but this time the Bois Brule Levee, which the Corps of Engineers had rebuilt in 1994, held back the water. None of the sites that had flooded in 1993 flooded again.[11] Still, nothing is more certain in Missouri than the eventuality of future flooding, and the cost of the buyout program of 1993 will undoubtedly prevent major outlays of flood relief money to disaster victims in the future. SEMA estimates that the cost-benefit ratio for Perry County is 2.14, meaning that within the next 15 years Missouri will save $2.14 for every dollar spent in the 1993 buyout program.[12]

A view of the former Rhineland village site after the buyout.

Rhineland now sits on a hill overlooking the Missouri River.

Rhineland

Rhineland, Missouri, a small town on the Missouri River in Montgomery County, was a relocation site that captured world wide attention. ABC, NBC, and CBS, as well as television stations from Japan and France, sent camera crews to record the dramatic event of the whole town being pulled by tractors, house by house, to a new location on top of a hill above the floodplain.[1]

Rhineland residents were the first flood victims in Missouri or Illinois to make the decision to move their entire town and its dozens of historically significant buildings out of the floodplain to a place of permanent safety. Once Rhineland initiated the idea, Pattonsburg in northeast Missouri and Valmeyer, Illinois, also decided to abandon their flood prone sites and move to higher ground.[2] Historically Rhineland was part of a group of towns near the Missouri River including Hermann, Dutzow, Augusta, Holstein, and Marthasville that German immigrants chose to settle in the mid-nineteenth century. Topographically it reminded them of their homeland. That was certainly true of the Germans who settled Rhineland in 1853. Their new home in Missouri reminded them of their homeland along the Rhine River in western Germany.

Since its foundation in 1853, Rhineland had experienced flooding, especially in 1951 and 1986, but never to the degree of the ‘93 flood.[3] In 1993, along the Missouri River between Rhineland and Hermann between January and June, a total of 27.11 inches of rain fell. That compared with only 13.08 inches in that same area for 1992.[4] People in Rhineland kept less formal, but equally revealing records. In 1986, five feet of water stood in the People’s Savings Bank of Rhineland. In 1993, however, the flood waters in the same bank rose as high as the top of a six foot coat rack.[5] By Wednesday, July 7, the town was underwater with 80% of the houses and business flooded.[6] Between that date and the end of September, Rhineland would experience four record crests and was totally cut off from dry land except for one emergency route that cut through a field.

As they had in previous floods, the Rhinelanders greeted this crisis with cooperative effort and grim cheerfulness. Cindy Engemann, whose husband Gary owned the Rhineland Grain Elevator, told a reporter that she referred to the flood waters as Alternate 94, and that instead of going “over the hill and through the woods,” it was “over the hill and through the pasture.” One picture that got nationwide exposure showed three Rhinelanders in a boat rescuing a two-week old fawn from atop the broken Rhineland Levee.[7]

However, the intensity of the flood this time convinced some people it was time for a permanent change. In the midst of their crisis, the people of Rhineland heard rumors about a new program. On October 24, Harold Volkmer, the area’s Congressional Representative, held a meeting in Hermann and revealed details of a new bill he was soon to introduce in the House of Representatives. As Volkmer explained, his bill would change current legislation regarding federal relocation and buyout programs administered through FEMA, by increasing the amount of money available for such programs. The plan seemed promising, and the magnitude of the crisis seemed to indicate, according to

Volkmer, that Congress wanted to do something significant to help victims. He promised to put the bill on the fast track.[8] He was as good as his word. The Bill moved quickly through the House Water Resources and Environment Subcommittee on October 27, and was passed 19 days later as the Flood Damage Reduction Bill (HB 3445). From there it went to the Senate that passed the bill a week later, and on December 2, President Clinton signed it into law.[9]

However, the Rhinelanders had not waited passively as the bill progressed rapidly through Congress. Mayor Ervin Elsenraat and the Rhineland City Council had utilized the resources of the Boonslick Regional Planning Commission, and its Director Steve Etcher, to apply for a community development block grant from Missouri's Department of Economic Development. On November 4, during a 2 ½ hour meeting in the Rhineland Firehouse, Rhineland's citizens discussed the proposed move, based on the block grant application as well as the anticipated money from Volkmer's proposed bill.

The Rhinelanders decided to relocate the town by moving to a new 40 acre site on top of a hill less than a quarter of a mile north of the site of Old Rhineland. Citizens would swap their home site at the bottom of the hill for a new one at the top. They could choose to move their old house or to build a new one on a new site. The block grant would buy the new site and prepare the new infrastructure. The citizens anticipated that Volkmer's bill would pass, and the money it generated could be used for a government buyout of their old homes.

At the Firehouse meeting, State Representative Charles Norwald of Warrenton, whose district included Rhineland, spoke in favor of the plan and felt it would be the kind of innovative solution that other towns would emulate. He also realistically reminded people that the move would not be cheap. It would cost the residents money. "It might cost them $10,000 to move up the hill," but if they didn't take advantage of the idea, "the next flood will cost them $10,000."

Houses being moved from old Rhineland to the town's new location.

The town's mayor, Ervin Elsenraat, felt the program would keep Rhineland economically viable, keep the community intact, and would be a "good investment of federal dollars" because afterwards there would be no more money spent for flood insurance or damage repair. He also reminded residents of a bit of good luck. Just before the flood, Rhineland had received a community development block grant of $357,000 to build a new sewage treatment plant. Since none of that money had been spent, it would be an easy matter to use it to build a sewage treatment plant compatible with the new town site.[10]

In one week the idea of a relocation had the support of a majority of Rhineland's citizens. Mayor Elsenraat was quoted in the November 16 issue of the <u>Hermann Advertiser-Courier</u> "that 40 out of 50 homeowners had indicated that they were ready to relocate on high ground either by building a new house or moving an existing one on... higher ground." Less than a month later, on December 9, Governor Carnahan announced that Rhineland would get a block grant of $999,500, to implement part of the move. Concurrent with this announcement, Mayor Elsenraat reported that five more homeowners had agreed to the move.[11]

On January 10, 1994, Eisenraat announced details of the move. The town would hold a lottery to decide the awarding of lots in the new city site. Three types of residential areas would delineate the new site: relocated homes, new constructions, and modular or mobile homes. Residents would then draw lots that determined the order of selection for themselves within the type of lot they had occupied in the old town. Meanwhile the property owners would deed their old lots to the city, that would in turn oversee that land turned into open spaces for parks, recreation, wetlands, or agriculture.[12]

Then on May 24, Governor Carnahan had more good news for Rhineland: FEMA had approved home relocation money for the project. With the $328,281 from FEMA, homeowners in Rhineland could relocate their ruined homes and look forward to the move up the hill. The FEMA grant was part of a package that went into the total project. There was $1.3 million from the Community Development Block Grant program for infrastructure at the new site and relocation, $343,000 from the Missouri Housing Development Commission for down payments on new homes and repairs to old ones, and $585,000 from the state's Economic Development Administration to build roads in and outside Rhineland.

Finally, the town voted a $150,000 bond issue to help with infrastructure improvements. On the purely commercial side, another block grant directed $1,325,000 toward buyout of commercial property, and the Small Business Administration provided loans to town businesses to rebuild.[13]

For the next 15 months, the town moved. On September 14, 1994, the first house moved slowly up Holzum Street towards the top of the hill. This street had been widened to 50 feet to accommodate the moving houses. Steve and Janet Wehrle's house was the first.

The move had the trappings of a parade. In front of the tractor trailer truck two kids carried a banner that read "Up Up and Away." Across the front of the house was another banner reading, "Expert House Movers Inc. 1-800-305-8938," just in case anyone watching on TV needed another house moved. Right behind the first house came another that Janet Wehrle's parents owned. Within a week, five houses had made the trip.

Once the houses reached the top of the hill, they sat at their new sites supported on 25 foot pillars while the house movers poured a foundation underneath them. Only when that foundation was dried were the houses lowered into place.[14]

In case anyone doubted the wisdom of the move, the site of old Rhineland flooded again in May 1995. This time the water was almost as high as in the '93 flood, but, of course, everyone had moved and the flood caused no harm to anyone.[15] The rising waters caused Hermann five miles east of Rhineland to cancel its 42nd annual Maifest, an event that usually drew thousands of visitors to the area. The 1995 water stayed above flood level for 88 days.[16]

Once the residences were moved, it was time to relocate the commercial properties. Instead of moving existing buildings, however, the town's businesses moved into new commercial buildings north of highway 94, at the bottom of the hill adjacent to the residential area.

In addition, the two highways leading into the new site were also raised above the 1993 flood level to insure that floodwater would never again cut off Rhineland.[17]

By July, 1996, the last building had been moved, the sewers, electricity, water, and other infrastructure items were in place, and Rhineland celebrated in a day long event called "Rhineland Celebration '96." There was a barbecue, music, and a parade with floats. The winning float was "Noah's Ark," an appropriate and clever reference to another triumph over a flood.[19]

Today, the only remaining structures in Old Rhineland are a warehouse that was once the general store, and one inhabited dwelling that was raised above the flood level of the 1986 flood. There are plans to develop part of the area as a trail head for the KATY Trail bike path that runs through the town.[18]

St. Charles County

St. Charles County is a county at risk anytime there is a flood along the Missouri and Mississippi Rivers in Missouri. The county lies at the confluence of the Missouri River and the Mississippi River, and when these rivers rise, the eastern portion of St. Charles County can be cut off entirely from the rest of the state. One of the county's towns, Portage Des Sioux, largely escapes periodic flooding. But the flood waters have made most of the town an island so often that its residents refer to the rest of the state as "the mainland."

During times of flooding, the only means of travel in and out of Portage Des Sioux is courtesy of the Missouri National Guard's 1438th Engineer Company that brings a 90 foot section of a portable military bridge to town to use as a giant raft to ferry people to their jobs in the rest of St. Charles and St. Louis counties.[1]

Usually, however, an extensive system of levees protects the towns of the county from most of the smaller flooding events. A serious and disruptive major flood had occurred in 1986 and caused extensive damage with the highest water on record along the Missouri River. People may have felt they had nothing to fear for a century, and so the population of the floodplain in St. Charles County began to grow after World War II as people moved into inexpensive housing or mobile homes scattered over the "100 year floodplain."

Unfortunately people misinterpreted the phrase, not realizing that the phrase is a statistical estimate signifying that a really large flood has only a 1 in a 100 chance of happening in any one year in the area. As Gary Dyhouse, a hydrologist with the U. S. Army Corps of Engineers, explains it: "When the year ends, the slate is erased. We start all over again, at a 1 percent chance."[2]

The 1 in a 100 chance came in 1993, and from late April to early August there was a steady acceleration of one disaster after another. By April 28, rains had saturated the soil along the Missouri and Mississippi Rivers so that the levels of both rivers rose so high that Governor Carnahan declared a state of emergency in St. Charles County. Then, on July 3, the Missouri River rose past flood stage at St. Charles, and 100 people in northern St. Charles County fled their homes.

Later that same day, a levee near the Mississippi River town of Winfield, Missouri, just north of St. Charles County, broke and 100 families had to evacuate their homes and find temporary shelter.[3] Four days later, the levee protecting West Alton, situated on a narrow peninsula between the two mighty rivers, broke and forced county officials to order an evacuation of the eastern part of the county.[4] Rising flood waters began to lap against hastily constructed sandbag barriers, around water pumping stations, and electrical substations, and on July 9, 7,000 St. Charles County residents found themselves without electricity.

Some of those without electricity were among the 7,000 residents forced to evacuate later that day.[5] On July 10, flood waters covered Route H leading into Portage Des Sioux cutting the townspeople off from their jobs and schools, and the residents were completely dependent on the makeshift rafts of the 1438th Engineer Company for communication with "the mainland."[6]

Then, on July 16, bad things got worse. St. Charles County's major levee, a 23 mile-long berm running between St. Charles and West Alton along the north shore of the Missouri River, tore open, and most of the county's floodplain was underwater.[7] On August 1, a levee running along Highway 94 failed and 400 previously-dry homes in the city of St. Charles were flooded. St. Charles County became the most flood damaged county in Missouri with a total of 2,109 houses condemned throughout the whole county.[8]

To add to the county-wide catastrophe, three tornadoes struck St. Charles County. One came down in the rural area of the county, but the other two hit St. Peters, and Portage Des Sioux, two county towns already heavily damaged by floodwaters. While the tornadoes did little direct damage, they generated winds that whipped up the floodwaters and further damaged homes that water had already damaged.[9]

While St. Charles County had the dubious distinction of being "first" in having sustained the most flood damage, it nevertheless has the more favorable distinction as the area that was first in Missouri to seek ways to repair that damage. On November 23, in the St. Charles County Courts Administration Building, the county called a meeting of residents to consider a buyout option.

The members of the St. Charles City Council, which was the administrative head of the city, knew that the damage was extreme and realized that the amount of money necessary for repair, relief, and prevention would be great. They decided from the onset to hire the Community Program Development Corporation, an outside consulting firm, to help them make application for government money and to present programs to the citizens.

Volunteers performing sandbagging operations in St. Charles County.

The most immediate concern of the Community Development Corporation was to test citizen reaction to buying out the flood ravaged mobile homes on a 58 acre tract on North River Road, Short Street, Transit Street, and North Main Street. The revenue was to come from $3,525,000 in Community Development Block Grant Program money that the city had received following a much less damaging flood the summer before. At that time few residents seemed interested in a buyout program. The catastrophe of the summer of '93, however, might have changed residents minds to take a second look at this option. The reaction of the people attending the program was positive, and Community Planning Development began the process of application.[10]

Only a few days later, on November 28, an article in the News Section of the St. Louis Post Dispatch, gave the residents of St. Charles County some additional good news. The momentum for a buyout solution was growing. The article by Robert L. Koenig, the Post Dispatch correspondent in Washington D.C., announced Representative Volkmer's intention to present a buyout plan to Congress that would make a great deal of money available to floodplain homeowners. This money, the article explained, eased restrictions on previous buyout programs. It increased the federal share of buyout money from 50% to 75%, and allowed cities and counties applying for the money to use community development block grant money to pay their 25% share of the money.

Koening reported that there was bipartisan support for the bill. Republican senators Tom Harkin of Iowa and John C. Danforth of Missouri would help assure that the bill would not get "bogged down in Congress."

St. Charles County did not waste time, and by November 30, Development Strategies, in association with Jerry King, had submitted an application for $19 million in federal money to the county council for approval. That approval came on December 2, and on January 12, Governor Carnahan announced that he intended to use part of his time while attending the National Governors Association Conference in Washington to lobby for a large share of the new buyout money for Missouri. During his visit, he lobbied Congress and Administration officials for a total of $340 million, that included $35 million to move 960 single family residences out of areas that might flood in coming years, $40 million in a special grant from the Community Development Block Grant Program, and $30 million for the Federal Hazard Mitigation Program.[11]

The Federal Government did not award all of the money requested by Governor Carnahan, but by May, the state had received $156 million and subsequently allocated $13.2 million for property buyouts in St. Charles County. Other money of that $156 million total was designated to pay for demolition of ruined homes, provide for replacement housing, purchase junk-yard sites that were polluting ground water, and repair flood damaged roads and sewers. Some of the money came from the Earthquake Relief Bill signed on February 12. Although that bill mainly supplied money to earthquake victims in California, Congress had tacked on an amendment giving more money to flood victims in the Midwest.[13]

The actual buying of flood damaged homes began on June 1, 1994, when two St. Charles County families, Ted and Linda House and

Roger and Jeanne Vaughn, received buyout checks. Neither the Houses nor the Vaughns would tell Ralph Dummit, the reporter for the St. Louis Post Dispatch, the amount of their checks; but official records show that the average amount paid for homes in their subdivision was $16,100.[14]

In time, St. Charles County would oversee the acquisition of 1,160 parcels of land (not all had homes on them), including 650 mobile home pads. In an interview with the St. Charles Post, reporter King said the buyout program was a "giant step forward" towards reducing the population on the floodplain, which was a goal of the federal government program. Fewer people living on the floodplain would mean fewer people who would draw on the Federal Government's resources in future floods.

In the same interview, King admitted there were problems. The buyout program reduced the number of inexpensive housing units in St. Charles County, thus creating a financial burden for previous residents. However, the county was trying to help by using part of a community block fund grant to build 100 single family homes out of the floodplain in an area called Boscher Town and by applying for grants to help build a new mobile home park out of the floodplain.[15]

Still other flood victims were having trouble affording homes outside the floodplain where houses cost an average of $30,000 to $65,000 more than houses had cost in the floodplain. Again the government tried to help with relocation money, paid in addition to the cost of a victim's home.[16]

An additional problem remained for some flood victims who had lived in mobile homes. In Missouri, mobile homes are classified as personal property just as automobiles are. Because they are not real estate they are ineligible for a buyout with buyout money. The pad on which the mobile home sits, however, is eligible for buyout money, but many mobile home owners rented the pad, making them ineligible to receive buyout money for their home. Jerry King admitted that mobile home owners who rented a pad were, "a big group [who] had slipped through the cracks."[17]

A solution was possible for these people, however. Many mobile home owners had insured their trailers as personal property in the same way that people insure a car. In addition, the Federal Emergency Management Agency, through a separate program, could pay a flood victim up to $11,000 for damage to personal property.[18] This program finally paid mobile home owners a total of $769,000.[19]

For mobile home owners, this was only a partial solution to the problems the flood of '93 had caused. Like most victims, they realized that for the next few years they were going to be more financially burdened than they had been before the disaster. Yet most floodplain residents who took advantage of the various offers the government made had to measure the stress and anxiety of continuing to live in a floodplain area and dealing repeatedly with future devastating floods against the one-time financial stress and anxiety of moving out of the threatened area with the help of the government.

By mid August 1994, St. Charles City had begun to demolish buyout houses. The first home to go belonged to Rosa Sims who had lived there for 37 years. Ms. Sims had used the $21,000 in buyout money to put a down payment on a new house only two blocks away. Initially, she had resisted the buyout program. Like many people, she was suspicious of the government's motives. She had worried that the buyout program was part of a government plan to buy land cheap and build parking lots for the gambling boats that were a major tourist draw for St. Charles. However, once St. Charles City Mayor, Grace Nichols, assured her that buyout land could not be used for that kind of development, she was willing to sell.

By the time Rosa Sims' house had been bulldozed into rubble on August 16, 12 more houses were scheduled for destruction and 50 other homeowners were waiting to find what kind of offer the government would make on their homes. Most of these homes were north of the Highway 370 bridge on the east side of North Main Street, an area next to the Ed Bales Memorial Park. The plan was for these sites to become an extension of that park.[20]

While derelict homes were waiting their turn for the wreckers, local arsonists turned to torching several of them. By mid-September, 11 homes had been destroyed, and the St. Charles Fire Department decided to burn down the remainder to prevent the possibility of future deliberate fires spreading to nearby homes that were still inhabited. Firefighters began deliberately burning abandoned houses on September 21, and by the end of the month, they had destroyed 31 homes that were close enough to inhabited homes to be a potential risk.[21]

While these permanent houses were either torn down or burned down, wreckers began destroying 120 mobile homes that the county had purchased at the Princess Jodi and St. Charles Mobile Home Parks along

Highway 94 north of the McDonnell Douglas Plant. Before the flood, 200 mobile homes had stood on 64 acres of land. Approximately 80 trailers had either been moved before floodwaters destroyed the homes, or if they had suffered marginal damage, had been sold to re-builders in Arkansas. However, 120 ruined trailers remained, and once St. Charles County bought the trailer parks from their owners for $1.365 million, these had to be cleared out.

Wreckers carefully removed environmentally dangerous materials like asbestos floor tile, stripped each mobile home of recyclable metal and fixtures, and dug up, and then buried the concrete from the pads and the asphalt from the streets in each park. By the end of November both parks were gone, and the land was waiting for grass seed in the spring.[22]

In November, St. Charles County offered to lease the newly cleared lots to neighboring home-owners. The buyout had not been 100%. Some owners had determined to stay in spite of the threat of flooding. Such people could lease adjacent cleared home sites for one dollar a year on condition that they promise to keep the lot in grass, or plant gardens. The lots ranged from 7,000 square feet to three acres.

St. Charles County experienced other benefits from the buyout program—a drastic reduction in the damage suffered because of flooding that occurred after 1993. In May, 1995, the county faced another flood nearly as destructive as that of 1993. Floodwaters covered much the same area as two years before, but there was little left to damage in the floodplain because over 900 families had taken buyout money in 1993 and lived elsewhere in 1995.[25]

Steve Lauer, St. Charles County Planning Director, estimated that 95% of the 1,374 properties acquired in the 1993 buyout program would have flooded again in 1995. The differences in the dollar amounts spent to help flood victims in St. Charles County in 1993 versus 1995 are the most dramatic evidence of the buyout programs success. In 1993, Missouri and the Federal Government spent $14,177,717 to help individual flood victims find disaster housing and live during the flood crisis. In 1995, however, that total for the same services in the same area was only $216,194.[26]

The total cost to the taxpayers for buying out individual residences in the St. Charles County floodplain was $14,617,424. The fact that the cost of helping floodplain victims in the 1993 flood alone was $439,707 less than that amount is dramatic proof that in future floods the buyout program will pay for itself many times over.

Community spirit was highly evident at many sandbagging operations. Volunteers came from all over Missouri and other states to help those who were threatened by flooding.

Ste. Genevieve

Ste. Genevieve marker shows flood stages from 1844.

Extensive flooding in St. Genevieve.

Since its founding, sometime between 1732 and 1735, Ste. Genevieve has suffered from chronic flooding. In 1785, flood waters washed the town completely away, and its people decided to reestablish the town on higher ground three miles up the river on ground they thought would never flood, but they were wrong. Ste. Genevieve continued to flood often over the next two centuries. Most recently in 1951, 1968, and 1973.[1] Each flood was hard on the town's inhabitants, but it has made them resilient. An article in the Christian Science Monitor described Ste. Genevieve's citizens as having "a kind of tough radiance. . . from farmers to the mayor."[2]

In 1993, when the Mississippi rose above flood stage (38 feet) on July 8, 1993, and kept on rising over the next five weeks, most of the 4,400 people of the town simply set to work to try to save their town as they had so often done in the past.[3] Over the next three days, the river rose four feet quickly covering the airport runways, the water works, the city power plant, and the sewage treatment plant.[4]

Surprisingly, despite its long tradition of flooding, Ste. Genevieve had never built adequate protective levees. The U.S. Army Corps of Engineers had offered to build a rock and earth levee along the front of the town back in 1986, for $48 million, if Ste. Genevieve could raise $11 million in matching funds.[5] The town of 4,400 could not. For years, therefore, Ste. Genevieve had to depend on six miles of county levees built with state aid over the years.[6]

Nevertheless, the citizens were determined to fight back. Their pugnacious attitude impressed Governor Carnahan when he visited to assess the damage. He liked the town's spunk. "It's the attitude that you're going to fight back with."[7] The people of Ste. Genevieve and their Mayor Bill Anderson, repeatedly drew a parallel between the town's plight and a war. A reporter from the Warrensburg Daily Star Journal wrote:

> *The people sit behind bunkers of sandbags and watch the front line, as if they are anticipating a battle. . . There's a wall sized aerial photo in a conference room at the Marina, where the battle plans are being drawn. We've got a war going on here. . . we're fighting the Mighty Mississippi.*[8]

The flood made Ste. Genevieve famous. Once the national and international newspapers publicized the problem, volunteers from all over the country came to help. Most volunteers were from Missouri, of course, but people came from all over the nation and the world. "People from Ohio met people from Denver, bagging sand in Missouri," was one reporter's way of putting it with a sentence that captured the spirit of the whole event.[9]

Besides the lack of an adequate levee system, the terrain and layout of the town made defense from floodwaters difficult. Most of the town's historic part—and this was the economic heart of Ste. Genevieve—was in an area near the river that was prone to flooding. In addition two small streams called North Gabouri Creek and South Gabouri Creek, flowed into the Mississippi on either side of this historic district. To compound the problem, water from the Mississippi backed up into these smaller streams which caused them to overflow into downtown and into the suburbs to both the north and the south. To protect Ste. Genevieve, it was necessary to build sandbag levees on either side of these creeks. From the air, the levee system resembled three "Us" lying on their sides with the curved ends toward the Mississippi. Another levee, called Farmer's Levee, protected 7,000 acres of rich bottom land south of the town.[10]

The fight to save Ste. Genevieve involved raising these makeshift levees along the Gabouri Creek banks to accommodate a river level of 50 feet; this necessitated filling and placing over a million sandbags. As a spur to action, National Guard troops painted green lines on trees as a visual goal for sandbaggers to work toward.[11] However, along the banks of the Mississippi levees had to be more substantial, and volunteers along with members of the 1140th Engineer Company of the Missouri Army National Guard reinforced parts of the levee with 400,000 tons of rock and mine tailings that bulldozers and heavy trucks moved.[12]

By August 6, this strenuous effort had paid off. The Mississippi crest, at 49.67 feet, came within inches of the tops of the 50 foot levees. Nevertheless, they held, and on August 7, the water level was going down.[13] The crisis was past—for the time being.

The Missouri Army National Guard reinforced parts of the levee at Ste. Genevieve with 400,000 tons of rock and mine tailings.

Many citizens realized the town's escape had been a near thing, and many echoed Mayor Bill Anderson's comment, "We want to get rid of the houses there [on the floodplain]. . . Then we won't have to worry about it."

The Mayor's comments reflected knowledge of Representative Volkmer's proposed buyout legislation. Mayor Anderson felt that at least 150 people might be interested in the buyout.[14]

Even before President Clinton signed Volkmer's bill into law, the Ste. Genevieve board of aldermen, assured by Speaker of the House Richard Gephardt that the proposal would pass, made themselves familiar with its provisions and drafted an initial application for $2 million in buyout money from the state's community development block grant program and the hazard mitigation grant program. This proposal targeted 127 parcels in the north end of Ste. Genevieve that had been particularly hard hit by flood waters.

Yet, after the board of aldermen had prepared the request, but before they had submitted it, the city council hit a snag. The problem revolved around 46 houses, well known for their historic value, that were included in the total of 127 houses. Alderman Frank Myers was concerned that if the board submitted the proposal, Ste. Genevieve received the money, and the 46 historic homes were torn down, it would jeopardize the town's chances of getting a federal levee. Myers reasoned that the U. S. government's willingness to help Ste. Genevieve build a permanent levee, was partially based on the historic value of many Ste. Genevieve houses.

The board spent an entire session debating the topic. Mayor Anderson proposed a compromise that included the board's submitting the grant application to buy only non-historic homes, but with an addendum declaring "the intention of the application to include those historic properties after those houses had undergone review by the Missouri Department of Natural Resources." Nevertheless, the board delayed sending the application.[15]

At their next meeting the aldermen, with Volkmer's bill safely passed, the board authorized submitting another proposal so that Ste. Genevieve could get additional money under the new law. This proposal asked for $1.4 million to cover 75% of the proposed buyout of 89 non-historic homes on the floodplain in the northern part of Ste. Genevieve. Again several aldermen expressed concern that the proposed addendum in the earlier proposal for flood buyout money might slow down acceptance of this second proposal, but Mayor Anderson assured them that he had received assurances from Claire Blackwell, the Department of Natural Resource's director of the Historic Sites Division, that the application could still be "fast tracked."[16] With this assurance, the aldermen voted to send the buyout applications, and Mayor Anderson took the SEMA application to Jefferson City on December 20.[17] A short while later, the Aldermen sent the request for CDBG money along to Jefferson City.[18]

The answer was not long in coming, but it was not all that Ste. Genevieve had hoped for. Instead of the nearly $4 million that the city had requested from SEMA and community development block grant funds, it got only $1,337,000 for the purchase of 57 flood damaged residences and an additional $706,000 for the cost of demolishing the houses.[19]

Unfortunately, it would be nearly a year before any homeowner would receive his/her buyout check. Just as some aldermen had anticipated, the delay revolved around the historic houses. It had nothing to do with the proposed levee as they had feared, but with the legal requirement to evaluate historic homes before they could be demolished. Under provisions of the National Historic Preservation Act of 1966, before the Federal Emergency Management Agency could authorize funds to demolish a house, it had to "take into account the effects of their undertakings on properties included in . . . the National Register of Historic Places." Since October, 1970, nearly every building in Ste. Genevieve was within the boundaries of the Ste. Genevieve Historic District, and therefore subject to a historic survey before any of them could be torn down.[20]

Once such surveys were finished, the law required that a concerted effort be made to either move the house or, failing that, make a formal photographic record of the house, catalog its contents and dispose of them by sale or gift to museums or other suitable institutions.[21]

Such surveys were the job of personnel of the Missouri Department of Conservation, and the buyout process ground to a halt, while they made their study. City Administrator David Angerer knew that SEMA was eager to get on with the buyout, but could not because of the Historic Preservation Act. The delay, he said, "is a victim of dueling federal programs: SEMA which is built for speed and quick relief of people in trouble, and the Historic Preservation Act that says federal money can't be used for buyouts unless a slow deliberate process is followed."[22]

By July, 1994, residents who had expressed an interest in the buyout were growing impatient. A group of them met with Mayor Anderson and Aldermen Frank Myers and Martha Reisinger on July 1 to ask officials to try to speed up the process. They were impatient because nearby St. Mary and Perry County were moving quickly with their buyout programs. The three town officials could do little but sympathize, although Anderson offered some hope that the first buyout might take place in late July.[23]

Unfortunately, Anderson was wrong. By the end of July all that had been accomplished was the Board of Aldermen's award to Southeast Missouri Regional Planning Commission (SEMO) of a contract to administer the buyout and the adoption of a formal process concerning the procedures the buyout would follow. These procedures offered some financial help to home owners who wanted to move their historic homes out of the floodplain. They also offered procedures under which the city might buy historic property, and/or handle the salvage and sale of architectural elements saved from historic houses.[24]

By August, 1994, there was still no progress. Cathy Mangles, SEMO's coordinator for the program, called a meeting where disgruntled property owners could meet with officials from SEMA, FEMA, the National Trust for Historic Preservation, and the Missouri Housing Development to discuss the status of the buyout. Mangles assured the homeowners that the formal historical analysis of homes would start soon, and it would require only two to three weeks after that to start the buyouts.[25]

Still, it was six months before the surveys were done, and owners began to get their checks. In the interim the Board of Aldermen helped by creating legal machinery for the city to buy some of the historic properties when they were available.[26] In November, there was another positive move when the Missouri Housing Development Commission announced Ste. Genevieve would get an additional community development block grant of $441,000 to help buyout candidates with relocation costs.[27]

By February 18, 1995, the historical analysis of buyout properties was complete. In addition, Ste. Genevieve and the Missouri Department of Natural Resources (DNR) had entered into an agreement to jointly buy four of the historic homes to protect them for further development as historic sites. The city and DNR jointly put up $58,000. The city's portion was raised by private donations from individuals and the French Heritage Relief Committee.[28]

On February 29, 1995, the first Ste. Genevieve residents received their buyout checks. The first couple to get a check was Kirk and Denise Rhinehart. The check was for $20,570.76, and Rhinehart admitted to reporters that ". . . its been a struggle. But this makes it a lot better. It's been almost two years, and the first 18 months were very rough. Nobody seemed to know what was going on. It was very frustrating."[29]

St. Genevieve historic home surrounded by blocks of vacant Buyout land.

After these initial buyouts, the city made every effort to find buyers for the historic buildings in the floodplains whose owners took advantage of the buyout. City officials listed properties for sale in historic preservation magazines and advertized in newspapers. The April 12, 1995, issue of the <u>Ste. Genevieve Herald</u> listed the Train Depot on Front Street as a property for sale. The building was a 19th century design by the famous architect Henry Hobson Richardson who had designed Trinity Church in Boston and the Marshall Field Wholesale Store in Chicago.[30] Unfortunately no buyer appeared.

Problems existed with moving the structures. Most of the historic structures were built in older parts of Ste. Genevieve where the streets were too narrow to move houses. A further difficulty lay in the overhead power and telephone wires that added an additional expense to the already heavy cost of moving a house.[31]

In the end, the only buyer for these historic houses was the City of Ste. Genevieve itself. In July, 1995, Ste. Genevieve, acting in conjunction with Missouri's Historic Preservation Fund, bought three historic houses. The plan was to "mothball" the houses, a term that meant stabilizing the buildings until they could be moved or raised above the level of flooding.[32]

Earlier Ste. Genevieve had purchased a smaller house, whose location allowed movers to move it out of the floodplain to the city park where it was later refurbished, and made the headquarters for Ste. Genevieve's Parks and Recreation Department.[33]

Unfortunately, for most of the houses there were no buyers. Once these houses were examined by the State Office of Historic Preservation and a photographic and written narrative prepared for each, the owner received a buyout check, and the city took possession. They were cleared of salvageable material and 38 historic properties were demolished.[34]

Four other houses in this area were demolished that had been judged to have no historic value, another accidentally burned down before demolition, and Ste. Genevieve was able to buy and preserve four others. Five buyout properties in the area were vacant lots acquired through the buyout process to preclude future building on them.[35]

Despite the loss of so many historic homes, the wisdom of the buyout in Ste. Genevieve was obvious in 1995 when Ste. Genevieve faced flooding again. On May 15, 1995, the Mississippi, swollen by heavy rains began to rise. By May 24, it had exceeded the 1973 flood level, and people prepared for a replay of 1993.[36] Fortunately, the river level did not go above 44 feet which was nearly 6 feet lower than the 1993 crest, but this event served to remind people not only of the danger they had faced in 1993, but also of the wisdom of the buyout.[37]

In 1995, the rising water covered two-thirds of the area that it had in 1993, including the buyout sites that had been flooded two years before.[36] It was clear that the buyout had done its job by removing at risk people from the floodplain. In fact, one homeowner who had not joined the buyout after 1993, did ask to be bought out after the 1995 flood.[39]

Ste. Genevieve is a prosperous town today. An estimated 100,000 tourists visit the historic town every year according to Betty Seibel. Frances C. Ballinger, head of Ste. Genevieve's Tourist Information Board, feels the figure should be 135,000. The high point is the annual Jour de Fete celebration the second week in August, although the annual celebration of Bastille Day on July 14th is gaining in popularity.[40]

The clearest sign of prosperity for the little town is the great Corps of Engineer's levee that is rising between Ste. Genevieve and the Mississippi. It will be completed in mid-2001, will run 3.5 miles, and be from 21 to 28 feet high. To qualify for the levee, citizens had to vote a 1 ½ cent sales tax on themselves to raise $1.5 million—part of the matching fund amount the Corps needed before they could start on the levee. It is a mark of the confidence the people of Ste. Genevieve feel about their town that the sales tax proposal passed by a margin of 4-1.[41]

Peaceful present day view of Ste. Genevieve Buyout property from the top of the rock and earth levee protecting the town (above) stands in sharp contrast to the flurry of volunteer activity that took place during the flood (right).

St. Louis and St. Louis County

St. Louis was used to big floods, and when the Mississippi River rose 14 feet in 48 hours on March 4 and 5, 1993, residents were not worried. They still were not worried when water began to creep across Leonor K. Sullivan Boulevard and cover the bottom step of the famous Gateway Arch.[1] After all, St. Louis legends spoke of really big floods, like the one in 1844, when the river rose so high that steamboats tied up to the front porches of businesses in downtown St. Louis.[2]

The Corps of Engineers warned St. Louis on June 25 to expect serious flooding, but then the rain stopped and the waters began to recede. St. Louisans smiled, said "I told you so," and went on with plans for July 3 opening of the Veiled Prophet Fair.[3]

Then it began to rain again. This time the river really began to rise. By July 15, the level of the Mississippi at St. Louis was 43.23 feet, 13 feet above the river level of 30 feet that marked what was considered flood-stage at St. Louis. St. Louis, however, is protected by a giant earth and concrete levee that rises 22 feet high and runs 11 miles from the mouth of Maline Creek, near the Chain of Rocks Bridge to the foot of Cherokee Street in south St. Louis. Floodwaters would have to rise to 52 feet before they would go over the top of this levee.[4] By July 22 the Mississippi's crest was at 47.05 feet, 3.82 feet higher than the second highest river level in history recorded in 1973.[5]

Then suddenly on July 24 things became serious. Four children and two adult counselors from St. Joseph's Home For Boys, were drowned in a flash flood inside the Cliff Cave at Cliff Cave Park in south St, Louis,[6] and a section of the concrete flood wall at the 9100 Block of Riverview Boulevard threatened to fail when flood waters dug a 60 foot-wide hole underneath it. Workers struggled all day to fill the hole with 6,000 tons of rock dumped on both sides of the wall at the break site and to build a seven-foot high ring dike around where the water emerged on the dry side of the wall.

The ring dike allowed a pool to form over the site where the water gushed out in order to equalize the force of the water that exerted pressure from the other side. The water coming through the wall took the course of least resistance and rejoined the normal course of the flood's flow downstream. The patch reduced the flow by 75%, and only a few industrial sites were flooded.[7]

On the 26, to further reduce the threat of water's undercutting the flood wall, engineers bored holes in the inside base of the wall and pumped in 111 cubic yards of concrete to stabilize the concrete and steel base of the wall. This finally stopped the flow and the flood wall was safe.[8]

The flood waters still needed a place to go as they rushed past St. Louis and its flood wall at about 7.4 million gallons of water per second.[9] As they swept past the city they backed up the water in the River Des Peres (the boundary between St. Louis City and St. Louis County in the south) causing it to flood out of its banks. In order to prevent the flooding of houses along Germania St. north of the River and those along Carondelet Blvd. and Weber St. south of the river, residents on both sides of the River Des Peres had frantically built a sandbag levee to contain the rising backwash.

Unfortunately, on July18, a 15 foot section of that levee gave way and collapsed. Approximately 264 houses were either flooded or suffered from backed up sewers and flooded basements.[10] Residents repaired the damage, but on July 20 a section of the levee on the north side of the river east of Alabama Avenue gave way and several more homes were damaged in addition to the Monsanto Carondelet Plant. Undaunted, volunteers began a back up levee and determined to build it high enough to withstand a 49 foot crest. Uncertain as to where the structure would break next, residents filled city trucks with sandbags, stationed them behind the levee wall, and waited for the next threat to develop.[11]

The crisis compounded in the area when the St. Louis Fire Department ordered 11,800 residents in the area to evacuate their homes for fear that fifty-one 30,000 gallon propane tanks in the Phillips

Petroleum Company Tank Yard at 8722 South Broadway might explode.[12] Divers tried to minimize the danger of explosion by arranging for the endangered tanks to float harmlessly out of the yard, into a natural cul-de-sac, but the potential for explosion remained.[13] Nevertheless enough local residents remained, or returned every day to continue building the levee higher. Their goal was to build it high enough to withstand a 50 foot crest.[14] In the end their efforts paid off. The levee held until the Mississippi River level dropped far enough to allow the River Des Peres to flow east again lessening pressure of the levee.[15] By August 6, authorities allowed some residents to return to their homes, but many homes were ruined.[16]

Just up the River Des Peres from these houses was an unincorporated section of St. Louis County called Lemay. Like their neighbors further down stream, Lemay's residents had built their own sandbag levee only to see it give way and allow flood water into 150 homes. Because the area was so near the Mississippi, James White, St. Louis County Emergency Management Director, estimated residents would not be able to return until mid-August. People in Lemay faced the same danger as their neighbors when concerns rose about the same propane tanks in the Phillips tank yard, and were also forced to evacuate because of that same danger.[17]

In addition to floodwater and propane tanks, other problems faced the people in the Lemay/River Des Peres area. Many homes in both areas remained vacant for nearly three weeks. Such a large number of uninhabited houses brought out the worst in some people, and looting became a problem. Police, their resources already stretched to the limit throughout the city and county, asked for the assistance of Missouri Army and Air National Guard military police to help protect the area.[18] At first, unarmed Guardsmen assisted armed police, but soon potential danger to these unarmed troops resulted in the order to carry loaded .45 caliber pistols.[19] During the 19 days the residents were absent, two man teams of military and civilian police set up road blocks and patrolled the area on either side of the River Des Peres. They dealt with numerous acts of vandalism, arson, assault, attempted rape, drunkenness, and disorderly conduct. Fortunately they were able to do so without firing a single shot.[20]

The flooding along the River Des Peres and in Lemay was some of the most dramatic and widely publicized in the St. Louis/St. Louis County area. Many other locations, however, while they did not receive the notoriety, were just as disturbing for the people who lived there.

In Bellefontaine Neighbors, the residents erected a sandbag levee along Maline Creek that, in normal times, empties into the Mississippi. But by July 6, water from the Mississippi was backing up into Maline Creek, and threatening houses along its banks. On July 22, the water appeared to be receding, and sandbagging residents relaxed. However, by July 25, the water rose to threatening levels again.[21] By July 28th, the situation was so desperate that residents needed help from National Guard troops with sandbagging. Nevertheless, on August 1 the levee broke and flood water reached 41 homes. Workers quickly began a secondary levee to save what they could. By the time the water level began to fall on August 3, l51 homes had been flooded.[22]

Fenton, in western St. Louis County was luckier than many Missouri communities. Only 12 houses were threatened by the flood. Two of these were in the historic Old Town part of the city, and the rest were scattered along the banks of the Meramec River and a local tributary, Fenton Creek. Most of "Old Town,"

Volunteers work to erect a sandbag levee in the St. Louis area.

the heart of Fenton, was too high for the flooding Meramec River.[23] Elsewhere, however, homeowners built individual levees around their houses. Ten of these individual levees held, but two gave way causing extensive damage to two houses.[24]

In Brentwood, both Deer Creek and Bear Creek, flow into River Des Peres, and both of these creeks had flooded 10 times since 1975. So, by 1993, flooding was a repeat of an all too familiar occurrence. Although residents made concerted efforts to throw up sandbag levees, nearly 100 buildings suffered some kind of water damage. Twelve homes along Pendleton and Hilldale Avenues were ruined beyond repair.

A flooded home in the St. Louis area.

The Buyout Program in St. Louis and St. Louis County

Taken together, there were nearly 700 individual homes in St. Louis City and St. Louis County seriously damaged before floodwaters began to fall on August 3rd.[25] Most of these homeowners welcomed the announcement on December 2, 1993, that President Clinton had signed Representative Harold Volkmer's Hazard Mitigation and Relocation Assistance Bill.

The first official mention of the possibility of a buyout program for St. Louis and St. Louis County area came in an article of the St. Louis Post Dispatch on November 10. Robert L. Koenig, the Post's Washington D.C. correspondent, reported that the House of Representative's House Public Work Committee was discussing a bill of Representative Volkmer's that would provide money to purchase flood damaged homes. In that article, Koenig wrote that the government estimated that 230 homeowners in south St. Louis and Lemay alone would be interested in pursuing the buyout program. The article did not give a figure for the whole of the St. Louis/St. Louis County area, but it did state that under the bill, Missouri could get as much as $24.7 million in buyout funds.[26]

Soon after that initial article, on December 22, Koenig reported more specifics. His article, "New Flood Assistance Will Go To Buyouts," stated that St. Louis City was planning to buy 235 homes, and St. Louis county planned to propose the buyout plan to 550 homeowners. The money would come not only from the Hazard Mitigation Grant Program administered by the State Emergency Management Agency, but from Community Development Block Grant money administered by the Missouri Department of Economic Development.

Following those announcements, various towns and sections of St. Louis and St. Louis County began to explore how the money would affect them specifically. Many small communities like Bellefontaine Neighbors lacked the employees to process the paperwork that was necessary in order to launch a buyout program. They found it efficient to hire a consultant to do these things for them. For $19,430, Bellefontaine Neighborhoods hired Jerry King, of RJK Inc., to help them with the application process. King, whose Community Planning Development Corporation, had already contracted to help St. Charles County to administer their $13.2 million recovery program, would prove equally effective in running Bellefontaine Neighbors' smaller program. Not only his results, measured in terms of money, but the numbers of residents participating in the buyout program were impressive.[27]

In Bellefontaine Neighbors, 100 houses had received some kind of water damage from floodwaters or sewers backing up, but 20 houses had sustained major damage, having flood water up to their roofs. These homes were total losses.[28] Some of the owners briefly considered rebuilding on the same site, but they changed their minds when they learned that new federal regulations required houses in the area be rebuilt on foundations high enough to prevent future flooding. The cost was just too high, and the owners finally agreed with Mayor Marty Rudloff that the best use of the land was a permanent seven acre green space. They had faced floods before, but nothing like the magnitude of the '93 flood, and while average buyout offer of $25,085 would not make anyone rich, it would allow them to make a fresh start and escape the yearly spring anxiety about floods. This feeling was so strong, and the owners so disgusted with living in a floodplain area, that none of them disputed the value that buyout appraisers put on their homes.[30]

By July 2, 1994, 10 residents of Bellefontaine Neighbors had received buyout checks from Mayor Marty Rudloff, and on July 22, the last 10 homeowners got their checks at a ceremony attended by both Governor Mel Carnahan and James Lee Witt, Director of the Federal Emergency Management Agency. Mark Schlinkmann, reporter for the St. Louis Post Dispatch, asked one of the recipients, 60 year old Marian Dishon, who had lived in her house 32 years, if she was satisfied with the payment she had received from the buyout. Her answer: "You have to be, what are you going to do?," reflected the attitude of many flood victims worn out by too many springs fighting flood waters. It was a case of too much too often.[31]

The buyout program had removed those homes most at risk. Since that time Bellefontaine Neighbors has turned the lots of the 20 houses into a park. In 1995, flood waters again came to St. Louis, but compared to the 1993 water levels, the 41.8 foot river level was "puny" as the Post Dispatch described it.[32] Even though the '95 flood damaged few homes in Bellefontaine Neighbors, it made some residents there nervous. One woman told a reporter from the Post Dispatch that if they offer a buyout again, "This old lady is going to take the money and run to someplace high."[33]

In Brentwood, another St. Louis County town, the flood of '95 also reinforced that the '93 buyout program was a success. In 1995, Deer and Black Creeks once more left their banks to flood the exact same area they had in 1993. But this time, all the houses damaged in the '93 flood were gone, and the water covered only grass fields.[34]

Bellefontaine Neighbors made a community park on Buyout property.

After the flood of '93, the Brentwood Board of Aldermen had moved quickly to take advantage of the buyout opportunity. They drafted an application and sent it to the homeowners whose homes had suffered damages and encouraged them to return it quickly. However, at the time, Chris Seemayer, Brentwood City Administrator stressed, in an interview with the Post Dispatch that, "we can't force anyone to participate, and we hope the offers will be reasonable. Nobody deserves to be tormented like these people have." He was referring to flood damage that had occurred 10 times since 1975.[35]

On September 25, 1995, the Federal Emergency Management Agency approved $31,715 in buyout money. The city used $6,455 of its own revenue and $4,116 from a community development block grant to raise the 25% in matching funds, to raise the $42,286 dollars necessary to buy the 13 most heavily damaged homes in the floodplain.[36]

Seemayer is still the Brentwood City Administrator and is still enthusiastic about the program. He said the buyout program was "great from start to finish," and that officials from SEMA and FEMA "were as helpful as they could be."[37]

Another enthusiastic supporter of the program is Fenton's Public Works Director Mark Sartors. Measured in numbers, the Fenton buyout program was small, only nine houses purchased at a cost of $276,099. But the rewards came early in the spring, 1994, when a flash flood swept through the same area as that where the '93 flood waters had been, and although water once more entered the same homes along Fenton Creek and the Meramec River, there was nobody living in them. The owners had moved out and, after deciding to participate in the buyout, and were waiting for the buyout money to arrive. The houses stood empty waiting for the wrecking crews.

The force of the '94 flood was especially violent, and could have created considerable danger to human life had those homes been occupied. One empty house was picked up by the rushing water and deposited in the middle of the street.

Looking back, Mark Sartors considered the money well spent. Fenton handled the buyout itself. Valerie Adams, City Clerk, coordinated the application of residents and passed them along to SEMA officials.[36] The process moved rapidly thereafter. SEMA approved the buyout on April 12, 1994, the first owners received their checks on August 1, 1994, and the city purchased the last house on December 21.[39]

In St. Louis County, Mary Campbell, County Community Development Director, helped process the paperwork for the buyouts in the River Des Peres area and the unincorporated Lemay area.[40] By August 1, 1994, 108 residents of Lemay had submitted applications. These people understood they were not making a hard and fast commitment. Most were merely curious about the price that SEMA would agree to let the county pay for their homes.[41] However, when these individuals received the official assessments of the pre-flood values of their homes, 90 decided to accept the offers.[42] By May of 1995, St. Louis County had acquired 210 more properties in the River Des Peres/ Lemay area.[43]

These totals, added to other buyout offers in the unincorporated areas of St. Louis County, meant that a total of 425 properties scattered throughout the area, had been acquired under the buyout plan. By that same date 120 of them had been demolished.[44] Nick Gragnani, an emergency management specialist for St. Louis County, summed up the situation in the area, "Having far fewer residents means far fewer problems. Mitigation works."[45]

The success of the program quickly bore fruit. In late April, 1995, heavy rains brought flooding back to Missouri. By May 22, the flood stage of the Mississippi stood at 41.8 feet, well below the levels of 1993, but high enough to see many of the same areas of St. Louis/St. Louis County— including the River Des Peres and Lemay— flooded again. Yet this time, the bill for flooding, measured in terms of costs for disaster housing, emergency monetary grants to flood victims, emergency evacuation, was dramatically less.

In 1993, for instance, SEMA reported that in the Lemay area, 492 people had applied for either disaster housing and/or individual family grants. The cost of these two combined figures was $571,918. In 1995, with the same area only a little less seriously hurt by floodwaters, the number of applicants was 16, and the cost for the same two basic services was $7,956. The difference was that 105 Lemay houses, located in the flooded area were empty in 1995. The owners had already sold their "at risk" real estate to St. Louis County and had moved elsewhere.[46] In fact at the time of the '95 flood, only three occupied homes remained in Lemay's floodplain.[47]

Similar statistics continued to be recorded throughout the St. Louis/ St. Louis county area. The American Red Cross, whose statistics did not break down relief costs by neighborhoods, but instead dealt with the whole eastern Missouri/southern Illinois together, told the Post Dispatch that in 1993, they served 13,000 households in that area, but only 2,700 during the 1995 flood.[48] Mary Campbell, Director of Community Development for St. Louis county estimated that the buyout program, by removing people from flood prone area after the '93 flood, had saved the county $7.2 million by the end of the '95 flood. Campbell also pointed out that the buyout program in the county had saved the federal government $4.7 million in flood insurance payments to homeowners and businesses.[49]

The buyout program was proving to be an unqualified success measured not only in the alleviation of suffering, but in dollars and cents.

St. Mary

Few places in Missouri can claim to have utilized the buyout program as completely as St. Mary. Encouraged by Governor Carnahan's support for the residential buyout program, and combining funds from the state's community development block grant program with money from the hazard mitigation grant program, this small Mississippi River town moved 90% of its threatened citizens out of an area that habitually flooded; this has saved the state of Missouri hundreds of thousands of dollars in emergency services to evacuate, maintain, and ultimately return 22 families to homes that would ultimately be at risk again. A cost benefit ratio, computed by Missouri's State Emergency Management Agency (SEMA), estimates that in the next 15 years, the state and federal government will save $3.74 cents for every dollar spent in the program.[1]

Working all across the state, Governor Mel Carnahan, members of the Missouri National Guard, and hundreds of other local, state, and federal workers spent hundreds of hours away from their families to help others during the floods of '93 and '95.

St. Mary's problem area was five acres of land at the southern edge of town where houses had been constructed. Two sloughs ran through this problem area, named St. Lawrence Creek and Regular Slough, both of which overflowed regularly during times of high water, especially in the annual spring runoff every April and May. This high water usually affected only a few houses, but in times of serious flooding, every residence and business was either threatened or damaged. Because flooding was so frequent, the residents simply became inured to the inconvenience and accepted these periodic bouts of high water; these properties were inexpensive and most of these people could afford to live nowhere else. Many had also grown used to periodic government grants that allowed them to rebuild their homes in this substandard area. Only six of the 22 families in the area bothered to carry flood insurance. For people on the low end of the poverty scale, the several hundred dollars a year in Flood Insurance premiums were simply too expensive.[2]

When the flood waters came again in '93, the town's citizens banded together to do what they had so often done before – build a makeshift levee between Pine and Walnut Street in an effort to save the buildings and residences along Main Street. This area included the post office, a service station, the MFA granary, the bank, and two residences. In 1993, the citizens of St. Mary built a levee, 12-14 high around these structures and saved them, but they could not prevent the water from flooding the other homes in this area. Once the water came, it stayed for a month, making a total loss of every structure outside the levee.[3]

The extensive damage and the longevity of the flood convinced people that it was time to seek a solution. City Clerk JoAnn Donze organized a meeting of affected families on October 19, 1993, and Kathy Mangels of the Southeast Missouri Regional Planning Commission explained the mechanics of a buyout. This proposal was not based on the proposed legislation of Representative Volkmer, which had not passed Congress at this time, but was based on pre-existing legislation. Almost everyone at the meeting voted to pursue a buyout option. On November 12, 1993, the city council voted to seek buyout funds through a community development block grant from the Missouri Department of Economic Development, to buy all the residences in the 100 year flood plain, demolish them, and permanently eliminate this source of misery from St. Mary.[4] The request asked homeowners to accept a post-flood value assessment of their homes instead of the more usual pre-flood assessment.

In this case the pre-flood price was based on an appraisal that was in turn based on the frequency of flooding in the area, and that was very low, averaging only $4,946.54. When the value of previous government loans and grants to repair earlier flood damage was deducted from this amount, the average amount offered a homeowner was less than $600.00. This low amount made it impossible for anyone to get enough money to move out of the floodplain. However, the special provisions of the community development block grant made it possible for each homeowner to not only receive a small amount of money for his/her home, but also a substantial grant of up to $22,500 to relocate out of the floodplain.[5] Governor Carnahan's office approved this arrangement on February 14.[6]

But St. Mary did not stop with the community development block grant request. On December 28, 1993, again acting on advice from Kathy Mangels of the Southeast Missouri Regional Planning Commission, the city council submitted another request. This time it could take advantage of Representative Harold Volkmer's legislation that aimed at buying flood damaged residences throughout Missouri's floodplains. On April 12, 1994, Governor Carnahan's office approved that request for funds and awarded St. Mary $142,987 to add to the town's earlier grant.[7] The town now had $491,593 to spend on its buyout program, and an additional $22,165 from a separate public assistance grant to pay for the cost of demolishing the homes.[8]

Purchase of home sites started on June 27, 1994, with the purchase of a house trailer lot. The owner received $2,503 for his trailer pad and a relocation allowance of $20,639.[9] On August 14, 1994, the city handed16 property owners checks for their homes, and announced plans to buy 20 more in the floodplain. When the residential buyout program was completed on May 31, 1995, the city government had purchased 32 homes.[10]

Two of the homes were considered historically significant and St. Mary had to take special precautions with them. It was necessary to hire individuals from the Missouri Historical Society to do a study of the homes, take pictures, and identify any historically significant materials in the homes. This material had to be stripped out of the structure and offered for sale. Any money received from such sales was subtracted from the total awarded to the city.[11] In this case, the sale of historically significant light fixtures, flooring, doors, and trim, netted only $154.00.[12]

Yet, St. Mary did not stop there. Ms. Donze, along with Kathy Mangels of the Southeast Missouri Regional Planning Commission, submitted another community development block grant for money to buy commercial properties that had been ruined by the flood. Ms. Donze had originally included a request to buy out six commercial properties with her first request for federal funds from FEMA in November, 1993. However, at that time, Governor Carnahan had already determined that the state would concentrate its efforts on residential buyout to impact the largest number of people, so that part of the request was denied.[13]

By November of 1994, however, when it appeared that most people who were going to take advantage of the residential buyout program had done so, Governor Carnahan decided that some state community development block grant money could be made available to buy out commercial properties. On November 9, 1994, St. Mary's City Council learned that the state had approved $261,000 to buy commercial properties. The City Council had already annexed land south of the town, but out of the floodplain. This land allowed six businesses a place upon which to relocate.

As in most cases, the pay off for St. Mary's energetic buyout program came in 1995, when the same area flooded again. This time, however, almost everyone had gone, and only four families were then living in the area. This second flood convinced even these hold outs, and St. Mary is currently seeking funds to get these people out too.

As for the land, St. Mary has seeded it with grass, so that the only expense to the town is mowing it.[15] Now every spring, when the St. Lawrence Creek and Regular Slough back up, the rising water serves only to remind people of the successful outcome of an innovative program.

Blocks of flood prone property are now open space in St. Mary.

Wakenda

On December 20, 1996, the citizens of Wakenda voluntarily dis-incorporated their town and simply left. They left behind only a granite monument to mark the site where 43 families had lived before the flood of '93.[1] Located five miles southeast of Carrollton in Carroll County, Wakenda had been near the tracks of the Atchison Topeka and Santa Fe Railroad, and had been a successful little farming community. In 1910, the town had a population of 400, two hotels, three churches, and a railroad station where trains of the Atchison Topeka and Santa Fe Railroad made four stops a day. However, when the railroads began cutting back service to small rural towns in the 1950s Wakenda began to die.[2] By 1993, there were 90 people living in the town, and the businesses were a grain elevator, an auto repair shop, and a grocery store. The town had a school that contained eight grades; at the ninth grade level, the students were bussed to Carrollton.

The flood of '93 was totally unexpected. Unlike other towns on Missouri's various floodplains that had experienced numerous floods, Wakenda had not experienced one since 1952.[3] On July 8, 1993, however, the levee systems guarding Wakenda from Wakenda Creek to the north and the Missouri River to the south began to fail and two days later seven inches of water had risen in Wakenda. That water level would rise to an average of six feet by mid-July and remain for 13 weeks. Some of the 55 houses in Wakenda simply collapsed, while others were twisted off their foundations. The town was a total loss, a fact that was magnified in the residents' minds because damage of this magnitude had never happened before in the town.[4]

The flood water quickly devastated the whole of southern Carroll County. Crop lands totaling 122,000 acres were soon covered with water, the southern end of Carrollton was flooded, and 70% of the businesses in that area were threatened.[5] By July 12, Carroll County had been declared a disaster area, and emergency assistance from the Federal government became available to Carroll County flood victims in the form of low interest loans, emergency housing, and other types of assistance. This government help kept hope alive, and in early August when the water started to recede, Carroll county citizens began to rebuild and repair.

In Wakenda, however, the damage was severe to the point where, after viewing their homes, many residents began to feel that rebuilding was futile. Nearly every home in the town was damaged beyond repair, total rebuilding of each home seemed the only option.[6] It was this gloomy appraisal that led 60 citizens of Wakenda, two-thirds of the town, to attend a buyout meeting October 7th in the Carroll County Courthouse. The Green Hills Regional Planning Commission, an organization that helps 11 counties in northwest Missouri with government programs, called this October 7th meeting. Citizens learned the outline of the buyout program built into the Federal Emergency Management Agency's 404 program. Unfortunately, while the general provisions of the buyout program seemed promising, the officials of the Green Hills Commission did not have all the details; their goal had been to test public opinion to the buyout idea to see whether people were interested enough to attend a second meeting where FEMA officials could tell them more details. In fact, the presentations confused many people, and the October 11th issue of the Carrollton Daily Democrat reported that most "left with more questions than answers." Some Wakenda residents expressed displeasure with the buyout idea. Alvin Yuille, made the statement that "the money you pay us for our property in Wakenda will only pay about a fourth of the price in Carrollton."[7]

Most of the people from the first meeting, however, were interested enough in the idea to attend another meeting on October 18, at St. Mary's Catholic School in Carrollton where Robert Fretteluso, a FEMA official, explained the intricacies of the buyout program. This was the buyout program that had been in existence since 1980, which was substantially different than the one Representative Volkmer would propose a month later. Still, Fretteluso's presentation introduced residents to the concept of a property buyout. Denise Stottlemeyer, the Director of the Green River Regional Planning Commission, also laid out the process of applying for a buyout grant. She warned some of the people thinking of rebuilding and "flood proofing" their homes that they had "the opportunity to do something now. If you stay where you are, with [flood proofing], the opportunity may not come along again."[8]

From October to December, the residents of Wakenda and Ms. Stottlemeyer moved through the intricacies of the applications that would be submitted to SEMA for final approval by FEMA. There were

Aerial view of Wakenda buyout area in Carroll County.

delays. In October, Wakenda residents delayed the application process briefly while they studied different types of assessment processes.[9] In November, seven Wakenda families returned to Wakenda determined to make repairs.[10] In December, SEMA delayed the application process. The delay had some merit. If Wakenda dis-incorporated, there would be no corporate entity to supervise demolition of the area, or oversee the abandoned area afterwards. SEMA wanted Carroll County to become the sponsor for these post buyout activities.[11]

Finally, on April 12, 1994, SEMA accepted Wakenda's application that asked for $408,000 to begin the buyout. Later, The Green Hills Regional Planning Commission sought additional funds on behalf of Wakenda homeowners, and by the end of the buyout program in June of 1997, Wakenda residents had procured a total of $654,027, with FEMA providing $216,966, and a community development block grant supplying $436,561. Once the money was approved, homeowners could apply, and The Green Hills Regional Planing Commission opened an office in the Carrollton Courthouse to help applicants.[12] Wakenda citizens adopted a wait and see attitude towards the government offers, and generally complained about the long waits for a buyout offer. "If the buyouts are reasonable we'll move," stated one owner. "Either way, we wish the government would just tell us the prices. Until then there's a lot of people left hanging on a string here."[13] As with most buyout sites, there were hold outs. Seven families refused to move until May of 1995 when it appeared that there would be a repeat flooding of the area. This time, the flood water in Wakenda was only seven and a half inches, but it persuaded all but two of the hold outs to evacuate. The last two families were located on slightly higher ground in the town site, and remain to this date, along with the grain elevator that is still operating.[14] By September 5, 1995, 30 homes had been demolished at Wakenda, at an average cost of between $5,300 and $6,000.[15]

On December 27, 1996, the <u>Carrollton Democrat</u> carried Wakenda's final epitaph, "Wakenda Becomes Dis-incorporated as a Town." The article reviewed the buyout process and reported that the land had been leased to a local truck farmer, Peter Gunn, who planned to grow watermelons, cantaloupes, and other fruits. It also reported that an advisory board, made up of ex-Wakenda citizens had formed to commission a monument to the now vanished town. That board had ordered a granite monument six feet tall that included the bell from the Walnut Grove Baptist Church. The town of Wakenda had endowment funds both to build the monument and to maintain a small area around the monument. At the time plans were made for a dedication ceremony. However, that ceremony never took place. Although Ms. Stottlemeyer tried to organize the affair, it was just too painful for many of Wakenda's citizens to attend, and so she abandoned the idea.[16] Ms. Trella Ward, who grew up in Wakenda, and now lives in Carrollton, has never been out to see the monument, not from lack of interest, but because it would be too emotional.[17]

But Wakenda's story is not over. The United States Forest Service has planted a stand of 30 trees near the monument in order to study the long term effects of flooding on Missouri trees.[18] The site of Wakenda is now part of a 250,000 acre watershed project managed by the National Resources Conservation Service (NRCS) that will attempt to reduce the potential for floods in the area.[19]

A granite monument six feet tall that includes the bell from the Walnut Grove Baptist Church is all that remains of Wakenda after the town moved following the floods of '93 and '95.

Warren County and Marthasville

Warren County, a predominately agricultural area, is in east central Missouri. Most of the county escaped flooding in both 1993 and 1995. Where the Missouri River forms the southern boundary of the county, however, was the exception. Prosperous farms dominate this part of the county, and its predominately German descendants are culturally similar to those who settled Hermann and Rhineland in the mid 19th century. Like the citizens of those other two towns, the Warren County citizens, who live beside the Missouri River, are philosophical about floods. They seem to take a certain pride in their ability to spring back from these periodic natural disasters. An editorial in the Marthasville Record, written by editor Reuben Eichmeyer, not only describes the disruption of a flood, but reflects pride in the ability of the local people to adapt:

> *"It's the uncertainty, the waiting, waiting, waiting, that gets you. And then the knowledge for those of us who have been there before of the back-breaking massive clean up which must be done when its over. Add to that the despair of lost income, lost possessions, and the foul-mouth tasting stench you breathe day after day, and you have a flood-plain dweller's worst nightmare come true.*
>
> *It takes a strong person to go through one flood and snap back, and an even stronger person to bounce back from repeated floods over their lifetime."*

Reuben Eichmeyer, was speaking from personal experience. When the waters began to rise along the Missouri in early July, he moved the printing equipment for the Marthasville Record above the high water mark of 1986 and waited for the water to rise. Other business owners did the same. Lictenberg Funeral Home moved their supply of caskets to higher ground, David Gaddie moved the cars in his Marthasville Auto Body Shop up the hill, senior citizens at the Charrette Senior Citizen's Apartments moved to motels or went to live with relatives, the U.S. Post Office made arrangements to operate out of Murrill Wohler's Garage, and the street department cut an emergency road through Steve Lochirco's apple orchard to Highway 47 so the town would not be isolated by high water.[1]

By the end of September, Marthasville had flooded three times, and water lay 18 to 24 inches in the city streets. Although there was no official way to measure the water level, it seemed that this was the highest the water had been in living memory, according to Lydia Zillgitt, who had either lived in or maintained a property in Marthasville all her years. In 1993, she took photos of the flooded town from a rowboat. She noted that flood water measured eight feet high on the telephone poles.[2] Ruby Buchholz, a one time resident who was well acquainted with Marthasville's history, also reported that before the flood of '93, flood waters had never been high enough to cross the railroad embankment and enter downtown Marthasville.[3]

As difficult as the flood was for Marthasville, the local farmers living along the Missouri east and west of the town suffered more. While townspeople could move their property, these farmers had to watch as flood water ruined bumper corn crops. Their farm houses, that had usually stood above the high water mark, also suffered the mud and muck of the flood water. The flash flood in September was especially destructive, and several farm houses were even swept off their foundations. One woman, Gertrude Hogard, died when her house crashed into Tugue Creek, a usually small stream that flowed into the Missouri east of town.[4]

People in Marthasville and along the Missouri River first learned about the buyout program when the Marthasville Record announced a meeting December 10th at the Hearnes Multipurpose Center on the University of Missouri Campus in Columbia, Missouri. The article explained that Representative Volkmer had organized the meeting and would explain his recently approved bill that made money available to buyout residential dwellings and that also simplified the application process.[5]

Under the leadership of Steve Etcher of the Boonslick Regional Planning Commission, over two dozen families in Warren County began the initial application process for buyout money. By April 28, 1994, the Marthasville Record reported that Warren County had received a total of $131,500 to buy 14 properties, and Marthasville—which had made a separate application—had received

$123,900 to buy five properties.[6] Surprisingly with the money available, a number of home owners in the county, as well as four Marthasville residents, decided to pull out of the deal.[7] Despite their earlier promise to participate, there was no penalty or demand that they honor their earlier commitment.

The Missouri State Emergency Management Agency (SEMA), which administered the FEMA funds was committed to the philosophy that the buyout program was voluntary. An individual homeowner could back out at any time before the check was actually handed to him/her.[8] While that policy could make administrative headaches for SEMA, it went a long way to assuring people that they were in control of their own destinies.

On May 19, 1995, high water again devastated Warren County along the Missouri River. Residents saw this flood as the third worst in living memory. Once again, Marthasville businesses moved to higher ground, and people had to use the emergency road through the Lochirco orchard.[9]

During this second flood, however, many in Warren County were angry when, at first, President Clinton's disaster declarations for Missouri excluded their county. It was ironic, but the very success of the buyout program up to that time may have been responsible for the exclusion. In the June 15, 1995, issue of the Marthasville Record, editor Reuben Eichmeyer identified the reason for the exclusion. "The fact that Warren County had such a large buyout program after the 1993 flood affected the county's damage assessment" by SEMA. Eichmeyer's point was that with so many houses out of harm's way, the usual formula that SEMA used, including number of homes damaged, value of contents, and number of people affected, did not rise to the level of a Presidential Disaster Declaration.

Regardless of official formula, the people of Warren County knew they should be declared part of the disaster area. County Commissioner Pat Spoonster told county residents to call SEMA to complain. "Just because we don't have a lot of people living in the flood area doesn't mean we don't have flood damage," Spoonster said in the same Marthasville Record article that reported Warren County's being excluded. The Commissioner went on to say that "there were 27 to 37 county roads under water. . . 38 homes have water. . . 33 to 38 businesses [are] affected. . . . There were also 22,000 acres of farm land inundated." A week later, whether because of higher water levels, or calls to SEMA made an impression, the President added Warren County to the disaster list.[10]

On August 1, 1995, Warren County received an additional $179,000 in money from SEMA to both buy family residences and pay for the demolition of these houses. At the end of the buyout program, SEMA had presided over the purchase of 13 properties with an average final offer of $29,519.68.[11] Only one of these buildings was in Marthasville itself, the rest were residences of farm families scattered throughout the county. The SEMA money did not go to buy out agricultural crop land, but was confined to purchase of the land on which a residence stood.[12] The reasoning was simple, while a farmer would not want to live in a flood threatened home, the farm land could still be extensively farmed. Since 1995, in fact, those fields have continued to produce bumper crops.[13]

Since 1995, additional threats from flooding have come to Warren County. Recently, some citizens of Marthasville have reconsidered the buyout philosophy, and have decided under the guidance of the Boonslick Regional Planning Commission, to apply for grant money. The goal this time is to use money from the NRCS and Community Development Block Grants to buy homes within Marthasville that are subject to flooding, and to build a watershed detention system consisting of a damn and 16 acre lake to prevent future damage to the town. The project will take a year and a half to complete, and will cost approximately $1.2 million.[14]

Conclusion

The buyout program was an unqualified success by any means of measurement. Economically, the amount of money Missouri spent in flood relief during and after the 1995 flood was markedly less than similar costs for the 1993 flood. Emergency assistance in 1993 to 37,000 Missouri households totaled $34.5 million; in 1995, 4,000 households received $4.1 million.[1] The reason is simple; fewer people were in harm's way during the second flood. Money that might have been needed for relief in '95 could be spent elsewhere.

For individual communities, the results are equally impressive. In Cedar City, that part of Jefferson City north of the Missouri River, 473 residents needed $941,149 in emergency aid for disaster housing and emergency family grants during the flood of '93. After flood waters covered substantially the same area in 1995, there were only 53 emergency aid applicants who consumed $45,503 dollars for the same services.

The same general story can be found in Lemay, where 492 people used $571,918 for disaster housing and emergency family grants in the '93 flood, but in the same area during the flood of 1995, only 16 people needed a total of $7,956. Again in Lemay, the flood waters covered approximately the same area in 1993 as in 1995.

The same picture emerges in St. Charles County. Following the 1993 floods, 4,277 people needed $14,174,717 to pay for disaster housing and emergency grants. However, in 1995, only 333 people applied for a total of $216,094 for the same services.[2]

However, some may argue that figures like these are suspect, because they have been collected by Missouri's Emergency Management Agency (SEMA), the very agency that was charged with administering the buyout program for the Federal Emergency Management Agency (FEMA). The fact remains however, that over the three and one half years that have elapsed since the end of flooding in 1995, the buyout program has been the subject of several investigative reports by major reporters from Missouri's major newspapers. Like all good reporters these writers are are always on the lookout for stories about corruption, waste, or even fraud. Those kind of stories make exciting reading and sell newspapers. Had there been large numbers of people who were cheated by the government, or a group of people who made inordinately large sums of money from the buyout, these journalists in all likelihood would have exposed anything suspect. Instead, the state's major newspapers have published mainly positive stories about the program without a hint of scandal or mismanagement.

Tim O'Neil, reporter for the Post Dispatch, cited the buyout program as the chief reason that the emergency relief cost of the 1995 flood was only 5% of the cost of the '93 flood. His article also pointed out other reduced costs besides emergency housing and living grants. Repairs to public roads, bridges, water, and sewage facilities totaled $127 million after the '93 flood, but only $9.5 million after the '95 flood.[3]

Tom Uhlenbrock, also of the Post Dispatch, reached the same general conclusion in an article titled "The Big Flood Buyout Program That Worked." The article's subtitle, "Across Region, Many Low-Lying Communities Are Now Ghost Towns Of Abandoned Homes," reinforced the idea that the buyout program had simply given people who previously lived in the floodplain the opportunity to move elsewhere after the '93 flood, so there were fewer people for flood waters to impact in '95.[4]

Most recently Kevin Murphy's article titled "Flooded-property buyout is paying off" in the Kansas City Star, explains that Missouri's positive experience matches similar, but smaller experiences in other flood-impacted states like Kansas and Illinois.[5]

Even outside the United States, the flood buyout program has elicited positive remarks. The Economist, Britain's prestigious weekly economic publication, reporting on the fight against the flood in Ste. Genevieve, went on to credit the buyout program throughout Missouri with saving money and being well administered. It estimated that, having spent $100 million after the '93 flood to buyout flooded homes, the program will save Missouri $200 million over the next 20 years.[6]

Still, with all this positive reaction some people who were victims of the flooding still were not happy, not because they perceived dishonesty, but because they simply disagreed either with the price they were offered for their flooded home or how the program was administered. Perhaps nothing can be done about complaints about assessing prices; some people naturally want more—yet concerning the complaints about administration perhaps some lessons could be learned.

People complained about the complicated procedure of filling out the buyout applications. Complaints surfaced about "red tape" and confusing forms. Certainly experience may alleviate some of these problems in the future. The program was new after the '93 flood, and some officials also were confused about the process. After the '95 flood, there were fewer complaints about "red tape" and complicated forms because SEMA and local officials had worked out many kinks.

Still, the complaints about red tape and difficult forms conceal a reality. When the government hands out money, the possibility that some citizen will try to get more than he/she is entitled to, exists. Recent American history is littered with stories about "Welfare Fraud." Government forms are meant to minimize this possibility. One can only imagine the public outrage that would have resulted had some individual received money for a house he/she did not own, or received more money than they deserved. While future buyout programs become more streamlined, there must always remain adequate safeguards.

Secondly, the success of the buyout program often depended on the enthusiasm of the people running it. Most often the program worked best where buyout managers were local individuals that local people knew and trusted. The enthusiasm for the program in Arnold due to Eric Knoll, in Cape Girardeau due to Ken Eftink, in Excelsior Springs due to Molly McGovern, and in Neosho due to the efforts of Jim Cole, are evidence of this.

Finally, there is certainly a place in the program for the contributions of private organizations like the Salvation Army and the Interfaith Disaster Response Network. Compared to the huge sums the state and local government spent, these agencies did not contribute large sums, but what they had, they distributed wisely in such ways that they minimized the impact of flood victims when they were forced to leave a home and moving elsewhere. These payments of between $5,000-$7,000, that were in addition to the big federal and state grants made a world of difference to people suffering extreme distress and/or discomfort.

The buyout program is heralded by most people as a real success. One measure of that feeling is that the program continues to the present time. Large scale buyouts are no longer going on, but a few do go on under the auspices of SEMA, that every year receives about $500,000 to help communities make additional buyouts and to remove even more people from the flood plain.[7]

Buyout property used as open space encourages community picnicking.

Introduction

1 Darryl W. Levings, "Among KC Floods, This One Ranks No. 4," Trial by Water, Special Supplement to the Kansas City Star, September, 1993, pp. 29 and 31.

2 Sharing the Challenge: Floodplain Management into the 21st Century, Report of the Interagency Floodplain Management Review Committee to the Administration Floodplain Management Task Force, US Government Printing Office, Washington D.C., June 1994, p. 59.

3 Timothy R. Roberts, The Great Flood of 93, Published by the Missouri National Guard, 1999. p.3.

4 Ayers B. Drummond Jr. "What's Left from the Great Flood of 93," The New York Times, (August 10, 1993).

5 "Economist Questions Levee Study," Columbia Daily Tribune, October 22, 1993, and "Bond Continues to Push to Expand Levee Repairs," Columbia Daily Tribune, October 23, 1993.

6 Sue Schneider and Kate Kline, "Out of Harms Way: Missouri's Flood Buyout Program," Missouri State Emergency Management Agency (SEMA), 1996, p.1. Sharing the Challenge: Floodplain Management into the 21st Century, p. 16. "Flood-Policy Review Just Beginning," Post Dispatch, October 24, 1993.

7 "Out of Harms Way: Missouri's Flood Buyout Program," p. 6.

8 Weather Data Service, US Army Corps of Engineers.

9 "Out of Harms Way," pp. 1-2.

10 "Waterlogged Roads Disintegrate," Kansas City Star, August 5, 1993.

11 "Flood Raises Road Repair Questions," Columbia Daily Tribune, November 15, 1993.

12 "Out of Harms Way," p. 1.

13 Public Law 93-288: as amended by Public Law 100-707.

14 "Out of Harms Way," p. 7.

15 The Response, Recovery and Lessons Learned from the Missouri Floods of 1993 and 1994, Missouri State Emergency Management Agency, p. 17.

16 Personal communication with Melva Fast, Flood Buyout Coordinator, for Jefferson City, MO. January 25, 1999.

17 Economic Development Administration (EDA) Grants and the National Flood Insurance Section 1362 Flood Damaged Property Purchase Program.

18 Sharing the Challenge: Floodplain Management into the 21st Century, p. 23.

19 "Out of Harms Way: Missouri's Flood Buyout Program," p. 4.

20 The Response, Recovery and Lessons Learned from the Missouri Floods of 1993 and 1994, Missouri State Emergency Management Agency, 1994. p. 9. "Out of the Mud, Some Lessons," The Economists, May 27, 1995, p. 28.

21 Sharing the Challenge: Flood Management into the 21st Century , p. 126.

22 Sharing the Challenge: Floodplain Management into the 21st Century, p. 7.

23 Personal communication with Destin Frost, State Hazard Mitigation Officer, Missouri SEMA, January 22, 1999.

24 The Response, Recovery and Lessons Learned from the Missouri Floods of 1993 and 1994, p. 17.

25 "Out of Harms Way," pp. 5- 6.

26 "Remembering and Recovering from the Great Flood of '93," Section D, Columbia Daily Tribune, August 9, 1998.

27 "Out of Harms Way," p. 6.

28 "City of Neosho, Missouri: Summary Report to Missouri's SEMA on CDBG, FEMA, and NARCS Grants to Buy Property," November 1998. "Out of the Mud, Some Lessons," The Economists, May 27, 1995, p. 28.

29 The Response, Recovery and Lessons Learned from the Missouri Floods of 1993 and 1994, p. 17-18.

30 "Remembering and Recovering from the Great Flood of '93," Section D, The Columbia Missourian, August 9, 1998.

31 The Response, Recovery and Lessons Learned from the Missouri Floods of 1993 and 1994, p. 18.

32 "Out of Harms Way," p. 3.

33 Paul Hamper, "Some Survivors Rebuild, Others Moved on, But the Flood of '93 Changes Lives Forever," St. Louis Post Dispatch, August 24, 1998.

Alexandria/Clark County

1 "After Action Report, 29 October, Mississippi and Missouri River Flood Duty 4 July to 5 October, 1993." Memorandum for NGB-ARO-OM, Report as of 8 July, 1993. Missouri National Guard Headquarters, Skelton Training Site, Jefferson City, MO.

2 Hazel Bledsoe Smith, "A Look Back at 1993," The Media (Kahoka, MO.), January 5, 1994.

3 "After Action Report, 16 August 1993, Battery B, 1st Battalion, 128th Field Artillery, Missouri National Guard," p. 1. 135th Military History Detachment, Missouri National Guard, Ike Skelton Training Site, Jefferson City, MO.

4 Jack Anderson and Michael Binstein, "Missouri Community Survives," St. Joseph News-Press (St. Joseph, MO.), November 27, 1993. The actual population of Alexandria is open to question, and ranges from a low of 390 to a high of 500. The 390 number is the population in July 1993, according to Mayor Bob Davis.

5 Hazel Bledsoe Smith, "Flood Relief Committees Oversee Distribution and Spending of Donated Funds," The Media, November 3, 1993.

6 Hazel Bledsoe Smith, "Flood Waters Recede, Alexandria Residents Return," The Media, August 11, 1993.

7 "Water Service Restored in Alexandria," Quincy Herald Wing (Quincy, IL.), June 15, 1994.

8 "City of Alexandria to Hold Meeting Concerning Buyout," The Media, November 10, 1993.

9 Shelly Chapman, "Governmental & Agency Representatives Answer Questions Concerning Buy-Out & Delays," The Media, November 10, 1993.

10 Hazel Bledsoe Smith, "Volkmer & Panelists Explain Buyout & Other Programs to Help Flood Victims," The Media, December 29, 1993.

11 Hazel Bledsoe Smith, "Buyout Application Made to State for Alexandria and Clark County," The Media, February 2, 1994.

12 Hazel Bledsoe Smith, "Decision Needed from Alexandria Residents Soon to Establish Buyout Funding," The Media, February 9, 1994.

13 Hazel Bledsoe Smith, "Buy-Out Applications Made to State For Alexandria and Clark County," The Media, February 2, 1994.

14 Hazel Bledsoe Smith, "Decision Needed From Alexandria Residents Soon to Establish Buyout Funding," The Media, February 9, 1994.

15 "Alexandria to get $1.1 Million, County to get $1 Million in Federal and State Buyout," The Media, February 23, 1994, and Hazel Bledsoe Smith, "Governor Approves Clark County Flood Buyout Request," The Media, March 23, 1994.

16 Hazel Bledsoe Smith, "City of Alexandria Establishes Buyout Criteria following Meeting with CDBG Official," The Media, April 13, 1994.

17 Hazel Bledsoe Smith, "Federal and State Representatives Meet with Local Officials to Discuss Details of flood Buyout Program," The Media, June 1, 1994.

18 Hazel Bledsoe Smith, "County Begins Acceptance of Flood Buyout Applications," The Media, May 25, 1994.

19 A number of articles in The Media give the details: "Properties Purchased Under Federal Buyout Program in Alexandria, Other Buyout Agreements Nearly Completed," February 1, 1995; "Alexandria Council Discusses Buyout and Demolition," February 8, 1995; and "Final Phase of Federal Flood Buyout Program to Begin soon in Alexandria," September 27, 1995.

20 Personal communication with Mayor Robert Davis of Alexandria, Mayor Jerry Johnson of Mt. Airy, MD, and Neil Shoemaker of Croton, OH.

21 Personal interview with Captain Walton Westbrook, Commander of Battery B, 1st Battalion, 128th Field Artillery, Missouri Army National Guard, January 7, 1996.

22 Personal interview with Robert Davis, April 19, 1999.

23 Personal interview with Robert Davis, April 19, 1999.

24 Personal interview with David Davison, Director of the Northeast Missouri Regional Planning Commission, April 19, 1999.

Arnold

1 Robert I. Koenig, "Uncle Sam's Right Hand. . .," St. Louis Post Dispatch, News Analysis, September 4, 1994. From 1980 to 1994, only 4,000 properties had been acquired under this earlier buyout program throughout the whole nation.

2 Personal communication with Eric Knoll, Arnold City Administrator, May 25, 1999.

3 Mike Schlinkmann, "Flood Meeting Puts City on the Map, I Guess," St. Louis Post Dispatch, Metro Post South, July 22, 1993.

4 "Many Communities Gear Up For The Next Wave Of Flooding," St. Louis Post Dispatch, News, July 28, 1993.

5 "A Few Enjoy Waters Ebb: Others Gird For The New Crest," St. Louis Post Dispatch, News, August 1, 1993, and The Flood In Perspective, St. Louis Post Dispatch, News, August 2, 1993.

6 "Water Falls A Bit In Some Towns, But Progress Is Slow," St. Louis Post Dispatch, News, August 3, 1993.

7 "Alton Finds Gift Tucked In Truck Of Bottled Water," St. Louis Post Dispatch, News, July 29, 1993.

8 Leo Fitmaurice, "We're Hurt Emotionally, Says Family Enduring Flood Damage," St. Louis Post Dispatch, News, August 5, 1993.

9 "Clearing Floodplains House By House," St. Louis Post Dispatch, Editorial, February 8, 1994.

10 Personal communication with Eric Knoll, May 25, 1999.

11 Terry Ganey, "Buyout Money OK'd For Flooded Areas," St. Louis Post Dispatch, News, January 25, 1994.

12 Personal communication with Eric Knoll, May 25, 1999.

13 Tim O'Neil, "River Gets 20 Houses Hit in 93," St. Louis Post Dispatch, News, April 16, 1994.

14 "At A Glance," City of Arnold, Disaster 0995, Residential Acquisition Project, State Emergency Management Agency, Jefferson City, MO. April 15, 1997.

15 Nicholas C. Wishart, "Flood Buyout Pleases Couple: When The Water Came Up, We Said We've Had It," St. Louis Post Dispatch, Metro Post South, May 6, 1996.

16 Schneider and Klise, "Out of Harms Way: Missouri's Flood Buyout Program," p. 7.

17 "State Allocates $1.3 Million For Floodplain Buyouts Here," St. Louis Post Dispatch, Metro Post South, August 28, 1995.

18 Personal communication with Destin Frost, Hazard Mitigation Officer, Missouri State Emergency Management Agency (SEMA), May 4, 1999.

19 Sheri L. Gaddy, "Council Agrees To Pay For Relocation," St. Louis Post Dispatch, Metro Post South, August 15, 1994, and a personal communication with Eric Knoll, May 26, 1999.

20 Personal communication with Eric Knoll, May 26, 1999.

21 Personal communication with Eric Knoll, May 25, 1999.

Buchanan County

1 Scott Canon, "Flood victims still weather uncertain times: Many in Rushville are waiting to help get their lives back on track," Kansas City Star, National/World, March 1, 1994. Also two articles by Pat Spencer, reporter for the Buchanan County News (Fawcett): "Battling The Flood Waters: Recovery Begins in Agency; Sugar Lake Residents Waiting For Waters to Recede," July 15, 1993, and "Flood Strikes Agency Again, South Side Evacuates," July 29, 1993.

2 Pat Spencer, "Battling the Flood Waters."

3 Pat Spencer, "Flood Waters Hit Weary Residents Again," Buchanan County News, September 30, 1993, and a caption to a photo, in the Buchanan County News, September 9, 1993.

4 Pat Spencer, "Meeting is Packed as Buyout Interest Grows," Buchanan County News, October 7, 1993.

5 Mike Jones, "2 counties interested in buyouts," St. Joseph News/Press (St. Joseph), November 11, 1993.

6 Pat Spencer, "Extension for Flood Assistance Slows Grant Application Process," Buchanan County News, February 3, 1994.

7 "Flood buyout hearing to be held in Agency," St. Joseph News Press, Metro Region, June 30, 1994, and "Informational Meeting Set On Sugar Lake Buy-Out," Buchanan County News, August 25, 1994.

8 Pat Spencer, "Buyout Funds Approved For Sugar Lake Residents," Buchanan County News, July 7, 1994.

9 Pat Spencer, "More Steps Taken Toward Finalizing Buyout Plans," Buchanan County News, September 1, 1994.

10 Steve Everly, "Sugar Lake buyouts offered: 34 property owners have until Jan. 1 to accept flood relief," Kansas City Star, Metropolitan Section, December 19, 1994.

11 Gary Chilcote, "Council announces 30 flood buyouts," St. Joseph News/Press: Metro Region, February 14, 1995.

12 "At A Glance," Buchanan County 404 Hazard Mitigation Grant Project, State Emergency Management Agency, (SEMA), Jefferson City, Missouri, April, 1996.

13 Scott Canon, "Flood victims still weather uncertain times: Many in Rushville are waiting for help to get their lives back on track," Kansas City Star, National/World Section, March 1, 1994.

14 Pat Spencer, "Final Work Completed on Rushville Levee," Buchanan County News, January 26, 1995.

15 Pat Spencer, "Sugar Lake Property Owners Finish Buyout," Buchanan County News, January 12, 1995.

Cape Girardeau

1 Virginia Baldwin and Tim O'Neil, "Hot Topics: Insurance, The Pros And Cons Of Buyouts," St. Louis Post Dispatch, News, August 27, 1993.

2 Tim Poor, "Crest Is Gone For Good. Water Drops A Foot Here In 24 Hours," St. Louis Post Dispatch, News, August 9, 1993.

3 High and Mighty: The Flood of '93, published by the St. Louis Post Dispatch, 1993, p. 10.

4 Personal communication with Ken Eftink, Development Services Coordinator for Cape Girardeau, June 14, 1999.

5 "500-year floods don't have calendar or clock to follow," Southeast Missourian (Cape Girardeau, Missouri), Editorial, May 26, 1995, and Tim O'Neil, "Crests May Go Higher Upriver," St. Louis Post Dispatch, News, May 26, 1995.

6 Martha Shrik, "Sandbaggers, Boaters Are Busy This Weekend. Some Work, Some Play Through The Holiday Rainstorms," St. Louis Post Dispatch, May 28, 1995.

7 Tom Uhlenbrock, "The Big Flood Buyout Program That Worked. Across Region Many Low-Lying Communities Are Now Ghost Towns Of Abandoned Homes," St. Louis Post Dispatch, News, May 28, 1995.

8 Kathleen Best, "12 Missouri Counties To Get Federal Flood Aid," St. Louis Post Dispatch, News, June 3, 1995, and Bill Heltland (S.E. Missouri News Service), "Of 24 counties eligible for assistance, only 1,240 people have registered," Daily Dunklin Democrat, (Kennett, Missouri), June 20, 1995.

9 Personal communication with Ken Eftink, June 14, 1999.

10 Mark Bliss, "Cape Girardeau will seek flood buyout funds after all," Southeast Missourian, July 23, 1995.

11 Mark Bliss, "Cape seeks money for flood buyout," Southeast Missourian, August 8, 1995.

12 Marc Powers, "Cape gets state nod for buyout," Southeast Missourian, October 17, 1995, and Marc Powers, "Government OKs flood buyouts," Daily Dunklin Democrat, November 9, 1995.

13 Bill Heitland, "Meadowbrook wants buyout, not sewer," Southeast Missourian, July 7, 1995.

14 Marc Powers, "Cape gets state nod for buyout."

15 "Briefs, Flood Buyout," St. Louis Post Dispatch, News, November 10, 1995.

16 Marc Powers, "Flood buyout plan outlined," Southeast Missourian, December 22, 1995.

17 Personal communication with Ken Eftink, June 14, 1999.

18 Peggy Scott, "Headed for higher ground," Southeast Missourian, August 9, 1998.

19 Personal communication with Linda Reed Brown, Associate Director of Interfaith Disaster Response Network, June 16, 1999. The group had done similar work in Pattonsburg and Rhineland.

20 Southeast Missourian, Editorial, May 2, 1996.

21 Mark Bliss, "Buyout plan extended to north Cape," Southeast Missourian, September 7, 1996.

22 Scott Moyers, "City to make all buyout offers by Jan.1," Southeast Missourian, October 6, 1996.

23 Peggy Scott, "Collaboration called key for flood buyout," Southeast Missourian, August 9, 1998.

Cedar City

1 Quote from Allen Garner, Jefferson City's city attorney, in "Out of Harm's Way," p. 5.

2 John Egan, "ABB manager denies shutdown rumors," Jefferson City Post Tribune (Jefferson City, Missouri), July 30, 1993.

3 "Final Report," Missouri SEMA, January 10, 1997.

4 Brent Johnson, "The knockout blow," The Columbia Missourian (Columbia), August 9, 1998.

5 Tom Uhlenbrock, "The Big Flood Buyout Program That Worked," St. Louis Post Dispatch, News, May 28, 1995.

6 "State Policy for Flood Mitigation Projects," State Administration Plan for SEMA, p. 10. Also Personal communication with Melva Fast, January 25, 1999.

7 Personal communication with Melva Fast, January 25, 1999.

8 "Final Performance Report," Missouri SEMA, January 10, 1997, p. 2.

9 "Out of Harm's Way," p. 5.

10 "The knockout blow," Columbia Missourian, August 9, 1998.

11 Personal communication with Melva Fast, January 25, 1999.

12 Personal communication with both Sally Sprague, Coordinator of the Rendezvous Festival and Harry Thompson, January 22, 1999.

13 Personal Communication with Terry Rackers, President of Jefferson City Flying Service, January 22, 1999.

Commerce

1 Laura Johnston, "Flood buyouts in Commerce commence; not everybody happy; government offers considered low," Chaffee Scott County Signal (Chaffee), February 26, 1996.

2 Ron Eifert, "Water Overtakes Commerce," Scott County News, (Chaffee), July 15, 1993, and Mark Bliss, "Commerce seeks buyout: Scott County town applies for $1.7 million," Southeast Missourian, Cape Girardeau, August 11, 1995.

3 Also "Flood waters down, Commerce cleaning up," Scott County News, September 9, 1993.

4 Cathryn Maya, "Commerce residents debate FEMA buyout," Scott County News, August 5, 1993.

5 Cathryn Maya, "Commerce slowly rebuilding, awaits the spring," Chaffee Scott County Signal, January 20, 1994.

6 "Commerce mayor hopes for buyout," Chaffee Scott County Signal, News Digest, June 18, 1995.

7 "500-year floods don't have calendar or clock to follow," Southeast Missourian, Editorial, May 26, 1995.

8 Martha Shrik, "Sandbaggers, Boaters Are Busy This Weekend. Some Work, Some Play Through The Holiday Rainstorms," St. Louis Post Dispatch, News, May 28, 1995.

9 Tom Uhlenbrock, "The Big Flood Buyout Program That Worked. Across Region, Many Low—Lying Communities Are Now Ghost Towns of Abandoned Homes," St. Louis Post Dispatch, News, May 28, 1995.

10 Mark Bliss, "Commerce seeks buyout; Scott County river town applies for $1.7 million," Southeast Missourian, August 11, 1995.

11 Tim ONeil, "Public Costs Plummet for 1995 Floods. Buyout Of Property Destroyed In '93 Gets Credit For Savings," St. Louis Post Dispatch, January 26, 1996.

12 Tom Uhlenbrock, "The Big Flood Buyout Program That Worked," St. Louis Post Dispatch, News, May 28, 1995.

13 "Briefs: Missouri Flood Buyouts," St. Louis Post Dispatch. October 17, 1995, "Cape gets state nod for flood buyout," Chaffee Scott County Signal: News Digest, October 22, 1995, and "Briefs: Flood Buyout," St. Louis Post Dispatch, News, November 10, 1995.

14 "Government OKs flood buyouts in Cape, Commerce," Chaffee Scott County Signal. News Digest, November 12, 1995.

15 Laura Johnston, "Officials open office to manage flood buyout plan: About 20 property owners have applied for the program," Southeast Missourian, November 30, 1995.

16 Personal communication with Destin Frost, State Hazard Mitigation Officer, Missouri Emergency Management Agency, (SEMA), June 29, 1999.

17 May 5, 1996.

18 Laura Johnston, "Commerce flood buyout program ended today," Chaffee Scott County Signal, May 5, 1996.

19 Scott Moyers, "Commerce treading water after buyout; Flood buyout leaves bitter taste for some," Southeast Missourian, November 24, 1996.

20 Laura Johnston, "41.5 foot crest expected here: Commerce residents battle river one more time," Southeast Missourian, May 1, 1996.

Excelsior Springs

1 Gene Hanson, "Flash flood of 93 recalled," Daily Standard, (Excelsior Springs) August 12, 1994.

2 Personal communication with Molly McGovern, Excelsior Springs City Administrator, February 9, 1999.

3 Gene Hanson, "City crews monitor water levels," Daily Standard, July 29, 1993, and "Flood hits close to Excelsior," July 30, 1993.

4 Personal communication, Molly McGovern, February 9, 1999.

5 Janis Kincaid, "Flood called worst ever," Daily Standard, August 13, 1993.

6 The damage summary is taken from the following articles in the Daily Standard, Janis Kincaid, "Downtown flooded," August 12, 1993, "Flood called worst ever," August 13, 1993, and "Lower level damage extensive," August 17, 1993. Also articles by Gene Hanson, "City monitors reserves, leak," August 17, 1993, "City damage widespread," August 24, 1993, and "Flash flood of '93 recalled," August 12, 1994. Additional information came from City Administrator Molly McGovern and town resident Kevin Bennett (interviewed on February 13).

7 Brad Fischer, "Power of flood blows out house," Daily Standard, August 16, 1993.

8 Brad Fischer, "Fire Chief Bill Stewart discusses emergency plans with FEMA," Daily Standard, August 13, 1993.

9 Gene Hanson, "Aid packages explained," Daily Standard, August 19, 1993.

10 Gene Hanson, "Downtown flooded again," Daily Standard, September 22, 1993.

11 "At a Glance," Final Report of the 404 Hazard Mitigation Grant Program: Residential Buyout, Missouri Emergency Management Agency (SEMA), revised January 13, 1998, p. 2.

12 Personal communication with Molly McGovern, February 9, 1999.

13 Nicole Raulie, "Flood buyout procedure is explained" Daily Standard, August 8, 1994.

14 Gene Hanson, "More flood buyout funding is sought," Daily Standard, August 16, 1993.

15 See for instance photos in the September 8th, September 23rd, October 12th, 1994 issue of the Daily Standard, as well as articles in the January 16th and 19th, 1995 issues.

16 Personal Communication with Molly McGovern, February 9, 1999. Also: "Excelsior Springs, Missouri: 1998 Flash Flooding of Little Concern to Residential Property Owners," Summary Published by Missouri Emergency Management Agency, Jefferson City, MO. 1998.

Hannibal

1 "Hannibal's worst floods," Hannibal Courier-Post (Hannibal), July 1993, 1993.

2 J. Hurley Hagood and Roberta Hagood, Hannibal Flood '93, published by Hannibal Courier-Post, Hannibal, Missouri, 1994. pp. 3-5.

3 Hagood and Hagood, p. 28.

4 Gil Stuekel, "Corps: Levee paid for itself, and then some," Hannibal Courier-Post, July 20, 1993. The statistics were quoted by Doyle W. McCully, deputy district engineer, Army Corps of Engineers.

5 Hagood and Hagood, pp. 16-17.

6 Hagood and Hagood, p. 24.

7 Martha Parsons, Sny breaks: 45,000 acres flooded, Hannibal Courier-Post, July 26, 1993.

8 Hagood and Hagood, p. 43.

9 "Rhineland is approved for relocation," Hermann Advertiser Courier (Hermann), December 14, 1993. The Hermann Advertiser Courier also carried stories on the Hannibal buyout project.

10 Hagood and Hagood, p. 137.

11 Brien Murphy, "City: Many flood plain homes may be uninhabitable," Hannibal Courier-Post, July 22, 1993, and Bev Dar. "FEMA changes buyout rules," Hannibal Courier-Post, September 3, 1993.

12 Brien Murphy, "City gets $1.5 million flood buyout grant," Hannibal Courier-Post, December 10, 1993.

13 "Rhineland is approved for relocation," Hermann Advertiser Courier, December 14, 1993.

14 "City to receive additional funding to buy 111 flood-damaged homes," Hannibal Courier-Post, April 5, 1993.

15 Martha Parsons, "Flood Buyout program expands," Hannibal Courier-Post, April 22, 1994.

16 Martha Parsons, "First federal funds to flood families," Hannibal Courier-Post, May 20, 1994.

17 "At a Glance," City of Hannibal Disaster 0995; FEMA 404 Residential Acquisition Project, June 26, 1997.

18 Personal conversation with John Wheeler, Building Inspector for Hannibal, Missouri, April 30, 1999.

19 Personal communication with Bill Lankford, Director of Parks and Recreation, Hannibal, Missouri, April 30, 1999.

Hartsburg / Boone County

1 Articles by Chuck Geary in the Ashland Boone County Journal (Ashland), "Water tops levees in south county," July 8, 1993, and "Levees give way; river wins again," July 15, 1993. Also Mike Rodemeyer, "The 1993 flood: A story of heartbreak and loss," Ashland Boone County Journal, July 22, 1993.

2 "The flood of 93: it ain't over till its over," Ashland Boone County Journal, July 29, 1993. Also Mike Rodemeyer, "The 1993 flood: A story of heartbreak and loss," Ashland Boone County Journal, July 22, 1993.

3 Photo in the August 12, 1993 issue of the Ashland Boone County Journal.

4 Caption on a photo in the Ashland Boone County Journal, August 19, 1993.

5 Chuck Geary "FEMA regulations stagger Hartsburg," Ashland Boone County Journal, September 23, 1993.

6 Bill Foreman, "County short on money to match buyouts," Columbia Daily Tribune , November 30, 1993.

7 "Meeting in Hartsburg Jan. 5 will discuss buyout program," Ashland Boone County Journal, December 30, 1993.

8 "Cities, county decide use of buyout land," Ashland Boone County Journal, January 13, 1994.

9 Karen Miller, "The County Line: Buyout applications," Ashland Boone County Journal, January 20, 1994.

10 Karen Miller, "The County Line: Time and change for the commission."

11 Lisa Yorkgitis, "Hartsburg area homes recommended for buyout," Jefferson City News Tribune, February 15, 1994.

12 Two articles in the Ashland Boone County Journal, Nancy Grant and Shirley Thomas, "Hartsburg Hot Line," June 16, 1994, and Karen Miller, "The County Line: Approval for buy-out, July 7, 1994."

13 Nancy Grant and Shirley Thomas, "Hartsburg Hot Line," Ashland Boone County Journal.

14 Alson Sharp, "Federal aid to pour into local flooded areas," June 9, 1995.

15 Nancy Grant and Shirley Thomas, "Hartsburg Hot Lline," Ashland Boone County Journal, May 18, 1995.

16 R.C. Adams, "Experience helps towns fight a rampaging river," Ashland Boone County Journal, May 25, 1995.

Hermann

1 Personal communication with Dolores Grannemann, Hermann City Clerk and Acting City Administrator, February 9, 1999.

2 Don Kruse, "River reaches record 36.98," Hermann Advertiser-Courier (Hermann), August 3, 1993, "Hermann schools remain closed due to high water," September 28, 1993, and "River could fall below flood stage Wednesday, July 5, 1995."

3 "City and county receive FEMA flood payments," Hermann Advertiser-Courier, November 23, 1993.

4 Local Government Leaders Briefed on Relief Programs, Hermann Advertiser-Courier, September 7, 1993.

5 Don Kruse, "Rhineland Close to Approval of Relocation," Hermann Advertiser-Courier, November 16, 1993. "City awarded nearly half-million dollars for buyout program," Hermann Advertiser-Courier, July 5, 1994.

6 Personal communication with Dolores Grannemann, February 9, 1999.

7 "Hermann submits $2.2 million application for buyout program," Hermann Advertiser-Courier, January 25, 1994.

8 "Hermann's buyout request improves with new funding," Hermann Advertiser-Courier, June 7, 1994.

9 "City's flood assistance grants given approval," Hermann Advertiser-Courier, August 9, 1994, and "City awarded nearly half-million dollars for buyout program," Hermann Advertiser-Courier, July 5, 1994.

10 "Hermann is approved for buyout," Hermann Advertiser-Courier, October 19, 1994.

11 "River here still not below flood stage; it could be Friday," Hermann Advertiser-Courier, July 12, 1995.

12 "Residential demolition underway," Hermann Advertiser-Courier, October 4, 1995.

13 Personal communication with Dolores Grannemann, February 9, 1999.

14 "Historic house discovered in demolition of fifth street," Hermann Advertiser-Courier, October 18, 1995.

15 Personal communication with Dolores Grannemann, February 9, 1999.

Jefferson County

1 Although Arnold is in Jefferson County, that city's buyout program was unique, and its story is recorded separately.

2 In the St. Louis Post Dispatch, News and in Metro Post South: Linda Eardley, "Flood Widens Reach, Stretches South," July 3, 1993, and William Adam and Al Stamborski, "Sandbag Soldiers Fight On: Levee Fails in St. Charles County." Also see: Robert Steyer, "Doe Run Shuts Lead Smelter," July 20, 1993, "A Few Enjoy Water's Ebb: Others Gird For The New Crest," August 1, 1993, and, "The Flood In Perspective," Stephen Kirkland, "Jefferson County Watches, Worries," August 1, 1993, and August 2, 1993, In the Festus Weekly News Democrat (Festus), see: Tim Rowden, "High water mark ahead: Worst flooding in years expected," "Flood veterans watch rising waters warily," July 9, 1993, and David Benson and Kathleen Sullivan, "National Guardsmen are deployed in county," July 16, 1993, Tim Rowden, "Weather pattern shifts, but more flooding expected," July 30, 1993.

3 Leo Fitzmaurice, "Officials Weigh Damage From Record Flooding," St. Louis Post Dispatch, Metro Post South, July 22, 1993, and Tim Rowden and David Benson, "Officials: One eye on water, other on recovery," Festus Weekly News Democrat, July 23, 1993.

4 Stephen Kirkland, "Jefferson County Watches, Worries," St. Louis Post Dispatch, Metro Post South, August 1, 1993.

5 Carolyn Tuft and Roy Malone, "Jefferson County Relieved: We're Winning," St. Louis Post Dispatch, News, August 3, 1993.

6 Tim Rowden, "Officials: don't rush to remove sandbag levees," Festus Weekly News Democrat, August 13, 1993.

7 Leo Fitmaurice, "Officials Weigh Damage From Record Flooding," St. Louis Post Dispatch, Metro Post South, July 22, 1993. The initial report in the Post Dispatch mentioned a buyout for mobile homes. However, the Post printed a correction on July 26th, stating that Faulkenberry had specified "flood damaged homes." St. Louis Post Dispatch, Correction, July 26, 1993.

8 Tim Rowden, "Flood and red tape: Meeting may help local officials," Festus Weekly News Democrat, September 10, 1993.

9 Kathleen Best, "One Town Followed The Rules—And Won," St Louis Post Dispatch, November 21, 1993, also personal communication with Eric Knoll, May 25, 1999.

10 Theresa Tighe and Jo Mannies, "Facing Still Another Crisis, Federal Rescue Could Be Slow, Meager," St. Louis Post Dispatch, News, September 20, 1993.

11 Terry Ganey, "Buyout Money OK'd For Flooded Areas," St. Louis Post Dispatch, News, January 25, 1994, and "Clearing Flood Plains House by House," St. Louis Post Dispatch, Editorial, February 8, 1994.

12 Jennifer Price, "Federal flood relief efforts are under way," Festus Weekly News Democrat, November 5, 1993.

13 Roy Malone, "$11 Million Sought In Federal Funds For Flood Buyout," St. Louis Post Dispatch, Metro Post South, December 6, 1993.

14 Thom Gross, "Families Full Of Praise For Flood Agencies' Victims; We Were Treated With Respect," St. Louis Post Dispatch, News Analysis, December 16, 1993.

15 Tim Rowden, "County seeks $5 million in flood buyouts," Festus Courier Journal, January 5, 1994.

16 Ron Malone, "Buyout Set On Flood-Damaged Properties," St. Louis Post Dispatch, Metro Post South, March 14, 1994. Faulkenberry's quote is from this article.

17 "Meramec Reclaims More Land, River Falls; Missouri Tops Levees: More Rain Feared," St. Louis Post Dispatch, News, April 15, 1994, also Jennifer Price, "Flooding not expected to reach '93 levels," Festus Weekly News Democrat, April 15, 1994.

18 Jennifer Price, "City to begin buyout of flooded property," Festus Weekly News Democrat, April 15, 1994.

19 Jennifer Price, "Flooded property buyout begins," Festus Weekly News Democrat, December 30, 1994.

20 Tom Uhlenbrock, "The Big Flood Buyout Program That Worked," St. Louis Post Dispatch, May 28, 1995.

21 Tim O'Neil, "Great, Big Flash Flood Tops Levee: Missouri River Brings Trouble From Near KC to St. Charles," St. Louis Post Dispatch, May 20, 1995.

22 Tim O'Neil, "2 Rivers May Drop In About A Month; But it Depends On NO More Downpours," St. Louis Post Dispatch, News, June 1, 1995.

23 "State Allocated $1.3 Million For Floodplain Buyout Here," St. Louis Post Dispatch, Metro Post South, August 28, 1995. This grant was divided between Arnold ($275,000), Valley Park (100,000) and Jefferson County ($925,000).

24 "At A Glance," Jefferson County FEMA-HMGP 404 Residential Acquisition Project, State Emergency Management Agency, (SEMA), October 16, 1997.

25 "At A Glance Reports," published by State Emergency Management Agency, (SEMA): St. Charles County, Disaster 0995 Residential Acquisition Project, December 6, 1998; Jefferson County, FEMA-HMGP 404, Residential Acquisition Project, October 16, 1997; and St. Louis County, Disaster 0995, Residential Acquisition Project, November 16, 1998.

Lincoln County

1 Ralph Dummit, "Levee Watchers Around Winfield Expecting Worst," Nation/World, July 3, 1993, and Gregg Ochoa, "Levees are holding their own thanks to dry holiday weekend," Troy Free Press (Troy), May 31, 1995.

2 Gregg Ochoa chronicled the flooding in: "County flooded; Winfield levee bursts," Troy Free Press, July 7, 1993, "No relief for flood victims," Troy Free Press, July 14, 1993, and "Flood of '93 Day by Day," Newspaper insert published by the Lincoln County Journal (Troy), September 21, 1993.

3 Gregg Ochoa, "2,700 parcels of land were flooded in county," Lincoln County Journal, September 7, 1993, and, Gregg Ochoa, "No relief for flood victims," Troy Free Press, July 14, 1993.

4 Gregg Ochoa, "Water down, some roads now open," Troy Free Press, August 11, 1993.

5 Gregg Ochoa, "Flood fight rages on in county; More than 400 seek." Troy Free Press, July 21, 1993.

6 Gregg Ochoa, "Officials field questions on buy-outs and repairs," Troy Free Press, August 25, 1993.

7 Three articles by Gregg Ochoa, “Volkmer bill awaits Clinton’s signature,” Lincoln County Journal, November 30, 1993, “Area officials to hold workshops on flood programs: Buyouts and other topics to be discussed” Troy Free Press, September 8, 1993, and “Officials field questions on buyouts and repairs,” Troy Free Press, August 25, 1993.

8 “Seminar to be held to discuss federal flood relocation program,” Lincoln County Journal, December 7, 1993.

9 Gregg Ochoa, “Buyout process begins for 1993 flood victims,” Lincoln County Journal, June 14, 1994.

10 Gregg Ochoa, “County set to receive $3.4 million for buyouts,” Troy Free Press, March 23, 1994.

11 Chuck Herron, “Getting out: Buyout program will help hundreds of Lincoln County families find higher ground,” Hannibal Courier-Post, May 11, 1994, and Gregg Ochoa, “Some interest expressed in buyout of land: 83 residents have asked to participate,” Lincoln County Journal, November 30, 1993, and Phil Linsalata, “Uncle Sam’s Left Hand. . . ,” St. Louis Post Dispatch, News Analysis, September 4, 1944.

12 Two articles by Gregg Ochoa: “Buyout process begins for 1993 flood victims,” Lincoln County Journal, June 14, 1994, and “County working on plan to buy flooded homes: Commission OK sought on plan,” Lincoln County Journal, May 10, 1994.

13 Gregg Ochoa, “Foley considering moving the town to higher ground,” Lincoln County Journal, June 21, 1994.

14 “Rhineland is Approved for Relocation,” Hermann Advertiser-Courier, December 14, 1993.

15 Gregg Ochoa, “Foley considering moving the town to higher ground.”

16 Personal communication with Steve Etcher, May 28, 1999.

17 Jackie Hoeltge, “Winfield City Council awards excavating contract for Highland Acres Subdivision,” Lincoln County Journal, June 18, 1996.

18 Personal communication with Steve Etcher, Boonslick Regional Planning Commission, May 28, 1999.

19 Gregg Ochoa, “County set to receive $3.4 million for buyouts,” Troy Free Press, March 23, 1994, and “Aftermath: Government moves to purchase homes,” Lincoln County Journal, February 2, 1995.

20 Gregg Ochoa, “County set to receive $3.4 million for buyouts,” Troy Free Press, March 23, 1994, and Gregg Ochoa, “Aftermath: Government moves to purchase homes,” Lincoln County Journal, February 2, 1995.

21 Gregg Ochoa, “Request by Foley to relocate is rejected,” Lincoln County Journal, November 8, 1994.

22 Gregg Ochoa, “Aftermath: Government moves to purchase homes,” Lincoln County Journal, February 7, 1995.

23 Gregg Ochoa, “Buyout marks end of painful ordeal,” Lincoln County Journal, August 2, 1994.

24 Gregg Ochoa, “County flood insurance is under fire,” Lincoln County Journal, November 7, 1995.

25 “State Group Honors Flood-Buyout Program,” St. Louis Post Dispatch: St. Charles Post, December 4, 1995.

26 Tom Uhlenbrock, “Water Works Crews Raze, Recycle Homes Hit By Flood,” St. Louis Post Dispatch, News, October 29, 1995.

27 Personal communication with Steve Etcher, Boonslick Regional Planning Commission, May 28, 1999.

28 “At A Glance,” City of Winfield, Disaster 0995, Residential Acquisition Project, State Emergency Management Agency, SEMA, April 14, 1997.

29 John Sonderregger, “Residents Step Back, Wait For The Water Evacuation Plans,” St Louis Post Dispatch, St. Charles Post, May 19, 1995, and Gregg Ochoa, “Levees are holding their own thanks to dry holiday weekend,” Troy Free Press, May 31, 1995.

30 Gregg Ochoa, “Cuivre River swallows up ground,” Troy Free Press, April 13, 1994.

31 Personal communication with Steve Etcher, Boonslick Regional Development Commission, May 28, 1999.

32 “No end predicted in county’s growth trend,” Lincoln County Journal, February 13, 1996.

33 “Officials warn of hazards,” Lincoln County Journal, February 6, 1996.

Neosho

1 Personal communication with Jim Cole, City Manager, Neosho, Missouri, January 26, 1999, and with Heidi Quinanes, Grant Administrator, Neosho, Missouri, January 25, 1999.

2 Final Performance Report, Missouri SEMA, February 25, 1999.

3 “State of Missouri Hazard Mitigation Makes Sense,” p. 2.

4 Personal communication with Jim Cole, January 26, 1999.

5 Final Report, SEMA, February 25, 1998.

6 Personal communication with Jim Cole, Neosho City Manager, January 26, 1999.

7 “State of Missouri: Hazard Mitigation Makes Sense,” p. 3.

8 Personal Communication with Heidi Quinanes, January 25, 1999.

9 Letter of Recommendation, November 23, 1998.

Pattsonburg

1 Mike Jones, “Pattonsburg mapping move,” St. Joseph Opinion (St. Joseph), November 13, 1993. Personal communication with Denise Stottlemeyer, Green Hills Regional Planning Commission, January 27, 1999.

2 Margaret Stafford, “Pattonsburg Remakes Itself After ‘93 Flood,” Missouri Monitor, August, 1998.

3 “Two floods in two weeks: too much,” Chillicothe Constitution-Tribune (Chillicothe), August 3, 1993, and photo caption from the Bethany Republican Clipper (Bethany), July 28, 1993.

4 “Pattonsburg Remakes Itself After ‘93 Flood,” Missouri Monitor, August 1998.

5 “Pattonsburg’s options include buyout, relocation,” Gallatin North Missourian (Gallatin), November 3, 1993.

6 “Dry future for Pattonsburg?” St. Joseph Opinion, November 13, 1993.

7 Personal communication with Denise Stottlemeyer, January 27, 1999.

8 "Final Performance Report," Missouri SEMA, November 13, 1998.

9 Personal communication with Denise Stottlemeyer, January 27, 1999.

10 "Pattonsburg Remakes Itself After '93 Flood," Missouri Monitor, August 1998.

11 "Two floods in two weeks: too much," Chillicothe Constitution-Tribune, August 3, 1993.

12 "Final Performance Report," Missouri SEMA, November 13, 1998.

13 Personal communication with Denise Stottlemeyer, January 27, 1999.

14 Personal communication with Mark Smith.

15 "Pattonsburg Remakes Itself After '93 Flood," Missouri Monitor, August 1998.

16 Personal communication with Mark Smith, January 27, 1999.

17 Personal communication with Buck Katt, Assistant Director, Missouri State Emergency Management Agency, (SEMA), May 21, 1999.

Perry County

1 High and Mighty, The Flood of '93, Published by the St. Louis Post Dispatch, 1993, p. 58.

2 The summary of damage is from: "Levee breaks near Menfro," The Perry County Republic-Monitor (Perryville), July 27, 1993, Bob Scott, "Break in Bois Brule Levee lets tidal wave into bottom lands," Perryville Sun Times, July 28, 1993, and "Crop loss estimated at over $13 million," Perry County Republic-Monitor, July 29, 1993.

3 "Contracts awarded on Bois Brule repair," Perry County Republic-Monitor, October 26, 1993.

4 Cecilia Fallert, "The Bottom Line: Severely damaged homes may not be rebuilt in the Bois Brule Bottoms," Perry County Republic-Monitor, August 31, 1993.

5 Cecilia Fallert, "County seeks 1.7 million buyout," Perry County Republic-Monitor, February 3, 1994. Also: Art Schwent, "Perry county proposes to buy 54 flood-damaged properties," Perryville Sun Times, February 2, 1994.

6 Art Schwent, "Perry county proposes to buy 54 flood-damaged properties," Perryville Sun Times, February 2, 1994.

7 "Gov. acts of buyout," Perry County Republic-Monitor, February 15, 1994.

8 "$296,352 block grant begins local buyout," Perry County Republic-Monitor, March 10, 1994.

9 "Perry county awaits state grant to buy flood damaged properties," Perryville Sun Times, November 23, 1994, and "At A Glance," Perry County FEMA-HMGP 404 Residential Acquisition Project, Missouri Emergency Management Agency (SEMA), May 9, 1997.

10 "Application and Grant Approval for Perry County," State Emergency Management Agency (SEMA), no date. Personal communication with Destin Frost, State Hazard Mitigation Officer, State Emergency Management Agency, June 29, 1999.

11 Personal communication with Brian Balsman, Southeast Missouri Regional Planning Commission, February 28, 1999.

12 "Application and Grant Approval for Perry County," State Emergency Management Agency (SEMA), no date.

Rhineland

1 "First House in Rhineland is Scheduled to be Moved up the Hill on Wednesday," Hermann Advertiser-Courier (Hermann), September 13, 1994, and "Rhineland Begins to Move up the Hill," Hermann Advertiser-Courier, September 20, 1994.

2 Don Kruse, "Plan Would Relocate Rhineland," Hermann Advertiser-Courier, November 9, 1993.

3 "Rhineland Begins Move up the Hill," Hermann Advertiser-Courier, September 20, 1994, and "Rhineland Hit Hard by Flood; Gasconade, Chamois and Berger feel record crest," Hermann Advertiser-Courier, August 3, 1993.

4 "Area Rainfall is on Record Setting Pace," Hermann Advertiser-Courier, July 6, 1993.

5 "Rhineland Hit Hard by Flood," Hermann Advertiser-Courier, August 3, 1993.

6 "Area Rainfall is on Record Setting Pace," Hermann Advertiser-Courier, July 6, 1993.

7 "Rhineland Mood is Upbeat: Church Groups Help Clean, and The 1993 Flood Makes its Mark," Hermann advertiser-Courier, August 24, and July 13, respectively.

8 "Volkmer Legislation Would Help Area," Hermann Advertiser-Courier, October 26, 1993.

9 Don Kruse, "Rhineland Close to Approval of Relocation," Hermann Advertiser-Courier, November 16, 1993.

10 Don Kruse, "Plan Would Relocate Rhineland," Hermann Advertiser-Courier, November 9, 1993.

11 "Rhineland is Approved for Relocation," Hermann Advertiser-Courier, December 14, 1993.

12 "News Expected Soon of Rhineland's Federal Grant," Hermann Advertiser-Courier, January 11, 1994.

13 "Rhineland Relocation Project," video produced by Video Production Company, Columbia, Missouri, 1998.

14 "Rhineland Moves up the Hill," Hermann Advertiser-Courier, September 20, 1994.

15 Personal communication with Steve Etcher, Director of the Boonslick Regional Planning Commission, February 5, 1999.

16 "Missouri River Crests at 36.3," Hermann Advertiser-Courier, May 24, 1995, and "River Falls Below Flood Stage After 88 Days Above 21 Feet," Hermann Advertiser-Courier, July 19, 1995.

17 "Downtown Rhineland Starts to Move to New Location Across the KATY Trail," Hermann Advertiser-Courier, September 13, 1995.

18 Personal communication with Steve Etcher, Director of the Boonslick Regional Planning Commission, February 5, 1999.

19 "Living It Up In Rhineland," Hermann Advertiser-Courier, July 10, 1996.

St. Charles County

1 Timothy R. Roberts, "The Great Flood of 93" Missouri Army National Guard, 1999. p. 22.

2 High and Mighty: The flood of 93, published by the St. Louis Post Dispatch, 1993. p. 10.

3 High and Mighty, p. 23

4 High and Mighty, p. 33.

5 "Here's What's Happening, Town By Town," St. Louis Post Dispatch, News, July 11, 1993.

6 After Action Report, 1438th Engineer Company (Assault Float Bridge, Ribbon) Missouri Army National guard, 15 September 1993.

7 High and Mighty, p. 22-23.

8 Jim Gallagher, "Levee Break Swamps North St. Louis," St. Louis Post Dispatch, News Analysis, August 2, 1993, and "Tally Begins On Damages as 93 Costs Keep Coming," St. Louis Post Dispatch, St. Charles Post, May 24, 1995.

9 High and Mighty, p. 23.

10 Ralph Dummit, "Floodplain Future May Be Decided Tonight," St. Louis Post Dispatch, St. Charles Post, November 23, 1993, and Tommy Robertson, "More Flood Aid Headed to Area," St. Louis Post Dispatch, St. Charles Post, May 26, 1994.

11 "Clearing Floodplains House By House," St. Louis Post Dispatch, Editorial, February 8, 1994.

12 Tommy Robertson, "More Flood Aid Headed to Area," St. Louis Post Dispatch, St. Charles Post, May 26, 1994.

13 Judith Vande Water, "Governor OK's More Money To Clear Floodplain," St. Louis Post Dispatch, St. Charles Post, February 16, 1994.

14 Ralph Dummit, "Farewell to Waterlogged Home Flooded Out—Bailed out First Two St. Charles County Homeowners Pick Up Checks," St. Louis Post Dispatch, News, June 3, 1994.

15 Ralph Dummit, "First Buyouts In Floodplain Begin, Officials Told," St. Louis Post Dispatch, St. Charles Post, May 13, 1994.

16 Ralph Dummit, "Farewell to Water Logged Home Flooded Out," June 3, 1994.

17 Ralph Dummit, "Flood Aid Missing, Some Say. Mobile-Home Parks Are Getting Left Out," St. Louis Post Dispatch, St. Charles Post, July 5, 1994.

18 Personal Communication with Destin Frost, Hazard Mitigation Officer, Missouri State Emergency Management Agency, May 4, 1999.

19 "Tally Begins on Damages as '93 Costs Keep Coming," St. Louis Post Dispatch, St. Charles Post, May 24, 1995.

20 Ralph Dummit, "First of Flood-Damaged Buyout Properties Razed," St Louis Post Dispatch, St. Charles Post, August 17, 1994.

21 Nordeka English, "Firefighters To Torch Flood-Devastated Houses," St. Louis Post Dispatch, St. Charles Post, September 21, 1994.

22 Al Stamborski, "Waiting for the End, 129 Flooded Mobile Homes to be Razed," St. Louis Post Dispatch, St. Charles Post, September 1, 1994.

23 Tommy Robertson, "Turn Flooded Land Into Park Areas, Firm Recommends," St. Louis Post Dispatch, St. Charles Post, April 27, 1995.

24 Tommy Robinson, "Flood Buyout Money Hearing Set For Tonight," St. Louis Post Dispatch, St. Charles Post, February 6, 1996.

25 "Tally Begins on Damages as '93 Costs Keep Coming," St. Louis Post Dispatch, St. Charles Post, May 24, 1995.

26 Sue Schneider and Kate Klise, "Out of Harm's Way: Missouri's Flood Buyout Program," Missouri State Emergency Management Agency (SEMA), 1996, p. 5.

Ste. Genevieve

1 Duane Meyer, The Heritage of Missouri, State Publishing company, St. Louis, Missouri, 1963, pp. 35-36, and "Missouri Floods," Missouri Historical Review, July 21, 1993.

2 "A View From Atop A Levee," July 21, 1993.

3 Timothy R. Roberts, The Missouri National Guard: The Great Flood of 93, Published by the Missouri National Guard, 1999, p. 35.

4 "Governor examines damage," Southeast Missourian (Cape Girardeau), July 12, 1993, and "Twelve hour shifts make long days for Company C," Standard Democrat (Sikeston), August 5, 1993.

5 Terry Ganey and Robert L. Koenig, "River Town May Get To Stop It's Waitin' On The Levee Soon," St. Louis Post Dispatch, News, August 25, 1994.

6 "Governor examines damage," Southeast Missourian, July 12, 1993.

7 "Governor examines damage."

8 "Guard unit helps fight floodwater at Ste. Genevieve," July 23, 1993.

9 "A View From Atop A Levee," Christian Science Monitor, July 21, 1993.

10 Timothy R. Roberts, Missouri National Guard, pages 39-40. The description of the levee system is from: "The Battle Zone," Drawing of the levees protecting Ste. Genevieve, appearing in the Ste. Genevieve Herald, July 14, 1993.

11 Scott Charton, "Ste. Genevieve's Mayor Leads Careful War Against Mississippi," St. Louis Post Dispatch, July 24, 1993, and "Its Us Against The River: Ste. Genevieve Shows Its Grit," St. Louis Post Dispatch, July 21, 1993.

12 "Workers Are Pushing to Keep Levee Tops Above Water," St. Louis Post Dispatch, News, July 27, 1993, and "Twelve hour shifts make long days for Company C," Standard Democrat, Sikeston, August 5, 1993. Reports on the amount of rock dumped on top of the levee vary with the reporter. Jean Rissover, project spokeswoman for the National Guard used 400,000 tons, while Colonel Calvin Broughton, commanding National Guard troops in the area said the figure was 100,000 tons.

13 Margaret Gillman, "Ste. Genevieve Draws Cautious Breath As Crest Passes," St. Louis Post Dispatch, August 7, 1993.

14 "Residents of small Missouri towns seek help in move to higher ground," Hermann Advertiser Courier, November 23, 1993.

15 Art Schwent, "Ste. Genevieve cuts flood buyout plan," Perryville Sun Times, December 1, 1993.

16 Art Schwent, "Aldermen to seek more buyout funds," Perryville Sun Times, December 15, 1993.

17 Art Schwent, "Ste. Genevieve seeks funds to buy properties in flood plain," Perryville Sun Times, December 29, 1993.

18 Art Schwent, "Ste. Genevieve waits for word on flood buyout application," Perryville Sun Times, February 2, 1994.

19 Jim Ward, "Buyout Program Approved, But Money Not Available Yet," Ste. Genevieve Herald, April 27, 1994.

20 Missouri Emergency Management Agency Manual on Project Management, p. 9.

21 "City Gets Authorization For FEMA Buyout Funding," Ste. Genevieve Herald, February 8, 1995.

22 Jim Ward, "Buyout Awaits Only FEMA Approval," Ste. Genevieve Herald, February 2, 1994.

23 "Residents Ask City To Speed Buyout Process," Ste. Genevieve Herald, July 6, 1994.

24 Two articles in the same issue: "Buyout Contract Awarded to SEMO Regional Planning," and "Buyout Program Agreement Details Released," Ste. Genevieve Herald, July 27, 1994.

25 "Buyout Candidates Get Information on Program," Ste. Genevieve Herald, September 7, 1994.

26 "Aldermen Approve Buyout Policies," Ste. Genevieve Herald, September 28, 1994.

27 "City Gets $441,000 For Relocation Assistance," Ste. Genevieve Herald, November 8, 1994.

28 "Houses Deemed To Be Of Historic Value Include Vertical Log, Queen Anne Style, and 1925 Bungalow," Ste. Genevieve Herald, February 18, 1995.

29 "First Buyout Checks Are Issued By Ste. Gen. City," Ste. Genevieve Herald, February 29, 1995.

30 "Ste. Genevieve Historic Train Depot Could Be Yours," Ste. Genevieve Herald, April 12, 1995.

31 Personal communication with Betty Seibel, Ste. Genevieve City Clerk, June 2, 1999.

32 "DNR and City Purchase 3 More Historic Properties," Ste. Genevieve Herald, July 26, 1995.

33 Personal communication with Betty Seibel, June 2, 1999.

34 Personal communication with Destin Frost, State Hazard Mitigation Officer, Missouri Emergency Management Agency, June 3, 1999.

35 Missouri Emergency Management Agency Manual on Project Management, pp. 10 through 12.

36 "Mississippi Tops 1973 Flood Level," Ste. Genevieve Herald, May 24, 1995.

37 "The Way We Were," Ste. Genevieve Herald, December 27, 1995.

38 Personal communication with Betty Seibel, June 2, 1999.

39 "More FEMA Buyouts Will Be Offered" Ste. Genevieve Herald, February 21, 1996, and SHPO Comment in the Missouri Emergency Management Agency Manual of Project Management, p. 12.

40 William Flannery, "Two Years After Historic Flood, Ste. Gen. On Firm Footing Again," St. Louis Post Dispatch, Business Plus, May 8, 1995.

41 "$48 million levee planned in historic Ste. Genevieve," Daily Capital News, (Jefferson City), May 10, 1995.

St. Louis and St. Louis County

1 High and Mighty, The Flood of 93, p. 13.

2 "Among KC Floods, This One Ranks No. 4," in Trial by Water, a special supplement to the Kansas City Star, September, 1993, p. 29.

3 High and Mighty, The Flood of 93, p. 23.

4 Harry Levins, "What a Flood Stage Means," St. Louis Post Dispatch, News, July 7, 1993, and Harry Levins, "What City's Flood Wall Protects," St. Louis Post Dispatch, News, July 27, 1993.

5 Virgil Tipton, "Rivers Remain Near Crest, On Attack: Venice Fisherman Missing," St. Louis Post Dispatch, News, July 22, 1993.

6 Lane Beauchamp, "Six die inside cave; one boy found alive," in Trial By Water, a special supplement to the Kansas City Star, September, 1993, p. 27, and Martha Shrink and Kim Bell, "Outing Turns Into A Disaster For Children," St. Louis Post Dispatch, News, July 24, 1993.

7 Tom Uhlenbrock and Christine Bertelson, "City Workers Plug 60-Foot Hole Under Flood Wall For St. Louis," St. Louis Post Dispatch, News, July 24, 1993. Information on how the ring dike works comes from a personal communication on January 7, 1996, with Captain Walter L. Westbrook, commander of Battery B, 1st Battalion, 128th Field Artillery, Missouri Army National Guard.

8 Virgil Tipton, "2 Crests Pinch KC; Levees Hold: Residences, Businesses Are Spared," St. Louis Post Dispatch, News, July 28, 1993.

9 Terry Ganey, "Residents Flee St. Joseph, MO." St. Louis Post Dispatch, News, July 27, 1993.

10 Jo Mannies, "Rivers Remain Near Crest, On Attack: Resolute Sentry Digs In," St. Louis Post Dispatch, News, July 22, 1993.

11 Lori Teresa Yearwood and Carolyn Tuft, "Baggers Set Sights On 49 Feet," St. Louis Post Dispatch, News, August 1, 1993.

12 Joe Holleman, Cynthia Todd, and Robert Duffy, "Evacuees Also Have Rush Hour," St. Louis Post Dispatch, News, August 3, 1993.

13 Daniel Browning, "Divers Try to Stabilize Floating Propane Tanks," St. Louis Post Dispatch, News, August 2, 1993.

14 Christine Bertelson, "Sandbagged South City Flees Propane Threat," St. Louis Post Dispatch, News, July 31, 1993, and "Water Falls A Bit In Some Towns, But Progress Is Slow," St. Louis Post Dispatch, News, August 3, 1993.

15 Joan Little, "River Des Peres Retreat: It's Trying To Go East," St. Louis Post Dispatch, News, August 3, 1993.

16 Stephen Kirkland, "Some South Siders Can Go Home" St. Louis Post Dispatch, News, August 6, 1993.

17 "Donations, Some Drops in Water Levels Boost Flood Victims," St. Louis Post Dispatch, News, July 22, 1993, "Towns Stockpile Water, Move Books, Man Pumps," St. Louis Post Dispatch, News, July 24, 1993, and "Sandbags Are Both Coming Down and Going Up," St. Louis Post Dispatch, News, July 31, 1993.

18 "Flood News Update," Missouri National Guard and State Emergency Management Agency, Jefferson City Missouri, July 18, 1993.

19 "Emergency Operations Center Message Log," Missouri National Guard Headquarters, Jefferson City, Missouri, July 12, 1993, p. 7.

20 "After Action Report of the 1137th Military Police Company," Missouri Army National Guard, August 11, 1993.

21 "Donations, Some Drops in Water Levels Boost Flood Victims," St. Louis Post Dispatch, News, July 22, 1993, and "Outsiders Bring Aid; Home Towners Just Keep Working," St. Louis Post Dispatch, News, July 25, 1993.

22 "Many Communities Gear Up For Next Wave of Flooding," St. Louis Post Dispatch, News, July 28, 1993, "A Few Enjoy Waters Ebb; Others Gird For New Crest," St. Louis Post Dispatch, News, August 1, 1993, and "Water Falls a Bit in Some Towns, But Progress Is Slow," St. Louis Post Dispatch, News, August 3, 1993. Arthur Goldgaber, "Bellefontaine Neighbors Aiming to Be First To Complete Buyout," St. Louis Post Dispatch, St. Charles Post, May 10, 1994.

23 Personal communication with Claire Pyre, Fenton City Clerk, May 21, 1999.

24 Personal communication with Mark Sartors, Public Works Director for Fenton, Missouri, May 21, 1999.

25 Linda Eardley, "Flood Buyouts At Hand: New Grants Cover About 671 Buildings Damaged by Floods," St. Louis Post Dispatch, St. Louis Region, February 27, 1993.

26 "Flood Aid Swells With Vote; Panel Action Bolsters Buyouts," St. Louis Post Dispatch, November 10, 1993

27 Arthur Goldgaber, "Bellefontaine Neighbors Aiming to Be First To Complete Buyout," St. Louis Post Dispatch, St. Charles Post Section, May 10, 1994.

28 Personal communication with Charlotte Youngman, Bellefontaine City Clerk, May 21, 1999.

29 Arthur Goldgaber, "Bellefontaine Neighbors Aiming to Be First to Complete Buyout," St. Louis Post Dispatch, St. Charles Post Section, May 10, 1994.

30 Personal communication with Charlotte Youngman, May 21, 1999.

31 Mark Schlinkmann, "Flood Buyout Checks Ease Horrible Year : Bellefontaine Neighbors Fulfills $557,600 Program," St. Louis Post Dispatch, News, July 23, 1994.

32 Harry Levins, "On Books, 95 Flood Looks Puny," St. Louis Post Dispatch, News, June 3, 1995.

33 Tom Uhlenbrock, "The Big Flood Buyout Program that Work: Across Region Many Low-Lying Communities Are Now Ghost Towns of Abandoned Homes," St. Louis Post Dispatch, Section B, May 28, 1995.

34 Personal communication with Chris Seemayer, Brentwood City Administrator, May 21, 1999.

35 Carolyn Bower, "US Buyout of Homes Advances: Board Agrees To First Step With Federal Flood Officials," St. Louis Post Dispatch, News, January 6, 1994, and "Pact Lines Up Buyout For Twelve Homes," St. Louis Post Dispatch, News, January 13, 1994.

36 "At A Glance,' City of Brentwood FEMA-HMGP 404 Residential Acquisition Project Report, State Emergency Management Agency, Jefferson City, MO. October 23, 1997. The number of homes damaged is from a personal communication with Chris Seemayer, May 21, 1999.

37 Personal communication with Chris Seemayer, May 21, 1999.

38 Personal communication with Mark Sartors, May 21, 1999.

39 At A Glance, "City of Fenton," Disaster 0995, Residential Acquisition Project, State Emergency Management Agency, Jefferson City, MO. December 26, 1996.

40 "Out of Harm's Way: Missouri's Flood Buyout Program," State Emergency Management Agency (SEMA), Jefferson City, MO. 1995.

41 Mark Schlinkmann, "Flood Buyout Checks Ease Horrible Year," Post Dispatch, News, July 23, 1994.

42 Linda Eardley, "Flood Buyouts At Hand: New Grants Cover About 671 Buildings Damaged By Floods," St. Louis Post Dispatch, St. Louis Region, February 27, 1994.

43 "Buyouts keep flood costs down," Columbia Daily Tribune, May 25, 1995.

44 "St. Louis and the Flood of '93, Buyout Bulletin," State Emergency Management Agency, Jefferson City, MO., Summer 1995.

45 Tom Uhlenbrock and Joe Holleman, "River Crests Fall Short of Predictions, but '95 Flood still third Worst," St. Louis Post Dispatch, News, May 22, 1995.

46 "Out of Harm's Way: Missouri's Flood Buyout Program," State Emergency Management Agency (SEMA), Jefferson city, MO. 1995., p. 14.

47 "Flood of '93's legacy still being felt a year later," St. Joseph News/Press, June 27, 1994.

48 Tim O'Neil, "Flood Aid Won't Match '93," St. Louis Post Dispatch, News Analysis, June 2, 1995.

49 "Government Buyout Keeping Missouri Flood Costs Down," Jefferson City Post Dispatch, May 26, 1995.

St. Mary

1 "Application and Grant Approval for St. Mary, Missouri," Missouri State Emergency Management Agency (SEMA), Jefferson City, MO., 1994.

2 Personal communication with JoAnn Donze, City Clerk, St. Mary, Missouri, February 23, 1999.

3 Art Schwent, "St. Mary constructs levee," Perryville Sun Times, (Perryville), July 22, 1993.

4 Art Schwent, "St. Mary plans to buy flood damaged property," Perryville Sun Times, November 17, 1993.

5 Personal communication with JoAnn Donze, February 23, 1999, and Art Schwent, "St. Mary applies for more money to expand flood buyout program," Perryville Sun Times, July 20, 1994.

6 "Gov. acts on buyout," Perry County Republic-Monitor, February 15, 1994.

7 "Application and Grant Approval for St. Mary, Missouri," Missouri State Emergency Management Agency (SEMA).

8 Art Schwent, "St. Mary gets approval for flood funds," Perryville Sun Times, April 20, 1994.

9 Art Schwent, "St. Mary applies for more money to expand flood buyout program," Perryville Sun Times, July 20, 1994.

10 Art Schwent, "St. Mary completes buyout of properties," Perryville Sun Times, August 17, 1994.

11 Personal communication with JoAnn Donze, February 23, 1994.

12 "At A Glance," Final Performance Report on St. Mary, Missouri, Missouri State Emergency Management Agency (SEMA), November 4, 1996.

13 Art Schwent, “St. Mary may get FEMA funds” Perryville Sun Times, February 16, 1993.

14 Art Schwent, “Grant Advances St. Mary flood recovery program,” Perryville Sun Times, November 9, 1994.

15 Personal Communication with JoAnn Donze, February 23, 1999.

Wakenda

1 Mike K. Johnson, “Wakenda Becomes Dis-incorporated as a town,” Carrollton Democrat (Carrollton), December 27, 1996.

2 “Early History Reveals Wakenda’s Original Name,” Carrollton Daily Democrat, October 11, 1994. On July 11, 1995, the Carrollton Daily Democrat changed from a daily to a twice weekly newspaper, and also changed its name to the Carrollton Democrat.

3 Personal communication with Trella Ward, Emergency Planning Director for Carroll County, February 1, 1999.

4 Personal communication with Denise Stottlemeyer, Director of the Green Hills Regional Planning Commission, February 1, 1999.

5 Supplement to the Carrollton Daily Democrat, the Waverly Times, and the Norborne Democrat, September 16, 1993.

6 Trish Sailer, “Wakenda Citizens Await Information to Decide Future,” Carrollton Daily Democrat, June 14, 1994.

7 Kristi Madison, “Two-Thirds of Wakenda Attends Meeting,” Carrollton Daily Democrat, October 11, 1993.

8 Kristi Madison, “Wakenda Buyout Answers Lead to Decisions,” Carrollton Daily Democrat, October 19, 1993.

9 Kristi Madison, “Wakenda Citizens Delay Decision,” Carrollton Daily Democrat, October 25, 1993.

10 Kristi Madison, “Families Return to Wakenda,” Carrollton Daily Democrat, November 3, 1993.

11 Kristi Madison, “Application Process Delayed,” Carrollton Daily Democrat, December 2, 1993.

12 “Green Hills Opens Carrollton Office to Aid with Buy-out,” Carrollton Daily Democrat, August 25, 1994.

13 Quote from Doug Womack in “Demolition to Begin” Carrollton Daily Democrat, June 14, 1994.

14 Personal communication with Denise Stottlemeyer, February 1, 1999.

15 Jon Flatland, “Flood Buyout Underway in City of Carrollton,” Carrollton Democrat, September 5, 1999, and “Application Process Delayed,” Carrollton Daily Democrat, December 2, 1993.

16 Personal communication with Denise Stottlemeyer, February 1, 1999.

17 Personal communication with Trella Ward, February 1, 1999.

18 Jon Flatland, “Conservation Dept. Studies Effects of Floodwaters on Trees in Wakenda,” Carrollton Democrat, September 8, 1995.

19 Jon Flatland, “Water Officials and Landowners Pursue Wakenda Watershed Project,” Carrollton Democrat, September 29, 1995.

Warren County

1 “Flood Waters Threaten Marthasville,” July 15, 1993, Editorial Page July 22, 1993, and “Flooding Missouri Disrupts This Area Again,” May 25, 1995.

2 Personal communication with Lydia Zillgitt, February 16, 1999.

3 Personal communication with Ruby Buchholz, July 5, 1999.

4 “Heavy Rains Last Week Wednesday Cause Widespread Flash Flooding,” Marthasville Record (Marthasville), September 30, 1993.

5 “Seminar To Be Held To Discuss Federal Flood Relocation Program” Marthasville Record, December 9, 1993.

6 “Volkmer Announces FEMA Relocation Funds,” Marthasville Record, April 28, 1994.

7 Personal Communication with Steve Etcher, Director of Boonslick Regional Planning Commission, February 9, 1999.

8 Personal communication with Destin Frost, State Hazard Mitigation Officer, Missouri Emergency Management Agency, February 16, 1999.

9 “Flooding Missouri River Disrupts This Area Again,” Marthasville Record, May 25, 1995.

10 “Warren County Included on Disaster Area List,” Marthasville Record, June 22, 1995.

11 “Final Performance Report,” Missouri SEMA, March 17, 1997, p. 2.

12 Personal communication with Chuck Eichmeyer, Boonslick Regional Planning Commission, February 16, 1999.

13 Personal communication with Lydia Zillgitt, Marthasville resident, February 16, 1999.

14 Personal communication with Chuck Eichmeyer, Boonslick Regional Planning Commission, February 16, 1999.

Conclusion

1 “Flood of ‘95 cost less than ‘93 flood,” Southeast Missourian (Cape Girardeau), January 27, 1996.

2 Sue Schneider and Kate Klise, “Out of Harm’s Way: Missouri’s Flood Buyout Program,” Missouri State Emergency Management Agency (SEMA), pp. 3, 5, and 14.

3 Tim O’Neil, “Public Costs Plummet For 1995 Floods. Buyout of Property Destroyed in ‘93 Gets Credit For Savings,” St. Louis Post Dispatch, News Analysis, January 26, 1996.

4 Article dated May 28, 1995, section 1B.

5 Article dated May 31, 1999, p. A1.

6 “Out of the mud, some lessons,” The Economist, May 27, 1995, p. 28.

7 Personal communication with Destin Frost, State Hazard Mitigation Officer, Missouri’s State Emergency Management Agency (SEMA), Jefferson City, Missouri, June 15, 1999.