

WETLANDS MATERIAL - FLOOD MATERIAL

PHOTOCOPY
PRESERVATION

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September 21, 1993

Mr. Brian Burke
White House Domestic Policy Council
Old Executive Office Building
Washington, D.C. 20503

Subject: Revisions to National Flood Insurance Program

Dear Mr. Burke:

Thank you for returning my telephone call and taking the time to talk about the public policy issue paper sent to you. I was encouraged by your interest in the policy issues it raises.

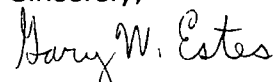
As we discussed, I submitted a petition to James Lee Witt, Director of FEMA, to initiate rule-making to revise regulations implementing the National Flood Insurance Program (NFIP). Mr. Witt should have received the petition on September 17 by Federal Express.

From my reading of the Federal laws creating the NFIP, I believe FEMA has the authority to restrict the availability of flood insurance to undeveloped floodplains. The petition is to bring this issue to FEMA. I believe both Congress and FEMA must face the failures of the NFIP. The petition and issue paper are intended to raise this significant public policy issue.

Enclosed are five copies of the petition and five additional copies of the issue paper which support the petition. I thought it would speed your efforts to distribute the materials to others.

I look forward to meeting with you on Wednesday, October 6 at 10:00 a.m. I will call your office on Monday, October 4 to get directions to your office. My wife and I will be on vacation in D.C. from October 4 through noon on October 7.

Sincerely,


Gary W. Estes

Petition To Initiate Rule-Making To Revise Regulations Implementing The National Flood Insurance Program

September 13, 1993

The purpose of this petition is to revise the regulations implementing the National Flood Insurance Program (NFIP) in order to prevent the NFIP from encouraging further urban development of deep floodplains. Such urban development is *increasing* the risk to public health, safety, and welfare which is contrary to the stated public policy regarding floodplain development under the NFIP. The national public policy is established in the Congressional findings and declaration of purposes of the National Flood Insurance Program and Presidential Executive Order No. 11988.

CONGRESSIONAL PURPOSE

The Congressional findings and purposes are contained in Sections 4001 and 4002 of Title 42 in the United States Code. Section 4001 of Title 42 states:

"(a) The Congress finds that . . . (3) as a matter of national policy, a reasonable method of sharing the risk of flood losses is through a program of flood insurance which can complement and encourage preventive and protective measures; . . .

"(c) The Congress further finds that (1) a program of flood insurance can promote the public interest by providing appropriate protection against the perils of flood losses and encouraging sound land use by minimizing exposure of property to flood losses; . . .

"(e) It is the further purpose of this chapter to (1) encourage State and local governments to make appropriate land use adjustments to constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses, (2) guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards, . . . (4) assure that any Federal assistance provided under the program will be related closely to all flood-related programs and activities of the Federal Government, and (5) authorize continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements."¹

Section 4002 of Title 42 states:

"(a) The Congress finds that--

(1) annual losses throughout the Nation from floods and mudslides are increasing at an alarming rate, largely as a result of the accelerating development of, and concentration of population in, areas of flood and mudslide hazards;

(2) the availability of Federal loans, grants, guaranties, insurance, and other forms of financial assistance are often determining factors in the utilization of land and the location and construction of public and of private industrial, commercial, and residential facilities; . . .

¹ 42 U.S.C. 4001

"(b) The purpose of this Act, therefore, is to--

(3) require States or local communities, as a condition of future Federal assistance, to participate in the flood insurance program and to adopt adequate flood plain ordinances with effective enforcement provisions consistent with Federal standards to reduce or avoid future flood losses; . . ."²

PRESIDENTIAL EXECUTIVE ORDER

Executive Order No. 11988 regarding "Floodplain Management" was signed by President Jimmy Carter on May 24, 1977, directed Federal agencies:

" . . . to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

"Section 1. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities.

FUNDAMENTAL PURPOSES

Taken together the stated Congressional purposes and President Carter's Executive Order establish five (5) fundamental purposes of the National Flood Insurance Program and Federal policy regarding floodplains. They are:

1. To constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses by encouraging State and local governments to make appropriate land use adjustments.
2. To guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards.
3. To avoid direct or indirect support of floodplain development wherever there is a practicable alternative.
4. To minimize the impact of floods on human safety, health, and welfare.
5. To reduce the risk of flood loss.

FAILURES OF EXISTING REGULATIONS

Under the existing regulations established by the Federal Emergency Management Agency (FEMA), the NFIP is failing to implement the stated national policy defined by Congressional and Presidential actions. This failure is caused by regulations which are

² 42 U.S.C. 4002

(A) increasing the risk to public health, safety, and welfare by encouraging more people to live and work in previously undeveloped floodplains, and

(B) increasing flood damage losses to buildings and contents by encouraging urban development in previously undeveloped floodplains.

The failure of existing regulations to adequately implement the Federal public policy is evidenced by two examples:

- Chesterfield Valley floodplain near St. Louis, Missouri
- Natomas Basin floodplain near Sacramento, California

Chesterfield Valley is an example of a past failure and Natomas Basin is an example of a potential future failure of the National Flood Insurance Program under the existing regulations.

Chesterfield Valley, Missouri

Chesterfield Valley is an example of how the NFIP encouraged development of 4,400 acres of agricultural land into business parks for 300 commercial and industrial companies along the Missouri River. Improving 13 miles of agricultural levees, originally constructed in 1947, allowed urban development in the floodplain. This development received an estimated \$450 million (or nearly half a billion dollars) of devastation during the Great Flood of 1993. Flood depths range from 6 to 10 feet. Details regarding Chesterfield Valley are contained in Exhibit A.

Natomas Basin, California

Natomas Basin is an example of how the NFIP is encouraging urban development of 47,600 acres (74 square miles) of agricultural and vacant land which is currently undeveloped. This agricultural reclamation area was created by building 41 miles of levees in 1914 to remove wetlands and floodplains from flooding by the American and Sacramento Rivers. Levees surround these 74 square miles which is an area larger than the District of Columbia (69 square miles). Land speculators, developers, and local government officials are planning to allow an estimated 170,000 people and over \$13 billion of property to reside in this floodplain. Over 91 percent of the land can flood to depths exceeding 8 feet. Duration of flood is estimated at 30 days. Such depths and duration cause 100 percent destruction of single story residential structures and contents. Estimated property damages from flooding a fully urbanized Natomas basin are \$8 to \$10 billion. Details regarding Natomas Basin are contained in the attached public policy issue paper entitled "New Development in Deep Floodplains is Bad Public Policy: The Natomas Basin Example."

PREVENTING FLOOD DISASTER IN NATOMAS BASIN

The flood disaster in Chesterfield Valley has happened. The flood disaster in Natomas Basin can be prevented by the Director of FEMA acting immediately to initiate rule-making to revise the regulations implementing the NFIP. The Director of FEMA under Section 4102(c) of Title 42 of the United States Code has the following duty:

"... the Director shall from time to time develop comprehensive criteria designed to encourage, where necessary, the adoption of adequate State and local measures which, to the maximum extent feasible, will--

(1) constrict the development of land which is exposed to flood damage where appropriate,

(2) guide the development of proposed construction away from locations which are threatened by flood hazards,

(3) assist in reducing damage caused by floods, and

(4) otherwise improve the long-range land management and use of flood-prone areas."

The existing criteria for floodplain management regulations established by FEMA fails in the case of Natomas Basin to meet the legislative requirements of:

A. Constricting development of land exposed to flood damage because there are no limits on urban development in Natomas Basin,

B. Guiding proposed construction away from locations threatened by flood hazards because under existing regulations local governments have approved plans to allow construction in Natomas Basin,

C. Assisting in reducing damage caused by floods because under existing regulations there are no requirements to flood proof structures constructed in Natomas Basin, and

D. Improving the long-range land management and use of flood-prone areas because under existing regulations there are no requirements for local governments to evaluate the life-cycle costs and benefits of all potential options for use of flood-prone areas. The primary consideration for evaluation is the highest and best use from an economic use of the land which means urban development. The long term or life-cycle cost to the Federal government to recover from a flood disaster in Natomas Basin has not been addressed. The first time costs and benefits need to be compared with the long term costs and benefits.

The argument for the Director to act immediately is supported by two laws enacted by Congress in 1992. The Director should take judicial notice of these two laws. In the laws Congress recognized the unacceptable risk posed to public health, safety, and welfare by further development in Natomas Basin. The two laws contain sections written to address Natomas Basin flooding issues. Each law and its legislative history talks specifically about Natomas Basin. Together these laws express the Congressional recognition of the unacceptable risk created by allowing further urban development of Natomas Basin

First, in the Department of Defense Appropriations Act of 1992, the Secretary of the Army was authorized to construct the Natomas Basin levee improvement features proposed by the Corps of Engineers. However, a limitation was placed upon these levee improvements:

"... provided that such construction does not encourage the development of deep floodplains."³

³ Department of Defense Appropriations Act of 1992, Section 9159.

Second, in the Housing and Community Development Act of 1992, Section 928 made changes to the National Flood Insurance Program (NFIP). A change was specifically designed to address Sacramento's flood insurance problems. Briefly, the legislation (a) creates a new "flood restoration zone" for flood insurance rates, and (b) directs FEMA to establish floodplain management criteria for new construction in the flood restoration zone where flood depths exceed 5 feet.⁴

Speaking as the Chairman of the Senate Housing and Urban Affairs Subcommittee responsible for the legislation, former U.S. Senator Alan Cranston of California spoke on the floor of the Senate to clarify the intent behind the legislation:

"The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento."⁵

These two laws recognize the unacceptable risk caused by further urban development in Natomas Basin. Congress has established limits on further development. However, local government officials are working to get around the limitations contained in these two laws. Their efforts appear to be close to success and urban development will continue to fill Natomas Basin. Before this happens, the Director of FEMA should act to change existing regulations by initiating a rule-making proceeding which prevents further urban development in Natomas Basin as required by Sections 4001, 4002, and 4102 of the National Flood Insurance Program.

RECOMMENDED CHANGES

Under Section 4001(e)(5) and Section 4102(c) of Title 42 of the United States Code, the Director of the Federal Emergency Management Agency (FEMA) has the affirmative duty to undertake ". . . continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements."

Under Section 4102(c) of Title 42 described earlier, the Director has the responsibility to develop comprehensive floodplain management criteria to be followed by State and local governments for floodplain development. Accordingly, the actions recommended in this petition are within the authority of the Director to perform.

The Director of FEMA should immediately initiate a rule-making proceeding which will revise the regulations implementing the National Flood Insurance Program to prevent the encouragement of urban development of undeveloped floodplains. Such revisions are desperately needed to prevent Federal policy from increasing the risk to public health, safety, and welfare caused by further urban development in floodplains. These revisions are essential to implement the stated Federal policy. Because of the extreme potential danger to public health, safety, and welfare by continuing urban development of undeveloped floodplains, the Director of FEMA should:

1. Immediately issue emergency rules stopping the issuing of flood insurance policies to the undeveloped portions of floodplains. These regulations would remain in effect until revised regulations are enacted. Time is of the essence to prevent more people and property from being placed in undeveloped floodplains.

⁴ Housing and Community Development Act of 1992, Section 928.

⁵ Congressional Record - Senate, October 8, 1992, p. S17910. Senator Cranston's entire comments are found in Exhibit B.

2. Immediately issue notice of a rule-making proceeding to revise regulations implementing the National Flood Insurance Program. Revisions should include three critical objectives:

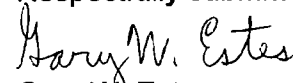
A. Defining undeveloped floodplains where Federal flood insurance will not be provided under any circumstances. There are floodplains which should never be developed. Such action was taken by Congress in October 1982 with the passage of the Coastal Barrier Resources Act (COBRA).⁶ The law was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas. Among the restrictions in COBRA, no new flood insurance coverage was provided for any new construction in designated coastal barriers after October 1, 1983. The Director of FEMA has the authority under Sections 4001, 4002, and 4102 to establish regulations which prevents flood insurance being available to areas which should not be developed.

The Natomas Basin is an outstanding example of a floodplain which should not be developed further. The potential risk to public health, safety, and welfare is too great to continue under existing regulations. We live in a new day with limited tax dollars and limited resources. To knowingly increasing the burden upon present and future taxpayers by allowing urban development of undeveloped floodplains is bad public policy.

B. Requiring flood insurance for all property located in floodplains in urban areas. The Great Flood of 1993 shows us that trying to predict and control the forces of nature is a flawed approach to preventing loss of life and destruction of property. Requiring people to pay for flood insurance is a constant reminder that where they live is more hazardous than living out of the floodplain. People who are not subject to flooding should not be required to pay for the disaster relief and recovery for people who choose to live in floodplains. Federal taxpayers should not be subsidizing those individuals who decided to live in a floodplain. The risks, costs, and benefits of choosing to live in a floodplain should be borne by those making that choice, not all the taxpayers. The accountability for making the choice to live in a floodplain does not fall upon the person making the decision, but is shifted to others who have no say in that decision. Lack of accountability for the consequences of decisions results in bad decision-making.

C. Establishing continual study of watersheds to prevent future disaster by providing data essential to change regulations and programs. Continual study of the changing nature of watersheds is essential to maintaining the existing flood control systems across the United States. Each incremental change in the land use upstream in the watershed alters the ability of flood control structures to protect the people living downstream. There is no system currently in place which provides ongoing analysis. As we continue to spread urban development over the land, the watersheds will change. We must be proactive in anticipating the changes to prevent disaster, instead of being reactive after the disaster. Prevention is cheaper and less damaging than trying to recover from a flooding disaster like the Great Flood of 1993.

Respectfully submitted,


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⁶ 96 Stat. 1653, Public Law 97-348 (S. 1018), October 18, 1982.

EXHIBIT A

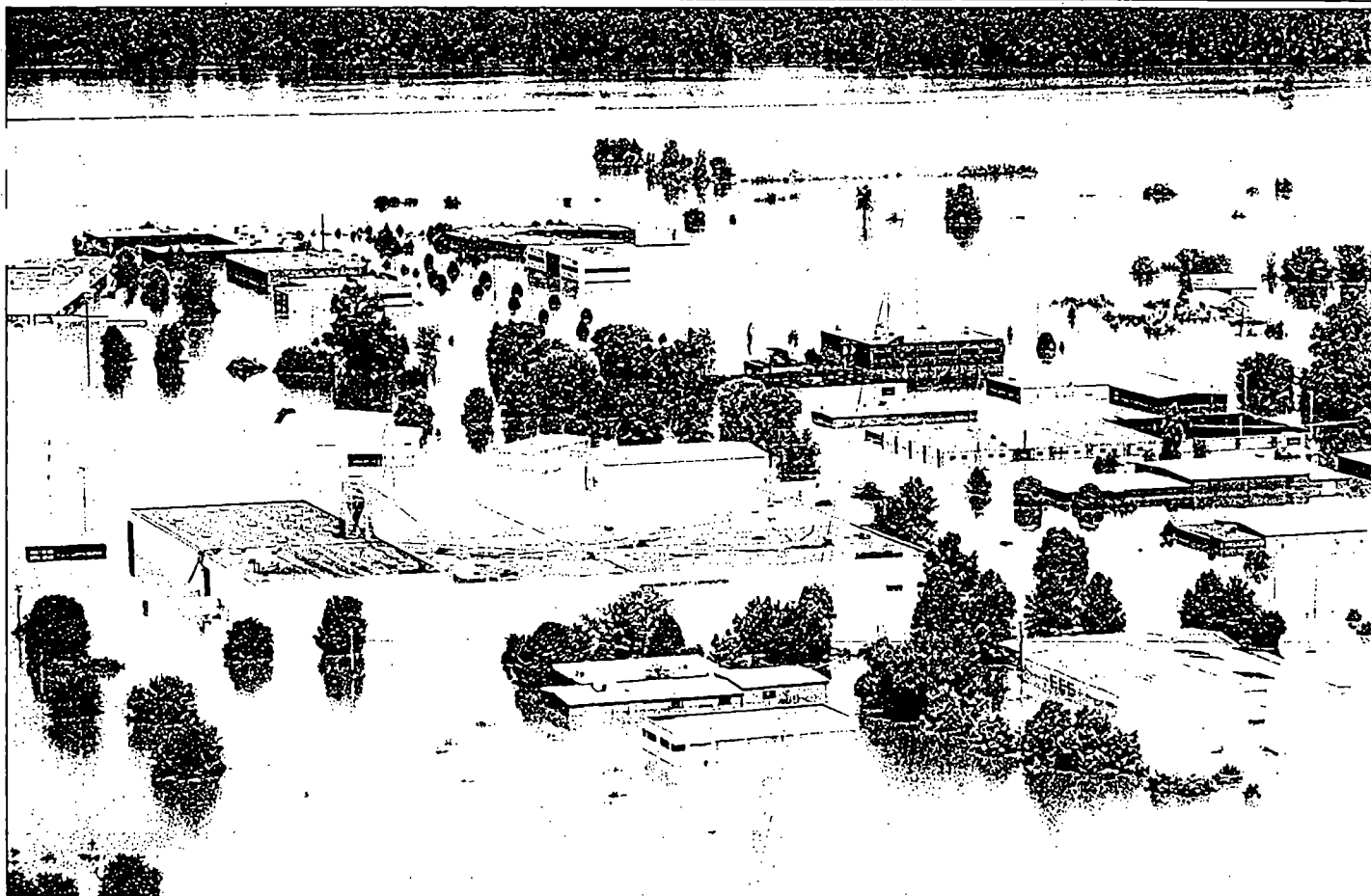
ST. LOUIS POST-DISPATCH

BUSINESS

SECTION E

SUNDAY, AUGUST 8, 1993

THE FLOOD OF '93



Kevin Manning/Post-Dispatch

Floodwater surrounds businesses in Chesterfield Valley last week. Highway 40's Daniel Boone Bridge is off to the upper right.

OUR BUBBLE HAS BURST'

Levee Break Dampened Dreams In Chesterfield

By Adam Goodman 8-8-93
Of the Post-Dispatch Staff

A little more than a week ago, James Kick couldn't wait to move his company's headquarters into a spanking-new industrial park in the Chesterfield Valley.

After months of searching, Kick had selected six acres on Chesterfield Airport Road in west St. Louis County as the site to build a \$2.4 million complex for C.A.P.S. Inc., the Fenton plastics company he heads.

Now, those six acres — like the rest of the low-lying valley — are under about six to 10 feet of water, courtesy of the raging Missouri River and a fractured levee.

Luckily for Kick, the valley flooded five days before his company was to close its deal at Siteman Organization's 100-acre Spirit Trade Center. C.A.P.S., formerly known as Custom Automated Plastic Systems, was to become the first business in the industrial park.

Now Kick is taking his search and his business elsewhere — "the higher, the better," he says.

"I will not look at any property if it is in a flood plain," Kick said. "There are all kinds of things that can happen to a business, so why throw in another variable?"

While the Flood of '93 has devastated homes, farms and businesses throughout the St. Louis region and the Midwest, it tore through the young and growing city of Chesterfield with added contempt and derision.

'False Sense Of Security'

On the night of July 30, the Missouri River burst through the Monarch-Chesterfield Levee, 13 miles of earthen mounds protecting 4,400 acres of flatlands on the city's western edge from the river and its tributaries.

In a few hours, the floodwaters flattened Chesterfield's economic engine and placed its bright economic future in jeopardy.

The waters gushed through St. Louis County's Spirit of St. Louis Airport, the second-busiest airport in Missouri, knocked out the Federal Aviation Administration's flight-servicing center and sideswiped several corporate jets and other planes that failed to evacuate in time.

The floodwaters then poured through high-tech industrial parks nearby and drowned about 300 businesses that called the Chesterfield Valley home. Those Chesterfield Valley addresses will remain uninhabitable for weeks or months.

Chesterfield officials estimate the damage at

a minimum of \$150 million to \$200 million, but fear that total losses will be much higher. Many of the flooded businesses have managed to relocate, unsure whether or when they will return.

"Our bubble has just burst," said Tom Shaw Sr., a longtime real-estate broker in Chesterfield who also chairs an influential economic-development group in the city.

"The problem next door is now our problem," Shaw said. "We were just lulled into a false sense of security."

Government officials and business executives are paying the price for their enthusiastic willingness to build an industrial and commercial development on an agricultural flood plain. Said Kick: "There is a reason it is called a flood plain."

They did so without fully anticipating the consequences or taking all the precautions they could to guard their massive investment.

The valley's land, buildings and other improvements are worth \$145 million, according to Chesterfield officials. That excludes machinery and other personal property inside many of those businesses and about \$50 million in non-taxed public improvements at Spirit

Airport.

By comparison, Sverdrup Corp. estimates that the office buildings, hotel and amphitheater at its Riverport development in Maryland Heights are worth about \$100 million.

Business owners say that everyone, from county and city officials to real-estate developers, told them they were safe from flooding. Some say their insurance agents advised them not to buy flood insurance and told them that most businesses in the valley didn't have it.

"I don't think I ever appreciated a levee like I do now," said Dale Natoli of the flooded Natoli Engineering Co. "People take it for granted."

'An Uphill Battle'

The flood has left Chesterfield Mayor Jack Leonard and other city officials with the biggest challenges they have faced in their city's young life.

Will Chesterfield be able to recover from the disaster and resume its economic development? Will flooded-out companies return? Will other industrial businesses like Kick's company ever again be attracted to move there?

Leonard, who has faced the wrath of displaced business owners since the flood, insists

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8E BUSINESS

Chesterfield

From page one

that the city can regain its luster and continue its growth.

"We have an uphill battle," Leonard said. "We are going to overcome this."

At Spirit Airport, Richard Hrabko, the county's director of aviation, says the airport will recover. Spirit, home to dozens of corporate jets and hundreds of small planes, is the primary reliever airport for Lambert Field.

"Spirit is going to come back better than ever," said Hrabko, who is also a Chesterfield City Council member.

But Spirit, which itself is insured for up to \$50 million, will have to compete with 20 other flooded airports around the Midwest for federal rebuilding funds.

During the last decade, fancy new homes, new office buildings and new industries have sprouted from Chesterfield land that once grew produce, wheat, corn and soybeans.

While Chesterfield Mall anchors the city's retail and office development along the bluffs on Clarkson Road and Olive Street Road, Spirit Airport anchors the valley, the city's only industrial corridor. About 4,500 people worked in the valley.

The city, which incorporated in 1988, has prospered from an influx of residents and businesses seeking to escape to the suburbs. They did not, however, escape the raging floodwater.

"Maybe we were naive," said John Eulich, president of Mark Andy Inc., whose printing press factory on Chesterfield Airport Road flooded. "A lot of people had confidence in that levee."

That levee — the Monarch-Chesterfield Levee — originally was built to protect farmland in the bottoms.

Bolstering The Levee

Incorporated as a private levee in 1947 by a group of farmers, the levee has been strengthened throughout the years. Until this summer, the bottoms had not flooded since 1935.

In the 1970s and 1980s, farmers, businesses, other landowners in the levee district and St. Louis County chipped in about \$2.5 million to raise, bolster and extend the levee system so that a 100-year-flood would not flow over it.

In the arcane world of flood terminology dictated by the Army Corps of Engineers,

THE FLOOD OF '93



Scott Diney/Post-Dispatch

The river swept this plane into some trees near Spirit of St. Louis Airport.

100-year flood has nothing to do with how often a flood will hit. It only means that in any given year there is a one-in-100 chance that a flood of that magnitude could occur.

The county wanted the levee improvements to protect its investment in Spirit Airport and ensure that it would qualify for \$7.2 million in grants from the Federal Aviation Administration.

Moreover, without the improvements, the businesses county officials hoped to attract to the airport's surrounding industrial parks would be unable to qualify for flood insurance — a sure deterrent to development of the flood plain.

Once the levee achieved 100-year-flood status from the Army Corps of Engineers, neither Monarch Levee District officials nor the county sought the highest level of flood protection. That level of protection, called an urban levee, would protect against an even larger, 500-year flood.

"Once that standard was met, everyone ignored the possibility that there could be a 500-year flood," said Alvin D. Vitt, who was one of the pioneering developers to build in the valley.

While other large developments downstream — Earth City in 1972 and Riverport in 1986 — built 500-year-flood levees to safeguard their investment, the Chesterfield Valley did not.

"There had been talk about it, but we

figured this would be high enough," said Melvin Fick, a Chesterfield farmer who is president of the Monarch Levee District.

Besides, even with gopher holes and infrequent mowing through the years, the Monarch-Chesterfield levee had withstood the area's two biggest floods of the last 20 years. "It held real well in 1973 and 1986," Fick said.

Hrabko of Spirit said federal requirements for the airport require only 100-year-flood protection.

"The levee was a 100-year levee, and what we experienced was a flood of biblical proportion," Hrabko said. "It was a 500-year flood or awfully close to it. You can't expect a 100-year flood levee to protect against that."

Monarch-Chesterfield Levee officials believe the flood that washed away their levee was a 500-year flood, but the Army Corps of Engineers has yet to provide an official ruling on the Flood of 1993.

'Highest Standards'

The development of Riverport and Earth City and their levees provide a sharp contrast to the development at Chesterfield Valley. The levees at Riverport and Earth City have both held so far through this year's flood.

While the Chesterfield Valley was planned by St. Louis County and has been built by several different developers, the other two

business parks were each primarily planned and developed by one large developer.

When Linclay Corp. started developing Earth City, company officials had no doubt that they wanted the strongest possible levee for their 1,200-acre project.

"We really felt that for a project in which there were going to be many millions of dollars invested, we wanted it protected by a levee of the highest standards," said Dale Perkinson, Linclay's former president.

Perkinson now heads Perkinson Realty Group, which is developing the Corporate Woods office park in Earth City. Today, more than 200 businesses are located in Earth City.

Linclay spent \$4 million in 1972 to build a 2.6-mile levee with a strong clay core and a connected system of relief wells to handle water seepage. The development also is protected by Interstate 70 on the south and the Norfolk Southern Railroad embankment on the north.

Meeting the 500-year-flood standard meant that the land was no longer considered a flood plain, Perkinson said.

"That made it easier to market and for people to finance their buildings," he said.

Sverdrup Corp. built a 1.7-mile urban levee at its 500-acre Riverport development across Interstate 70 from Earth City.

The 1986 levee project — together with relief wells, pumps, roads and other infrastructure — cost more than \$10 million. St. Louis County paid about \$4 million of that.

"We just thought it was prudent," said Omar Feeler, Sverdrup's director of civil works.

The 500-year-flood levee "is the norm when you are going to be in a highly developed area," Feeler said.

Now, civic and business boosters in Chesterfield are already clamoring for a 500-year-flood levee to replace the broken Monarch-Chesterfield Levee.

"This levee is going to be rebuilt and built as a 500-year levee," real-estate broker Shaw said. "It will be impregnable or nobody is coming back."

It is unclear who would pay for a new levee — a project that Mayor Leonard can only guess will cost "many millions of dollars."

The Monarch Levee District collected only \$80,984 in assessments from property owners last year. The district is scheduled next month to make its final payment for its last round of improvements in 1983.

"We thought we'd have smooth sailing after that with only a maintenance tax," Levee District President Fick said. Any improvements are "going to cost lots of money," he

said.

Looking To The Future

Some business executives say they would be willing to help pay for a new levee.

Dave Neal is president of Advanced Industrial Systems Inc., a small distributor of temperature controls and other industrial controls. With the company's office underwater, Advanced Industrial has borrowed furniture and moved its six employees to the basement and garage of Neal's home near Ballwin.

"I'd certainly be willing to pay dramatically more if we got a stronger levee," Neal said.

With Highway 40 and Spirit Airport's FAA center out of commission, Mayor Leonard is counting on federal taxpayers to rebuild and improve the levee. Private, city, county and state funds will not be enough, he says.

The money "has to come from Washington, D.C.," he said. "To protect their investment, they are going to have to put in a 500-year levee."

Spirit's Hrabko says the airport will rebuild whether the old levee is repaired or a stronger levee is built. "We want a 500-year levee but we can reopen and rehabilitate with only a 100-year levee," he said.

In the meantime, the lingering questions over the valley's future will hurt Chesterfield's development.

"Until people know what is going to happen, they are not going to want to go back there," said Phillip Schreiber, a real-estate consultant. Schreiber is a former president of Sachs Properties Inc., which is developing the still-dry, 1,500-acre Chesterfield Village just east of the bottoms.

Others hope that the flood's effects won't last long. "I think in a period of time people will forget the stigma," developer Vitt said. "You can't get rid of the development there."

Meanwhile, Chesterfield city officials have been trying feverishly to provide relocation help to flooded companies and to encourage them to move back after the water recedes and the levee is repaired or strengthened.

"We are going to lose a few," Leonard said. "But if we do it and do it right, we are going to have new companies down there also."

Although the final word must come from the Federal Emergency Management Agency, city officials make clear that they are committed to resuming development.

"The bottom line is you still develop the valley," said John Langa, who heads the city's economic-development agency. "Obviously, the rules of the game have changed."

October 8, 1992

S17904

HOUSING AND COMMUNITY DEVELOPMENT ACT—CONFERENCE REPORT

Mr. FORD. Mr. President, I submit a report of the committee of conference on H.R. 5334 and ask for its immediate consideration.

The PRESIDING OFFICER. The report will be stated.

The legislative clerk read as follows:

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 5334) to amend and extend certain laws relating to housing and community development, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses this report, signed by a majority of the conferees.

The PRESIDING OFFICER. Without objection, the Senate will proceed to the consideration of the conference report.

(The conference report is printed in the House proceedings of the RECORD of October 5, 1992.)

The PRESIDING OFFICER. The Senator from California is recognized.

Mr. CRANSTON. Mr. President, I rise to say, briefly, that I am pleased that the Senate is about to take final action on the conference report on H.R. 5334, the Housing and Community Development Act of 1992.

During the last several weeks, House and Senate conferees took on the difficult task of merging the Senate and House bills into one coherent piece of legislation. We have incorporated administration suggestions. We have resolved a number of very tough and controversial issues. This conference report is a result of those efforts. It both builds upon existing efforts and establishes new initiatives to address the Nation's affordable housing problem.

S17910

**CLARIFICATION OF CERTAIN ISSUES IN
CONFERENCE REPORT**

Mr. CRANSTON. Mr. President, I would like to clarify the intent behind a series of provisions contained in the conference report.

TITLE IX ISSUES

Three provisions in title IX regulatory programs also need clarification.

The flood restoration zone establishes a new zone "AR" under the flood insurance program for communities in which an existing structural flood control system that provided at least 100-year frequency flood protection, no longer does so. Communities that meet the eligibility criteria as of January 1, 1992, specifically Sacramento and Los Angeles, would be subject to specific construction requirements. The delineated elevation restrictions and the continued eligibility for c zone rates would apply only to developed areas in Sacramento and Los Angeles provided the decertified flood protection system can be restored in a period not to exceed 10 years from the date of enactment of this provision. For other communities that may become eligible for the AR zone and for less developed

areas of Los Angeles and Sacramento, the Director of the Federal Emergency Management Agency shall establish floodplain management criteria for new construction and the substantial improvement of existing structures. The flood restoration zone is intended to address problems experienced by existing communities that temporarily are not afforded 100-year frequency flood protection. The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento. In addition, only structural projects that are decertified by the Corp of Engineers could be considered eligible under the AR zone. Beach nourishment and other such projects would not be eligible.

Petition To Initiate Rule-Making To Revise Regulations Implementing The National Flood Insurance Program

September 13, 1993

The purpose of this petition is to revise the regulations implementing the National Flood Insurance Program (NFIP) in order to prevent the NFIP from encouraging further urban development of deep floodplains. Such urban development is *increasing* the risk to public health, safety, and welfare which is contrary to the stated public policy regarding floodplain development under the NFIP. The national public policy is established in the Congressional findings and declaration of purposes of the National Flood Insurance Program and Presidential Executive Order No. 11988.

CONGRESSIONAL PURPOSE

The Congressional findings and purposes are contained in Sections 4001 and 4002 of Title 42 in the United States Code. Section 4001 of Title 42 states:

"(a) The Congress finds that . . . (3) as a matter of national policy, a reasonable method of sharing the risk of flood losses is through a program of flood insurance which can complement and encourage preventive and protective measures; . . .

"(c) The Congress further finds that (1) a program of flood insurance can promote the public interest by providing appropriate protection against the perils of flood losses and encouraging sound land use by minimizing exposure of property to flood losses; . . .

"(e) It is the further purpose of this chapter to (1) encourage State and local governments to make appropriate land use adjustments to constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses, (2) guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards, . . . (4) assure that any Federal assistance provided under the program will be related closely to all flood-related programs and activities of the Federal Government, and (5) authorize continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements."¹

Section 4002 of Title 42 states:

"(a) The Congress finds that--

(1) annual losses throughout the Nation from floods and mudslides are increasing at an alarming rate, largely as a result of the accelerating development of, and concentration of population in, areas of flood and mudslide hazards;

(2) the availability of Federal loans, grants, guaranties, insurance, and other forms of financial assistance are often determining factors in the utilization of land and the location and construction of public and of private industrial, commercial, and residential facilities; . . .

¹ 42 U.S.C. 4001

"(b) The purpose of this Act, therefore, is to--

(3) require States or local communities, as a condition of future Federal assistance, to participate in the flood insurance program and to adopt adequate flood plain ordinances with effective enforcement provisions consistent with Federal standards to reduce or avoid future flood losses; . . ."²

PRESIDENTIAL EXECUTIVE ORDER

Executive Order No. 11988 regarding "Floodplain Management" was signed by President Jimmy Carter on May 24, 1977, directed Federal agencies:

" . . . to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

"Section 1. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities.

FUNDAMENTAL PURPOSES

Taken together the stated Congressional purposes and President Carter's Executive Order establish five (5) fundamental purposes of the National Flood Insurance Program and Federal policy regarding floodplains. They are:

1. To constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses by encouraging State and local governments to make appropriate land use adjustments.
2. To guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards.
3. To avoid direct or indirect support of floodplain development wherever there is a practicable alternative.
4. To minimize the impact of floods on human safety, health, and welfare.
5. To reduce the risk of flood loss.

FAILURES OF EXISTING REGULATIONS

Under the existing regulations established by the Federal Emergency Management Agency (FEMA), the NFIP is failing to implement the stated national policy defined by Congressional and Presidential actions. This failure is caused by regulations which are

² 42 U.S.C. 4002

(A) increasing the risk to public health, safety, and welfare by encouraging more people to live and work in previously undeveloped floodplains, and

(B) increasing flood damage losses to buildings and contents by encouraging urban development in previously undeveloped floodplains.

The failure of existing regulations to adequately implement the Federal public policy is evidenced by two examples:

- Chesterfield Valley floodplain near St. Louis, Missouri
- Natomas Basin floodplain near Sacramento, California

Chesterfield Valley is an example of a past failure and Natomas Basin is an example of a potential future failure of the National Flood Insurance Program under the existing regulations.

Chesterfield Valley, Missouri

Chesterfield Valley is an example of how the NFIP encouraged development of 4,400 acres of agricultural land into business parks for 300 commercial and industrial companies along the Missouri River. Improving 13 miles of agricultural levees, originally constructed in 1947, allowed urban development in the floodplain. This development received an estimated \$450 million (or nearly half a billion dollars) of devastation during the Great Flood of 1993. Flood depths range from 6 to 10 feet. Details regarding Chesterfield Valley are contained in Exhibit A.

Natomas Basin, California

Natomas Basin is an example of how the NFIP is encouraging urban development of 47,600 acres (74 square miles) of agricultural and vacant land which is currently undeveloped. This agricultural reclamation area was created by building 41 miles of levees in 1914 to remove wetlands and floodplains from flooding by the American and Sacramento Rivers. Levees surround these 74 square miles which is an area larger than the District of Columbia (69 square miles). Land speculators, developers, and local government officials are planning to allow an estimated 170,000 people and over \$13 billion of property to reside in this floodplain. Over 91 percent of the land can flood to depths exceeding 8 feet. Duration of flood is estimated at 30 days. Such depths and duration cause 100 percent destruction of single story residential structures and contents. Estimated property damages from flooding a fully urbanized Natomas basin are \$8 to \$10 billion. Details regarding Natomas Basin are contained in the attached public policy issue paper entitled "New Development in Deep Floodplains is Bad Public Policy: The Natomas Basin Example."

PREVENTING FLOOD DISASTER IN NATOMAS BASIN

The flood disaster in Chesterfield Valley has happened. The flood disaster in Natomas Basin can be prevented by the Director of FEMA acting immediately to initiate rule-making to revise the regulations implementing the NFIP. The Director of FEMA under Section 4102(c) of Title 42 of the United States Code has the following duty:

"... the Director shall from time to time develop comprehensive criteria designed to encourage, where necessary, the adoption of adequate State and local measures which, to the maximum extent feasible, will--

(1) constrict the development of land which is exposed to flood damage where appropriate,

(2) guide the development of proposed construction away from locations which are threatened by flood hazards,

(3) assist in reducing damage caused by floods, and

(4) otherwise improve the long-range land management and use of flood-prone areas."

The existing criteria for floodplain management regulations established by FEMA fails in the case of Natomas Basin to meet the legislative requirements of:

A. Constricting development of land exposed to flood damage because there are no limits on urban development in Natomas Basin,

B. Guiding proposed construction away from locations threatened by flood hazards because under existing regulations local governments have approved plans to allow construction in Natomas Basin,

C. Assisting in reducing damage caused by floods because under existing regulations there are no requirements to flood proof structures constructed in Natomas Basin, and

D. Improving the long-range land management and use of flood-prone areas because under existing regulations there are no requirements for local governments to evaluate the life-cycle costs and benefits of all potential options for use of flood-prone areas. The primary consideration for evaluation is the highest and best use from an economic use of the land which means urban development. The long term or life-cycle cost to the Federal government to recover from a flood disaster in Natomas Basin has not been addressed. The first time costs and benefits need to be compared with the long term costs and benefits.

The argument for the Director to act immediately is supported by two laws enacted by Congress in 1992. The Director should take judicial notice of these two laws. In the laws Congress recognized the unacceptable risk posed to public health, safety, and welfare by further development in Natomas Basin. The two laws contain sections written to address Natomas Basin flooding issues. Each law and its legislative history talks specifically about Natomas Basin. Together these laws express the Congressional recognition of the unacceptable risk created by allowing further urban development of Natomas Basin

First, in the Department of Defense Appropriations Act of 1992, the Secretary of the Army was authorized to construct the Natomas Basin levee improvement features proposed by the Corps of Engineers. However, a limitation was placed upon these levee improvements:

"... provided that such construction does not encourage the development of deep floodplains."³

³ Department of Defense Appropriations Act of 1992, Section 9159.

Second, in the Housing and Community Development Act of 1992, Section 928 made changes to the National Flood Insurance Program (NFIP). A change was specifically designed to address Sacramento's flood insurance problems. Briefly, the legislation (a) creates a new "flood restoration zone" for flood insurance rates, and (b) directs FEMA to establish floodplain management criteria for new construction in the flood restoration zone where flood depths exceed 5 feet.⁴

Speaking as the Chairman of the Senate Housing and Urban Affairs Subcommittee responsible for the legislation, former U.S. Senator Alan Cranston of California spoke on the floor of the Senate to clarify the intent behind the legislation:

"The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento."⁵

These two laws recognize the unacceptable risk caused by further urban development in Natomas Basin. Congress has established limits on further development. However, local government officials are working to get around the limitations contained in these two laws. Their efforts appear to be close to success and urban development will continue to fill Natomas Basin. Before this happens, the Director of FEMA should act to change existing regulations by initiating a rule-making proceeding which prevents further urban development in Natomas Basin as required by Sections 4001, 4002, and 4102 of the National Flood Insurance Program.

RECOMMENDED CHANGES

Under Section 4001(e)(5) and Section 4102(c) of Title 42 of the United States Code, the Director of the Federal Emergency Management Agency (FEMA) has the affirmative duty to undertake "... continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements."

Under Section 4102(c) of Title 42 described earlier, the Director has the responsibility to develop comprehensive floodplain management criteria to be followed by State and local governments for floodplain development. Accordingly, the actions recommended in this petition are within the authority of the Director to perform.

The Director of FEMA should immediately initiate a rule-making proceeding which will revise the regulations implementing the National Flood Insurance Program to prevent the encouragement of urban development of undeveloped floodplains. Such revisions are desperately needed to prevent Federal policy from increasing the risk to public health, safety, and welfare caused by further urban development in floodplains. These revisions are essential to implement the stated Federal policy. Because of the extreme potential danger to public health, safety, and welfare by continuing urban development of undeveloped floodplains, the Director of FEMA should:

1. Immediately issue emergency rules stopping the issuing of flood insurance policies to the undeveloped portions of floodplains. These regulations would remain in effect until revised regulations are enacted. Time is of the essence to prevent more people and property from being placed in undeveloped floodplains.

⁴ Housing and Community Development Act of 1992, Section 928.

⁵ Congressional Record - Senate, October 8, 1992, p. S17910. Senator Cranston's entire comments are found in Exhibit B.

2. Immediately issue notice of a rule-making proceeding to revise regulations implementing the National Flood Insurance Program. Revisions should include three critical objectives:

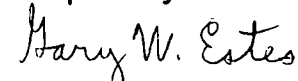
A. Defining undeveloped floodplains where Federal flood insurance will not be provided under any circumstances. There are floodplains which should never be developed. Such action was taken by Congress in October 1982 with the passage of the Coastal Barrier Resources Act (COBRA).⁶ The law was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas. Among the restrictions in COBRA, no new flood insurance coverage was provided for any new construction in designated coastal barriers after October 1, 1983. The Director of FEMA has the authority under Sections 4001, 4002, and 4102 to establish regulations which prevents flood insurance being available to areas which should not be developed.

The Natomas Basin is an outstanding example of a floodplain which should not be developed further. The potential risk to public health, safety, and welfare is too great to continue under existing regulations. We live in a new day with limited tax dollars and limited resources. To knowingly increasing the burden upon present and future taxpayers by allowing urban development of undeveloped floodplains is bad public policy.

B. Requiring flood insurance for all property located in floodplains in urban areas. The Great Flood of 1993 shows us that trying to predict and control the forces of nature is a flawed approach to preventing loss of life and destruction of property. Requiring people to pay for flood insurance is a constant reminder that where they live is more hazardous than living out of the floodplain. People who are not subject to flooding should not be required to pay for the disaster relief and recovery for people who choose to live in floodplains. Federal taxpayers should not be subsidizing those individuals who decided to live in a floodplain. The risks, costs, and benefits of choosing to live in a floodplain should be borne by those making that choice, not all the taxpayers. The accountability for making the choice to live in a floodplain does not fall upon the person making the decision, but is shifted to others who have no say in that decision. Lack of accountability for the consequences of decisions results in bad decision-making.

C. Establishing continual study of watersheds to prevent future disaster by providing data essential to change regulations and programs. Continual study of the changing nature of watersheds is essential to maintaining the existing flood control systems across the United States. Each incremental change in the land use upstream in the watershed alters the ability of flood control structures to protect the people living downstream. There is no system currently in place which provides ongoing analysis. As we continue to spread urban development over the land, the watersheds will change. We must be proactive in anticipating the changes to prevent disaster, instead of being reactive after the disaster. Prevention is cheaper and less damaging than trying to recover from a flooding disaster like the Great Flood of 1993.

Respectfully submitted,


Gary W. Estes

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⁶ 96 Stat. 1653, Public Law 97-348 (S. 1018), October 18, 1982.

EXHIBIT A

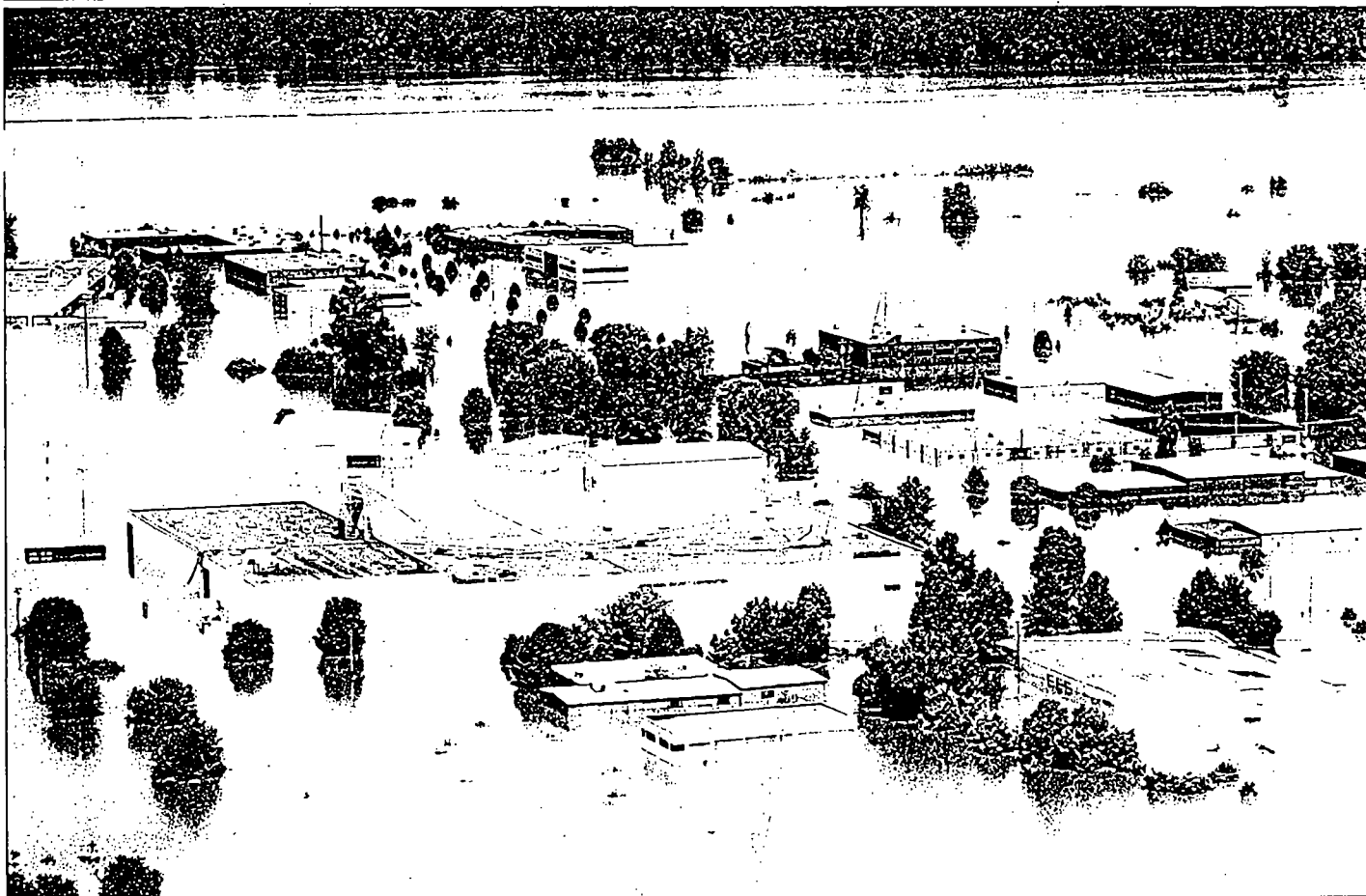
ST. LOUIS POST-DISPATCH

BUSINESS

SECTION E

SUNDAY, AUGUST 8, 1993

THE FLOOD OF '93



Kevin Manning/Post-Dispatch

Floodwater surrounds businesses in Chesterfield Valley last week. Highway 40's Daniel Boone Bridge is off to the upper right.

'OUR BUBBLE HAS BURST'

Levee Break Dampened Dreams In Chesterfield

By Adam Goodman 8-8-93
Of the Post-Dispatch Staff

A little more than a week ago, James Kick couldn't wait to move his company's headquarters into a spanking-new industrial park in the Chesterfield Valley.

After months of searching, Kick had selected six acres on Chesterfield Airport Road in west St. Louis County as the site to build a \$2.4 million complex for C.A.P.S. Inc., the Fenton plastics company he heads.

Now, those six acres — like the rest of the low-lying valley — are under about six to 10 feet of water, courtesy of the raging Missouri River and a fractured levee.

Luckily for Kick, the valley flooded five days before his company was to close its deal at Siteman Organization's 100-acre Spirit Trade Center. C.A.P.S., formerly known as Custom Automated Plastic Systems, was to become the first business in the industrial park.

Now Kick is taking his search and his business elsewhere — "the higher, the better," he says.

"I will not look at any property if it is in a flood plain," Kick said. "There are all kinds of things that can happen to a business, so why throw in another variable?"

While the Flood of '93 has devastated homes, farms and businesses throughout the St. Louis region and the Midwest, it tore through the young and growing city of Chesterfield with added contempt and derision.

'False Sense Of Security'

On the night of July 30, the Missouri River burst through the Monarch-Chesterfield Levee. 13 miles of earthen mounds protecting 4,400 acres of flatlands on the city's western edge from the river and its tributaries.

In a few hours, the floodwaters flattened Chesterfield's economic engine and placed its bright economic future in jeopardy.

The waters gushed through St. Louis County's Spirit of St. Louis Airport, the second-busiest airport in Missouri, knocked out the Federal Aviation Administration's flight service center and sideswiped several corporate jets and other planes that failed to evacuate in time.

The floodwaters then poured through high-tech industrial parks nearby and drowned about 300 businesses that called the Chesterfield Valley home. Those Chesterfield Valley addresses will remain uninhabitable for weeks or months. Chesterfield officials estimate the damage at

a minimum of \$150 million to \$200 million, but fear that total losses will be much higher. Many of the flooded businesses have managed to relocate, unsure whether or when they will return.

"Our bubble has just burst," said Tom Shaw Sr., a longtime real-estate broker in Chesterfield who also chairs an influential economic-development group in the city.

"The problem next door is now our problem," Shaw said. "We were just lulled into a false sense of security."

Government officials and business executives are paying the price for their enthusiastic willingness to build an industrial and commercial development on an agricultural flood plain. Said Kick: "There is a reason it is called a flood plain."

They did so without fully anticipating the consequences or taking all the precautions they could to guard their massive investment.

The valley's land, buildings and other improvements are worth \$145 million, according to Chesterfield officials. That excludes machinery and other personal property inside many of those businesses and about \$50 million in non-taxed public improvements at Spirit

Airport.

By comparison, Sverdrup Corp. estimates that the office buildings, hotel and amphitheater at its Riverport development in Maryland Heights are worth about \$100 million.

Business owners say that everyone, from county and city officials to real-estate developers, told them they were safe from flooding. Some say their insurance agents advised them not to buy flood insurance and told them that most businesses in the valley didn't have it.

"I don't think I ever appreciated a levee like I do now," said Dale Natoli of the flooded Natoli Engineering Co. "People take it for granted."

'An Uphill Battle'

The flood has left Chesterfield Mayor Jack Leonard and other city officials with the biggest challenges they have faced in their city's young life.

Will Chesterfield be able to recover from the disaster and resume its economic development? Will flooded-out companies return? Will other industrial businesses like Kick's company ever again be attracted to move there?

Leonard, who has faced the wrath of displaced business owners since the flood, insists

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Chesterfield

From page one

that the city can regain its luster and continue its growth.

"We have an uphill battle," Leonard said. "We are going to overcome this."

At Spirit Airport, Richard Hrabko, the county's director of aviation, says the airport will recover. Spirit, home to dozens of corporate jets and hundreds of small planes, is the primary reliever airport for Lambert Field.

"Spirit is going to come back better than ever," said Hrabko, who is also a Chesterfield City Council member.

But Spirit, which itself is insured for up to \$50 million, will have to compete with 20 other flooded airports around the Midwest for federal rebuilding funds.

During the last decade, fancy new homes, new office buildings and new industries have sprouted from Chesterfield land that once grew produce, wheat, corn and soybeans.

While Chesterfield Mall anchors the city's retail and office development along the bluffs on Clarkson Road and Olive Street Road, Spirit Airport anchors the valley, the city's only industrial corridor. About 4,500 people worked in the valley.

The city, which incorporated in 1988, has prospered from an influx of residents and businesses seeking to escape to the suburbs. They did not, however, escape the raging floodwater.

"Maybe we were naive," said John Eulice, president of Mark Andy Inc., whose printing press factory on Chesterfield Airport Road flooded. "A lot of people had confidence in that levee."

That levee — the Monarch-Chesterfield Levee — originally was built to protect farmland in the bottoms.

Bolstering The Levee

Incorporated as a private levee in 1947 by a group of farmers, the levee has been strengthened throughout the years. Until this summer, the bottoms had not flooded since 1935.

In the 1970s and 1980s, farmers, businesses, other landowners in the levee district and St. Louis County chipped in about \$2.5 million to raise, bolster and extend the levee system so that a 100-year-flood would not flow over it.

In the arcane world of flood terminology dictated by the Army Corps of Engineers,

THE FLOOD OF '93



Scott Dine/Post-Dispatch

The river swept this plane into some trees near Spirit of St. Louis Airport.

100-year flood has nothing to do with how often a flood will hit. It only means that in any given year there is a one-in-100 chance that a flood of that magnitude could occur.

The county wanted the levee improvements to protect its investment in Spirit Airport and ensure that it would qualify for \$7.2 million in grants from the Federal Aviation Administration.

Moreover, without the improvements, the businesses county officials hoped to attract to the airport's surrounding industrial parks would be unable to qualify for flood insurance — a sure deterrent to development of the flood plain.

Once the levee achieved 100-year-flood status from the Army Corps of Engineers, neither Monarch Levee District officials nor the county sought the highest level of flood protection. That level of protection, called an urban levee, would protect against an even larger, 500-year flood.

"Once that standard was met, everyone ignored the possibility that there could be a 500-year flood," said Alvin D. Vitt, who was one of the pioneering developers to build in the valley.

While other large developments downstream — Earth City in 1972 and Riverport in 1986 — built 500-year-flood levees to safeguard their investment, the Chesterfield Valley did not.

"There had been talk about it, but we

figured this would be high enough," said Melvin Fick, a Chesterfield farmer who is president of the Monarch Levee District.

Besides, even with gopher holes and infrequent mowing through the years, the Monarch-Chesterfield levee had withstood the area's two biggest floods of the last 20 years. "It held real well in 1973 and 1986," Fick said.

Hrabko of Spirit said federal requirements for the airport require only 100-year-flood protection.

"The levee was a 100-year levee, and what we experienced was a flood of biblical proportion," Hrabko said. "It was a 500-year flood or awfully close to it. You can't expect a 100-year flood levee to protect against that."

Monarch-Chesterfield Levee officials believe the flood that washed away their levee was a 500-year flood, but the Army Corps of Engineers has yet to provide an official ruling on the Flood of 1993.

'Highest Standards'

The development of Riverport and Earth City and their levees provide a sharp contrast to the development at Chesterfield Valley. The levees at Riverport and Earth City have both held so far through this year's flood.

While the Chesterfield Valley was planned by St. Louis County and has been built by several different developers, the other two

business parks were each primarily planned and developed by one large developer.

When Linclay Corp. started developing Earth City, company officials had no doubt that they wanted the strongest possible levee for their 1,200-acre project.

"We really felt that for a project in which there were going to be many millions of dollars invested, we wanted it protected by a levee of the highest standards," said Dale Perkinson, Linclay's former president.

Perkinson now heads Perkinson Realty Group, which is developing the Corporate Woods office park in Earth City. Today, more than 200 businesses are located in Earth City.

Linclay spent \$4 million in 1972 to build a 2.6-mile levee with a strong clay core and a connected system of relief wells to handle water seepage. The development also is protected by Interstate 70 on the south and the Norfolk Southern Railroad embankment on the north.

Meeting the 500-year-flood standard meant that the land was no longer considered a flood plain, Perkinson said.

"That made it easier to market and for people to finance their buildings," he said.

Sverdrup Corp. built a 1.7-mile urban levee at its 500-acre Riverport development across Interstate 70 from Earth City.

The 1986 levee project — together with relief wells, pumps, roads and other infrastructure — cost more than \$10 million. St. Louis County paid about \$4 million of that.

"We just thought it was prudent," said Omar Feeler, Sverdrup's director of civil works.

The 500-year-flood levee "is the norm when you are going to be in a highly developed area," Feeler said.

Now, civic and business boosters in Chesterfield are already clamoring for a 500-year-flood levee to replace the broken Monarch-Chesterfield Levee.

"This levee is going to be rebuilt and built as a 500-year levee," real-estate broker Shaw said. "It will be impregnable or nobody is coming back."

It is unclear who would pay for a new levee — a project that Mayor Leonard can only guess will cost "many millions of dollars."

The Monarch Levee District collected only \$80,984 in assessments from property owners last year. The district is scheduled next month to make its final payment for its last round of improvements in 1983.

"We thought we'd have smooth sailing after that with only a maintenance tax," Levee District President Fick said. Any improvements are "going to cost lots of money," he

said.

Looking To The Future

Some business executives say they would be willing to help pay for a new levee.

Dave Neal is president of Advanced Industrial Systems Inc., a small distributor of temperature controls and other industrial controls. With the company's office underwater, Advanced Industrial has borrowed furniture and moved its six employees to the basement and garage of Neal's home near Ballwin.

"I'd certainly be willing to pay dramatically more if we got a stronger levee," Neal said.

With Highway 40 and Spirit Airport's FAA center out of commission, Mayor Leonard is counting on federal taxpayers to rebuild and improve the levee. Private, city, county and state funds will not be enough, he says.

The money "has to come from Washington, D.C.," he said. "To protect their investment, they are going to have to put in a 500-year levee."

Spirit's Hrabko says the airport will rebuild whether the old levee is repaired or a stronger levee is built. "We want a 500-year levee but we can reopen and rehabilitate with only a 100-year levee," he said.

In the meantime, the lingering questions over the valley's future will hurt Chesterfield's development.

"Until people know what is going to happen, they are not going to want to go back there," said Phillip Schreiber, a real-estate consultant. Schreiber is a former president of Sachs Properties Inc., which is developing the still-dry, 1,500-acre Chesterfield Village just east of the bottoms.

Others hope that the flood's effects won't last long. "I think in a period of time people will forget the stigma," developer Vitt said. "You can't get rid of the development there."

Meanwhile, Chesterfield city officials have been trying feverishly to provide relocation help to flooded companies and to encourage them to move back after the water recedes and the levee is repaired or strengthened.

"We are going to lose a few," Leonard said. "But if we do it and do it right, we are going to have new companies down there also."

Although the final word must come from the Federal Emergency Management Agency, city officials make clear that they are committed to resuming development.

"The bottom line is you still develop the valley," said John Langa, who heads the city's economic-development agency. "Obviously, the rules of the game have changed."

October 8, 1992

S17904

HOUSING AND COMMUNITY DEVELOPMENT ACT—CONFERENCE REPORT

Mr. FORD. Mr. President, I submit a report of the committee of conference on H.R. 5334 and ask for its immediate consideration.

The PRESIDING OFFICER. The report will be stated.

The legislative clerk read as follows:

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 5334) to amend and extend certain laws relating to housing and community development, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses this report, signed by a majority of the conferees.

The PRESIDING OFFICER. Without objection, the Senate will proceed to the consideration of the conference report.

(The conference report is printed in the House proceedings of the RECORD of October 5, 1992.)

The PRESIDING OFFICER. The Senator from California is recognized.

Mr. CRANSTON. Mr. President, I rise to say, briefly, that I am pleased that the Senate is about to take final action on the conference report on H.R. 5334, the Housing and Community Development Act of 1992.

During the last several weeks, House and Senate conferees took on the difficult task of merging the Senate and House bills into one coherent piece of legislation. We have incorporated administration suggestions. We have resolved a number of very tough and controversial issues. This conference report is a result of those efforts. It both builds upon existing efforts and establishes new initiatives to address the Nation's affordable housing problem.

S17910

**CLARIFICATION OF CERTAIN ISSUES IN
CONFERENCE REPORT**

Mr. CRANSTON. Mr. President, I would like to clarify the intent behind a series of provisions contained in the conference report.

TITLE IX ISSUES

Three provisions in title IX regulatory programs also need clarification.

The flood restoration zone establishes a new zone "AR" under the flood insurance program for communities in which an existing structural flood control system that provided at least 100-year frequency flood protection, no longer does so. Communities that meet the eligibility criteria as of January 1, 1992, specifically Sacramento and Los Angeles, would be subject to specific construction requirements. The delineated elevation restrictions and the continued eligibility for c zone rates would apply only to developed areas in Sacramento and Los Angeles provided the decertified flood protection system can be restored in a period not to exceed 10 years from the date of enactment of this provision. For other communities that may become eligible for the AR zone and for less developed

areas of Los Angeles and Sacramento, the Director of the Federal Emergency Management Agency shall establish floodplain management criteria for new construction and the substantial improvement of existing structures. The flood restoration zone is intended to address problems experienced by existing communities that temporarily are not afforded 100-year frequency flood protection. The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento. In addition, only structural projects that are decertified by the Corp of Engineers could be considered eligible under the AR zone. Beach nourishment and other such projects would not be eligible.

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CONGRESSIONAL PURPOSE

The Congressional findings and purposes are contained in Sections 4001 and 4002 of Title 42 in the United States Code. Section 4001 of Title 42 states:

"(a) The Congress finds that . . . (3) as a matter of national policy, a reasonable method of sharing the risk of flood losses is through a program of flood insurance which can complement and encourage preventive and protective measures; . . .

"(c) The Congress further finds that (1) a program of flood insurance can promote the public interest by providing appropriate protection against the perils of flood losses and encouraging sound land use by minimizing exposure of property to flood losses; . . .

"(e) It is the further purpose of this chapter to (1) encourage State and local governments to make appropriate land use adjustments to constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses, (2) guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards, . . . (4) assure that any Federal assistance provided under the program will be related closely to all flood-related programs and activities of the Federal Government, and (5) authorize continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements."¹

Section 4002 of Title 42 states:

"(a) The Congress finds that--

(1) annual losses throughout the Nation from floods and mudslides are increasing at an alarming rate, largely as a result of the accelerating development of, and concentration of population in, areas of flood and mudslide hazards;

(2) the availability of Federal loans, grants, guaranties, insurance, and other forms of financial assistance are often determining factors in the utilization of land and the location and construction of public and of private industrial, commercial, and residential facilities; . . .

¹ 42 U.S.C. 4001

"(b) The purpose of this Act, therefore, is to--

(3) require States or local communities, as a condition of future Federal assistance, to participate in the flood insurance program and to adopt adequate flood plain ordinances with effective enforcement provisions consistent with Federal standards to reduce or avoid future flood losses; . . ."²

PRESIDENTIAL EXECUTIVE ORDER

Executive Order No. 11988 regarding "Floodplain Management" was signed by President Jimmy Carter on May 24, 1977, directed Federal agencies:

" . . . to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

"Section 1. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities.

FUNDAMENTAL PURPOSES

Taken together the stated Congressional purposes and President Carter's Executive Order establish five (5) fundamental purposes of the National Flood Insurance Program and Federal policy regarding floodplains. They are:

1. To constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses by encouraging State and local governments to make appropriate land use adjustments.
2. To guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards.
3. To avoid direct or indirect support of floodplain development wherever there is a practicable alternative.
4. To minimize the impact of floods on human safety, health, and welfare.
5. To reduce the risk of flood loss.

FAILURES OF EXISTING REGULATIONS

Under the existing regulations established by the Federal Emergency Management Agency (FEMA), the NFIP is failing to implement the stated national policy defined by Congressional and Presidential actions. This failure is caused by regulations which are

² 42 U.S.C. 4002

(A) increasing the risk to public health, safety, and welfare by encouraging more people to live and work in previously undeveloped floodplains, and

(B) increasing flood damage losses to buildings and contents by encouraging urban development in previously undeveloped floodplains.

The failure of existing regulations to adequately implement the Federal public policy is evidenced by two examples:

- Chesterfield Valley floodplain near St. Louis, Missouri
- Natomas Basin floodplain near Sacramento, California

Chesterfield Valley is an example of a past failure and Natomas Basin is an example of a potential future failure of the National Flood Insurance Program under the existing regulations.

Chesterfield Valley, Missouri

Chesterfield Valley is an example of how the NFIP encouraged development of 4,400 acres of agricultural land into business parks for 300 commercial and industrial companies along the Missouri River. Improving 13 miles of agricultural levees, originally constructed in 1947, allowed urban development in the floodplain. This development received an estimated \$450 million (or nearly half a billion dollars) of devastation during the Great Flood of 1993. Flood depths range from 6 to 10 feet. Details regarding Chesterfield Valley are contained in Exhibit A.

Natomas Basin, California

Natomas Basin is an example of how the NFIP is encouraging urban development of 47,600 acres (74 square miles) of agricultural and vacant land which is currently undeveloped. This agricultural reclamation area was created by building 41 miles of levees in 1914 to remove wetlands and floodplains from flooding by the American and Sacramento Rivers. Levees surround these 74 square miles which is an area larger than the District of Columbia (69 square miles). Land speculators, developers, and local government officials are planning to allow an estimated 170,000 people and over \$13 billion of property to reside in this floodplain. Over 91 percent of the land can flood to depths exceeding 8 feet. Duration of flood is estimated at 30 days. Such depths and duration cause 100 percent destruction of single story residential structures and contents. Estimated property damages from flooding a fully urbanized Natomas basin are \$8 to \$10 billion. Details regarding Natomas Basin are contained in the attached public policy issue paper entitled "New Development in Deep Floodplains is Bad Public Policy: The Natomas Basin Example."

PREVENTING FLOOD DISASTER IN NATOMAS BASIN

The flood disaster in Chesterfield Valley has happened. The flood disaster in Natomas Basin can be prevented by the Director of FEMA acting immediately to initiate rule-making to revise the regulations implementing the NFIP. The Director of FEMA under Section 4102(c) of Title 42 of the United States Code has the following duty:

"... the Director shall from time to time develop comprehensive criteria designed to encourage, where necessary, the adoption of adequate State and local measures which, to the maximum extent feasible, will--

(1) constrict the development of land which is exposed to flood damage where appropriate,

(2) guide the development of proposed construction away from locations which are threatened by flood hazards,

(3) assist in reducing damage caused by floods, and

(4) otherwise improve the long-range land management and use of flood-prone areas."

The existing criteria for floodplain management regulations established by FEMA fails in the case of Natomas Basin to meet the legislative requirements of:

A. Constricting development of land exposed to flood damage because there are no limits on urban development in Natomas Basin,

B. Guiding proposed construction away from locations threatened by flood hazards because under existing regulations local governments have approved plans to allow construction in Natomas Basin,

C. Assisting in reducing damage caused by floods because under existing regulations there are no requirements to flood proof structures constructed in Natomas Basin, and

D. Improving the long-range land management and use of flood-prone areas because under existing regulations there are no requirements for local governments to evaluate the life-cycle costs and benefits of all potential options for use of flood-prone areas. The primary consideration for evaluation is the highest and best use from an economic use of the land which means urban development. The long term or life-cycle cost to the Federal government to recover from a flood disaster in Natomas Basin has not been addressed. The first time costs and benefits need to be compared with the long term costs and benefits.

The argument for the Director to act immediately is supported by two laws enacted by Congress in 1992. The Director should take judicial notice of these two laws. In the laws Congress recognized the unacceptable risk posed to public health, safety, and welfare by further development in Natomas Basin. The two laws contain sections written to address Natomas Basin flooding issues. Each law and its legislative history talks specifically about Natomas Basin. Together these laws express the Congressional recognition of the unacceptable risk created by allowing further urban development of Natomas Basin

First, in the Department of Defense Appropriations Act of 1992, the Secretary of the Army was authorized to construct the Natomas Basin levee improvement features proposed by the Corps of Engineers. However, a limitation was placed upon these levee improvements:

". . . provided that such construction does not encourage the development of deep floodplains."³

³ Department of Defense Appropriations Act of 1992, Section 9159.

Second, in the Housing and Community Development Act of 1992, Section 928 made changes to the National Flood Insurance Program (NFIP). A change was specifically designed to address Sacramento's flood insurance problems. Briefly, the legislation (a) creates a new "flood restoration zone" for flood insurance rates, and (b) directs FEMA to establish floodplain management criteria for new construction in the flood restoration zone where flood depths exceed 5 feet.⁴

Speaking as the Chairman of the Senate Housing and Urban Affairs Subcommittee responsible for the legislation, former U.S. Senator Alan Cranston of California spoke on the floor of the Senate to clarify the intent behind the legislation:

"The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento."⁵

These two laws recognize the unacceptable risk caused by further urban development in Natomas Basin. Congress has established limits on further development. However, local government officials are working to get around the limitations contained in these two laws. Their efforts appear to be close to success and urban development will continue to fill Natomas Basin. Before this happens, the Director of FEMA should act to change existing regulations by initiating a rule-making proceeding which prevents further urban development in Natomas Basin as required by Sections 4001, 4002, and 4102 of the National Flood Insurance Program.

RECOMMENDED CHANGES

Under Section 4001(e)(5) and Section 4102(c) of Title 42 of the United States Code, the Director of the Federal Emergency Management Agency (FEMA) has the affirmative duty to undertake ". . . continuing studies of flood hazards in order to provide for a constant reappraisal of the flood insurance program and its effect on land use requirements."

Under Section 4102(c) of Title 42 described earlier, the Director has the responsibility to develop comprehensive floodplain management criteria to be followed by State and local governments for floodplain development. Accordingly, the actions recommended in this petition are within the authority of the Director to perform.

The Director of FEMA should immediately initiate a rule-making proceeding which will revise the regulations implementing the National Flood Insurance Program to prevent the encouragement of urban development of undeveloped floodplains. Such revisions are desperately needed to prevent Federal policy from increasing the risk to public health, safety, and welfare caused by further urban development in floodplains. These revisions are essential to implement the stated Federal policy. Because of the extreme potential danger to public health, safety, and welfare by continuing urban development of undeveloped floodplains, the Director of FEMA should:.....

1. Immediately issue emergency rules stopping the issuing of flood insurance policies to the undeveloped portions of floodplains. These regulations would remain in effect until revised regulations are enacted. Time is of the essence to prevent more people and property from being placed in undeveloped floodplains.

⁴ Housing and Community Development Act of 1992, Section 928.

⁵ Congressional Record - Senate, October 8, 1992, p. S17910. Senator Cranston's entire comments are found in Exhibit B.

2. Immediately issue notice of a rule-making proceeding to revise regulations implementing the National Flood Insurance Program. Revisions should include three critical objectives:

A. Defining undeveloped floodplains where Federal flood insurance will not be provided under any circumstances. There are floodplains which should never be developed. Such action was taken by Congress in October 1982 with the passage of the Coastal Barrier Resources Act (COBRA).⁶ The law was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas. Among the restrictions in COBRA, no new flood insurance coverage was provided for any new construction in designated coastal barriers after October 1, 1983. The Director of FEMA has the authority under Sections 4001, 4002, and 4102 to establish regulations which prevents flood insurance being available to areas which should not be developed.

The Natomas Basin is an outstanding example of a floodplain which should not be developed further. The potential risk to public health, safety, and welfare is too great to continue under existing regulations. We live in a new day with limited tax dollars and limited resources. To knowingly increasing the burden upon present and future taxpayers by allowing urban development of undeveloped floodplains is bad public policy.

B. Requiring flood insurance for all property located in floodplains in urban areas. The Great Flood of 1993 shows us that trying to predict and control the forces of nature is a flawed approach to preventing loss of life and destruction of property. Requiring people to pay for flood insurance is a constant reminder that where they live is more hazardous than living out of the floodplain. People who are not subject to flooding should not be required to pay for the disaster relief and recovery for people who choose to live in floodplains. Federal taxpayers should not be subsidizing those individuals who decided to live in a floodplain. The risks, costs, and benefits of choosing to live in a floodplain should be borne by those making that choice, not all the taxpayers. The accountability for making the choice to live in a floodplain does not fall upon the person making the decision, but is shifted to others who have no say in that decision. Lack of accountability for the consequences of decisions results in bad decision-making.

C. Establishing continual study of watersheds to prevent future disaster by providing data essential to change regulations and programs. Continual study of the changing nature of watersheds is essential to maintaining the existing flood control systems across the United States. Each incremental change in the land use upstream in the watershed alters the ability of flood control structures to protect the people living downstream. There is no system currently in place which provides ongoing analysis. As we continue to spread urban development over the land, the watersheds will change. We must be proactive in anticipating the changes to prevent disaster, instead of being reactive after the disaster. Prevention is cheaper and less damaging than trying to recover from a flooding disaster like the Great Flood of 1993.

Respectfully submitted,

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⁶ 96 Stat. 1653, Public Law 97-348 (S. 1018), October 18, 1982.

EXHIBIT A

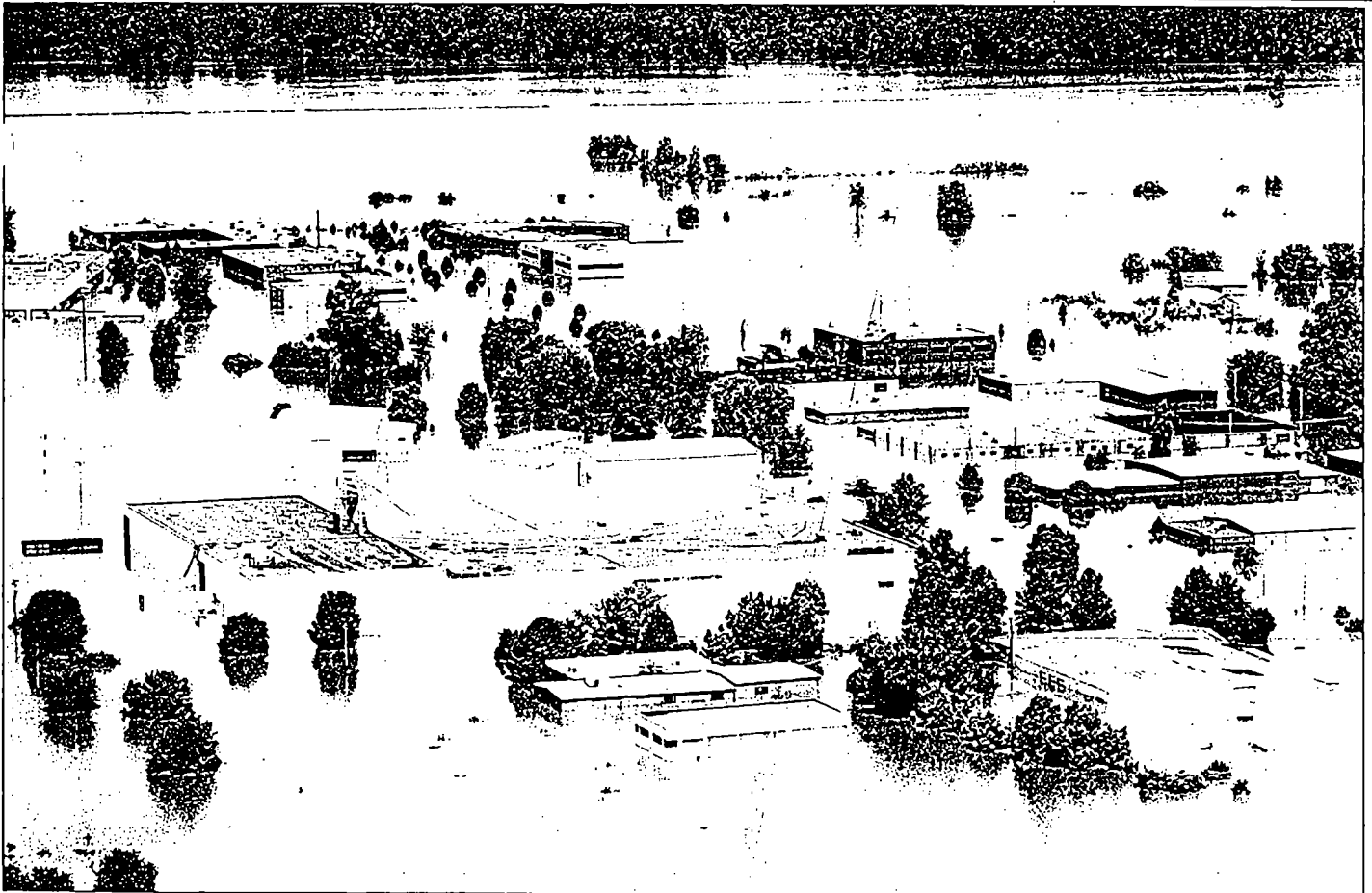
ST. LOUIS POST-DISPATCH

BUSINESS

SECTION E

SUNDAY, AUGUST 8, 1993

THE FLOOD OF '93



Kevin Manning/Post-Dispatch

Floodwater surrounds businesses in Chesterfield Valley last week. Highway 40's Daniel Boone Bridge is off to the upper right.

'OUR BUBBLE HAS BURST'

Levee Break Dampened Dreams In Chesterfield

By Adam Goodman 8-8-93
Of the Post-Dispatch Staff

A little more than a week ago, James Kick couldn't wait to move his company's headquarters into a spanking-new industrial park in the Chesterfield Valley.

After months of searching, Kick had selected six acres on Chesterfield Airport Road in west St. Louis County as the site to build a \$2.4 million complex for C.A.P.S Inc., the Fenton plastics company he heads.

Now, those six acres — like the rest of the low-lying valley — are under about six to 10 feet of water, courtesy of the raging Missouri River and a fractured levee.

Luckily for Kick, the valley flooded five days before his company was to close its deal at Siteman Organization's 100-acre Spirit Trade Center. C.A.P.S., formerly known as Custom Automated Plastic Systems, was to become the first business in the industrial park.

Now Kick is taking his search and his business elsewhere — "the higher, the better," he says.

"I will not look at any property if it is in a flood plain," Kick said. "There are all kinds of things that can happen to a business, so why throw in another variable?"

While the Flood of '93 has devastated homes, farms and businesses throughout the St. Louis region and the Midwest, it tore through the young and growing city of Chesterfield with added contempt and derision.

'False Sense Of Security'

On the night of July 30, the Missouri River burst through the Monarch-Chesterfield Levee, 13 miles of earthen mounds protecting 1,400 acres of flatlands on the city's western edge from the river and its tributaries.

In a few hours, the floodwaters flattened Chesterfield's economic engine and placed its bright economic future in jeopardy.

The waters gushed through St. Louis County's Spirit of St. Louis Airport, the second-busiest airport in Missouri, knocked out the Federal Aviation Administration's flight-servicing center and sideswiped several corporate jets and other planes that failed to evacuate in time.

The floodwaters then poured through high-tech industrial parks nearby and drowned about 300 businesses that called the Chesterfield Valley home. Those Chesterfield Valley addresses will remain uninhabitable for weeks or months.

Chesterfield officials estimate the damage at

a minimum of \$150 million to \$200 million, but fear that total losses will be much higher. Many of the flooded businesses have managed to relocate, unsure whether or when they will return.

"Our bubble has just burst," said Tom Shaw Sr., a longtime real-estate broker in Chesterfield who also chairs an influential economic-development group in the city.

"The problem next door is now our problem," Shaw said. "We were just lulled into a false sense of security."

Government officials and business executives are paying the price for their enthusiastic willingness to build an industrial and commercial development on an agricultural flood plain. Said Kick: "There is a reason it is called a flood plain."

They did so without fully anticipating the consequences or taking all the precautions they could to guard their massive investment.

The valley's land, buildings and other improvements are worth \$145 million, according to Chesterfield officials. That excludes machinery and other personal property inside many of those businesses and about \$50 million in non-taxed public improvements at Spirit

Airport.

By comparison, Sverdrup Corp. estimates that the office buildings, hotel and amphitheater at its Riverport development in Maryland Heights are worth about \$100 million.

Business owners say that everyone, from county and city officials to real-estate developers, told them they were safe from flooding. Some say their insurance agents advised them not to buy flood insurance and told them that most businesses in the valley didn't have it.

"I don't think I ever appreciated a levee like I do now," said Dale Natoli of the flooded Natoli Engineering Co. "People take it for granted."

'An Uphill Battle'

The flood has left Chesterfield Mayor Jack Leonard and other city officials with the biggest challenges they have faced in their city's young life.

Will Chesterfield be able to recover from the disaster and resume its economic development? Will flooded-out companies return? Will other industrial businesses like Kick's company ever again be attracted to move there?

Leonard, who has faced the wrath of displaced business owners since the flood, insists

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8E BUSINESS

Chesterfield

From page one

that the city can regain its luster and continue its growth.

"We have an uphill battle," Leonard said. "We are going to overcome this."

At Spirit Airport, Richard Hrabko, the county's director of aviation, says the airport will recover. Spirit, home to dozens of corporate jets and hundreds of small planes, is the primary reliever airport for Lambert Field.

"Spirit is going to come back better than ever," said Hrabko, who is also a Chesterfield City Council member.

But Spirit, which itself is insured for up to \$50 million, will have to compete with 20 other flooded airports around the Midwest for federal rebuilding funds.

During the last decade, fancy new home new office buildings and new industries have sprouted from Chesterfield land that once grew produce, wheat, corn and soybeans.

While Chesterfield Mall anchors the city's retail and office development along the bluffs on Clarkson Road and Olive Street Road, Spirit Airport anchors the valley, the city's only industrial corridor. About 4,500 people worked in the valley.

The city, which incorporated in 1988, has prospered from an influx of residents and businesses seeking to escape to the suburbs. They did not, however, escape the raging floodwater.

"Maybe we were naive," said John Eulish, president of Mark Andy Inc., whose printing press factory on Chesterfield Airport Road flooded. "A lot of people had confidence in that levee."

That levee — the Monarch-Chesterfield Levee — originally was built to protect farmland in the bottoms.

Bolstering The Levee

Incorporated as a private levee in 1947 by a group of farmers, the levee has been strengthened throughout the years. Until this summer, the bottoms had not flooded since 1935.

In the 1970s and 1980s, farmers, businesses, other landowners in the levee district and St. Louis County chipped in about \$2.5 million to raise, bolster and extend the levee system so that a 100-year-flood would not flow over it.

In the arcane world of flood terminology dictated by the Army Corps of Engineers,

THE FLOOD OF '93



Scott Dine/Post-Dispatch

The river swept this plane into some trees near Spirit of St. Louis Airport.

100-year flood has nothing to do with how often a flood will hit. It only means that in any given year there is a one-in-100 chance that a flood of that magnitude could occur.

The county wanted the levee improvements to protect its investment in Spirit Airport and ensure that it would qualify for \$7.2 million in grants from the Federal Aviation Administration.

Moreover, without the improvements, the businesses county officials hoped to attract to the airport's surrounding industrial parks would be unable to qualify for flood insurance — a sure deterrent to development of the flood plain.

Once the levee achieved 100-year-flood status from the Army Corps of Engineers, neither Monarch Levee District officials nor the county sought the highest level of flood protection. That level of protection, called an urban levee, would protect against an even larger, 500-year flood.

"Once that standard was met, everyone ignored the possibility that there could be a 500-year flood," said Alvin D. Vitt, who was one of the pioneering developers to build in the valley.

While other large developments downstream — Earth City in 1972 and Riverport in 1986 — built 500-year-flood levees to safeguard their investment, the Chesterfield Valley did not.

"There had been talk about it, but we

figured this would be high enough," said Melvin Fick, a Chesterfield farmer who is president of the Monarch Levee District.

Besides, even with gopher holes and infrequent mowing through the years, the Monarch-Chesterfield levee had withstood the area's two biggest floods of the last 20 years. "It held real well in 1973 and 1986," Fick said.

Hrabko of Spirit said federal requirements for the airport require only 100-year-flood protection.

"The levee was a 100-year levee, and what we experienced was a flood of biblical proportion," Hrabko said. "It was a 500-year flood or awfully close to it. You can't expect a 100-year flood levee to protect against that."

Monarch-Chesterfield Levee officials believe the flood that washed away their levee was a 500-year flood, but the Army Corps of Engineers has yet to provide an official ruling on the Flood of 1993.

'Highest Standards'

The development of Riverport and Earth City and their levees provide a sharp contrast to the development at Chesterfield Valley. The levees at Riverport and Earth City have both held so far through this year's flood.

While the Chesterfield Valley was planned by St. Louis County and has been built by several different developers, the other two

business parks were each primarily planned and developed by one large developer.

When Linclay Corp. started developing Earth City, company officials had no doubt that they wanted the strongest possible levee for their 1,200-acre project.

"We really felt that for a project in which there were going to be many millions of dollars invested, we wanted it protected by a levee of the highest standards," said Dale Perkinson, Linclay's former president.

Perkinson now heads Perkinson Realty Group, which is developing the Corporate Woods office park in Earth City. Today, more than 200 businesses are located in Earth City.

Linclay spent \$4 million in 1972 to build a 2.6-mile levee with a strong clay core and a connected system of relief wells to handle water seepage. The development also is protected by Interstate 70 on the south and the Norfolk Southern Railroad embankment on the north.

Meeting the 500-year-flood standard meant that the land was no longer considered a flood plain, Perkinson said.

"That made it easier to market and for people to finance their buildings," he said.

Sverdrup Corp. built a 1.7-mile urban levee at its 500-acre Riverport development across Interstate 70 from Earth City.

The 1986 levee project — together with relief wells, pumps, roads and other infrastructure — cost more than \$10 million. St. Louis County paid about \$4 million of that.

"We just thought it was prudent," said Omar Feeler, Sverdrup's director of civil works.

The 500-year-flood levee "is the norm when you are going to be in a highly developed area," Feeler said.

Now, civic and business boosters in Chesterfield are already clamoring for a 500-year-flood levee to replace the broken Monarch-Chesterfield Levee.

"This levee is going to be rebuilt and built as a 500-year levee," real-estate broker Shaw said. "It will be impregnable or nobody is coming back."

It is unclear who would pay for a new levee — a project that Mayor Leonard can only guess will cost "many millions of dollars."

The Monarch Levee District collected only \$80,984 in assessments from property owners last year. The district is scheduled next month to make its final payment for its last round of improvements in 1983.

"We thought we'd have smooth sailing after that with only a maintenance tax," Levee District President Fick said. Any improvements are "going to cost lots of money," he

said.

Looking To The Future

Some business executives say they would be willing to help pay for a new levee.

Dave Neal is president of Advanced Industrial Systems Inc., a small distributor of temperature controls and other industrial controls. With the company's office underwater, Advanced Industrial has borrowed furniture and moved its six employees to the basement and garage of Neal's home near Ballwin.

"I'd certainly be willing to pay dramatically more if we got a stronger levee," Neal said.

With Highway 40 and Spirit Airport's FAA center out of commission, Mayor Leonard is counting on federal taxpayers to rebuild and improve the levee. Private, city, county and state funds will not be enough, he says.

The money "has to come from Washington, D.C.," he said. "To protect their investment, they are going to have to put in a 500-year levee."

Spirit's Hrabko says the airport will rebuild whether the old levee is repaired or a stronger levee is built. "We want a 500-year levee but we can reopen and rehabilitate with only 100-year levee," he said.

In the meantime, the lingering questions over the valley's future will hurt Chesterfield's development.

"Until people know what is going to happen, they are not going to want to go back there," said Phillip Schreiber, a real-estate consultant. Schreiber is a former president of Sachs Properties Inc., which is developing the still-dry, 1,500-acre Chesterfield Village just east of the bottoms.

Others hope that the flood's effects won't last long. "I think in a period of time people will forget the stigma," developer Vitt said. "You can't get rid of the development there."

Meanwhile, Chesterfield city officials have been trying feverishly to provide relocation help to flooded companies and to encourage them to move back after the water recedes and the levee is repaired or strengthened.

"We are going to lose a few," Leonard said. "But if we do it and do it right, we are going to have new companies down there also."

Although the final word must come from the Federal Emergency Management Agency, city officials make clear that they are committed to resuming development.

"The bottom line is you still develop the valley," said John Langa, who heads the city's economic-development agency. "Obviously, the rules of the game have changed."

October 8, 1992

S17904

HOUSING AND COMMUNITY DEVELOPMENT ACT—CONFERENCE REPORT

Mr. FORD. Mr. President, I submit a report of the committee of conference on H.R. 5334 and ask for its immediate consideration.

The PRESIDING OFFICER. The report will be stated.

The legislative clerk read as follows:

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 5334) to amend and extend certain laws relating to housing and community development, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses this report, signed by a majority of the conferees.

The PRESIDING OFFICER. Without objection, the Senate will proceed to the consideration of the conference report.

(The conference report is printed in the House proceedings of the RECORD of October 5, 1992.)

The PRESIDING OFFICER. The Senator from California is recognized.

Mr. CRANSTON. Mr. President, I rise to say, briefly, that I am pleased that the Senate is about to take final action on the conference report on H.R. 5334, the Housing and Community Development Act of 1992.

During the last several weeks, House and Senate conferees took on the difficult task of merging the Senate and House bills into one coherent piece of legislation. We have incorporated administration suggestions. We have resolved a number of very tough and controversial issues. This conference report is a result of those efforts. It both builds upon existing efforts and establishes new initiatives to address the Nation's affordable housing problem.

S17910

**CLARIFICATION OF CERTAIN ISSUES IN
CONFERENCE REPORT**

Mr. CRANSTON. Mr. President, I would like to clarify the intent behind a series of provisions contained in the conference report.

TITLE IX ISSUES

Three provisions in title IX regulatory programs also need clarification.

The flood restoration zone establishes a new zone "AR" under the flood insurance program for communities in which an existing structural flood control system that provided at least 100-year frequency flood protection, no longer does so. Communities that meet the eligibility criteria as of January 1, 1992, specifically Sacramento and Los Angeles, would be subject to specific construction requirements. The delineated elevation restrictions and the continued eligibility for c zone rates would apply only to developed areas in Sacramento and Los Angeles provided the decertified flood protection system can be restored in a period not to exceed 10 years from the date of enactment of this provision. For other communities that may become eligible for the AR zone and for less developed

areas of Los Angeles and Sacramento, the Director of the Federal Emergency Management Agency shall establish floodplain management criteria for new construction and the substantial improvement of existing structures. The flood restoration zone is intended to address problems experienced by existing communities that temporarily are not afforded 100-year frequency flood protection. The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento. In addition, only structural projects that are decertified by the Corp of Engineers could be considered eligible under the AR zone. Beach nourishment and other such projects would not be eligible.

PUBLIC POLICY ISSUE PAPER

for the

NATIONAL PERFORMANCE REVIEW

**NEW DEVELOPMENT IN DEEP FLOODPLAINS IS BAD PUBLIC POLICY:
THE NATOMAS BASIN EXAMPLE**

Written by

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August 16, 1993

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EXECUTIVE SUMMARY

At issue are Federal policies which **INCREASE** the risk to public health and safety from deep flooding. This increased risk is caused by encouraging more people to live and more buildings to be constructed in deep floodplains, such as Natomas Basin. This paper argues that to knowingly increase the risk to public health and safety is bad public policy.

The flood protection programs of the U.S. Army Corps of Engineers (Corps) and the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA) work together to **increase** the number of people and buildings at risk of catastrophic flooding. This result is caused by the Corps building flood control structures, like levees and dams, creating a false sense of safety. Once a floodplain is protected from the 100-year flood by such structures, then urban development can proceed without any restrictions. FEMA compounds this false sense of safety by making flood insurance **available** to the people who move into the "protected" floodplain, but **not requiring** flood insurance. The Corps and FEMA are encouraging floodplain development by offering the Federal government's "seal of approval" that floodplains are safe for development.

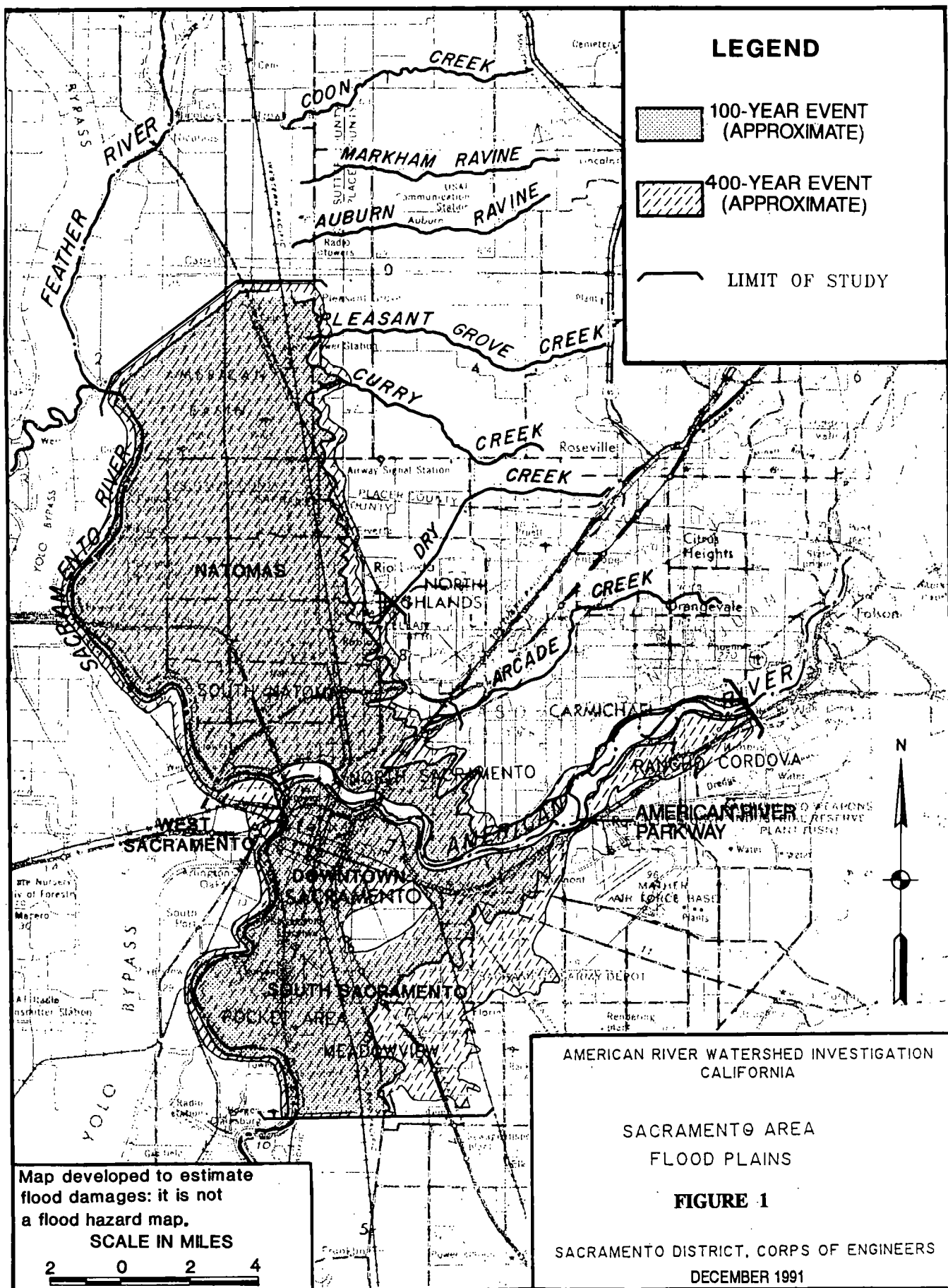
An example of this public policy gone wrong is the Natomas Basin located in the Sacramento (California) floodplain. The 55,000 acre Natomas Basin already has over 31,000 people and 13,730 structures located on 7,260 acres at risk of flooding to depths of 8 to 23 feet. The structures, plus the contents, are valued at \$2.351 billion with flood damage to them estimated at \$1.592 billion. By protecting these people and buildings, the remaining 47,622 acres of agricultural and vacant land are opened to development. This undeveloped land area totals 74 square miles which is **LARGER** than the District of Columbia (69 square miles).

Three local governments control land use decisions in Natomas Basin. Proposed urban development plans by these jurisdictions would allow over 170,000 more people and over 80,000 new homes to reside in Natomas Basin. The result would equal a city in excess of 200,000 people living in over 93,000 homes. The value of all structures and contents is estimated at over \$15 billion with potential flood damage estimated at \$8 to \$10 billion.

How much development has been encouraged in floodplains throughout the United States by existing public policy? How many times will this be repeated in the future across America? How many more disastrous floods must occur before we act? The Great Flood of 1993 shows the consequences of the current public policy. Now is the time to establish a decisive policy opposing Federal encouragement of urban development in deep floodplains.

This new policy can be implemented by enacting the same limitations on Federal actions which once encouraged development of coastal barrier areas. Enacted in 1982, the Coastal Barrier Resources Act (COBRA) prohibits Federal flood insurance for new development and restricts Federal financial assistance to designated coastal barrier areas. The same restrictions should apply to deep floodplains. Such restrictions applied to Natomas Basin will prevent:

- adding over 170,000 people living at risk of deep flooding,
- adding over \$13 billion of property at risk of destruction deep flooding,
- increasing the future cost of government to recover from a catastrophic flood disaster,
- shifting accountability for the consequences of local land use decisions to the Federal government, and
- taxpayers subsidizing profits estimated at \$5 to \$10 billion for land speculators and developers.



FOREWORD

On March 3, 1993, President Bill Clinton announced the National Performance Review to the nation. Vice President Al Gore will lead this effort to bring Total Quality Management (TQM) concepts to all parts of our Nation's government. The National Performance Review will focus six months of intense effort to evaluate the performance of government. Every aspect is open for evaluation. The President stated the Review will "... challenge the basic assumptions of every program asking: Does it work? Does it provide quality service? Does it encourage innovation?" He observed that many programs began for good reasons, but times have changed. He continued, "If there is something the Federal government should stop doing, we will try to make changes."

President Clinton and Vice President Gore asked citizens to communicate their suggestions for improving our Federal government. In response to their invitation, this issue paper is offered to focus attention and initiate dialogue regarding a flawed public policy. This paper identifies problems and offers possible solutions, though the problem definitions and solutions will likely change as the dialogue continues.

GEOGRAPHIC LOCATION¹

Our story begins in the floodplain of Sacramento, California. Formed by the confluence of the Sacramento River and American River, the Sacramento floodplain contains 116,000 acres (181 square miles). "To the conventional wisdom that one ought never to build on a floodplain, California has responded with its capital city."²

In the part of the Sacramento floodplain known as Natomas Basin, over 31,000 people have been allowed by Federal, California, and local governments to build their homes in a deep floodplain. Flood depths range from 8 to 23 feet in the existing developed areas. This 55,000-acre man-made basin was created in 1914 to "reclaim" wetlands and floodplain lands for agriculture.³ The entire Natomas Basin (86 square miles) covers an area *larger* than the District of Columbia (69 square miles). Approximately 13 percent (7,260 acres) of the land is in urban use and the remaining 87 percent (47,622 acres) consists of agricultural and vacant land available for development.

Figure 1 shows the Sacramento floodplain which could be flooded by a 100-year and 400-year flood event.⁴ The reader can see the rivers, creeks, and land areas comprising the 116,000 acre floodplain. The Sacramento River is the western boundary of the floodplain. Flowing north to south the Sacramento River passes Natomas, West Sacramento, Downtown Sacramento, and South Sacramento on its way to the Pacific Ocean through San Francisco Bay. The American River begins its journey in the Sierra Nevada Mountains flowing east to west joining the Sacramento River just south of Natomas Basin.

¹ Much of the information in this paper was obtained from the American River Watershed Investigation, California: Feasibility Report dated December 1991. The Report was prepared by the U.S Army Corps of Engineers, Sacramento District, and issued jointly with The Reclamation Board, State of California. It consists of Part I: Main Report and Part II: Environmental Impact Statement/Environmental Impact Report (EIS/EIR) with Appendixes A through T. This Report will be referenced as Corps Feasibility Report.

² John McPhee, Assembling California, Farrar, Straus and Giroux, (New York, 1993), p. 177.

³ Corps Feasibility Report, EIS/EIR, p. EIS 7-12.

⁴ The 100-year flood plain is approximately 110,000 acres and the 400-year flood plain is approximately 116,000 acres. Source: Corps Feasibility Report, Appendix C, p. C-14.

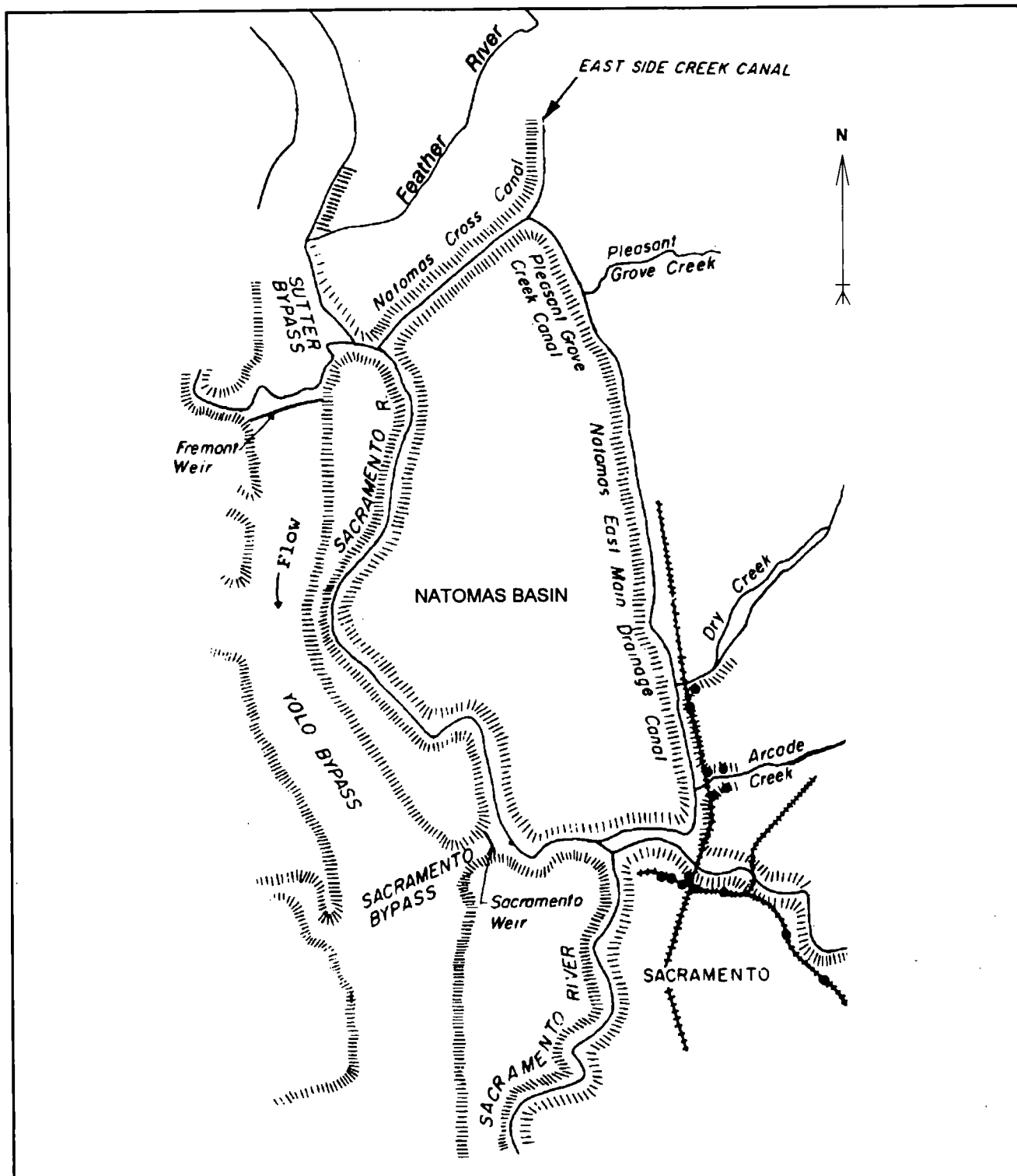


FIGURE 2

SACRAMENTO AREA

EXISTING FLOOD CONTROL STRUCTURES

LEGEND: ||||| Levees
 • Floodgate
 +++ Railroad

Adapted from: U.S. Army Corps of Engineers,
 American River Watershed Investigation, California:
 Feasibility Report, (Sacramento District, December
 1991), Main Report, Plate 2



FIGURE 3
NATOMAS BASIN
AERIAL PHOTOGRAPH
SCALE: 1" = 3750 ft.
PHOTO DATE: 04-25-92

Figure 2 shows the man-made levees totaling over 41 miles creating Natomas Basin. Some 20.6 miles of canals plus another 20.6 miles of the Sacramento and American Rivers encircle the Basin. Water marks its boundaries. The north boundary is the Natomas Cross Canal. The east boundary is made of the Pleasant Grove Creek Canal and the Natomas East Main Drainage Canal. The south boundary is made of the Sacramento River and American River joining south of Natomas. The west boundary is the Sacramento River.

To give the reader an understanding of what Natomas Basin looks like, Figure 3 is an aerial photograph of the area. The expansive agricultural and vacant land in the large northern portion can be contrasted with small urbanized development in the southeastern corner between Interstate 80 and the American River.

DEVELOPMENT IN NATOMAS BASIN

Created by constructing drainage canals and 41 miles of encircling levees, Natomas Basin was considered "protected" from the 100-year flood. Like elsewhere in America, urban development was proposed to replace farming in Sacramento's floodplain. When officials of Sacramento City and Sacramento County decided to approve urban development, it made sense at the time as Natomas Basin is flat land and a 15 to 30 minute drive to downtown Sacramento. Since the level of flood protection met the minimum Federal standards set by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program (NFIP), urban development proceeded. By 1990 over 31,000 people called this area home. Over 13,730 homes, businesses, industries, and public buildings were built over 7,260 acres in Natomas Basin. These buildings and their contents have an estimated value exceeding \$2.351 billion.⁵

In February 1986 a major Pacific Ocean storm brought record breaking rainfall to Northern California causing the Sacramento and American Rivers to reach new record high flows. The Natomas Basin levees held, but weaknesses were found. FEMA contracted with the Corps of Engineers to evaluate the Sacramento area flood control system. With new record river flows plus new FEMA safety standards for levees, Natomas Basin levees were downrated from 100-year flood protection to ranges of 40-year to 70-year protection.

Without going into the details, urban development stopped in Natomas Basin after the 1986 storm because the FEMA 100-year flood control standard was no longer met. Without 100-year flood control, FEMA would allow development to continue only if the first habitable floor is built one foot above the height of the 100-year flood elevation. Because of the potential high flood depths of 8 to 23 feet in Natomas Basin, it was impractical and uneconomical for residential buildings to meet the one foot standard. Residential development stopped.

Projects supported by the Federal, California, and local governments have worked to strengthen the Sacramento River levees. Projects to strengthen other levees around Natomas Basin are progressing. Once the minimum FEMA 100-year flood control standard is restored or exceeded, urban development can continue on the 47,622 acres (74 square miles) of vacant and agricultural land in Natomas Basin.

⁵ Corps Feasibility Report, Appendix C, Table III-3 on p. C-14, Table III-5 on p. C-18, Table III-6 on p. C-19, and p. C-29. Figures are existing conditions as defined on each table.

ACCOUNTABILITY FOR DEVELOPMENT CONSEQUENCES

Who will be held accountable for the consequences of further urban development in Natomas Basin? Who is responsible for promoting such urban development? Who is responsible for declaring Natomas Basin safe for development? In the minds of land speculators, developers, and the local government officials of Sacramento City, Sacramento County, and Sutter County, further urban development is the "Manifest Destiny" for Natomas Basin.

After 100-year flood protection is restored to Natomas Basin, FEMA will give its "seal of approval" and the requirement to build the first floor above the 100-year flood elevation will be removed. Development can continue. To local promoters and decision-makers, this means the flood risk has been determined by FEMA to be acceptable to the Federal government. FEMA's acceptance allows the flood risk caused by approving further development to be shifted from land speculators, developers, and local government taxpayers to Federal taxpayers. The land speculators and developers make their \$5 to \$10 billion of profits and leave the disaster cleanup bills for others to pay. This is wrong. The consequences of local land use decisions should stay with those promoting and making the decisions.

The accountability for land use decisions promoted by land speculators and developers and approved by local government officials is lost because the consequences are shifted to the Federal government. Accountability for decisions will only occur when institutions and individuals making decisions are held accountable for the resulting consequences. Without such ultimate accountability for their actions, land speculators and developers will pressure and encourage local government officials to allow further development in Natomas Basin. Continuing to shift the accountability for development consequences to the Federal government, and ultimately Federal taxpayers, is bad public policy.

How can the accountability for local land use decisions be left with the decision-makers? The answer is found in the Coastal Barrier Resources Act (COBRA) enacted in 1982. COBRA prohibits new development in designated coastal barrier areas from receiving flood insurance and other Federal financial assistance. By removing the Federal encouragement to development (i.e., flood insurance and other Federal financial assistance), land speculators, developers, and local government officials are held totally accountable for the consequences of their land use decisions. Development is still allowed in the floodplain, but the Federal government does not provide financial assistance nor does it provide flood insurance.⁶ All the risks and profits remain with those land speculators, developers, and local government officials who are willing to invest their money in floodplain development. The buck stops at the local level, where it belongs.

INCREASING THE RISK TO PUBLIC HEALTH AND SAFETY

Let's explore the possible consequences from further urban development in Natomas Basin. In the Corps of Engineers report on Sacramento flood hazards, the Corps identified THE flaw in all the flood control alternatives examined for protecting Sacramento: **All flood control alternatives increase the risk to public health and safety.** Why? Because the number of people and buildings exposed to flooding will increase due to urban development in floodplains. The Corps states:

⁶ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 24.

"Finally, under existing local and Federal flood plain management regulations, all of the alternatives carried forward in this report would provide a sufficient level of protection to permit development to proceed in Natomas and elsewhere in the flood plain. This development would significantly increase the number of people and the amount of property exposed to flooding and would increase the losses produced by an uncontrolled event."⁷

The most disturbing results from Natomas Basin flooding are the potential for significant loss of life, the massive disruption of peoples' lives, and the massive destruction of buildings and their contents. Over 31,000 people call this area home.

"Loss of life could be significant depending on the warning time given to residents to evacuate the basin. Advance warning would be essential because the breach would be proximately located to the urbanized portion of the basin. Floodwaters would thus reach vital transportation corridors relatively quickly, and eventually render the affected freeway and local roadway segments impassable."⁸

Proposed urban development plans by local governments would add over 170,000 people and over \$13 billion of new buildings and their contents in Natomas Basin. The total population would exceed 200,000 and property value exceed \$15 billion. Where do 200,000 people who lived in 93,000 homes find housing during and after the flood? What magnitude of human and economic disaster will befall the Sacramento area when a flood inundates a fully urbanized Natomas Basin? To answer this question let's compare the Great Flood of 1993 to a future flood in Natomas Basin with 200,000 people and over \$15 billion worth of structures and contents. Table A shows the comparison:

Table A

Comparison of Great Flood of 1993 to Future Flood of Urbanized Natomas Basin⁹

	Great Flood of 1993*	Future Flood Natomas Basin
Deaths	48	15
People Evacuated	100,000	200,000
Homes Damaged	45,000	93,000
Total Damages	\$12 to \$15 Billion	\$8 to \$10 Billion
Property Damage	\$6 to \$7 Billion	\$8 to \$10 Billion
Crop Damage	\$6 to \$8 Billion	0
Square Miles Flooded	31,250	86

* Actual and estimated as of Friday, August 6, 1993.

⁷ Corps Feasibility Report, EIS/EIR, p. EIS 1-8.

⁸ Sacramento Area Flood Control Agency, Revised Draft Environmental Impact Report for the Revised Natomas Area Flood Control Improvement Project, (Sacramento, March 1993), p. 5.3-1.

⁹ See Appendix B for sources.

The comparison is striking. In the Midwest the flood damage and destruction is spread over 31,250 square miles beside rivers stretching hundreds of miles. In Natomas Basin the destruction is concentrated in 86 square miles. It is ironic to compare the Midwest flood damage to that of a fully developed Natomas Basin. Crop damage is half of the Midwest damages because flooding occurred during the growing and planting season. Property damage is the entire source of damages in Natomas Basin.

The estimated property and crop damage, as of August 6, produced by the Great Flood is \$12 to \$15 billion spread over 31,250 square miles compared to an estimated \$8 to \$10 billion of property damage over just 86 square miles in Natomas Basin. Twice as many homes would be damaged in Natomas Basin (93,000) compared to the Midwest (45,000 as of August 6). Why would we knowingly create a potential catastrophe of this magnitude?

SEVERITY OF FLOOD DAMAGE

Why does flooding in Natomas Basin cause so much destruction? The answer is found in its physical features:

1. During flood events, river levels are higher than the ground level inside the Basin.
2. Rivers or canals surround the Basin on all sides.
3. Levees surround Natomas Basin on all sides.
4. Levees are 15 to 20 feet higher than the inside land area.
5. Natomas Basin has no drain.
6. Low lying lands inside the Basin are lower than surrounding land.
7. Flood waters fill the Basin whenever levees fail.

Together these physical features make Natomas Basin a disaster waiting to happen. Whenever a levee breaks, flood water could fill the Basin. Why? Natomas Basin is a 55,000-acre bathtub and swimming pool combined, but it has no drain! The 15 to 20 high levees form the "bathtub" walls. The land inside is the "bathtub" bottom, but the bottom is not flat. The bottom is like a swimming pool with the deep end located in the middle. From the deep center the pool gets shallower as one moves toward the levees.

On Figure 4 the land area shown as white (over 23 feet) is the lowest part of Natomas Basin. The next lowest land elevation is the land area marked 18 to 23 feet. Once flood waters get inside, it cannot get out until the river level goes down allowing some water to drain out the break in the levee. In these two low lying areas, water will remain until pumped out or it evaporates. These two areas are 5 to 10 feet *lower* than the land around them and would form a 17,700 acre (27.6 square mile) pond. It would cover 32 percent of the land area.

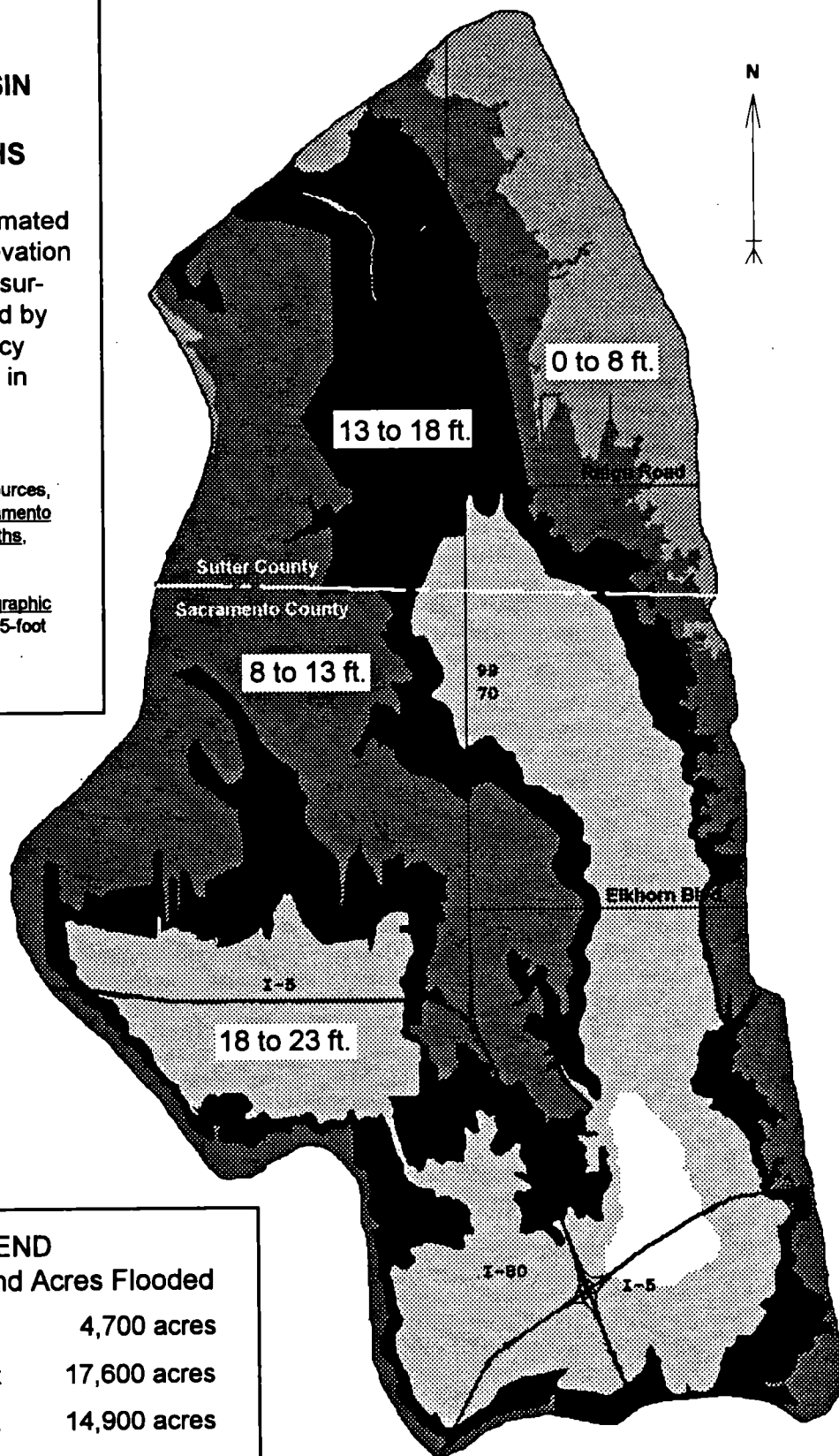
Figure 4 shows the land area covered by the estimated potential flood depths for Natomas Basin. The flood depths are based upon a flood elevation of 33 feet derived from the Flood Insurance Study and Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA) in March 1993. Figure 5 shows the estimated flood depths, the number of acres and square miles by flood depth, and the percentage of land area covered by flood depth.

FIGURE 4 **NATOMAS BASIN** **ESTIMATED** **FLOOD DEPTHS**

Flood depths are estimated from 33-foot flood elevation derived from Flood Insurance Rate Map issued by the Federal Emergency Management Agency in March 1993.

Map developed from:
 California Dept. of Water Resources,
Map of American River - Sacramento
Estimated Potential Flood Depths,
 June 1993.

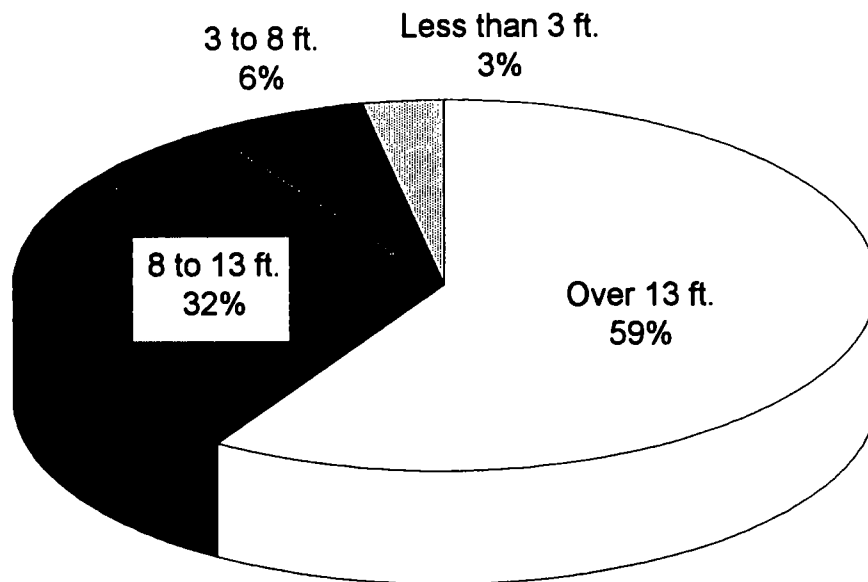
U.S. Geological Survey, Topographic
Maps (7.5 Minute Series) with 5-foot
 contour interval, various years.



LEGEND

Depth of Water and Acres Flooded

	0 to 8 feet	4,700 acres
	8 to 13 feet	17,600 acres
	13 to 18 feet	14,900 acres
	18 to 23 feet	16,600 acres
	over 23 feet	1,100 acres



Depth of Flood Water (feet)	Percent of Total Land	Land Area	
		(acres)	(sq. miles)
0 to 3	3.	1,400	2.
3 to 8	6.	3,300	5.
8 to 13	32.	17,600	28.
13 to 18	27.	14,900	23.
18 to 23	30.	16,600	26.
over 23	2.	1,100	2.
Totals	100.	54,900	86.

**FIGURE 5
NATOMAS BASIN
ESTIMATED FLOOD DEPTHS**

Percentage, acreage, and square mile
measurements of estimated flood depths

The depth of flood water and the duration of flooding have a significant impact upon property damage. Together flood depth and duration have a significant impact on property damage in Natomas Basin. The Corps of Engineers estimated flooding will last for 30 days. This is an extraordinary amount of time when compared to the flood duration of less than 5 days for other parts of the Sacramento floodplain. The Corps also estimated damages to buildings and contents would reach 100 percent where flood depths exceed 13 feet.¹⁰ Figure 5 shows that approximately 59 percent of Natomas Basin's land area could flood to depths exceeding 13 feet and 32 percent could flood to depths of 8 to 13 feet. A total of 91 percent of the land area could flood to depths exceeding 8 feet.

The Corps estimated 13,730 structures and the contents are valued at \$2.351 billion and would suffer flood damage estimated at \$1.592 billion, which is over 67 percent of the market value. "Natomas is the only reach (part the Sacramento floodplain) where flood damages would exceed 50 percent of the market value of the structure."¹¹

Even if a higher level of flood control is provided, the depth and duration of flooding in Natomas Basin is the same. Whenever the next larger flood breeches the levees, Natomas Basin fills with water. The Corps of Engineers observed:

"Flooding from levee failure would be similar in Natomas . . . **regardless of the frequency** of the flood event because (1) the ground elevation adjacent to the levees in these locations is lower than the water surface in the river, and (2) the volume of water in the American River . . . and Sacramento River in the case of Natomas . . . **would fill** the flood plains to similar depths."¹²

To illustrate the Corps point, Figure 6 is a Natomas Basin levee profile along the American River. It shows the highest river water level during the February 1986 storm was 13 feet above the ground level in Natomas Basin. If the levee had failed with the river at the highest level, Natomas Basin could have filled up. As shown on Figure 6, a single story house would have been completely covered by water.¹³

The Corps of Engineers concluded that the Natomas Basin will experience severe flooding whenever the flood control levees are breached. The only thing which changes is the probability, or frequency, of when flooding will occur. Severity of flooding in Natomas Basin is the same no matter the frequency of flood. In other words, severity of flooding in Natomas Basin is the same no matter the probability, or probable frequency, of flooding.

¹⁰ "For the Natomas reach, duration is 30 days, and the average velocity is less than 0.5 feet per second. **Duration has a significant effect on the flood damages for this area.** Damages to structure and content for each land use category [i.e., residential, commercial, industrial, public, and mobile home] were set at 100 percent for depths greater than [sic] 13 feet. For the remaining reaches in the flood plain, duration is less than 5 days, and the average velocities range from 0.5 to 5 feet per second. Neither duration nor velocity had any significant effect on damages." Source: Corps Feasibility Report, Appendix C, p. C-22, (emphasis added)

¹¹ Ibid., p. C-25.

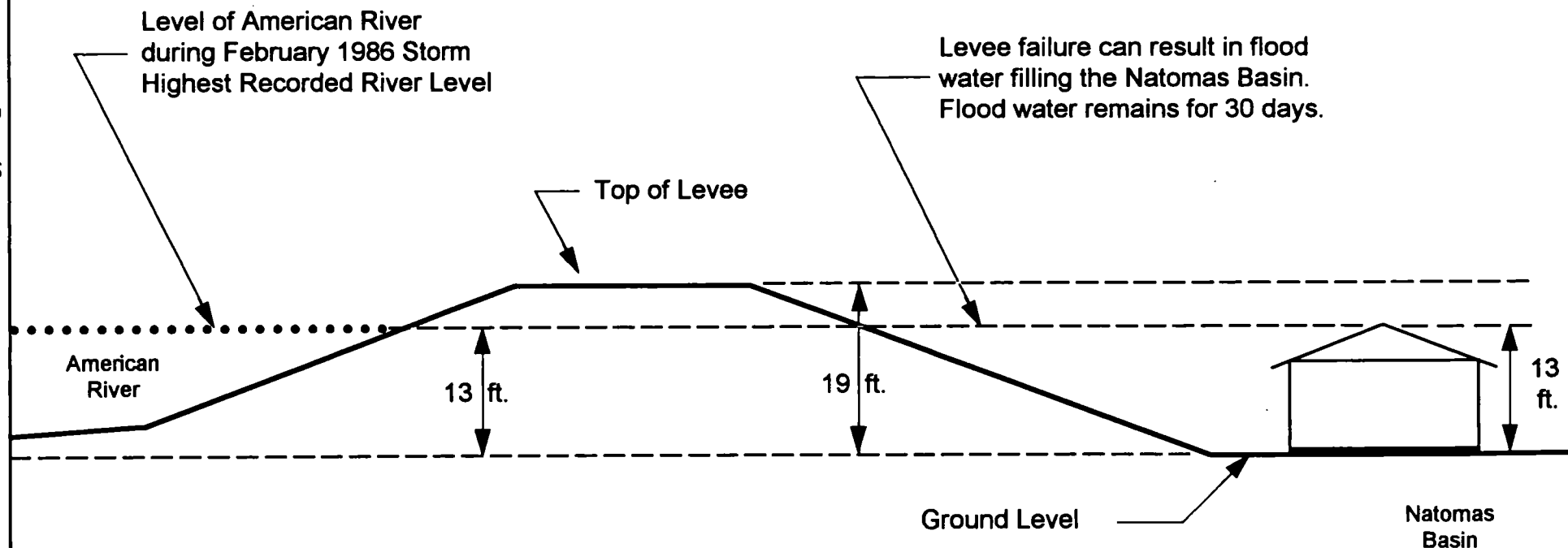
¹² Ibid., Main Report, p. III-18, (emphasis added).

¹³ Figure 6 is a graphic illustration of Natomas Basin flood depths and what this much water does to a single story house constructed on grade. Building on grade is the typical method used in much of California. The house is completely covered. Destruction is total for building and contents.

**FIGURE 6 LEVEE PROFILE
NATOMAS BASIN
AMERICAN RIVER
RIVER MILE 1.5
LOOKING DOWNSTREAM**

"Flooding from levee failure would be similar in Natomas . . . regardless of the frequency of the flood event because (1) the ground elevation adjacent to the levees in these locations is lower than the water surface in the river and (2) the volume of water in the American River . . . and Sacramento River . . . would fill the flood plains to similar depths."

SOURCE: U.S. Army Corps of Engineers, American River Watershed Investigation, California: Feasibility Report, (Sacramento District, December 1991), Main Report, p. III-18.



Drawn from U.S. Army Corps of Engineers, American River Watershed Investigation, California: Feasibility Report, (Sacramento District, December 1991), Appendix M, Chapter 2, Appendix M-2-A, Levee and Flood Profiles - Sections 5 through 9, Section 7.

PROBABILITY OF FLOODING

What is the probability of Natomas Basin flooding? To answer the question, consider an incident from the Great Flood of 1993:

"For various points along the Mississippi, the Army Corps of Engineers has calculated the probability of floods of varying heights. The smallest probability they bothered to calculate was a '500-year flood' - one so unlikely it can be expected to happen only once in five centuries. . . . [A]t Hannibal, Mo., a 500-year flood was determined to be 30 feet, so the city built its new levee a foot higher, at 31. It was finished in April after two years of work, and when the waters rose in early July residents heaped three feet more of sandbags atop it. When the crest reached Hannibal, the river was at 32 feet."¹⁴

This incident helps us to understand the uncertainty of predicting and controlling flood events. Also it shows the confusion caused by the terms used to describe flood events. The Corps of Engineers calculates the probability of floods of varying heights, or volumes. Each calculated flood event has an estimated water height which is caused by an estimated water volume. As can be expected, greater volume results in greater height. As the volume of water increases, the probability decreases because larger floods occur less often.

To name different flood events, engineers use a shorthand description based upon the probability of when each flood event will occur. Engineers take historical records of past floods and apply statistical calculations to predict the probability or chance of flooding. For example, the "500-year flood" is the calculated flood of a certain volume or height which has a 1 in 500 chance of occurring in any year. The 500-year flood has a one-fifth of one percent (0.20%) of occurring in any year. Over 30 years the 500-year flood has a 6 percent chance of occurring during the 30 years. The "500-year flood" DOES NOT mean this size of flood will only occur once in 500 years. As can be seen from Table B, over 100 years the 500-year flood has a 18 percent of occurring while the 100-year flood has a 63 percent chance of occurring during the same 100 years.

The terms 500-year flood and 100-year flood can be misleading. Such floods may be experienced in any year. Since the National Flood Insurance Program was established, there have been numerous instances where communities have experienced two, and even three, 100-year or greater floods within a span of several years. A notable example is Pennsylvania in the 1970's where within five years after Tropical Storm Agnes (1972) battered the state another 100-year flood occurred.¹⁵

Table B presents the percent chance or probability of different flood events happening in any year and over various numbers of years. The chance of the 1 in 100 flood, or the 100-year flood, occurring over the life of a 30-year mortgage is 26 percent, or about one in four. The question for the homeowner is whether or not to purchase flood insurance. By contrast, during the term of a 30-year mortgage, there is only a 1 percent chance of suffering a fire loss.¹⁶ What level of risk is acceptable? What level of risk is unacceptable?

¹⁴ Jerry Adler, "Troubled Waters," Newsweek, July 26, 1993, p.21.

¹⁵ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 7.

¹⁶ Ibid.

Table B

Percent Chance Of Floods Occurring Over The Years

Number Of Years	100-Year Flood (percent)	500-Year Flood (percent)
Any Year	1.0	0.20
30	26	6
50	39	10
75	53	14
100	63	18
200	87	33
400	98	55
500	99.34	63
1000	99.99	86
2000	99.99	98

CONGRESSIONAL RECOGNITION OF UNACCEPTABLE RISK

The unacceptable risk posed to public health and safety by further development in Natomas Basin was recognized in two Federal laws enacted in 1992. These two laws contained sections written to address Natomas Basin flooding issues. Each law and its legislative history talks specifically about Natomas Basin. Together these laws express the Congressional recognition of the unacceptable risk created by allowing further urban development of Natomas Basin

First, in the Department of Defense Appropriations Act of 1992, the Secretary of the Army was authorized to construct the Natomas Basin levee improvement features proposed by the Corps of Engineers. However, a limitation was placed upon these levee improvements:

"... provided that such construction does not encourage the development of deep floodplains."¹⁷

Second, in the Housing and Community Development Act of 1992 (H.R. 5334), changes were made to the National Flood Insurance Program (NFIP). A change was specifically designed to address Sacramento's flood insurance problems. Briefly, the legislation (a) created a new "flood restoration zone" for flood insurance rates, and (b) allowed the Federal Emergency Management Agency (FEMA) to establish floodplain management criteria for new construction in the flood restoration zone where flood depths exceed 5 feet. Speaking as the Chairman of the Senate Housing and Urban Affairs Subcommittee responsible for the legislation, former U.S. Senator Alan Cranston of California spoke on the floor of the Senate to clarify the intent behind the legislation:

"The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento."¹⁸

¹⁷ Department of Defense Appropriations Act of 1992, Section 9159.

These two laws recognize the unacceptable risk caused by further urban development in Natomas Basin. Congress has established limits on further development. However, local government officials are working to get around the limitations contained in these two laws. Their efforts appear to be close to success and urban development will continue to fill Natomas Basin. Before this happens, the Clinton-Gore Administration and Congress should act to change Federal law by prohibiting flood insurance from being available to new development and by removing other Federal financial assistance.

Such action was taken by Congress in October 1982 with the passage of the Coastal Barrier Resources Act (COBRA).¹⁹ The law was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas. Among the restrictions in COBRA, no new flood insurance coverage was provided for any new construction in designated coastal barriers after October 1, 1983. While COBRA does not prevent private financing and development, it limits financial assistance by Federal agencies on undeveloped coastal barriers. Similar legislation should be enacted to remove Federal encouragement of further urban development in Natomas Basin. Further details for legislation to achieve this end is presented in Appendix A.

SUMMARY OF PUBLIC POLICY ISSUE

The basic public policy issue is whether or not the Federal government should encourage additional urban development in deep floodplains, such as Natomas Basin. The arguments against encouraging further development are based upon these beliefs and values:

- Government should reduce risk and protect the public health and safety, not increase such risks.
- Government should spent limited tax dollars protecting public health and safety, not wasted on projects increasing the risk to people and property.
- Predicting and controlling the forces of nature is subject to unacceptable error and mistake, not an activity government should depend upon for protecting public health and safety.
- The accountability for the consequences resulting from decisions should remain with the decision-makers responsible, not transferred to others.
- Each generation should think about the short and long term impacts of their actions, not leaving deficits and billion dollar blank checks to be paid for future flood disasters by future generations.
- Tax dollars should benefit the larger public good, not produce windfall profits for a few land speculators and developers.

The problems caused by allowing further urban development in Natomas Basin are:

1. The risk to human life and safety is increased by further urban development in Natomas Basin. Over 170,000 additional people could be added to the 31,000 already living there. What will be the level of human suffering when 200,000 people are flooded? Where does a city of over 200,000 people live when everything is under water for 30 days? How long will it take to rebuild? How many people will die?

¹⁸ Congressional Record - Senate, October 8, 1992, p. S17910.

¹⁹ 96 Stat. 1653, Public Law 97-348 (S. 1018), October 18, 1982.

2. The 55,000-acre Natomas Basin is a combined bathtub/swimming pool with no drain! Massive destruction of structures and the contents would result from flooding a fully urbanized Natomas Basin. Proposed urban development plans by local governments would increase the value of structures and contents to an estimated value of over \$15 billion. The potential property damage is estimated at \$8 to \$10 billion. This amount is similar to the destructive Great Flood of 1993 (as of August 6, 1993). How much will the local, California, and Federal governments pay for such a massive disaster relief effort? From where will the money come?

3. Flood depth, flood duration, and extent of destruction in Natomas Basin is the same no matter if the flood is a 100-year, 200-year, or 400-year event. Flood control structures create a false sense of security. Flood control structures for Natomas Basin only reduce the probability, or probable frequency, of flooding, not the severity of destruction. Instead of encouraging people to stay out of floodplains, government tries to predict and control the forces of nature. Why are we allowing more people and buildings to be placed in harms way when we know disaster will strike someday?

4. The accountability for flooding consequences caused by the decision to build in floodplains is transferred from local decision-makers to Federal taxpayers. How can local decision-makers be held accountable for their decisions when the resulting consequences are transferred to others?

5. By encouraging further development in Natomas Basin, Federal taxpayers are subsidizing profits for land speculators and developers who promote building in deep floodplains. Estimated profits are \$5 to \$10 billion. The land speculators and developers do not bear the cost of building flood control structures nor the cost of emergency disaster relief and recovery. Taxpayers are responsible for this financial burden. When will the costs be placed upon those responsible and not passed on to others?

CONCLUSION

The National Performance Review offers the opportunity to ask tough questions and to take corrective action. Federal public policy should not encourage increasing the number of people and buildings at risk of deep flooding. The Natomas Basin is a prime example of Federal policy gone wrong. Encouraging further urban development in deep floodplains is bad public policy. The Great Flood of 1993 shows the folly of continuing business as usual. Saying "it has always been done this way" is no excuse for continuing the practice. Now is the time to make fundamental changes.

APPENDIX A

PROPOSED LEGISLATIVE SOLUTION

Federal government actions are encouraging urban development in Natomas Basin. This is the same type of problem Congress faced when it enacted the Coastal Barrier Resources Act (COBRA). Adopted in October 1982, COBRA was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas.

The essential provisions of COBRA are:

1. Prohibits the National Flood Insurance Program from providing flood insurance protection for buildings built after October 1, 1983, in designated undeveloped coastal barriers.
2. Limits financial assistance by Federal agencies on undeveloped coastal barriers, except for enumerated situations such as emergency assistance actions essential to saving lives, protecting property, and protecting public health and safety. Such emergency assistance would not include disaster assistance and government loans.

While COBRA limits the availability of flood insurance and limits financial assistance by Federal agencies, it does not prevent private financing and development. The inability of the property owner to purchase flood insurance does not require a lender to refrain from making a conventional loan. The decision and risk remain with the property owner and the lender.¹

These same COBRA restrictions should be enacted by Congress for deep floodplains, like Natomas Basin. Doing so will greatly restrict new development and alter the type of development undertaken in the Natomas Basin. Existing buildings would be grandfathered and allowed to continue receiving flood insurance and Federal financial assistance.

Based upon the characteristics of Natomas Basin, five (5) criteria should be used to define deep floodplains subject to COBRA-type restrictions:

1. Damage from potential flood events will cause destruction of structures and contents to be 50 percent or greater of their value regardless of the flooding frequency or probability.
2. Depth of flooding is over five (5) feet for all potential flood events regardless of the frequency of flooding.
3. Duration of flooding is over five (5) days for all potential flood events regardless of the frequency of flooding.
4. Amount of undeveloped land in project area located in floodplain exceeds 5 percent of the project land area.
5. Potential risk to public health and safety is increased even after flood control measures are implemented.

¹ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 24

APPENDIX B

GREAT FLOOD OF 1993: The numbers are as of Friday, August 6, 1993. The information and numbers used are taken from The Sacramento Bee, August 8, 1993, p. A8, except where another source is noted.

A Newsweek, July 26, 1993, p. 22 .

As of August 6, 1993	Deaths (actual)	Homes Damaged (estimated)	Estimated Property Damage (billion)	Estimated Crop Damage (billion)	State Total Estimated Damages (billion)	Square Miles Flooded	Total Number States Flooded
Illinois	4		\$0.930	\$0.565	\$1.495		
Iowa	5		1.250	1.150	2.400		
Kansas	1		A 2.000	0.434	2.434		
Minnesota	4		0.018	0.990	1.008		
Missouri	25		1.700	1.100	2.800		
Nebraska	2		0.050	0.292	0.342		
N. Dakota	2		0.100	0.400	0.500		
S. Dakota	3		0.014	0.572	0.586		
Wisconsin	2		0.121	0.800	0.921		
TOTAL	48	44,984	\$6.183	\$6.303	\$12.486	31,250	9

Estimated damages range from \$12.486 billion to \$15 billion. Based upon totals for estimated crop and property damage from the table above, 50/50 split of damage costs to date. Applying 50/50 split to \$15 billion gives \$7.5 billion each.

"Homes Damaged" is based on 44,984 "Families affected" found in the article and rounded to 45,000.

"People Evacuated" is estimated by assuming 2.25 persons per home times 44,984 homes damaged yielding 101,214 people and rounded to 100,000.

"Square Miles Flooded" is calculated from estimated 20 million acres flooded divided by 640 acres/sq. mile equals 31,250 sq. miles.

FUTURE NATOMAS BASIN:

Deaths: Estimated deaths were derived from data in Corps Feasibility Report, Main Report, p. III-18 and Appendix C, Table III-3, p. 14. Estimated 25 fatalities in Sacramento's population of 366,500 produced a ratio of 1 death per 14,660 people. Applied to an estimated Natomas Basin population of 210,000 yields 15 deaths.

Homes Damaged (estimated): Based upon estimated housing units from:
City of Sacramento: South Natomas Community Plan:

Total Housing Units (buildout): 17,765
Total Population (buildout): 38,147

Source: Population and Housing Data by Community Plan Area, City of Sacramento, Planning and Development Department, March 1991, p. 6.

North Natomas Community Plan:

Total Housing Units (buildout): 33,527
Total Population (buildout): 66,910

Source: Draft Supplement to the 1986 North Natomas Community Plan EIR, City of Sacramento, Planning and Development Department, March 1993, p. 2.0-8.

Sutter County: Total Housing Units (buildout) 42,362
 Total Population (buildout): 105,056

Source: Technical Appendices to the South Sutter County General Plan Amendment and Draft Environmental Impact Report, Sutter County Planning Department, July 31, 1991, Appendix G "Land Use Calculations by Cells," Part 5.

Total Natomas Basin: Total Housing Units (buildout): 93,654
 Total Population (buildout): 210,113

Estimated Property Damage (billion): The estimated value of structures and contents is calculated by assuming the 200,000 people will have the same value of structures and contents as the current 31,000 people. So (200,000 divided by 31,000) times \$2.351 billion/per 31,000 people equals \$15.168 billion. Using the 67 percent flood damage figure for existing structures and contents yields (67% x \$15.168 billion = \$10.163 billion). Being more conservative using 50 percent damages on \$15.168 billion gives \$7.584 billion rounded to \$8 billion.

Estimated Crop Damage: "The economic evaluation for the Reconnaissance Report, American River Watershed Investigation, January 1988, indicated that the benefits attributable to agricultural crops were less than 1/2 half of 1 percent. As a result, flood damage reduction benefits were not estimated for agricultural crops." Source: Corps Feasibility Report, Appendix C, p. C-20.

PUBLIC POLICY ISSUE PAPER

for the

NATIONAL PERFORMANCE REVIEW

**NEW DEVELOPMENT IN DEEP FLOODPLAINS IS BAD PUBLIC POLICY:
THE NATOMAS BASIN EXAMPLE**

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EXECUTIVE SUMMARY

At issue are Federal policies which **INCREASE** the risk to public health and safety from deep flooding. This increased risk is caused by encouraging more people to live and more buildings to be constructed in deep floodplains, such as Natomas Basin. This paper argues that to knowingly increase the risk to public health and safety is bad public policy.

The flood protection programs of the U.S. Army Corps of Engineers (Corps) and the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA) work together to **increase** the number of people and buildings at risk of catastrophic flooding. This result is caused by the Corps building flood control structures, like levees and dams, creating a false sense of safety. Once a floodplain is protected from the 100-year flood by such structures, then urban development can proceed without any restrictions. FEMA compounds this false sense of safety by making flood insurance **available** to the people who move into the "protected" floodplain, but **not requiring** flood insurance. The Corps and FEMA are encouraging floodplain development by offering the Federal government's "seal of approval" that floodplains are safe for development.

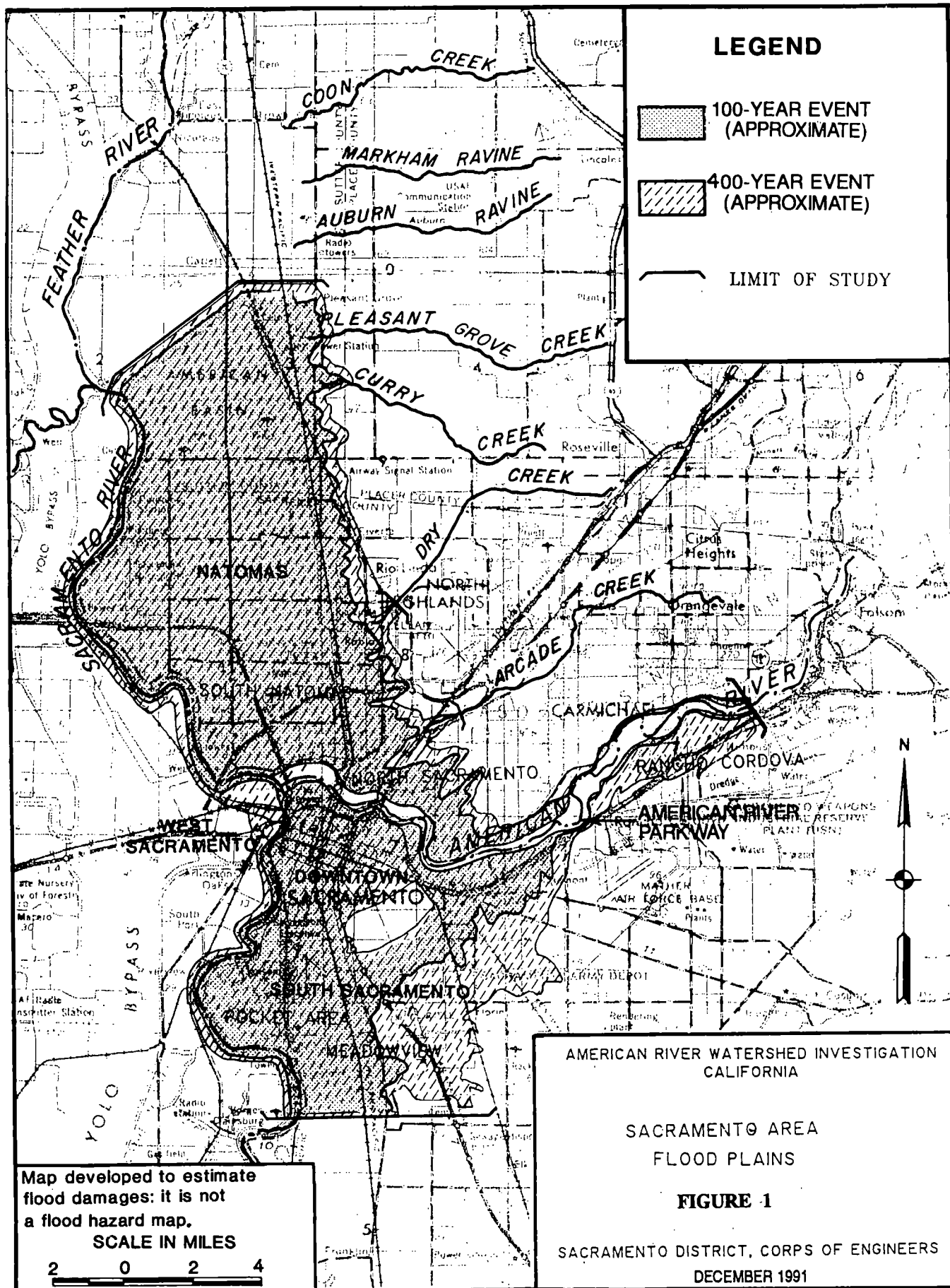
An example of this public policy gone wrong is the Natomas Basin located in the Sacramento (California) floodplain. The 55,000 acre Natomas Basin already has over 31,000 people and 13,730 structures located on 7,260 acres at risk of flooding to depths of 8 to 23 feet. The structures, plus the contents, are valued at \$2.351 billion with flood damage to them estimated at \$1.592 billion. By protecting these people and buildings, the remaining 47,622 acres of agricultural and vacant land are opened to development. This undeveloped land area totals 74 square miles which is **LARGER** than the District of Columbia (69 square miles).

Three local governments control land use decisions in Natomas Basin. Proposed urban development plans by these jurisdictions would allow over 170,000 more people and over 80,000 new homes to reside in Natomas Basin. The result would equal a city in excess of 200,000 people living in over 93,000 homes. The value of all structures and contents is estimated at over \$15 billion with potential flood damage estimated at \$8 to \$10 billion.

How much development has been encouraged in floodplains throughout the United States by existing public policy? How many times will this be repeated in the future across America? How many more disastrous floods must occur before we act? The Great Flood of 1993 shows the consequences of the current public policy. Now is the time to establish a decisive policy opposing Federal encouragement of urban development in deep floodplains.

This new policy can be implemented by enacting the same limitations on Federal actions which once encouraged development of coastal barrier areas. Enacted in 1982, the Coastal Barrier Resources Act (COBRA) prohibits Federal flood insurance for new development and restricts Federal financial assistance to designated coastal barrier areas. The same restrictions should apply to deep floodplains. Such restrictions applied to Natomas Basin will prevent:

- adding over 170,000 people living at risk of deep flooding,
- adding over \$13 billion of property at risk of destruction deep flooding,
- increasing the future cost of government to recover from a catastrophic flood disaster,
- shifting accountability for the consequences of local land use decisions to the Federal government, and
- taxpayers subsidizing profits estimated at \$5 to \$10 billion for land speculators and developers.



FOREWORD

On March 3, 1993, President Bill Clinton announced the National Performance Review to the nation. Vice President Al Gore will lead this effort to bring Total Quality Management (TQM) concepts to all parts of our Nation's government. The National Performance Review will focus six months of intense effort to evaluate the performance of government. Every aspect is open for evaluation. The President stated the Review will "... challenge the basic assumptions of every program asking: Does it work? Does it provide quality service? Does it encourage innovation?" He observed that many programs began for good reasons, but times have changed. He continued, "If there is something the Federal government should stop doing, we will try to make changes."

President Clinton and Vice President Gore asked citizens to communicate their suggestions for improving our Federal government. In response to their invitation, this issue paper is offered to focus attention and initiate dialogue regarding a flawed public policy. This paper identifies problems and offers possible solutions, though the problem definitions and solutions will likely change as the dialogue continues.

GEOGRAPHIC LOCATION¹

Our story begins in the floodplain of Sacramento, California. Formed by the confluence of the Sacramento River and American River, the Sacramento floodplain contains 116,000 acres (181 square miles). "To the conventional wisdom that one ought never to build on a floodplain, California has responded with its capital city."²

In the part of the Sacramento floodplain known as Natomas Basin, over 31,000 people have been allowed by Federal, California, and local governments to build their homes in a deep floodplain. Flood depths range from 8 to 23 feet in the existing developed areas. This 55,000-acre man-made basin was created in 1914 to "reclaim" wetlands and floodplain lands for agriculture.³ The entire Natomas Basin (86 square miles) covers an area *larger* than the District of Columbia (69 square miles). Approximately 13 percent (7,260 acres) of the land is in urban use and the remaining 87 percent (47,622 acres) consists of agricultural and vacant land available for development.

Figure 1 shows the Sacramento floodplain which could be flooded by a 100-year and 400-year flood event.⁴ The reader can see the rivers, creeks, and land areas comprising the 116,000 acre floodplain. The Sacramento River is the western boundary of the floodplain. Flowing north to south the Sacramento River passes Natomas, West Sacramento, Downtown Sacramento, and South Sacramento on its way to the Pacific Ocean through San Francisco Bay. The American River begins its journey in the Sierra Nevada Mountains flowing east to west joining the Sacramento River just south of Natomas Basin.

¹ Much of the information in this paper was obtained from the American River Watershed Investigation, California: Feasibility Report dated December 1991. The Report was prepared by the U.S Army Corps of Engineers, Sacramento District, and issued jointly with The Reclamation Board, State of California. It consists of Part I: Main Report and Part II: Environmental Impact Statement/Environmental Impact Report (EIS/EIR) with Appendixes A through T. This Report will be referenced as Corps Feasibility Report.

² John McPhee, Assembling California, Farrar, Straus and Giroux, (New York, 1993), p. 177.

³ Corps Feasibility Report, EIS/EIR, p. EIS 7-12.

⁴ The 100-year flood plain is approximately 110,000 acres and the 400-year flood plain is approximately 116,000 acres. Source: Corps Feasibility Report, Appendix C, p. C-14.

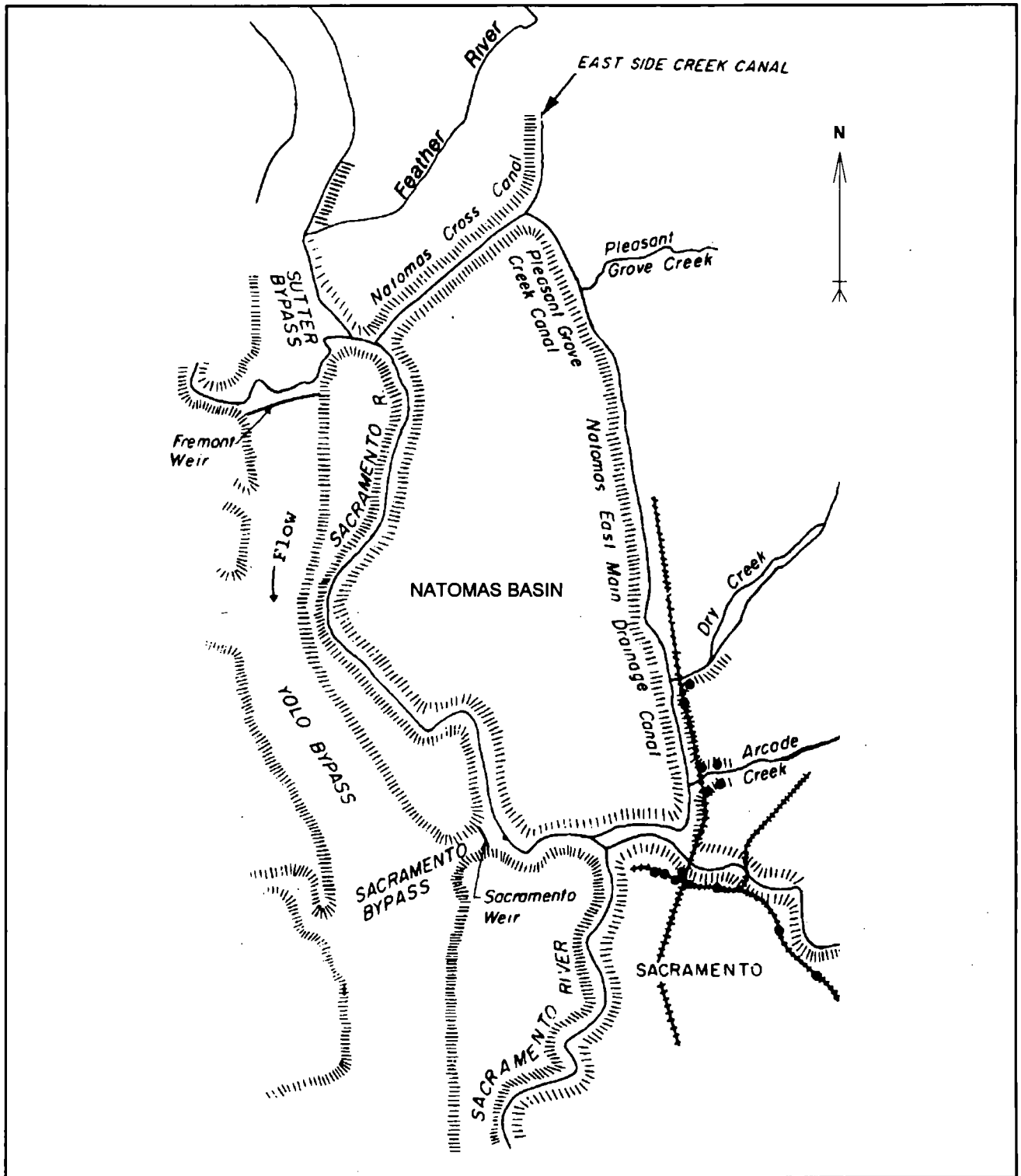


FIGURE 2
SACRAMENTO AREA

EXISTING FLOOD CONTROL STRUCTURES

LEGEND: ||||| Levees
• Floodgate
+++ Railroad

Adapted from: U.S. Army Corps of Engineers,
American River Watershed Investigation, California:
Feasibility Report, (Sacramento District, December
1991), Main Report, Plate 2

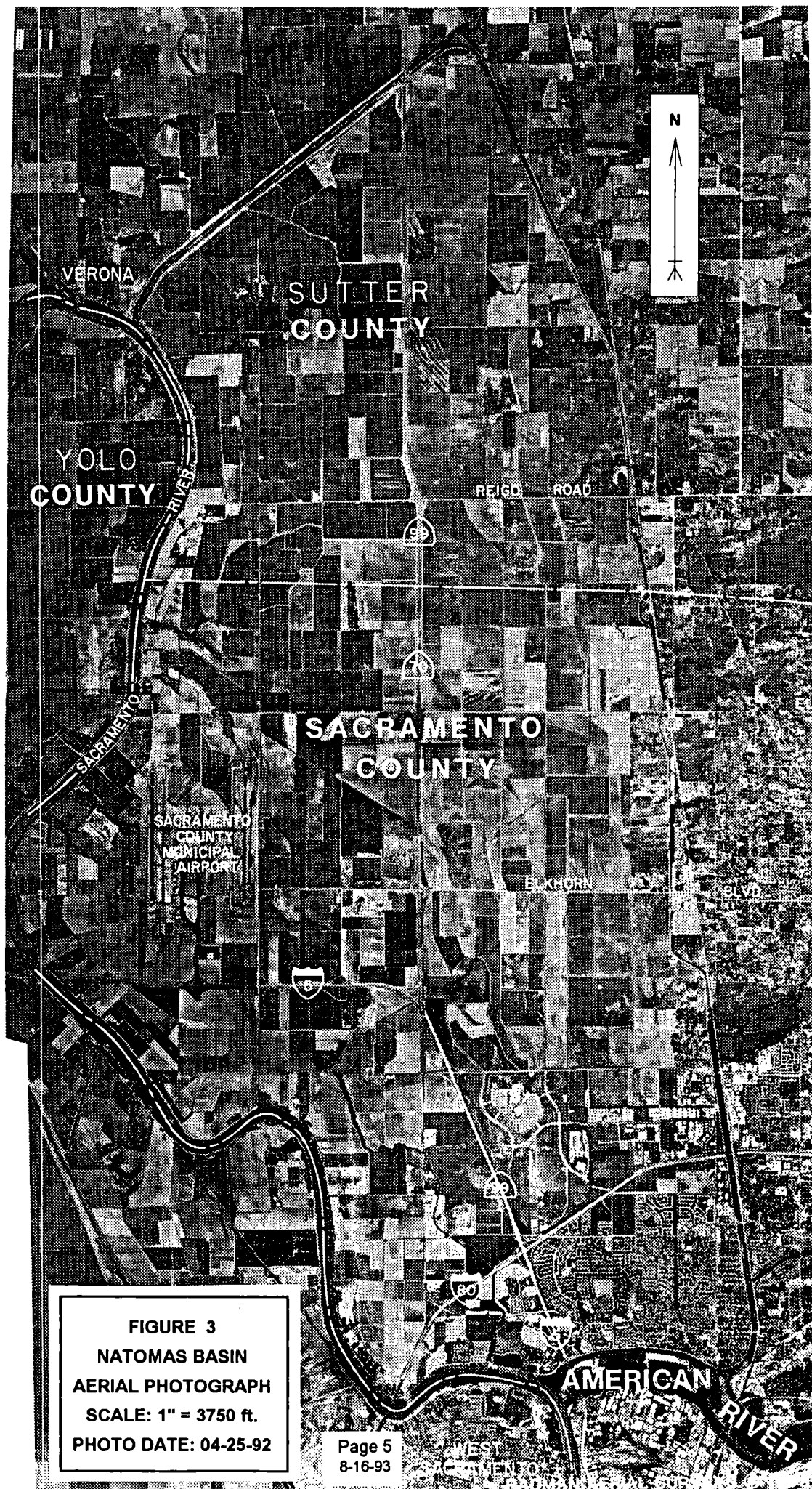


FIGURE 3
NATOMAS BASIN
AERIAL PHOTOGRAPH
SCALE: 1" = 3750 ft.
PHOTO DATE: 04-25-92

Figure 2 shows the man-made levees totaling over 41 miles creating Natomas Basin. Some 20.6 miles of canals plus another 20.6 miles of the Sacramento and American Rivers encircle the Basin. Water marks its boundaries. The north boundary is the Natomas Cross Canal. The east boundary is made of the Pleasant Grove Creek Canal and the Natomas East Main Drainage Canal. The south boundary is made of the Sacramento River and American River joining south of Natomas. The west boundary is the Sacramento River.

To give the reader an understanding of what Natomas Basin looks like, Figure 3 is an aerial photograph of the area. The expansive agricultural and vacant land in the large northern portion can be contrasted with small urbanized development in the southeastern corner between Interstate 80 and the American River.

DEVELOPMENT IN NATOMAS BASIN

Created by constructing drainage canals and 41 miles of encircling levees, Natomas Basin was considered "protected" from the 100-year flood. Like elsewhere in America, urban development was proposed to replace farming in Sacramento's floodplain. When officials of Sacramento City and Sacramento County decided to approve urban development, it made sense at the time as Natomas Basin is flat land and a 15 to 30 minute drive to downtown Sacramento. Since the level of flood protection met the minimum Federal standards set by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program (NFIP), urban development proceeded. By 1990 over 31,000 people called this area home. Over 13,730 homes, businesses, industries, and public buildings were built over 7,260 acres in Natomas Basin. These buildings and their contents have an estimated value exceeding \$2.351 billion.⁵

In February 1986 a major Pacific Ocean storm brought record breaking rainfall to Northern California causing the Sacramento and American Rivers to reach new record high flows. The Natomas Basin levees held, but weaknesses were found. FEMA contracted with the Corps of Engineers to evaluate the Sacramento area flood control system. With new record river flows plus new FEMA safety standards for levees, Natomas Basin levees were downrated from 100-year flood protection to ranges of 40-year to 70-year protection.

Without going into the details, urban development stopped in Natomas Basin after the 1986 storm because the FEMA 100-year flood control standard was no longer met. Without 100-year flood control, FEMA would allow development to continue only if the first habitable floor is built one foot above the height of the 100-year flood elevation. Because of the potential high flood depths of 8 to 23 feet in Natomas Basin, it was impractical and uneconomical for residential buildings to meet the one foot standard. Residential development stopped.

Projects supported by the Federal, California, and local governments have worked to strengthen the Sacramento River levees. Projects to strengthen other levees around Natomas Basin are progressing. Once the minimum FEMA 100-year flood control standard is restored or exceeded, urban development can continue on the 47,622 acres (74 square miles) of vacant and agricultural land in Natomas Basin.

⁵ Corps Feasibility Report, Appendix C, Table III-3 on p. C-14, Table III-5 on p. C-18, Table III-6 on p. C-19, and p. C-29. Figures are existing conditions as defined on each table.

ACCOUNTABILITY FOR DEVELOPMENT CONSEQUENCES

Who will be held accountable for the consequences of further urban development in Natomas Basin? Who is responsible for promoting such urban development? Who is responsible for declaring Natomas Basin safe for development? In the minds of land speculators, developers, and the local government officials of Sacramento City, Sacramento County, and Sutter County, further urban development is the "Manifest Destiny" for Natomas Basin.

After 100-year flood protection is restored to Natomas Basin, FEMA will give its "seal of approval" and the requirement to build the first floor above the 100-year flood elevation will be removed. Development can continue. To local promoters and decision-makers, this means the flood risk has been determined by FEMA to be acceptable to the Federal government. FEMA's acceptance allows the flood risk caused by approving further development to be shifted from land speculators, developers, and local government taxpayers to Federal taxpayers. The land speculators and developers make their \$5 to \$10 billion of profits and leave the disaster cleanup bills for others to pay. This is wrong. The consequences of local land use decisions should stay with those promoting and making the decisions.

The accountability for land use decisions promoted by land speculators and developers and approved by local government officials is lost because the consequences are shifted to the Federal government. Accountability for decisions will only occur when institutions and individuals making decisions are held accountable for the resulting consequences. Without such ultimate accountability for their actions, land speculators and developers will pressure and encourage local government officials to allow further development in Natomas Basin. Continuing to shift the accountability for development consequences to the Federal government, and ultimately Federal taxpayers, is bad public policy.

How can the accountability for local land use decisions be left with the decision-makers? The answer is found in the Coastal Barrier Resources Act (COBRA) enacted in 1982. COBRA prohibits new development in designated coastal barrier areas from receiving flood insurance and other Federal financial assistance. By removing the Federal encouragement to development (i.e., flood insurance and other Federal financial assistance), land speculators, developers, and local government officials are held totally accountable for the consequences of their land use decisions. Development is still allowed in the floodplain, but the Federal government does not provide financial assistance nor does it provide flood insurance.⁶ All the risks and profits remain with those land speculators, developers, and local government officials who are willing to invest their money in floodplain development. The buck stops at the local level, where it belongs.

INCREASING THE RISK TO PUBLIC HEALTH AND SAFETY

Let's explore the possible consequences from further urban development in Natomas Basin. In the Corps of Engineers report on Sacramento flood hazards, the Corps identified THE flaw in all the flood control alternatives examined for protecting Sacramento: **All flood control alternatives increase the risk to public health and safety.** Why? Because the number of people and buildings exposed to flooding will increase due to urban development in floodplains. The Corps states:

⁶ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 24.

"Finally, under existing local and Federal flood plain management regulations, all of the alternatives carried forward in this report would provide a sufficient level of protection to permit development to proceed in Natomas and elsewhere in the flood plain. This development would significantly increase the number of people and the amount of property exposed to flooding and would increase the losses produced by an uncontrolled event."⁷

The most disturbing results from Natomas Basin flooding are the potential for significant loss of life, the massive disruption of peoples' lives, and the massive destruction of buildings and their contents. Over 31,000 people call this area home.

"Loss of life could be significant depending on the warning time given to residents to evacuate the basin. Advance warning would be essential because the breach would be proximately located to the urbanized portion of the basin. Floodwaters would thus reach vital transportation corridors relatively quickly, and eventually render the affected freeway and local roadway segments impassable."⁸

Proposed urban development plans by local governments would add over 170,000 people and over \$13 billion of new buildings and their contents in Natomas Basin. The total population would exceed 200,000 and property value exceed \$15 billion. Where do 200,000 people who lived in 93,000 homes find housing during and after the flood? What magnitude of human and economic disaster will befall the Sacramento area when a flood inundates a fully urbanized Natomas Basin? To answer this question let's compare the Great Flood of 1993 to a future flood in Natomas Basin with 200,000 people and over \$15 billion worth of structures and contents. Table A shows the comparison:

Table A

Comparison of Great Flood of 1993 to Future Flood of Urbanized Natomas Basin⁹

	Great Flood of 1993*	Future Flood Natomas Basin
Deaths	48	15
People Evacuated	100,000	200,000
Homes Damaged	45,000	93,000
Total Damages	\$12 to \$15 Billion	\$8 to \$10 Billion
Property Damage	\$6 to \$7 Billion	\$8 to \$10 Billion
Crop Damage	\$6 to \$8 Billion	0
Square Miles Flooded	31,250	86

* Actual and estimated as of Friday, August 6, 1993.

⁷ Corps Feasibility Report, EIS/EIR, p. EIS 1-8.

⁸ Sacramento Area Flood Control Agency, Revised Draft Environmental Impact Report for the Revised Natomas Area Flood Control Improvement Project, (Sacramento, March 1993), p. 5.3-1.

⁹ See Appendix B for sources.

The comparison is striking. In the Midwest the flood damage and destruction is spread over 31,250 square miles beside rivers stretching hundreds of miles. In Natomas Basin the destruction is concentrated in 86 square miles. It is ironic to compare the Midwest flood damage to that of a fully developed Natomas Basin. Crop damage is half of the Midwest damages because flooding occurred during the growing and planting season. Property damage is the entire source of damages in Natomas Basin.

The estimated property and crop damage, as of August 6, produced by the Great Flood is \$12 to \$15 billion spread over 31,250 square miles compared to an estimated \$8 to \$10 billion of property damage over just 86 square miles in Natomas Basin. Twice as many homes would be damaged in Natomas Basin (93,000) compared to the Midwest (45,000 as of August 6). Why would we knowingly create a potential catastrophe of this magnitude?

SEVERITY OF FLOOD DAMAGE

Why does flooding in Natomas Basin cause so much destruction? The answer is found in its physical features:

1. During flood events, river levels are higher than the ground level inside the Basin.
2. Rivers or canals surround the Basin on all sides.
3. Levees surround Natomas Basin on all sides.
4. Levees are 15 to 20 feet higher than the inside land area.
5. Natomas Basin has no drain.
6. Low lying lands inside the Basin are lower than surrounding land.
7. Flood waters fill the Basin whenever levees fail.

Together these physical features make Natomas Basin a disaster waiting to happen. Whenever a levee breaks, flood water could fill the Basin. Why? Natomas Basin is a 55,000-acre bathtub and swimming pool combined, but it has no drain! The 15 to 20 high levees form the "bathtub" walls. The land inside is the "bathtub" bottom, but the bottom is not flat. The bottom is like a swimming pool with the deep end located in the middle. From the deep center the pool gets shallower as one moves toward the levees.

On Figure 4 the land area shown as white (over 23 feet) is the lowest part of Natomas Basin. The next lowest land elevation is the land area marked 18 to 23 feet. Once flood waters get inside, it cannot get out until the river level goes down allowing some water to drain out the break in the levee. In these two low lying areas, water will remain until pumped out or it evaporates. These two areas are 5 to 10 feet *lower* than the land around them and would form a 17,700 acre (27.6 square mile) pond. It would cover 32 percent of the land area.

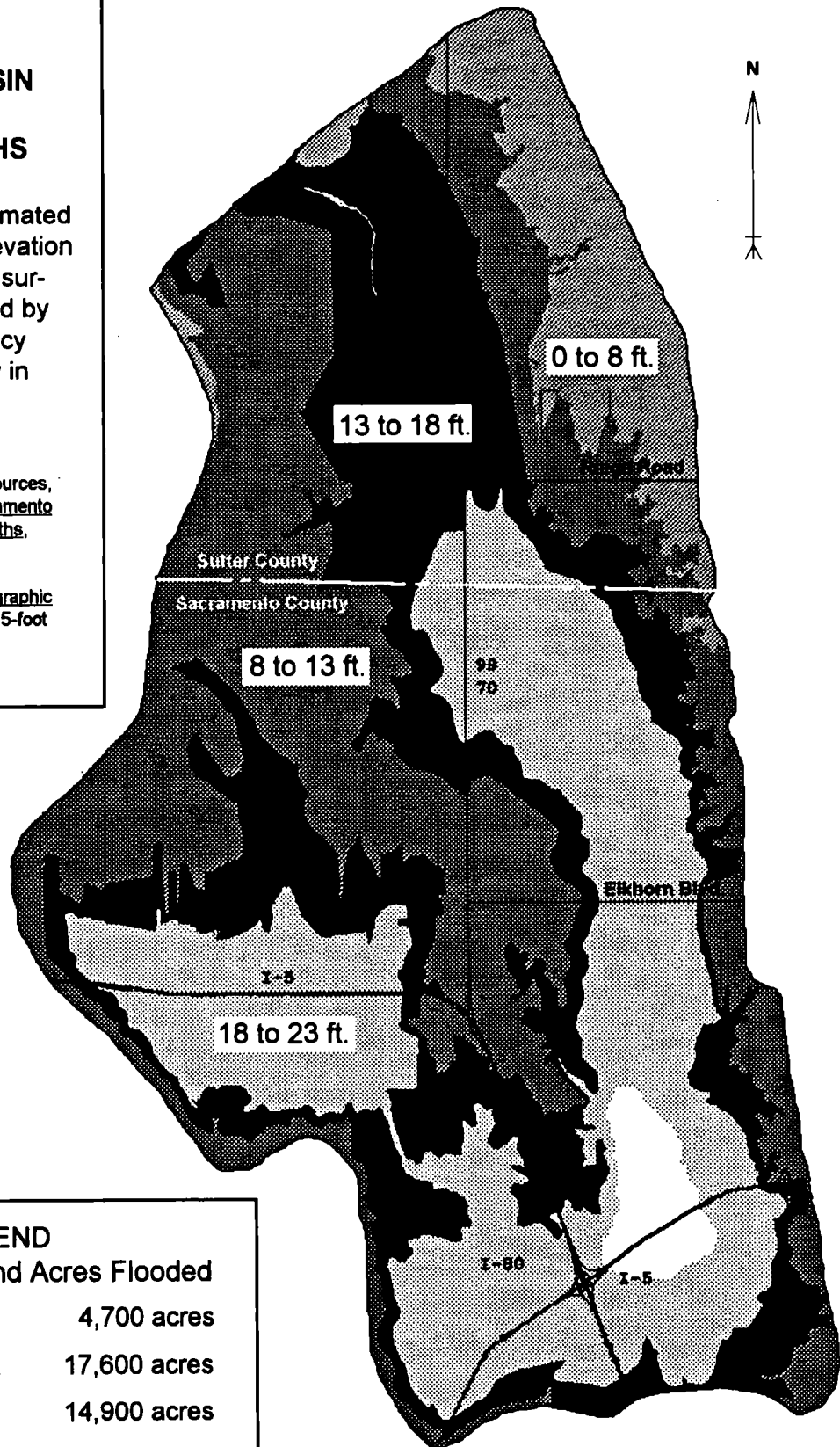
Figure 4 shows the land area covered by the estimated potential flood depths for Natomas Basin. The flood depths are based upon a flood elevation of 33 feet derived from the Flood Insurance Study and Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA) in March 1993. Figure 5 shows the estimated flood depths, the number of acres and square miles by flood depth, and the percentage of land area covered by flood depth.

FIGURE 4 **NATOMAS BASIN** **ESTIMATED** **FLOOD DEPTHS**

Flood depths are estimated from 33-foot flood elevation derived from Flood Insurance Rate Map issued by the Federal Emergency Management Agency in March 1993.

Map developed from:
 California Dept. of Water Resources,
Map of American River - Sacramento
Estimated Potential Flood Depths,
 June 1993.

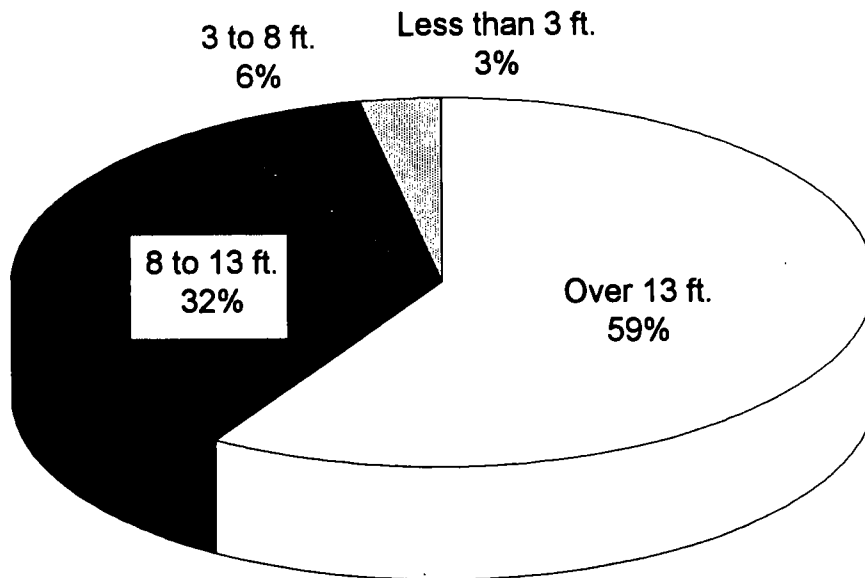
U.S. Geological Survey, Topographic
Maps (7.5 Minute Series) with 5-foot
 contour interval, various years.



LEGEND

Depth of Water and Acres Flooded

	0 to 8 feet	4,700 acres
	8 to 13 feet	17,600 acres
	13 to 18 feet	14,900 acres
	18 to 23 feet	16,600 acres
	over 23 feet	1,100 acres



Depth of Flood Water (feet)	Percent of Total Land	Land Area	
		(acres)	(sq. miles)
0 to 3	3.	1,400	2.
3 to 8	6.	3,300	5.
8 to 13	32.	17,600	28.
13 to 18	27.	14,900	23.
18 to 23	30.	16,600	26.
over 23	2.	1,100	2.
Totals	100.	54,900	86.

**FIGURE 5
NATOMAS BASIN
ESTIMATED FLOOD DEPTHS**

Percentage, acreage, and square mile
measurements of estimated flood depths

The depth of flood water and the duration of flooding have a significant impact upon property damage. Together flood depth and duration have a significant impact on property damage in Natomas Basin. The Corps of Engineers estimated flooding will last for 30 days. This is an extraordinary amount of time when compared to the flood duration of less than 5 days for other parts of the Sacramento floodplain. The Corps also estimated damages to buildings and contents would reach 100 percent where flood depths exceed 13 feet.¹⁰ Figure 5 shows that approximately 59 percent of Natomas Basin's land area could flood to depths exceeding 13 feet and 32 percent could flood to depths of 8 to 13 feet. A total of 91 percent of the land area could flood to depths exceeding 8 feet.

The Corps estimated 13,730 structures and the contents are valued at \$2.351 billion and would suffer flood damage estimated at \$1.592 billion, which is over 67 percent of the market value. "Natomas is the only reach (part the Sacramento floodplain) where flood damages would exceed 50 percent of the market value of the structure."¹¹

Even if a higher level of flood control is provided, the depth and duration of flooding in Natomas Basin is the same. Whenever the next larger flood breeches the levees, Natomas Basin fills with water. The Corps of Engineers observed:

"Flooding from levee failure would be similar in Natomas . . . **regardless of the frequency** of the flood event because (1) the ground elevation adjacent to the levees in these locations is lower than the water surface in the river, and (2) the volume of water in the American River . . . and Sacramento River in the case of Natomas . . . **would fill** the flood plains to similar depths."¹²

To illustrate the Corps point, Figure 6 is a Natomas Basin levee profile along the American River. It shows the highest river water level during the February 1986 storm was 13 feet above the ground level in Natomas Basin. If the levee had failed with the river at the highest level, Natomas Basin could have filled up. As shown on Figure 6, a single story house would have been completely covered by water.¹³

The Corps of Engineers concluded that the Natomas Basin will experience severe flooding whenever the flood control levees are breached. The only thing which changes is the probability, or frequency, of when flooding will occur. Severity of flooding in Natomas Basin is the same no matter the frequency of flood. In other words, severity of flooding in Natomas Basin is the same no matter the probability, or probable frequency, of flooding.

¹⁰ "For the Natomas reach, duration is **30 days**, and the average velocity is less than 0.5 feet per second. **Duration has a significant effect on the flood damages for this area.** Damages to structure and content for each land use category [i.e., residential, commercial, industrial, public, and mobile home] were set at **100 percent** for depths greater than [sic] **13 feet**. For the remaining reaches in the flood plain, duration is less than 5 days, and the average velocities range from 0.5 to 5 feet per second. Neither duration nor velocity had any significant effect on damages." Source: Corps Feasibility Report, Appendix C, p. C-22, (emphasis added)

¹¹ Ibid., p. C-25.

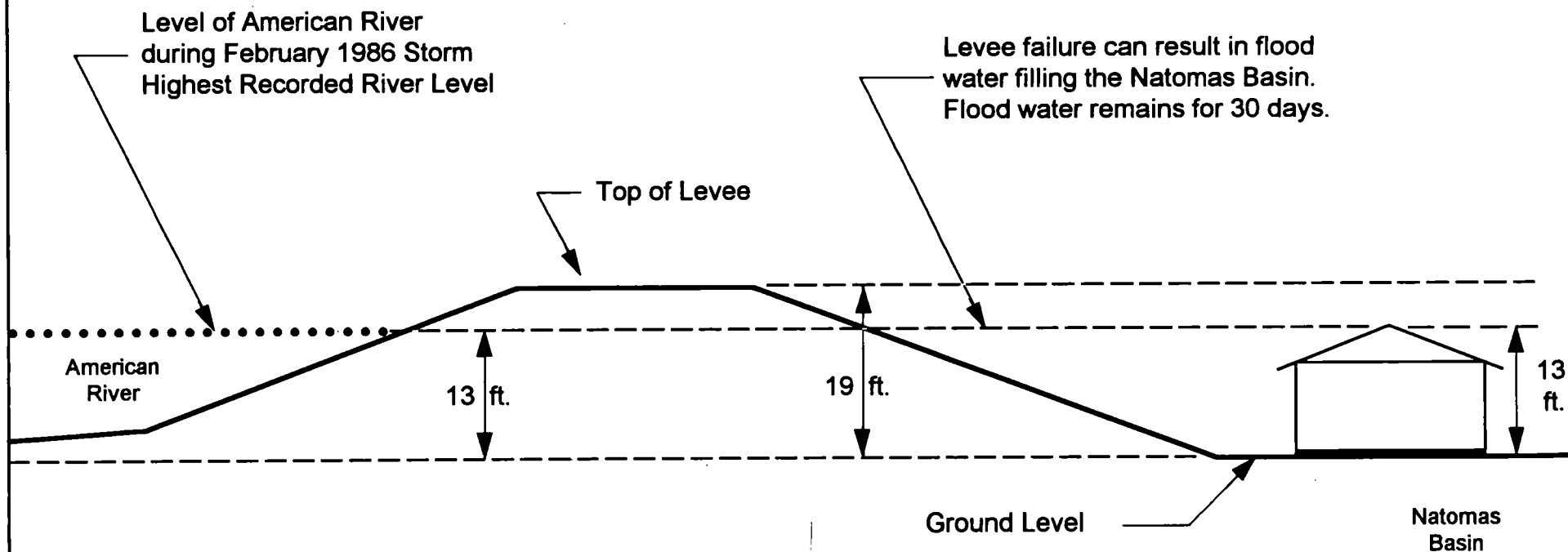
¹² Ibid., Main Report, p. III-18, (emphasis added).

¹³ Figure 6 is a graphic illustration of Natomas Basin flood depths and what this much water does to a single story house constructed on grade. Building on grade is the typical method used in much of California. The house is completely covered. Destruction is total for building and contents.

**FIGURE 6 LEVEE PROFILE
NATOMAS BASIN
AMERICAN RIVER
RIVER MILE 1.5
LOOKING DOWNSTREAM**

"Flooding from levee failure would be similar in Natomas . . . regardless of the frequency of the flood event because (1) the ground elevation adjacent to the levees in these locations is lower than the water surface in the river and (2) the volume of water in the American River . . . and Sacramento River . . . would fill the flood plains to similar depths."

SOURCE: U.S. Army Corps of Engineers, American River Watershed Investigation, California: Feasibility Report, (Sacramento District, December 1991), Main Report, p. III-18.



Drawn from U.S. Army Corps of Engineers, American River Watershed Investigation, California: Feasibility Report, (Sacramento District, December 1991), Appendix M, Chapter 2, Appendix M-2-A, Levee and Flood Profiles - Sections 5 through 9, Section 7.

PROBABILITY OF FLOODING

What is the probability of Natomas Basin flooding? To answer the question, consider an incident from the Great Flood of 1993:

"For various points along the Mississippi, the Army Corps of Engineers has calculated the probability of floods of varying heights. The smallest probability they bothered to calculate was a '500-year flood' - one so unlikely it can be expected to happen only once in five centuries. . . . [A]t Hannibal, Mo., a 500-year flood was determined to be 30 feet, so the city built its new levee a foot higher, at 31. It was finished in April after two years of work, and when the waters rose in early July residents heaped three feet more of sandbags atop it. When the crest reached Hannibal, the river was at 32 feet."¹⁴

This incident helps us to understand the uncertainty of predicting and controlling flood events. Also it shows the confusion caused by the terms used to describe flood events. The Corps of Engineers calculates the probability of floods of varying heights, or volumes. Each calculated flood event has an estimated water height which is caused by an estimated water volume. As can be expected, greater volume results in greater height. As the volume of water increases, the probability decreases because larger floods occur less often.

To name different flood events, engineers use a shorthand description based upon the probability of when each flood event will occur. Engineers take historical records of past floods and apply statistical calculations to predict the probability or chance of flooding. For example, the "500-year flood" is the calculated flood of a certain volume or height which has a 1 in 500 chance of occurring in any year. The 500-year flood has a one-fifth of one percent (0.20%) of occurring in any year. Over 30 years the 500-year flood has a 6 percent chance of occurring during the 30 years. The "500-year flood" DOES NOT mean this size of flood will only occur once in 500 years. As can be seen from Table B, over 100 years the 500-year flood has a 18 percent of occurring while the 100-year flood has a 63 percent chance of occurring during the same 100 years.

The terms 500-year flood and 100-year flood can be misleading. Such floods may be experienced in any year. Since the National Flood Insurance Program was established, there have been numerous instances where communities have experienced two, and even three, 100-year or greater floods within a span of several years. A notable example is Pennsylvania in the 1970's where within five years after Tropical Storm Agnes (1972) battered the state another 100-year flood occurred.¹⁵

Table B presents the percent chance or probability of different flood events happening in any year and over various numbers of years. The chance of the 1 in 100 flood, or the 100-year flood, occurring over the life of a 30-year mortgage is 26 percent, or about one in four. The question for the homeowner is whether or not to purchase flood insurance. By contrast, during the term of a 30-year mortgage, there is only a 1 percent chance of suffering a fire loss.¹⁶ What level of risk is acceptable? What level of risk is unacceptable?

¹⁴ Jerry Adler, "Troubled Waters," Newsweek, July 26, 1993, p.21.

¹⁵ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 7.

¹⁶ Ibid.

Table B

Percent Chance Of Floods Occurring Over The Years

Number Of Years	100-Year Flood (percent)	500-Year Flood (percent)
Any Year	1.0	0.20
30	26	6
50	39	10
75	53	14
100	63	18
200	87	33
400	98	55
500	99.34	63
1000	99.99	86
2000	99.99	98

CONGRESSIONAL RECOGNITION OF UNACCEPTABLE RISK

The unacceptable risk posed to public health and safety by further development in Natomas Basin was recognized in two Federal laws enacted in 1992. These two laws contained sections written to address Natomas Basin flooding issues. Each law and its legislative history talks specifically about Natomas Basin. Together these laws express the Congressional recognition of the unacceptable risk created by allowing further urban development of Natomas Basin

First, in the Department of Defense Appropriations Act of 1992, the Secretary of the Army was authorized to construct the Natomas Basin levee improvement features proposed by the Corps of Engineers. However, a limitation was placed upon these levee improvements:

" . . . provided that such construction does not encourage the development of deep floodplains."¹⁷

Second, in the Housing and Community Development Act of 1992 (H.R. 5334), changes were made to the National Flood Insurance Program (NFIP). A change was specifically designed to address Sacramento's flood insurance problems. Briefly, the legislation (a) created a new "flood restoration zone" for flood insurance rates, and (b) allowed the Federal Emergency Management Agency (FEMA) to establish floodplain management criteria for new construction in the flood restoration zone where flood depths exceed 5 feet. Speaking as the Chairman of the Senate Housing and Urban Affairs Subcommittee responsible for the legislation, former U.S. Senator Alan Cranston of California spoke on the floor of the Senate to clarify the intent behind the legislation:

"The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento."¹⁸

¹⁷ Department of Defense Appropriations Act of 1992, Section 9159.

These two laws recognize the unacceptable risk caused by further urban development in Natomas Basin. Congress has established limits on further development. However, local government officials are working to get around the limitations contained in these two laws. Their efforts appear to be close to success and urban development will continue to fill Natomas Basin. Before this happens, the Clinton-Gore Administration and Congress should act to change Federal law by prohibiting flood insurance from being available to new development and by removing other Federal financial assistance.

Such action was taken by Congress in October 1982 with the passage of the Coastal Barrier Resources Act (COBRA).¹⁹ The law was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas. Among the restrictions in COBRA, no new flood insurance coverage was provided for any new construction in designated coastal barriers after October 1, 1983. While COBRA does not prevent private financing and development, it limits financial assistance by Federal agencies on undeveloped coastal barriers. Similar legislation should be enacted to remove Federal encouragement of further urban development in Natomas Basin. Further details for legislation to achieve this end is presented in Appendix A.

SUMMARY OF PUBLIC POLICY ISSUE

The basic public policy issue is whether or not the Federal government should encourage additional urban development in deep floodplains, such as Natomas Basin. The arguments against encouraging further development are based upon these beliefs and values:

- Government should reduce risk and protect the public health and safety, not increase such risks.
- Government should spent limited tax dollars protecting public health and safety, not wasted on projects increasing the risk to people and property.
- Predicting and controlling the forces of nature is subject to unacceptable error and mistake, not an activity government should depend upon for protecting public health and safety.
- The accountability for the consequences resulting from decisions should remain with the decision-makers responsible, not transferred to others.
- Each generation should think about the short and long term impacts of their actions, not leaving deficits and billion dollar blank checks to be paid for future flood disasters by future generations.
- Tax dollars should benefit the larger public good, not produce windfall profits for a few land speculators and developers.

The problems caused by allowing further urban development in Natomas Basin are:

1. The risk to human life and safety is increased by further urban development in Natomas Basin. Over 170,000 additional people could be added to the 31,000 already living there. What will be the level of human suffering when 200,000 people are flooded? Where does a city of over 200,000 people live when everything is under water for 30 days? How long will it take to rebuild? How many people will die?

¹⁸ Congressional Record - Senate, October 8, 1992, p. S17910.

¹⁹ 96 Stat. 1653, Public Law 97-348 (S. 1018), October 18, 1982.

2. The 55,000-acre Natomas Basin is a combined bathtub/swimming pool with no drain! Massive destruction of structures and the contents would result from flooding a fully urbanized Natomas Basin. Proposed urban development plans by local governments would increase the value of structures and contents to an estimated value of over \$15 billion. The potential property damage is estimated at \$8 to \$10 billion. This amount is similar to the destructive Great Flood of 1993 (as of August 6, 1993). How much will the local, California, and Federal governments pay for such a massive disaster relief effort? From where will the money come?

3. Flood depth, flood duration, and extent of destruction in Natomas Basin is the same no matter if the flood is a 100-year, 200-year, or 400-year event. Flood control structures create a false sense of security. Flood control structures for Natomas Basin only reduce the probability, or probable frequency, of flooding, not the severity of destruction. Instead of encouraging people to stay out of floodplains, government tries to predict and control the forces of nature. Why are we allowing more people and buildings to be placed in harms way when we know disaster will strike someday?

4. The accountability for flooding consequences caused by the decision to build in floodplains is transferred from local decision-makers to Federal taxpayers. How can local decision-makers be held accountable for their decisions when the resulting consequences are transferred to others?

5. By encouraging further development in Natomas Basin, Federal taxpayers are subsidizing profits for land speculators and developers who promote building in deep floodplains. Estimated profits are \$5 to \$10 billion. The land speculators and developers do not bear the cost of building flood control structures nor the cost of emergency disaster relief and recovery. Taxpayers are responsible for this financial burden. When will the costs be placed upon those responsible and not passed on to others?

CONCLUSION

The National Performance Review offers the opportunity to ask tough questions and to take corrective action. Federal public policy should not encourage increasing the number of people and buildings at risk of deep flooding. The Natomas Basin is a prime example of Federal policy gone wrong. Encouraging further urban development in deep floodplains is bad public policy. The Great Flood of 1993 shows the folly of continuing business as usual. Saying "it has always been done this way" is no excuse for continuing the practice. Now is the time to make fundamental changes.

APPENDIX A

PROPOSED LEGISLATIVE SOLUTION

Federal government actions are encouraging urban development in Natomas Basin. This is the same type of problem Congress faced when it enacted the Coastal Barrier Resources Act (COBRA). Adopted in October 1982, COBRA was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas.

The essential provisions of COBRA are:

1. Prohibits the National Flood Insurance Program from providing flood insurance protection for buildings built after October 1, 1983, in designated undeveloped coastal barriers.
2. Limits financial assistance by Federal agencies on undeveloped coastal barriers, except for enumerated situations such as emergency assistance actions essential to saving lives, protecting property, and protecting public health and safety. Such emergency assistance would not include disaster assistance and government loans.

While COBRA limits the availability of flood insurance and limits financial assistance by Federal agencies, it does not prevent private financing and development. The inability of the property owner to purchase flood insurance does not require a lender to refrain from making a conventional loan. The decision and risk remain with the property owner and the lender.¹

These same COBRA restrictions should be enacted by Congress for deep floodplains, like Natomas Basin. Doing so will greatly restrict new development and alter the type of development undertaken in the Natomas Basin. Existing buildings would be grandfathered and allowed to continue receiving flood insurance and Federal financial assistance.

Based upon the characteristics of Natomas Basin, five (5) criteria should be used to define deep floodplains subject to COBRA-type restrictions:

1. Damage from potential flood events will cause destruction of structures and contents to be 50 percent or greater of their value regardless of the flooding frequency or probability.
2. Depth of flooding is over five (5) feet for all potential flood events regardless of the frequency of flooding.
3. Duration of flooding is over five (5) days for all potential flood events regardless of the frequency of flooding.
4. Amount of undeveloped land in project area located in floodplain exceeds 5 percent of the project land area.
5. Potential risk to public health and safety is increased even after flood control measures are implemented.

¹ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 24

APPENDIX B

GREAT FLOOD OF 1993: The numbers are as of Friday, August 6, 1993. The information and numbers used are taken from The Sacramento Bee, August 8, 1993, p. A8, except where another source is noted.

A Newsweek, July 26, 1993, p. 22 .

As of August 6, 1993	Deaths (actual)	Homes Damaged (estimated)	Estimated Property Damage (billion)	Estimated Crop Damage (billion)	State Total Estimated Damages (billion)	Square Miles Flooded	Total Number States Flooded
Illinois	4		\$0.930	\$0.565	\$1.495		
Iowa	5		1.250	1.150	2.400		
Kansas	1		A 2.000	0.434	2.434		
Minnesota	4		0.018	0.990	1.008		
Missouri	25		1.700	1.100	2.800		
Nebraska	2		0.050	0.292	0.342		
N. Dakota	2		0.100	0.400	0.500		
S. Dakota	3		0.014	0.572	0.586		
Wisconsin	2		0.121	0.800	0.921		
TOTAL	48	44,984	\$6.183	\$6.303	\$12.486	31,250	9

Estimated damages range from \$12.486 billion to \$15 billion. Based upon totals for estimated crop and property damage from the table above, 50/50 split of damage costs to date. Applying 50/50 split to \$15 billion gives \$7.5 billion each.

"Homes Damaged" is based on 44,984 "Families affected" found in the article and rounded to 45,000.

"People Evacuated" is estimated by assuming 2.25 persons per home times 44,984 homes damaged yielding 101,214 people and rounded to 100,000.

"Square Miles Flooded" is calculated from estimated 20 million acres flooded divided by 640 acres/sq. mile equals 31,250 sq. miles.

FUTURE NATOMAS BASIN:

Deaths: Estimated deaths were derived from data in Corps Feasibility Report, Main Report, p. III-18 and Appendix C, Table III-3, p. 14. Estimated 25 fatalities in Sacramento's population of 366,500 produced a ratio of 1 death per 14,660 people. Applied to an estimated Natomas Basin population of 210,000 yields 15 deaths.

Homes Damaged (estimated): Based upon estimated housing units from:
City of Sacramento: South Natomas Community Plan:

Total Housing Units (buildout): 17,765
Total Population (buildout): 38,147

Source: Population and Housing Data by Community Plan Area, City of Sacramento, Planning and Development Department, March 1991, p. 6.

North Natomas Community Plan:

Total Housing Units (buildout): 33,527
Total Population (buildout): 66,910

Source: Draft Supplement to the 1986 North Natomas Community Plan EIR, City of Sacramento, Planning and Development Department, March 1993, p. 2.0-8.

Sutter County: Total Housing Units (buildout) 42,362
 Total Population (buildout): 105,056

Source: Technical Appendices to the South Sutter County General Plan Amendment and Draft Environmental Impact Report, Sutter County Planning Department, July 31, 1991, Appendix G "Land Use Calculations by Cells," Part 5.

Total Natomas Basin: Total Housing Units (buildout): 93,654
 Total Population (buildout): 210,113

Estimated Property Damage (billion): The estimated value of structures and contents is calculated by assuming the 200,000 people will have the same value of structures and contents as the current 31,000 people. So (200,000 divided by 31,000) times \$2.351 billion/per 31,000 people equals \$15.168 billion. Using the 67 percent flood damage figure for existing structures and contents yields (67% x \$15.168 billion = \$10.163 billion). Being more conservative using 50 percent damages on \$15.168 billion gives \$7.584 billion rounded to \$8 billion.

Estimated Crop Damage: "The economic evaluation for the Reconnaissance Report, American River Watershed Investigation, January 1988, indicated that the benefits attributable to agricultural crops were less than 1/2 half of 1 percent. As a result, flood damage reduction benefits were not estimated for agricultural crops." Source: Corps Feasibility Report, Appendix C, p. C-20.

PUBLIC POLICY ISSUE PAPER

for the

NATIONAL PERFORMANCE REVIEW

**NEW DEVELOPMENT IN DEEP FLOODPLAINS IS BAD PUBLIC POLICY:
THE NATOMAS BASIN EXAMPLE**

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EXECUTIVE SUMMARY

At issue are Federal policies which **INCREASE** the risk to public health and safety from deep flooding. This increased risk is caused by encouraging more people to live and more buildings to be constructed in deep floodplains, such as Natomas Basin. This paper argues that to knowingly increase the risk to public health and safety is bad public policy.

The flood protection programs of the U.S. Army Corps of Engineers (Corps) and the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA) work together to **increase** the number of people and buildings at risk of catastrophic flooding. This result is caused by the Corps building flood control structures, like levees and dams, creating a false sense of safety. Once a floodplain is protected from the 100-year flood by such structures, then urban development can proceed without any restrictions. FEMA compounds this false sense of safety by making flood insurance **available** to the people who move into the "protected" floodplain, but **not requiring** flood insurance. The Corps and FEMA are encouraging floodplain development by offering the Federal government's "seal of approval" that floodplains are safe for development.

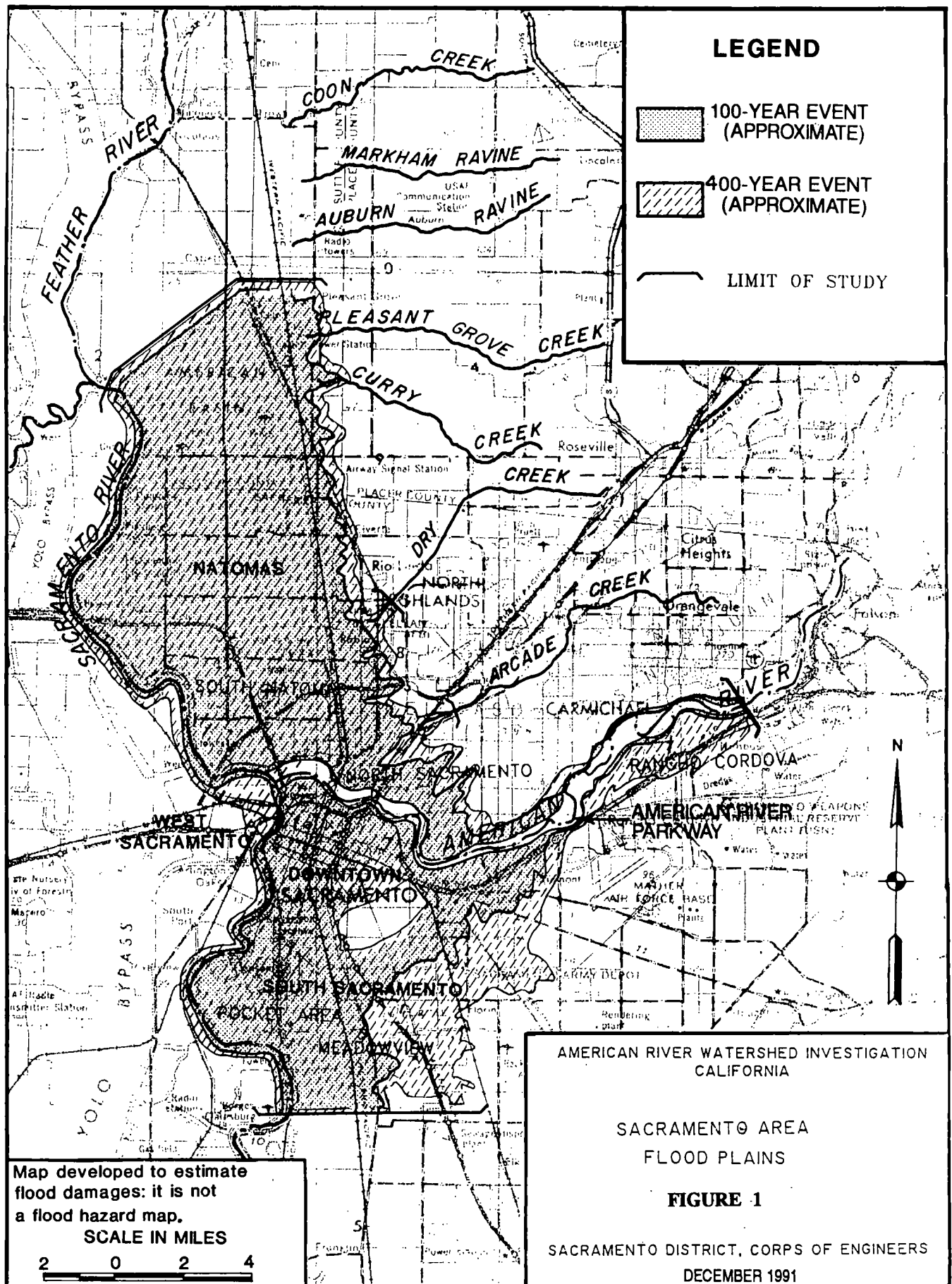
An example of this public policy gone wrong is the Natomas Basin located in the Sacramento (California) floodplain. The 55,000 acre Natomas Basin already has over 31,000 people and 13,730 structures located on 7,260 acres at risk of flooding to depths of 8 to 23 feet. The structures, plus the contents, are valued at \$2.351 billion with flood damage to them estimated at \$1.592 billion. By protecting these people and buildings, the remaining 47,622 acres of agricultural and vacant land are opened to development. This undeveloped land area totals 74 square miles which is **LARGER** than the District of Columbia (69 square miles).

Three local governments control land use decisions in Natomas Basin. Proposed urban development plans by these jurisdictions would allow over 170,000 more people and over 80,000 new homes to reside in Natomas Basin. The result would equal a city in excess of 200,000 people living in over 93,000 homes. The value of all structures and contents is estimated at over \$15 billion with potential flood damage estimated at \$8 to \$10 billion.

How much development has been encouraged in floodplains throughout the United States by existing public policy? How many times will this be repeated in the future across America? How many more disastrous floods must occur before we act? The Great Flood of 1993 shows the consequences of the current public policy. Now is the time to establish a decisive policy opposing Federal encouragement of urban development in deep floodplains.

This new policy can be implemented by enacting the same limitations on Federal actions which once encouraged development of coastal barrier areas. Enacted in 1982, the Coastal Barrier Resources Act (COBRA) prohibits Federal flood insurance for new development and restricts Federal financial assistance to designated coastal barrier areas. The same restrictions should apply to deep floodplains. Such restrictions applied to Natomas Basin will prevent:

- adding over 170,000 people living at risk of deep flooding,
- adding over \$13 billion of property at risk of destruction deep flooding,
- increasing the future cost of government to recover from a catastrophic flood disaster,
- shifting accountability for the consequences of local land use decisions to the Federal government, and
- taxpayers subsidizing profits estimated at \$5 to \$10 billion for land speculators and developers.



FOREWORD

On March 3, 1993, President Bill Clinton announced the National Performance Review to the nation. Vice President Al Gore will lead this effort to bring Total Quality Management (TQM) concepts to all parts of our Nation's government. The National Performance Review will focus six months of intense effort to evaluate the performance of government. Every aspect is open for evaluation. The President stated the Review will ". . . challenge the basic assumptions of every program asking: Does it work? Does it provide quality service? Does it encourage innovation?" He observed that many programs began for good reasons, but times have changed. He continued, "If there is something the Federal government should stop doing, we will try to make changes."

President Clinton and Vice President Gore asked citizens to communicate their suggestions for improving our Federal government. In response to their invitation, this issue paper is offered to focus attention and initiate dialogue regarding a flawed public policy. This paper identifies problems and offers possible solutions, though the problem definitions and solutions will likely change as the dialogue continues.

GEOGRAPHIC LOCATION¹

Our story begins in the floodplain of Sacramento, California. Formed by the confluence of the Sacramento River and American River, the Sacramento floodplain contains 116,000 acres (181 square miles). "To the conventional wisdom that one ought never to build on a floodplain, California has responded with its capital city."²

In the part of the Sacramento floodplain known as Natomas Basin, over 31,000 people have been allowed by Federal, California, and local governments to build their homes in a deep floodplain. Flood depths range from 8 to 23 feet in the existing developed areas. This 55,000-acre man-made basin was created in 1914 to "reclaim" wetlands and floodplain lands for agriculture.³ The entire Natomas Basin (86 square miles) covers an area **larger** than the District of Columbia (69 square miles). Approximately 13 percent (7,260 acres) of the land is in urban use and the remaining 87 percent (47,622 acres) consists of agricultural and vacant land available for development.

Figure 1 shows the Sacramento floodplain which could be flooded by a 100-year and 400-year flood event.⁴ The reader can see the rivers, creeks, and land areas comprising the 116,000 acre floodplain. The Sacramento River is the western boundary of the floodplain. Flowing north to south the Sacramento River passes Natomas, West Sacramento, Downtown Sacramento, and South Sacramento on its way to the Pacific Ocean through San Francisco Bay. The American River begins its journey in the Sierra Nevada Mountains flowing east to west joining the Sacramento River just south of Natomas Basin.

¹ Much of the information in this paper was obtained from the American River Watershed Investigation, California: Feasibility Report dated December 1991. The Report was prepared by the U.S Army Corps of Engineers, Sacramento District, and issued jointly with The Reclamation Board, State of California. It consists of Part I: Main Report and Part II: Environmental Impact Statement/Environmental Impact Report (EIS/EIR) with Appendixes A through T. This Report will be referenced as Corps Feasibility Report.

² John McPhee, Assembling California, Farrar, Straus and Giroux, (New York , 1993), p. 177.

³ Corps Feasibility Report, EIS/EIR, p. EIS 7-12.

⁴ The 100-year flood plain is approximately 110,000 acres and the 400-year flood plain is approximately 116,000 acres. Source: Corps Feasibility Report, Appendix C, p. C-14.

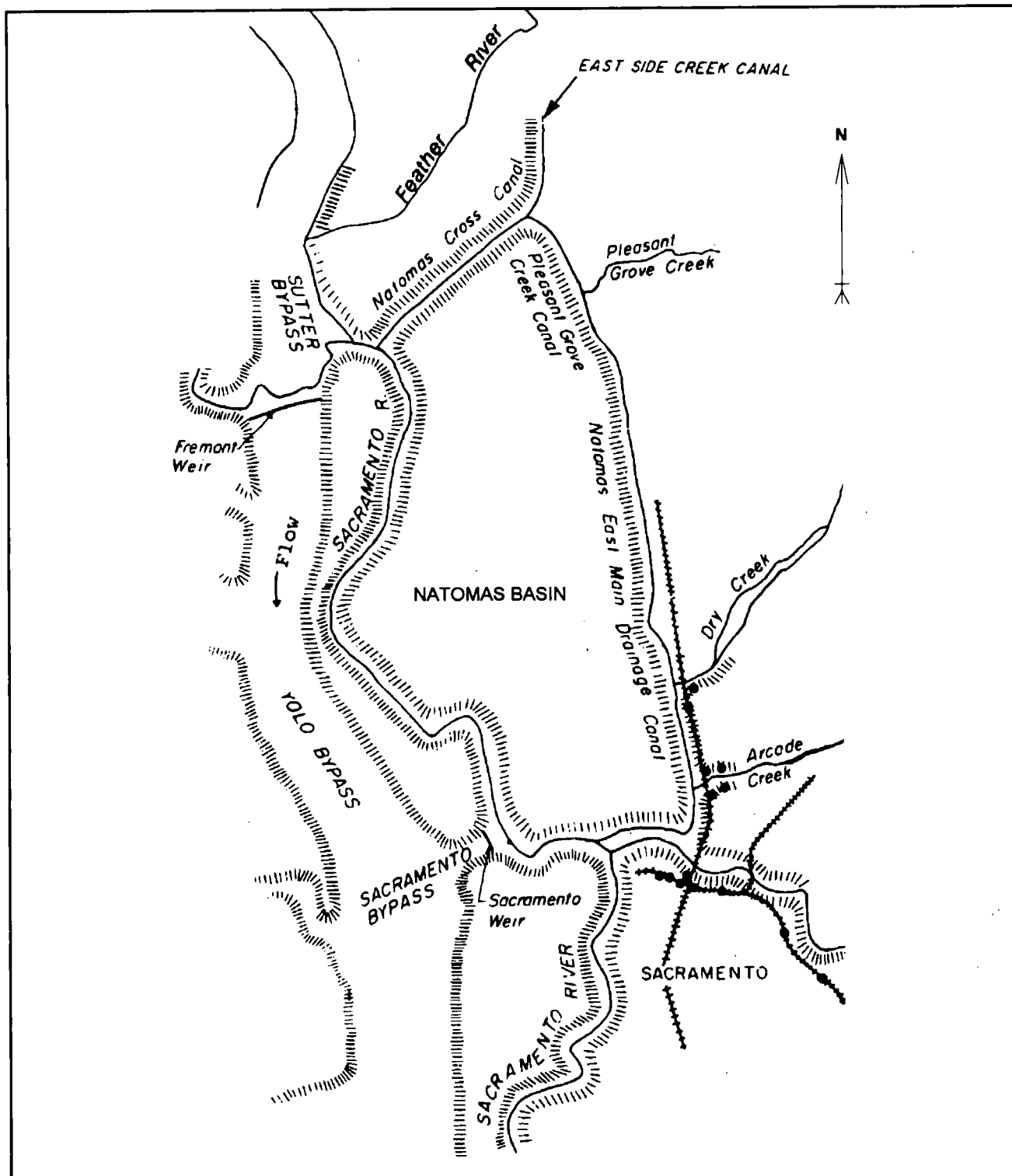


FIGURE 2
SACRAMENTO AREA

EXISTING FLOOD CONTROL STRUCTURES

LEGEND: ||||| Levees
• Floodgate
+++ Railroad

Adapted from: U.S. Army Corps of Engineers,
American River Watershed Investigation, California:
Feasibility Report, (Sacramento District, December
1991), Main Report, Plate 2

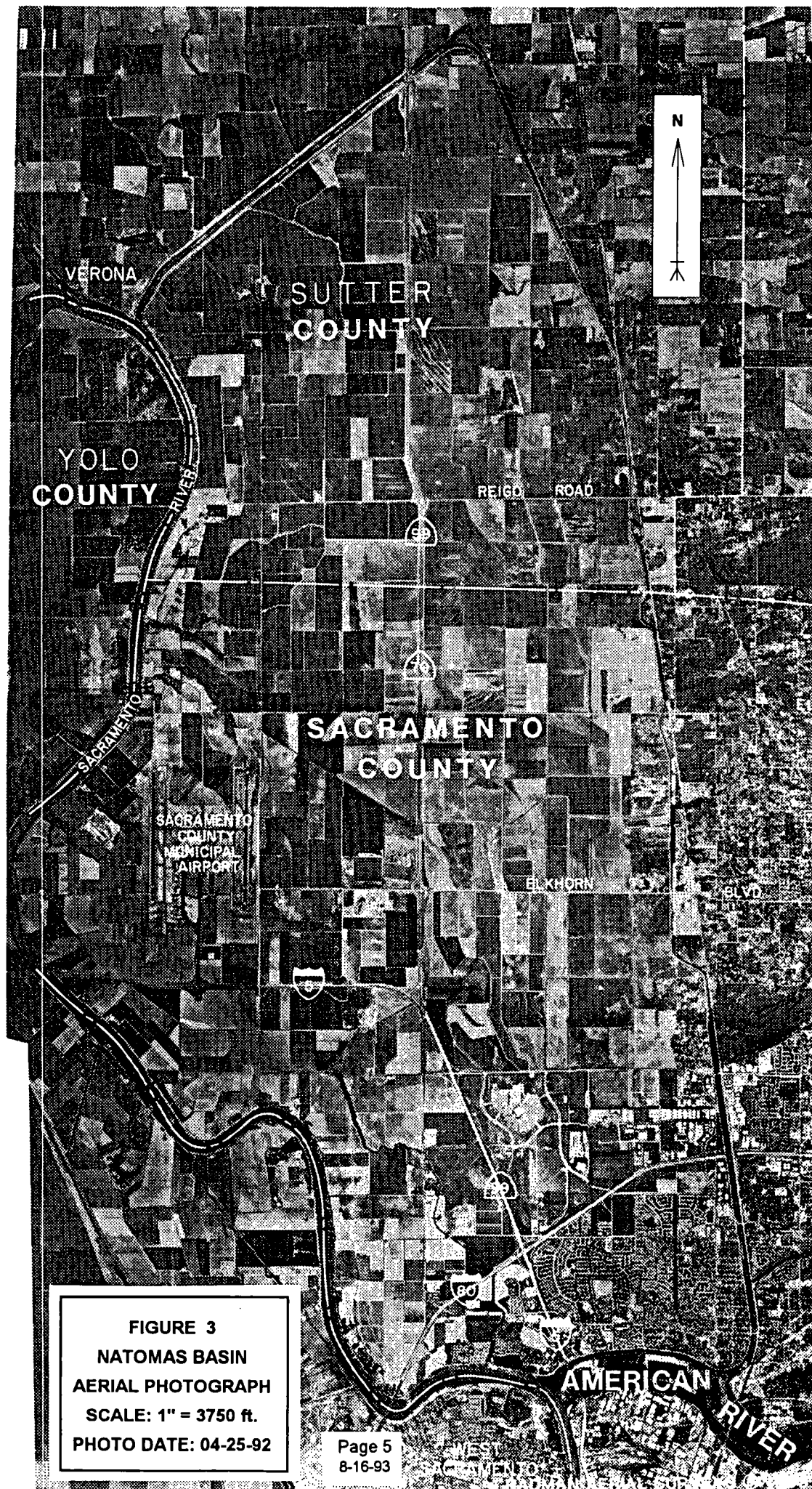


FIGURE 3
NATOMAS BASIN
AERIAL PHOTOGRAPH
SCALE: 1" = 3750 ft.
PHOTO DATE: 04-25-92

Figure 2 shows the man-made levees totaling over 41 miles creating Natomas Basin. Some 20.6 miles of canals plus another 20.6 miles of the Sacramento and American Rivers encircle the Basin. Water marks its boundaries. The north boundary is the Natomas Cross Canal. The east boundary is made of the Pleasant Grove Creek Canal and the Natomas East Main Drainage Canal. The south boundary is made of the Sacramento River and American River joining south of Natomas. The west boundary is the Sacramento River.

To give the reader an understanding of what Natomas Basin looks like, Figure 3 is an aerial photograph of the area. The expansive agricultural and vacant land in the large northern portion can be contrasted with small urbanized development in the southeastern corner between Interstate 80 and the American River.

DEVELOPMENT IN NATOMAS BASIN

Created by constructing drainage canals and 41 miles of encircling levees, Natomas Basin was considered "protected" from the 100-year flood. Like elsewhere in America, urban development was proposed to replace farming in Sacramento's floodplain. When officials of Sacramento City and Sacramento County decided to approve urban development, it made sense at the time as Natomas Basin is flat land and a 15 to 30 minute drive to downtown Sacramento. Since the level of flood protection met the minimum Federal standards set by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program (NFIP), urban development proceeded. By 1990 over 31,000 people called this area home. Over 13,730 homes, businesses, industries, and public buildings were built over 7,260 acres in Natomas Basin. These buildings and their contents have an estimated value exceeding \$2.351 billion.⁵

In February 1986 a major Pacific Ocean storm brought record breaking rainfall to Northern California causing the Sacramento and American Rivers to reach new record high flows. The Natomas Basin levees held, but weaknesses were found. FEMA contracted with the Corps of Engineers to evaluate the Sacramento area flood control system. With new record river flows plus new FEMA safety standards for levees, Natomas Basin levees were downrated from 100-year flood protection to ranges of 40-year to 70-year protection.

Without going into the details, urban development stopped in Natomas Basin after the 1986 storm because the FEMA 100-year flood control standard was no longer met. Without 100-year flood control, FEMA would allow development to continue only if the first habitable floor is built one foot above the height of the 100-year flood elevation. Because of the potential high flood depths of 8 to 23 feet in Natomas Basin, it was impractical and uneconomical for residential buildings to meet the one foot standard. Residential development stopped.

Projects supported by the Federal, California, and local governments have worked to strengthen the Sacramento River levees. Projects to strengthen other levees around Natomas Basin are progressing. Once the minimum FEMA 100-year flood control standard is restored or exceeded, urban development can continue on the 47,622 acres (74 square miles) of vacant and agricultural land in Natomas Basin.

⁵ Corps Feasibility Report, Appendix C, Table III-3 on p. C-14, Table III-5 on p. C-18, Table III-6 on p. C-19, and p. C-29. Figures are existing conditions as defined on each table.

ACCOUNTABILITY FOR DEVELOPMENT CONSEQUENCES

Who will be held accountable for the consequences of further urban development in Natomas Basin? Who is responsible for promoting such urban development? Who is responsible for declaring Natomas Basin safe for development? In the minds of land speculators, developers, and the local government officials of Sacramento City, Sacramento County, and Sutter County, further urban development is the "Manifest Destiny" for Natomas Basin.

After 100-year flood protection is restored to Natomas Basin, FEMA will give its "seal of approval" and the requirement to build the first floor above the 100-year flood elevation will be removed. Development can continue. To local promoters and decision-makers, this means the flood risk has been determined by FEMA to be acceptable to the Federal government. FEMA's acceptance allows the flood risk caused by approving further development to be shifted from land speculators, developers, and local government taxpayers to Federal taxpayers. The land speculators and developers make their \$5 to \$10 billion of profits and leave the disaster cleanup bills for others to pay. This is wrong. The consequences of local land use decisions should stay with those promoting and making the decisions.

The accountability for land use decisions promoted by land speculators and developers and approved by local government officials is lost because the consequences are shifted to the Federal government. Accountability for decisions will only occur when institutions and individuals making decisions are held accountable for the resulting consequences. Without such ultimate accountability for their actions, land speculators and developers will pressure and encourage local government officials to allow further development in Natomas Basin. Continuing to shift the accountability for development consequences to the Federal government, and ultimately Federal taxpayers, is bad public policy.

How can the accountability for local land use decisions be left with the decision-makers? The answer is found in the Coastal Barrier Resources Act (COBRA) enacted in 1982. COBRA prohibits new development in designated coastal barrier areas from receiving flood insurance and other Federal financial assistance. By removing the Federal encouragement to development (i.e., flood insurance and other Federal financial assistance), land speculators, developers, and local government officials are held totally accountable for the consequences of their land use decisions. Development is still allowed in the floodplain, but the Federal government does not provide financial assistance nor does it provide flood insurance.⁶ All the risks and profits remain with those land speculators, developers, and local government officials who are willing to invest their money in floodplain development. The buck stops at the local level, where it belongs.

INCREASING THE RISK TO PUBLIC HEALTH AND SAFETY

Let's explore the possible consequences from further urban development in Natomas Basin. In the Corps of Engineers report on Sacramento flood hazards, the Corps identified THE flaw in all the flood control alternatives examined for protecting Sacramento: **All flood control alternatives increase the risk to public health and safety.** Why? Because the number of people and buildings exposed to flooding will increase due to urban development in floodplains. The Corps states:

⁶ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 24.

"Finally, under existing local and Federal flood plain management regulations, all of the alternatives carried forward in this report would provide a sufficient level of protection to permit development to proceed in Natomas and elsewhere in the flood plain. This development would significantly increase the number of people and the amount of property exposed to flooding and would increase the losses produced by an uncontrolled event."⁷

The most disturbing results from Natomas Basin flooding are the potential for significant loss of life, the massive disruption of peoples' lives, and the massive destruction of buildings and their contents. Over 31,000 people call this area home.

"Loss of life could be significant depending on the warning time given to residents to evacuate the basin. Advance warning would be essential because the breach would be proximately located to the urbanized portion of the basin. Floodwaters would thus reach vital transportation corridors relatively quickly, and eventually render the affected freeway and local roadway segments impassable."⁸

Proposed urban development plans by local governments would add over 170,000 people and over \$13 billion of new buildings and their contents in Natomas Basin. The total population would exceed 200,000 and property value exceed \$15 billion. Where do 200,000 people who lived in 93,000 homes find housing during and after the flood? What magnitude of human and economic disaster will befall the Sacramento area when a flood inundates a fully urbanized Natomas Basin? To answer this question let's compare the Great Flood of 1993 to a future flood in Natomas Basin with 200,000 people and over \$15 billion worth of structures and contents. Table A shows the comparison:

Table A

Comparison of Great Flood of 1993 to Future Flood of Urbanized Natomas Basin⁹

	Great Flood of 1993*	Future Flood Natomas Basin
Deaths	48	15
People Evacuated	100,000	200,000
Homes Damaged	45,000	93,000
Total Damages	\$12 to \$15 Billion	\$8 to \$10 Billion
Property Damage	\$6 to \$7 Billion	\$8 to \$10 Billion
Crop Damage	\$6 to \$8 Billion	0
Square Miles Flooded	31,250	86

* Actual and estimated as of Friday, August 6, 1993.

⁷ Corps Feasibility Report, EIS/EIR, p. EIS 1-8.

⁸ Sacramento Area Flood Control Agency, Revised Draft Environmental Impact Report for the Revised Natomas Area Flood Control Improvement Project, (Sacramento, March 1993), p. 5.3-1.

⁹ See Appendix B for sources.

The comparison is striking. In the Midwest the flood damage and destruction is spread over 31,250 square miles beside rivers stretching hundreds of miles. In Natomas Basin the destruction is concentrated in 86 square miles. It is ironic to compare the Midwest flood damage to that of a fully developed Natomas Basin. Crop damage is half of the Midwest damages because flooding occurred during the growing and planting season. Property damage is the entire source of damages in Natomas Basin.

The estimated property and crop damage, as of August 6, produced by the Great Flood is \$12 to \$15 billion spread over 31,250 square miles compared to an estimated \$8 to \$10 billion of property damage over just 86 square miles in Natomas Basin. Twice as many homes would be damaged in Natomas Basin (93,000) compared to the Midwest (45,000 as of August 6). Why would we knowingly create a potential catastrophe of this magnitude?

SEVERITY OF FLOOD DAMAGE

Why does flooding in Natomas Basin cause so much destruction? The answer is found in its physical features:

1. During flood events, river levels are higher than the ground level inside the Basin.
2. Rivers or canals surround the Basin on all sides.
3. Levees surround Natomas Basin on all sides.
4. Levees are 15 to 20 feet higher than the inside land area.
5. Natomas Basin has no drain.
6. Low lying lands inside the Basin are lower than surrounding land.
7. Flood waters fill the Basin whenever levees fail.

Together these physical features make Natomas Basin a disaster waiting to happen. Whenever a levee breaks, flood water could fill the Basin. Why? Natomas Basin is a 55,000-acre bathtub and swimming pool combined, but it has no drain! The 15 to 20 high levees form the "bathtub" walls. The land inside is the "bathtub" bottom, but the bottom is not flat. The bottom is like a swimming pool with the deep end located in the middle. From the deep center the pool gets shallower as one moves toward the levees.

On Figure 4 the land area shown as white (over 23 feet) is the lowest part of Natomas Basin. The next lowest land elevation is the land area marked 18 to 23 feet. Once flood waters get inside, it cannot get out until the river level goes down allowing some water to drain out the break in the levee. In these two low lying areas, water will remain until pumped out or it evaporates. These two areas are 5 to 10 feet *lower* than the land around them and would form a 17,700 acre (27.6 square mile) pond. It would cover 32 percent of the land area.

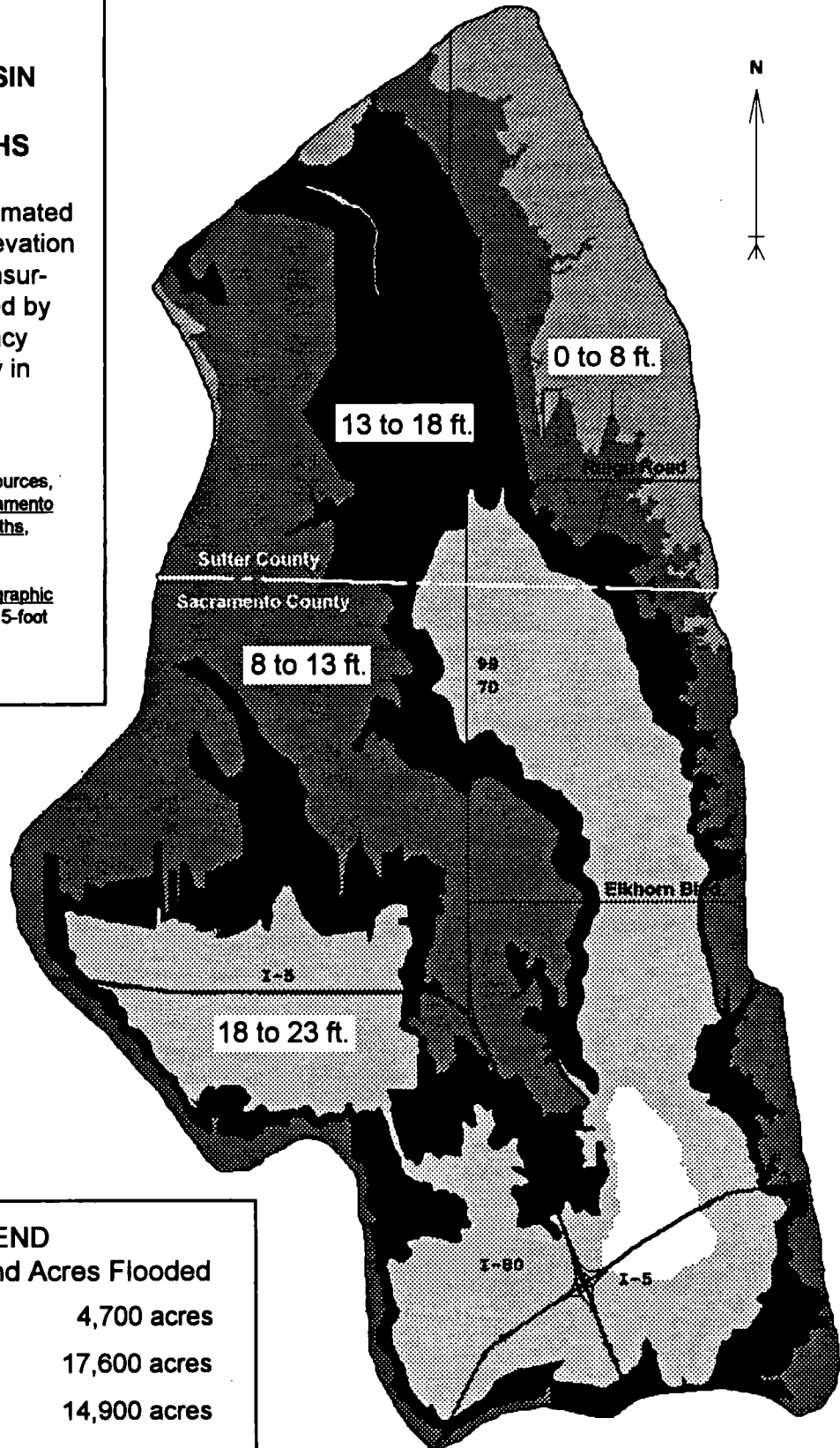
Figure 4 shows the land area covered by the estimated potential flood depths for Natomas Basin. The flood depths are based upon a flood elevation of 33 feet derived from the Flood Insurance Study and Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA) in March 1993. Figure 5 shows the estimated flood depths, the number of acres and square miles by flood depth, and the percentage of land area covered by flood depth.

FIGURE 4 **NATOMAS BASIN** **ESTIMATED** **FLOOD DEPTHS**

Flood depths are estimated from 33-foot flood elevation derived from Flood Insurance Rate Map issued by the Federal Emergency Management Agency in March 1993.

Map developed from:
 California Dept. of Water Resources,
Map of American River - Sacramento
Estimated Potential Flood Depths,
 June 1993.

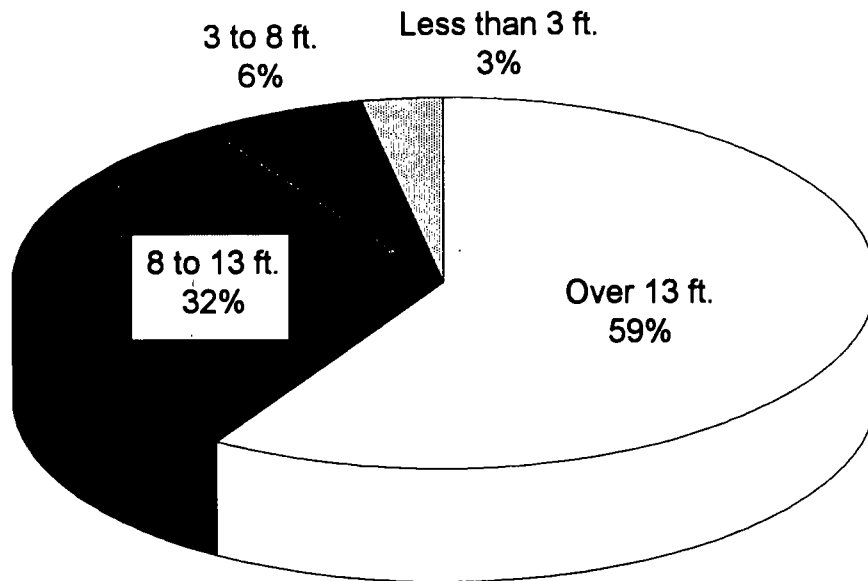
U.S. Geological Survey, Topographic
Maps (7.5 Minute Series) with 5-foot
 contour interval, various years.



LEGEND

Depth of Water and Acres Flooded

	0 to 8 feet	4,700 acres
	8 to 13 feet	17,600 acres
	13 to 18 feet	14,900 acres
	18 to 23 feet	16,600 acres
	over 23 feet	1,100 acres



Depth of Flood Water (feet)	Percent of Total Land	Land Area	
		(acres)	(sq. miles)
0 to 3	3.	1,400	2.
3 to 8	6.	3,300	5.
8 to 13	32.	17,600	28.
13 to 18	27.	14,900	23.
18 to 23	30.	16,600	26.
over 23	2.	1,100	2.
Totals	100.	54,900	86.

**FIGURE 5
NATOMAS BASIN
ESTIMATED FLOOD DEPTHS**

Percentage, acreage, and square mile
measurements of estimated flood depths

The depth of flood water and the duration of flooding have a significant impact upon property damage. Together flood depth and duration have a significant impact on property damage in Natomas Basin. The Corps of Engineers estimated flooding will last for 30 days. This is an extraordinary amount of time when compared to the flood duration of less than 5 days for other parts of the Sacramento floodplain. The Corps also estimated damages to buildings and contents would reach 100 percent where flood depths exceed 13 feet.¹⁰ Figure 5 shows that approximately 59 percent of Natomas Basin's land area could flood to depths exceeding 13 feet and 32 percent could flood to depths of 8 to 13 feet. A total of 91 percent of the land area could flood to depths exceeding 8 feet.

The Corps estimated 13,730 structures and the contents are valued at \$2.351 billion and would suffer flood damage estimated at \$1.592 billion, which is over 67 percent of the market value. "Natomas is the only reach (part the Sacramento floodplain) where flood damages would exceed 50 percent of the market value of the structure."¹¹

Even if a higher level of flood control is provided, the depth and duration of flooding in Natomas Basin is the same. Whenever the next larger flood breeches the levees, Natomas Basin fills with water. The Corps of Engineers observed:

"Flooding from levee failure would be similar in Natomas . . . **regardless of the frequency** of the flood event because (1) the ground elevation adjacent to the levees in these locations is lower than the water surface in the river, and (2) the volume of water in the American River . . . and Sacramento River in the case of Natomas . . . **would fill** the flood plains to similar depths."¹²

To illustrate the Corps point, Figure 6 is a Natomas Basin levee profile along the American River. It shows the highest river water level during the February 1986 storm was 13 feet above the ground level in Natomas Basin. If the levee had failed with the river at the highest level, Natomas Basin could have filled up. As shown on Figure 6, a single story house would have been completely covered by water.¹³

The Corps of Engineers concluded that the Natomas Basin will experience severe flooding whenever the flood control levees are breached. The only thing which changes is the probability, or frequency, of when flooding will occur. Severity of flooding in Natomas Basin is the same no matter the frequency of flood. In other words, severity of flooding in Natomas Basin is the same no matter the probability, or probable frequency, of flooding.

¹⁰ "For the Natomas reach, duration is 30 days, and the average velocity is less than 0.5 feet per second. **Duration has a significant effect on the flood damages for this area.** Damages to structure and content for each land use category [i.e., residential, commercial, industrial, public, and mobile home] were set at 100 percent for depths greater than [sic] 13 feet. For the remaining reaches in the flood plain, duration is less than 5 days, and the average velocities range from 0.5 to 5 feet per second. Neither duration nor velocity had any significant effect on damages." Source: Corps Feasibility Report, Appendix C, p. C-22, (emphasis added)

¹¹ Ibid., p. C-25.

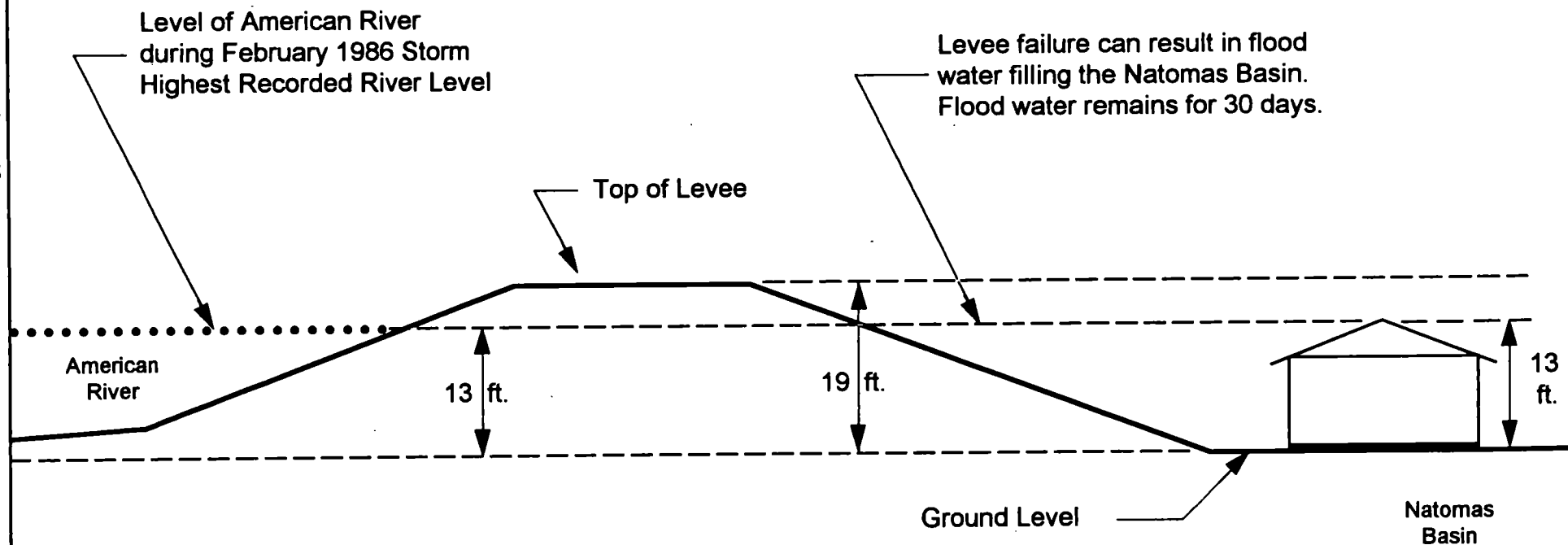
¹² Ibid., Main Report, p. III-18, (emphasis added).

¹³ Figure 6 is a graphic illustration of Natomas Basin flood depths and what this much water does to a single story house constructed on grade. Building on grade is the typical method used in much of California. The house is completely covered. Destruction is total for building and contents.

**FIGURE 6 LEVEE PROFILE
NATOMAS BASIN
AMERICAN RIVER
RIVER MILE 1.5
LOOKING DOWNSTREAM**

"Flooding from levee failure would be similar in Natomas . . . regardless of the frequency of the flood event because (1) the ground elevation adjacent to the levees in these locations is lower than the water surface in the river and (2) the volume of water in the American River . . . and Sacramento River . . . would fill the flood plains to similar depths."

SOURCE: U.S. Army Corps of Engineers, American River Watershed Investigation, California: Feasibility Report, (Sacramento District, December 1991), Main Report, p. III-18.



Drawn from U.S. Army Corps of Engineers, American River Watershed Investigation, California: Feasibility Report, (Sacramento District, December 1991), Appendix M, Chapter 2, Appendix M-2-A, Levee and Flood Profiles - Sections 5 through 9, Section 7.

PROBABILITY OF FLOODING

What is the probability of Natomas Basin flooding? To answer the question, consider an incident from the Great Flood of 1993:

"For various points along the Mississippi, the Army Corps of Engineers has calculated the probability of floods of varying heights. The smallest probability they bothered to calculate was a '500-year flood' - one so unlikely it can be expected to happen only once in five centuries. . . . [A]t Hannibal, Mo., a 500-year flood was determined to be 30 feet, so the city built its new levee a foot higher, at 31. It was finished in April after two years of work, and when the waters rose in early July residents heaped three feet more of sandbags atop it. When the crest reached Hannibal, the river was at 32 feet."¹⁴

This incident helps us to understand the uncertainty of predicting and controlling flood events. Also it shows the confusion caused by the terms used to describe flood events. The Corps of Engineers calculates the probability of floods of varying heights, or volumes. Each calculated flood event has an estimated water height which is caused by an estimated water volume. As can be expected, greater volume results in greater height. As the volume of water increases, the probability decreases because larger floods occur less often.

To name different flood events, engineers use a shorthand description based upon the probability of when each flood event will occur. Engineers take historical records of past floods and apply statistical calculations to predict the probability or chance of flooding. For example, the "500-year flood" is the calculated flood of a certain volume or height which has a 1 in 500 chance of occurring in any year. The 500-year flood has a one-fifth of one percent (0.20%) of occurring in any year. Over 30 years the 500-year flood has a 6 percent chance of occurring during the 30 years. The "500-year flood" DOES NOT mean this size of flood will only occur once in 500 years. As can be seen from Table B, over 100 years the 500-year flood has a 18 percent of occurring while the 100-year flood has a 63 percent chance of occurring during the same 100 years.

The terms 500-year flood and 100-year flood can be misleading. Such floods may be experienced in any year. Since the National Flood Insurance Program was established, there have been numerous instances where communities have experienced two, and even three, 100-year or greater floods within a span of several years. A notable example is Pennsylvania in the 1970's where within five years after Tropical Storm Agnes (1972) battered the state another 100-year flood occurred.¹⁵

Table B presents the percent chance or probability of different flood events happening in any year and over various numbers of years. The chance of the 1 in 100 flood, or the 100-year flood, occurring over the life of a 30-year mortgage is 26 percent, or about one in four. The question for the homeowner is whether or not to purchase flood insurance. By contrast, during the term of a 30-year mortgage, there is only a 1 percent chance of suffering a fire loss.¹⁶ What level of risk is acceptable? What level of risk is unacceptable?

¹⁴ Jerry Adler, "Troubled Waters," Newsweek, July 26, 1993, p.21.

¹⁵ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 7.

¹⁶ Ibid.

Table B

Percent Chance Of Floods Occurring Over The Years

Number Of Years	100-Year Flood (percent)	500-Year Flood (percent)
Any Year	1.0	0.20
30	26	6
50	39	10
75	53	14
100	63	18
200	87	33
400	98	55
500	99.34	63
1000	99.99	86
2000	99.99	98

CONGRESSIONAL RECOGNITION OF UNACCEPTABLE RISK

The unacceptable risk posed to public health and safety by further development in Natomas Basin was recognized in two Federal laws enacted in 1992. These two laws contained sections written to address Natomas Basin flooding issues. Each law and its legislative history talks specifically about Natomas Basin. Together these laws express the Congressional recognition of the unacceptable risk created by allowing further urban development of Natomas Basin

First, in the Department of Defense Appropriations Act of 1992, the Secretary of the Army was authorized to construct the Natomas Basin levee improvement features proposed by the Corps of Engineers. However, a limitation was placed upon these levee improvements:

" . . . provided that such construction does not encourage the development of deep floodplains."¹⁷

Second, in the Housing and Community Development Act of 1992 (H.R. 5334), changes were made to the National Flood Insurance Program (NFIP). A change was specifically designed to address Sacramento's flood insurance problems. Briefly, the legislation (a) created a new "flood restoration zone" for flood insurance rates, and (b) allowed the Federal Emergency Management Agency (FEMA) to establish floodplain management criteria for new construction in the flood restoration zone where flood depths exceed 5 feet. Speaking as the Chairman of the Senate Housing and Urban Affairs Subcommittee responsible for the legislation, former U.S. Senator Alan Cranston of California spoke on the floor of the Senate to clarify the intent behind the legislation:

"The flood restoration zone is not intended to allow the development of undeveloped areas including the Natomas basin area in Sacramento."¹⁸

¹⁷ Department of Defense Appropriations Act of 1992, Section 9159.

These two laws recognize the unacceptable risk caused by further urban development in Natomas Basin. Congress has established limits on further development. However, local government officials are working to get around the limitations contained in these two laws. Their efforts appear to be close to success and urban development will continue to fill Natomas Basin. Before this happens, the Clinton-Gore Administration and Congress should act to change Federal law by prohibiting flood insurance from being available to new development and by removing other Federal financial assistance.

Such action was taken by Congress in October 1982 with the passage of the Coastal Barrier Resources Act (COBRA).¹⁹ The law was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas. Among the restrictions in COBRA, no new flood insurance coverage was provided for any new construction in designated coastal barriers after October 1, 1983. While COBRA does not prevent private financing and development, it limits financial assistance by Federal agencies on undeveloped coastal barriers. Similar legislation should be enacted to remove Federal encouragement of further urban development in Natomas Basin. Further details for legislation to achieve this end is presented in Appendix A.

SUMMARY OF PUBLIC POLICY ISSUE

The basic public policy issue is whether or not the Federal government should encourage additional urban development in deep floodplains, such as Natomas Basin. The arguments against encouraging further development are based upon these beliefs and values:

- Government should reduce risk and protect the public health and safety, not increase such risks.
- Government should spent limited tax dollars protecting public health and safety, not wasted on projects increasing the risk to people and property.
- Predicting and controlling the forces of nature is subject to unacceptable error and mistake, not an activity government should depend upon for protecting public health and safety.
- The accountability for the consequences resulting from decisions should remain with the decision-makers responsible, not transferred to others.
- Each generation should think about the short and long term impacts of their actions, not leaving deficits and billion dollar blank checks to be paid for future flood disasters by future generations.
- Tax dollars should benefit the larger public good, not produce windfall profits for a few land speculators and developers.

The problems caused by allowing further urban development in Natomas Basin are:

1. The risk to human life and safety is increased by further urban development in Natomas Basin. Over 170,000 additional people could be added to the 31,000 already living there. What will be the level of human suffering when 200,000 people are flooded? Where does a city of over 200,000 people live when everything is under water for 30 days? How long will it take to rebuild? How many people will die?

¹⁸ Congressional Record - Senate, October 8, 1992, p. S17910.

¹⁹ 96 Stat. 1653, Public Law 97-348 (S. 1018), October 18, 1982.

2. The 55,000-acre Natomas Basin is a combined bathtub/swimming pool with no drain! Massive destruction of structures and the contents would result from flooding a fully urbanized Natomas Basin. Proposed urban development plans by local governments would increase the value of structures and contents to an estimated value of over \$15 billion. The potential property damage is estimated at \$8 to \$10 billion. This amount is similar to the destructive Great Flood of 1993 (as of August 6, 1993). How much will the local, California, and Federal governments pay for such a massive disaster relief effort? From where will the money come?

3. Flood depth, flood duration, and extent of destruction in Natomas Basin is the same no matter if the flood is a 100-year, 200-year, or 400-year event. Flood control structures create a false sense of security. Flood control structures for Natomas Basin only reduce the probability, or probable frequency, of flooding, not the severity of destruction. Instead of encouraging people to stay out of floodplains, government tries to predict and control the forces of nature. Why are we allowing more people and buildings to be placed in harms way when we know disaster will strike someday?

4. The accountability for flooding consequences caused by the decision to build in floodplains is transferred from local decision-makers to Federal taxpayers. How can local decision-makers be held accountable for their decisions when the resulting consequences are transferred to others?

5. By encouraging further development in Natomas Basin, Federal taxpayers are subsidizing profits for land speculators and developers who promote building in deep floodplains. Estimated profits are \$5 to \$10 billion. The land speculators and developers do not bear the cost of building flood control structures nor the cost of emergency disaster relief and recovery. Taxpayers are responsible for this financial burden. When will the costs be placed upon those responsible and not passed on to others?

CONCLUSION

The National Performance Review offers the opportunity to ask tough questions and to take corrective action. Federal public policy should not encourage increasing the number of people and buildings at risk of deep flooding. The Natomas Basin is a prime example of Federal policy gone wrong. Encouraging further urban development in deep floodplains is bad public policy. The Great Flood of 1993 shows the folly of continuing business as usual. Saying "it has always been done this way" is no excuse for continuing the practice. Now is the time to make fundamental changes.

APPENDIX A

PROPOSED LEGISLATIVE SOLUTION

Federal government actions are encouraging urban development in Natomas Basin. This is the same type of problem Congress faced when it enacted the Coastal Barrier Resources Act (COBRA). Adopted in October 1982, COBRA was enacted to restrict Federal government actions that were encouraging the development of certain coastal barrier areas.

The essential provisions of COBRA are:

1. Prohibits the National Flood Insurance Program from providing flood insurance protection for buildings built after October 1, 1983, in designated undeveloped coastal barriers.
2. Limits financial assistance by Federal agencies on undeveloped coastal barriers, except for enumerated situations such as emergency assistance actions essential to saving lives, protecting property, and protecting public health and safety. Such emergency assistance would not include disaster assistance and government loans.

While COBRA limits the availability of flood insurance and limits financial assistance by Federal agencies, it does not prevent private financing and development. The inability of the property owner to purchase flood insurance does not require a lender to refrain from making a conventional loan. The decision and risk remain with the property owner and the lender.¹

These same COBRA restrictions should be enacted by Congress for deep floodplains, like Natomas Basin. Doing so will greatly restrict new development and alter the type of development undertaken in the Natomas Basin. Existing buildings would be grandfathered and allowed to continue receiving flood insurance and Federal financial assistance.

Based upon the characteristics of Natomas Basin, five (5) criteria should be used to define deep floodplains subject to COBRA-type restrictions:

1. Damage from potential flood events will cause destruction of structures and contents to be 50 percent or greater of their value regardless of the flooding frequency or probability.
2. Depth of flooding is over five (5) feet for all potential flood events regardless of the frequency of flooding.
3. Duration of flooding is over five (5) days for all potential flood events regardless of the frequency of flooding.
4. Amount of undeveloped land in project area located in floodplain exceeds 5 percent of the project land area.
5. Potential risk to public health and safety is increased even after flood control measures are implemented.

¹ Federal Emergency Management Agency, Mandatory Purchase of Flood Insurance Guidelines, FEMA 186, Effective on July 13, 1989, p. 24

APPENDIX B

GREAT FLOOD OF 1993: The numbers are as of Friday, August 6, 1993. The information and numbers used are taken from The Sacramento Bee, August 8, 1993, p. A8, except where another source is noted.

A Newsweek, July 26, 1993, p. 22 .

As of August 6, 1993	Deaths (actual)	Homes Damaged (estimated)	Estimated Property Damage (billion)	Estimated Crop Damage (billion)	State Total Estimated Damages (billion)	Square Miles Flooded	Total Number States Flooded
Illinois	4		\$0.930	\$0.565	\$1.495		
Iowa	5		1.250	1.150	2.400		
Kansas	1		A 2.000	0.434	2.434		
Minnesota	4		0.018	0.990	1.008		
Missouri	25		1.700	1.100	2.800		
Nebraska	2		0.050	0.292	0.342		
N. Dakota	2		0.100	0.400	0.500		
S. Dakota	3		0.014	0.572	0.586		
Wisconsin	2		0.121	0.800	0.921		
TOTAL	48	44,984	\$6.183	\$6.303	\$12.486	31,250	9

Estimated damages range from \$12.486 billion to \$15 billion. Based upon totals for estimated crop and property damage from the table above, 50/50 split of damage costs to date. Applying 50/50 split to \$15 billion gives \$7.5 billion each.

"Homes Damaged" is based on 44,984 "Families affected" found in the article and rounded to 45,000.

"People Evacuated" is estimated by assuming 2.25 persons per home times 44,984 homes damaged yielding 101,214 people and rounded to 100,000.

"Square Miles Flooded" is calculated from estimated 20 million acres flooded divided by 640 acres/sq. mile equals 31,250 sq. miles.

FUTURE NATOMAS BASIN:

Deaths: Estimated deaths were derived from data in Corps Feasibility Report, Main Report, p. III-18 and Appendix C, Table III-3, p. 14. Estimated 25 fatalities in Sacramento's population of 366,500 produced a ratio of 1 death per 14,660 people. Applied to an estimated Natomas Basin population of 210,000 yields 15 deaths.

Homes Damaged (estimated): Based upon estimated housing units from:
City of Sacramento: South Natomas Community Plan:

Total Housing Units (buildout): 17,765
Total Population (buildout): 38,147

Source: Population and Housing Data by Community Plan Area, City of Sacramento, Planning and Development Department, March 1991, p. 6.

North Natomas Community Plan:

Total Housing Units (buildout): 33,527
Total Population (buildout): 66,910

Source: Draft Supplement to the 1986 North Natomas Community Plan EIR, City of Sacramento, Planning and Development Department, March 1993, p. 2.0-8.

Sutter County: Total Housing Units (buildout) 42,362
 Total Population (buildout): 105,056

Source: Technical Appendices to the South Sutter County General Plan Amendment and Draft Environmental Impact Report, Sutter County Planning Department, July 31, 1991, Appendix G "Land Use Calculations by Cells," Part 5.

Total Natomas Basin: Total Housing Units (buildout): 93,654
 Total Population (buildout): 210,113

Estimated Property Damage (billion): The estimated value of structures and contents is calculated by assuming the 200,000 people will have the same value of structures and contents as the current 31,000 people. So (200,000 divided by 31,000) times \$2.351 billion/per 31,000 people equals \$15.168 billion. Using the 67 percent flood damage figure for existing structures and contents yields (67% x \$15.168 billion = \$10.163 billion). Being more conservative using 50 percent damages on \$15.168 billion gives \$7.584 billion rounded to \$8 billion.

Estimated Crop Damage: "The economic evaluation for the Reconnaissance Report, American River Watershed Investigation, January 1988, indicated that the benefits attributable to agricultural crops were less than 1/2 half of 1 percent. As a result, flood damage reduction benefits were not estimated for agricultural crops." Source: Corps Feasibility Report, Appendix C, p. C-20.



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

Tues 9:00
Levee Mtg.

October 15, 1993

TO: See Distribution List

FROM: ~~Bruce~~ Long
Chief, Water Resources Branch
Office Of Management And Budget

RE: Federal Programs Booklet On Alternatives To Levee
Repair/Replacement

The attached package is provided for your agency's final review and comment. It is important that your agency's programs be reviewed with great care. These booklets will be made available to a wide array of agencies, governments, organizations, and individuals throughout the flooded areas of the Midwest.

Some program information you provided has been deleted or moved to different categories in an attempt to make the programs as clear, concise, and focused on viable alternatives as possible. During your review, please direct your attention to the following specific areas:

- General - Additional information required for particular programs are noted in brackets ([]). Please provide the information requested or state why it is not needed.
- Total Funding - Update this element to include the conference amount in your FY 1994 appropriation. If your bill has not gone to Conference, state the House and/or Senate amount in the FY 1994 bills.
- You will note that a number of programs in the booklet are marked for deletion because they do not appear to be clear alternatives to the repair or replacement of levees. Review these programs in detail and determine if they are relevant and should remain in the booklet. If you believe a program(s) should remain, you must modify the program description to clearly show its relevance as an alternative to levee repair or replacement. HUD is a special example. Although there is significant funding and a broad range of programs, the descriptions do not clearly identify them as useful as alternatives to levee repair. The description needs to be more focused in this regard or they will be dropped from the package.
- Several of the programs in the booklet are marked for deletion because they are not funded. Please review the status of funding for these programs and indicate if any of these

PHOTOCOPY
PRESERVATION

programs should remain due to a change in funding status (remember to include carryover funds, emergency supplemental, and FY 1994 anticipated appropriations).

- The program matrix needs your careful review to ensure that your programs are included in the proper categories (strategies). Note that a program can be considered under more than one category.
- Are there any additional programs which should be included in the booklet? Any that are included that should be deleted? Why?

The individual(s) to whom this draft is sent for review/comment will be responsible for agency review and concurrence, and for returning the booklet with comments to OMB by the suspense date.

You are requested to complete your review and return the booklet to me not later than **Wednesday, October 20, 1993**. The package will be discussed at the task force meeting scheduled for that day. Questions and/or comments can be addressed at that time or directed to Vince Montante at 202-395-4695.

DISTRIBUTION LIST:

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***FEDERAL PROGRAMS OFFERING
ALTERNATIVES TO TRADITIONAL
FLOOD CONTROL FACILITIES***

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SUMMARIES OF ALTERNATIVE STRATEGIES

Wetland Restoration
Rural Land Easements or Acquisition
Flood Proofing, Relocation or Elevation

SPECIFIC FEDERAL PROGRAM SUMMARIES

Department of Agriculture
Department of Commerce
Corps of Engineers
Department of the Interior
Environmental Protection Agency
Federal Emergency Management Agency
Department of Housing and Urban Development
Small business Administration

October 15, 1993

FEDERAL PROGRAMS OFFERING ALTERNATIVES TO TRADITIONAL FLOOD CONTROL FACILITIES

Preface

What follows is a compilation of broad strategies and specific Federal programs that could form the basis for an integrated, alternative Federal response to the Midwest flood. These programs have been selected for priority identification in this way because they offer the following characteristics: there is available funding, the assistance is administratively relatively easy to access, and the program delivery is timely, flexible, and effective.

Each strategy could be selected by a local cooperator based on its particular circumstances. Once selected, the strategy could be carried out through a combination of programs administered by one or more Federal agencies. Implementation of these programs in a coordinated way through a plan developed by the local cooperator would reduce flood losses, the mental, physical, and economic toll on towns and farms that have suffered repeated damage, long-term costs to society, and help restore lost or impaired environmental resources.

A matrix is provided to illustrate how various Federal programs can be combined to support these strategies. Following the matrix is a more complete discussion of the three strategies and summaries of the programs that provide information on their objectives, eligibility, cost-sharing requirements, available funding, and other important information.

This pamphlet was prepared by the Office of Management and Budget, within the Executive Office of the President, in cooperation with the various Federal agencies represented in the packages that follow. Corrections or additional information regarding applicable programs should be brought to the attention of Mr. Bruce D. Long at 202-395-4590 or fax 202-395-4652.

ALTERNATIVE WATERSHED PROGRAMS

Agency/Specific Programs	Alternative to Levees		
	Restore Wetlands	Rural Land Easements/ Acquisitions	Relocations/ Floodproofing/ Elevation
Agriculture - ASCS			
Wetlands Reserve Program	X	X	
Emergency Conservation Program	DELETE - NOT RELEVANT		
Water Bank Program	DELETE - NO FUNDING		
Conservation Reserve Program	DELETE - NO FUNDING		
Agriculture - SCS			
Emergency Watershed Protection			X
Watershed Protection and Flood Prevention	DELETE - NO FUNDING		
Agriculture - FHA			
Debt Cancellation Conservation Easements		X	
Transfer of Inventory Real Property	X	X	
Inventory Property Acquisition		X	
Commerce - EDA			
Flood Relief Program			X
Corps of Engineers			
Section 1135 Program (Environmental Restoration)	X		
Section 22 Program (Planning Assistance to States Program)			X
Section 206 Program (Flood Plain Management Services)	X	X	X

ALTERNATIVE WATERSHED PROGRAMS

Agency/Specific Programs	Alternative to Levees		
	Restore Wetlands	Rural Land Easements/ Acquisitions	Relocations/ Floodproofing/ Elevation
DOI - USFWS			
Partners for Wildlife	X		
N. A. Wetland Conservation Fund	X		
Land Acquisition Program		X	
DOI - USNPS			
River and Trails Conservation Program			X
Federal Land Transfer; Federal Land-to-Parks Program			X
Land and Water Conservation State Grants	DELETE- NO FUNDING		
EPA			
Capitalization Grants for State Revolving Funds			X
Clean Water Act Section 319 Grants	X		
Wetlands Protection - State Development Grants	X		
Water Pollution Control - State and Interstate Program Support (Section 10	DELETE - NOT RELEVANT		
FEMA			
Hazard Mitigation Grant Program	X	X	X
Section 1362 Flooded Property Purchase Program		X	
Technical Assistance for Implementing Hazard Mitigation Programs	X	X	X

ALTERNATIVE WATERSHED PROGRAMS

Agency/Specific Programs	Alternative to Levees		
	Restore Wetlands	Rural Land Easements/ Acquisitions	Relocations/ Floodproofing/ Elevation
HUD			
Section 108 Loan Guarantee Program			X
Community Development Block Grant Program			X
SBA			
Physical Disaster Loans and Economic Injury	X		X

FEDERAL PROGRAMS THAT SUPPORT

WETLAND RESTORATION

ALTERNATIVE FEDERAL PROGRAMS FOR THE RESTORATION OF WETLANDS

On August 24, 1993, the Clinton Administration proposed a new policy framework for the protection of wetlands. The importance of this new policy was summarized in the policy statement as follows: "The Nation's wetlands perform many functions that are important to society, such as improving water quality, recharging groundwater, providing natural flood control, and supporting a wide variety of fish, wildlife and plants. The economic importance of wetlands to commercial fisheries and recreational uses is also enormous."

The policy statement also placed the importance of wetlands in the context of lessons learned from the Great Flood of 93: "Many scientists have concluded that past manipulation of the rivers in the Midwest has contributed to the current level of devastation by separating the river channels from their natural floodplains, eliminating millions of acres of additional flood storage capacity. Wetlands within the floodplain and higher in the watershed reduce floods by absorbing rain, snow melt, and floodwaters and releasing it slowly, thereby reducing the severity of downstream flooding."

For these reasons, it is important that we seize the opportunity provided by this great flood to restore wetlands lost to agriculture and other forms of development.

Among the hardest hit by the flood were farmers. Many lost at least one year's crop. The land itself may have been ravaged by flood waters causing the land to be too expensive to farm. The Administration will consider offering farmers, where eligible and where it makes sense economically and environmentally, an opportunity to recover at least a portion of their losses and, at the same time, make a contribution to the natural environment and reduced flooding. The following programs can contribute to the restoration of wetland values by the actual manipulation of land contours, plantings, and routing of water flows. Programs for the acquisition of land or easements on which the wetlands will be placed are described in the next section.

The Administration requested, and Congress provided, language in the emergency supplemental that may provide \$15 million in SCS funds* that would otherwise be used for levee repair to be used instead for wetland restoration in those cases where the cost of levee repair plus land reclamation exceeds the value of the land. This flexibility exists not only for cropland protected by SCS levees. Cropland behind Corps of Engineers levees are also eligible for consideration.

* This is a policy guidance estimate. Most of these funds would be used for purchase of easements as described in the next section. Some portion would, however, be used for actual wetland restoration.

This is not the only program that can be used for this purpose. Additional programs are listed below and described in more detail in the accompanying program descriptions.

State Wetland Program Development

- EPA's "Wetland Protection -- State Development Grants (Funding available -- \$10.3 million)
- EPA's "Clean Water Section 319 (nonpoint source) Grants" (Funding available -- \$81.7 million)

Wetland Restoration Funding

- Department of the Interior's Fish and Wildlife Service "Partners for Wildlife" program (Funding available -- \$3.3 million), the "North American Wetlands Conservation Fund" (Funding available -- \$2 million)
- Army Corps of Engineers "1135" program (Funding available -- \$8.5 million)
- (Land acquisition and easement programs to support wetland restoration are described in the following section.)

If you need further information, an agency point of contact is listed in the program summaries. Agency representatives at the nearest DFO should also be able to provide information.

**FEDERAL PROGRAMS THAT SUPPORT
EASEMENTS OR ACQUISITION**

ALTERNATIVE FEDERAL PROGRAMS FOR RURAL LAND EASEMENTS AND ACQUISITION

In the past farmers have had two choices when farming land that was susceptible to flooding. They could sell their crops in good years and collect crop insurance and/or disaster payments in bad, or they could seek protection in the form of levees, channels, or other structures. Similar decisions were faced by other rural landowners using flood prone lands for production of fruits, timber, or other products.

Neither alternative was ideal either from the landowner's perspective or the government's. The landowner never knew what level of payment he or she would receive from the government when damage was incurred or a crop lost. The government often paid many times as the levee required repair and crops were repeatedly lost. Even if there was no levee, payments would still be made by the government for each lost crop.

The Great Flood of '93 destroyed great stretches of levees and thousands of acres of crops, pasture, and woodland. The question facing landowners and the government today is whether to simply repeat the pattern of past floods by making disaster payments and rebuilding the levees, or whether to embark on a new course of action that will give the landowners some measure of security by making payments for future flood damages and, at the same time, reduce long-term costs to the Federal government.

The alternatives listed below are among those that would support the latter course of action by providing for the purchase of long-term flood or conservation easements or the outright acquisition of property for alternative uses.

Easements

- The Department of Agriculture's Farmer's Home Administration ASCS's "Wetlands Reserve Program (Funding available -- \$67 million), SCS's "Emergency Wetlands Reserve" program (Funding available -- \$15 million), to a lesser extent, conservation authority for FmHA debt restructuring and acquired inventory property (Funding available -- NA)
- Department of the Interior's Fish and Wildlife Service "Land Acquisition" program (Funding available -- \$6-7 million)

Acquisition

- Department of Agriculture's FmHA "Transfer of Inventory Real Property (Funding available -- NA)
- Fish and Wildlife Services "Land Acquisition" program (see above)

- Corps of Engineers' "1135" program (Funding available -- \$8.5 million)

If you need further information, an agency point of contact is listed in the program summaries. Agency representatives at the nearest DFO should also be able to provide information.

**FEDERAL PROGRAMS THAT SUPPORT
FLOOD PROOFING, RELOCATION, OR ELEVATION
OF STRUCTURES**

ALTERNATIVE FEDERAL PROGRAMS FOR FLOOD PROOFING, RELOCATION, AND ELEVATION

Thousands of structures were damaged by the Great Flood of '93, many beyond repair. Some owners will choose to rebuild in place. To the extent that their decision does not entail future Federal damage payments, they should be free to do so. However, from a budget and wise land-use perspective, it may be preferable to modify the structure to reduce or eliminate the flood threat.

This modification may entail relocation outside the floodplain; the structure may actually be moved or the existing structure destroyed and a new one built or purchased to replace its function. Elevation or flood proofing are also viable options in some cases.

The setting in which these actions take place can be as varied as isolated farm structures, commercial facilities, or entire urbanized areas including homes, schools, fire houses, water and waste treatment plants, and hospitals.

There are a number of Federal programs that can assist in the implementation of a decision to relocate. These range from technical assistance in the planning of the action, to actual financial assistance in the form of grants or loans.

However, in order to affect such an action, it may be necessary to utilize more than one program since each was created to serve a specific purpose. Accessing technical assistance in order to prepare a plan and organize local support is an important first step. The various agencies will certainly try to facilitate the coordination of the various programs, but it will not necessarily be easy or quick.

Flood Plain Management Technical Assistance

- FEMA's "Technical Assistance for Implementing Hazard Mitigation" program (Funding available --)
- Army Corps of Engineers Section 22 "Planning Assistance to States" program (Funding available -- \$3 million), and the Section 206 "Flood Plain Management Services Program" (Funding available --)
- Department of the Interior's National Park Service "Rivers and Trails Conservation Program" (Funding available -- \$6.8 million)

Property Acquisition and Relocation Assistance

- FEMA's "Hazard Mitigation Grant Program" (Funding available -- \$27.5 million) and the Section 1362 "Flooded Property Purchase Program" (Funding available -- \$4.7 million)

- Department of the Interior's National Park Service "Federal Land Transfer; Federal Lands-to-Parks (Funding available -- \$.5 million)
- SBA's "Physical Disaster Loans and Economic Injury Disaster Loans" (Funding available --)
- Department of Commerce's "Flood Relief Program" (Funding available -- \$100 million)
- EPA's "Capitalization Grants for State Revolving Funds" (Funding available -- \$1.2 billion)
- HUD (Note: HUD has a number of programs such as its "Single Family Property Disposition Program - Lease of Acquired Properties to Disaster Victims" that, by providing temporary housing assistance, can help homeowners who want to relocate their homes out of the flood plain. HUD can also assist with the disposition of HUD-owned damaged loans through its "Forbearance on HUD-Owned Loans" program. See the attached HUD program descriptions.)

If you need further information, an agency point of contact is listed in the program summaries. Agency representatives at the nearest DFO should also be able to provide information.

DEPARTMENT OF AGRICULTURE

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Agriculture

Agency: Agricultural Stabilization and Conservation Service

Program Name: Wetlands Reserve Program

Agency Point of Contact:

Lisa Manning	Illinois	(217) 492-4670
Bill Hawks/Ron Manthei	Iowa	(515) 254-1540
Roger Lemons	Kansas	(913) 539-3534
Greg Anderson	Minnesota	(612) 290-3650
Gerald Hrdina	Missouri	(314) 876-0932
Roger Hessman	Nebraska	(402) 437-5277
Robert Mullenbach	North Dakota	(701) 239-5258
Ron Larson	South Dakota	(605) 353-1840
Susan Butler	Wisconsin	(608) 264-5311

Program Function: Provides owners of eligible land an opportunity to offer an easement for purchase by the Secretary of Agriculture and to receive cost-share assistance to restore wetlands.

Applicability: This program is administered by the Agricultural Stabilization and Conservation Service (ASCS) with technical assistance from the Soil Conservation Service (SCS) on wetland designs. SCS, in consultation with the U.S. Fish and Wildlife Service, will determine land eligibility and develop a wetland reserve plan of operation for the acres that are eligible.

Form of Assistance: Financial and technical assistance to restore wetlands.

Program Target: Private landowners.

Total Funding: \$67 million

Eligibility Requirement(s): One-year ownership and be cropped one of the last five years; farmed wetlands, and prior converted wetlands.

Cost-Sharing Requirement(s): Federal government will provide not less than 75 percent cost-share for restoration, plus lump sum payment for easement.

Repayment Requirement(s): None.

Application Procedure(s): Landowner must submit an intention to enter into the program through ASCS field office.

Application Time Line: [NEED AGENCY INPUT. HOW LONG AFTER THE APPLICATION IS APPROVED IS MONEY AVAILABLE?]

Programmatic/Funding Constraint(s): None.

Other Comments: None.

[DELETE - NOT RELEVANT]

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Agriculture

Agency: Agricultural Stabilization and Conservation Service

Program Name: Emergency Conservation Program

Agency Point of Contact:

Lisa Manning	Illinois	(217) 492-4670
Bill Hawks/Ron Manthei	Iowa	(515) 254-1540
Roger Lemons	Kansas	(913) 539-3534
Greg Anderson	Minnesota	(612) 290-3650
Gerald Hrdina	Missouri	(314) 876-0932
Roger Hessman	Nebraska	(402) 437-5277
Robert Mullenbach	North Dakota	(701) 239-5258
Ron Larson	South Dakota	(605) 353-1840
Susan Butler	Wisconsin	(608) 264-5311

Program Function: Rehabilitate farmland damaged by wind and water erosion, floods, hurricanes, or other natural disasters.

Applicability: This program is administered by the Agricultural Stabilization and Conservation Service (ASCS) with technical assistance from the Soil Conservation Service (SCS). Technical assistance and cost sharing are provided for the restoration of farmland and existing conservation practices damaged by natural disasters such as floods, drought, hurricanes, or tornadoes. SCS provides needed technical assistance for restoring conservation practices.

Form of Assistance: Financial and technical assistance to rehabilitate farmland.

Program Target: Private landowner.

Total Funding: \$30 million

Eligibility Requirement(s): Damage to agricultural land caused by flooding or water erosion.

Cost-Sharing Requirement(s): Federal government will provide 64 percent cost-share.

Repayment Requirement(s): None.

Application Procedure(s): Landowner must apply at ASCS office.

Application Time Line: [NEED AGENCY INPUT. HOW LONG AFTER THE APPLICATION IS APPROVED IS MONEY AVAILABLE.]

Programmatic/Funding Constraint(s): None.

Other Comments: None.

[DELETE - NO FUNDING]

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: The Department of Agriculture

Agency: Agricultural Stabilization and Conservation Service

Program Name: Water Bank Program

Agency POC:

Lisa Manning	Illinois	(217) 492-4670
Bill Hawks/Ron Manthei	Iowa	(515) 254-1540
Roger Lemons	Kansas	(913) 539-3534
Greg Anderson	Minesota	(612) 290-3650
Gerald Hrdina	Missouri	(314) 876-0932
Roger Hessamn	Nebraska	(402) 437-5277
Robert Mullenbach	North Dakota	(701) 239-5258
Ron Larson	South Dakota	(605) 353-1840
Susan Butler	Wisconsin	(608) 264-5311

Program Function: The Water Bank Program objectives are to preserve, restore, and improve the wetlands of the Nation.

Applicability: The Water Bank Program is administered by the Agricultural Stabilization and Conservation Service (ASCS) through State and county committees with technical assistance from the Soil Conservation Service (SCS). SCS assistance involves identifying eligible wetlands, assisting wetland owners to develop necessary conservation plans, and assisting participants in applying contracted conservation treatment.

Form of Assistance: Technical assistance to protect, improve, or restore eligible wetlands.

Program Target: Private landowners.

Total Funding/\$(mil): None

Eligibility Requirement(s): Type I-VII wetlands.

Cost Sharing Requirement(s): Rental at appropriate rate per acre based on wetland type.

Repayment Requirement(s): If funds from other programs are used during a given year, rental for that year must be repaid.

Application Procedure(s): Landowner must apply for program at ASCS field office.

Application Time Line: Sign-up period.

Programmatic/Funding Constraints(s): Lack of funding.

Other Comments: None.

[DELETE - NO FUNDING]

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Agriculture

Agency: Agricultural Stabilization and Conservation Service

Program Name: Conservation Reserve Program

Agency Point of Contact:

Lisa Manning	Illinois	(217) 492-4670
Bill Hawks/Ron Manthei	Iowa	(515) 254-1540
Roger Lemons	Kansas	(913) 539-3534
Greg Anderson	Minnesota	(612) 290-3650
Gerald Hrdina	Missouri	(314) 876-0932
Roger Hessamn	Nebraska	(402) 437-5277
Robert Mullenbach	North Dakota	(701) 239-5258
Ron Larson	South Dakota	(605) 353-1840
Susan Butler	Wisconsin	(608) 264-5311

Program Function: The Conservation Reserve Program (CRP) offers long-term rental payments and cost-share assistance to establish permanent vegetative cover on cropland that is highly erodible or contributing to a serious water quality problem.

Applicability: The CRP is administered by the Agricultural Stabilization and Conservation Service with technical assistance from the Soil Conservation Service (SCS). SCS provides technical assistance to make land eligibility determinations, develop conservation plans on accepted acres, and assist with implementation and vegetation establishment and maintenance.

Form of Assistance: Long-term rental payments and technical assistance to establish permanent vegetative cover on cropland.

Program Target: Individual landowner.

Total Funding: None.

Eligibility Requirement(s): None.

Cost-Sharing Requirement(s): None.

Repayment Requirement(s): None.

Application Procedure(s): None.

Application Time Line: None.

Programmatic/Funding Constraint(s): None.

Other Comments: None.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Agriculture

Agency: Soil Conservation Service

Program Name: Emergency Watershed Protection

Agency Point of Contact:

Lyle W. Asell	Iowa	(515) 284-4260
Gary N. Parker	Illinois	(217) 398-5271
Delbert E. Prophet	Kansas	(913) 823-4568
Jon V. DeGroot	Minnesota	(612) 290-3677
Michael D. Wells	Missouri	(314) 876-0900
Kenneth E. Noonan	Nebraska	(402) 437-5302
Ronald D. Sando	North Dakota	(701) 250-4441
E. Leroy Holtsclaw	South Dakota	(605) 353-1783
Robert W. Martin	Wisconsin	(608) 264-5578

Program Function: Emergency Watershed Protection (EWP) assistance is provided to reduce hazards to life and property in watersheds damaged by severe natural events. Extraordinary authority was included in the Emergency Supplemental that allows funds to be used for the purchase of wetland easements when the cost of levee repair plus land reclamation exceeds the value of the land.

Applicability: An emergency is considered to exist when a watershed is suddenly impaired by flood, fire, drought, or other natural causes which result in life and property being endangered by flooding, erosion, or sediment discharge.

There are two broad types or degrees of emergency situations with different Federal cost-share rates and time constraints for obligating funds and completing work:

1. Exigency - an imminent situation of unusual emergency.
2. Nonexigency - an emergency requiring action, but of less urgency than an imminent situation.

Form of Assistance: Financial and technical assistance for (1) levee reconstruction/wetland restoration and (2) emergency runoff retardation and soil erosion prevention to safeguard life and property.

Program Target: Public or private landowners, land managers, land users, or others who have a legal interest in or responsibility for the values threatened by a watershed emergency.

Total Funding: \$60 million.

Eligibility Requirement(s): Applicants must have insufficient funds or other resources available to provide relief from the hazards. Applicants must be represented by a project sponsor who has legal authority. Sponsors must agree to obtain land rights, water rights, permits, and provide for the operation and maintenance of completed emergency measures.

Cost-Sharing Requirement(s): Federal funds may cover 75 percent of the construction costs of eligible measures. In cases of extreme hardship, Federal funds may provide up to 100 percent of the cost.

Repayment Requirements(s): None.

Application Procedures(s): Sponsors may apply to any Soil Conservation Service Office (SCS) for EWP assistance. SCS will help sponsors prepare their applications. Information supplied should include the nature, location, and scope of the problems and the assistance needed.

Application Time Line: None.

Programmatic/Funding Constraint(s):

Programmatic: Emergency funds must not be used to perform normal operation or maintenance or to solve watershed problems that existed before the disaster-causing event. Emergency funds must not be used to repair, rebuild, or maintain private or public transportation facilities, public utilities, public aid highways, or similar facilities.

Funding: Exhaustion of program funds.

Other Comments: None.

[**NEED AGENCY INPUT.** THIS DISCRIPTION MKUST BE MODIFIED TO REFLECT SPECIAL AUTHORITY (WETLANDS) PROVIDED IN EMERGENCY SUPPLEMENTAL.]

[DELETE - NO FUNDING]

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: The Department of Agriculture

Agency: Soil Conservation Service

Program Name: Watershed Protection and Flood Prevention

Agency POC:

Lyle W. Asell	Iowa	(515) 284-4260
Gary N. Parker	Illinois	(217) 398-5271
Delbert E. Prophet	Kansas	(913) 823-4568
Jon V. DeGroot	Minnesota	(612) 290-3677
Michael D. Wells	Missouri	(314) 876-0900
Kenneth E. Noonan	Nebraska	(402) 437-5302
Ronald D. Sando	North Dakota	(701) 250-4441
E. Leroy Holtsclaw	South Dakota	(605) 353-1783
Robert W. Martin	Wisconsin	(608) 264-5578

Program Function: The objectives of the Watershed Protection and Flood Prevention Program, authorized by Public Law 83-566, are to provide technical and financial assistance in planning and carrying out works of improvement to protect, develop, and utilize the land and water resources in small watersheds under 250,000 acres in size.

Applicability: The Watershed Protection and Flood Prevention Act defines its purposes to be watershed protection, flood prevention, and agricultural and nonagricultural water management. Conservation land treatment, structural, and nonstructural measures are used to address these purposes. Application of conservation land treatment measures to upstream watersheds is the main feature that separates this program from others. The program emphasizes planning through interdisciplinary teams which include the sponsors, other agencies, and environmental groups in all stages of plan development.

Form of Assistance: Financial and technical assistance to local organizations for planning and carrying out watershed projects.

Program Target: Local organizations representing the people living in small watersheds.

Total Funding/\$(mil): None.

Eligibility Requirement(s): Watershed projects must address one or more of the purposes authorized by Public Law 83-566 to solve

problems and needs that are beyond the capability of individual landowners. Projects must be sponsored by entities legally organized under State law, or any Indian tribe or tribal organization, having authority to carry out, operate, and maintain works of improvement. For plans that incorporate structural or nonstructural measures, sponsors must have the power of eminent domain and the authority to levy taxes or use other adequate funding sources to finance their share of the project cost and all operation, maintenance, and replacement costs of works of improvement.

Cost Sharing Requirements(s): Cost-share rates depend upon the type of measure (land treatment, nonstructural, or structural) and for structural measures, the purpose to which the cost is allocated. Cost sharing for land treatment may not exceed the level of other existing national programs. Construction costs for flood prevention projects are cost shared at 100 percent Federal.

Repayment Requirements(s): None.

Application Procedure(s): Sponsors must follow State-developed procedures for coordination of proposed Federal financial assistance and must notify the State's Single Point of Contact for Federal Assistance of their intent to apply for assistance under Public Law 83-566. The original and one copy should be sent to the designated State agency and one copy to the State's Single Point of Contact for Federal Assistance. An application must be approved by the designated State agency.

Application Time Line: [NEED AGENCY INPUT. HOW LONG AFTER APPLICATION IS APPROVED IS MONEY AVAILABLE]

Programmatic/Funding Constraint(s): A watershed or subwatershed area may not exceed 250,000 acres. No structure providing more 12,500 acre-feet of floodwater detention capacity or more than 25,000 acre-feet of total capacity may be included in a plan. Each project must contain benefits directly related to agriculture, including rural communities, that account for at least 20 percent of the total benefits of the project. Project sponsors must be willing to carry out all phases of project installation, operation, and maintenance and have the financial ability for meeting their full responsibilities with relation to the project. Funds must be available for project installation.

Other Comments: None.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Agriculture

Agency: Farmers Home Administration

Program Name: Debt Cancellation Conservation Easements

Agency Point of Contact:

James P. Fortner	National Office	(202) 720-1976
Wallace D. Furrow	Illinois	(217) 398-5235
Ellen Huntoon	Iowa	(515) 284-4663
William M. Kirk	Kansas	(913) 271-2700
Lou Anne Kling	Minnesota	(612) 290-3842
Gary L. Fisch	Missouri	(314) 876-0976
Stanley E. Foster	Nebraska	(402) 437-5551
Charles F. Mertens	North Dakota	(701) 250-4781
Dallas Tonsager	South Dakota	(605) 353-1430
Bryce E. Luchterhand	Wisconsin	(715) 345-7600

Program Function: To reduce the debt of delinquent and non-delinquent borrowers in exchange for conservation easements placed on environmentally sensitive real property that secures FmHA loans.

Applicability: FmHA borrowers with Farmer Programs loans which are secured by real property.

Form of Assistance: FmHA can forgive debt in exchange for conservation easements on environmentally sensitive portions of a borrower's property. A conservation easement may be obtained for a period of not less than 50 years. A perpetual easement will usually be recommended.

Program Target: Individual land owners.

Total Funding: Since the funding required to establish debt cancellation conservation easements already exists in FmHA's loan portfolio, no additional funds are needed. The amount credited to an FmHA borrower will be applied on their loan(s) as an extra payment in order of lien priority on the security.

Eligibility Requirement(s): Both current and delinquent FmHA borrowers are eligible to participate in the debt restructuring conservation easement program. The borrowers must have loans secured by real estate. The easements can be established for conservation, recreational, and wildlife purposes on farm property that is wetland, wildlife habitat, upland, or highly erodible land. Non-program borrowers are not eligible to participate in this program.

Cost-Sharing Requirement(s): None.

Repayment Requirement(s): Except as necessary to meet the requirements stated in the easement, the landowner is not obligated to take any action or to incur any expense related to the maintenance or restoration of the easement area. In the event of violations of terms and conditions of the easement, the enforcement or management authorities may utilize such administrative, civil, or criminal remedies as may be available under applicable law. The landowner may be liable for the costs of enforcing the terms and conditions of the easement including litigation expenses, and repair or restoration of the easement area.

Application Procedure(s): Interested borrowers should contact their local FmHA County Office. The County Supervisor will assist the borrower in the application process. The County Supervisor will determine whether or not the borrower is eligible to receive an easement. If there is some reason that the easement cannot be granted, then the borrower will be notified of the adverse action and given appeal rights. If there are any prior or junior lienholders, their consent to the terms of the easement must be obtained in writing by the borrower. If it is not possible to obtain the lienholders' consent, the easement will be denied and the borrower so informed. The borrower will have no appeal rights for an FmHA denial on this basis. A professional survey of the easement's boundaries will be required and will be provided for by FmHA.

Application Time Line: The estimated time from application to the completion of the easement process is 60-90 days. The length of time which is required to perform functions such as appraisals, surveys, and title opinions will have a direct impact on the time required to complete the easement process.

Programmatic/Funding Constraints: None.

Other Comments: Exchanging conservation easements for debt reduction could provide an economical mechanism to establishing floodplain and watershed protection measures that will reduce damage and damage payments caused by similar flood events in the future. Establishment of conservation easements may be viewed as economically and environmentally preferable to repairing flood-damaged farm lands. Therefore, before disaster assistance funds are expended on repair of damaged farmland that secures FmHA loans, the landowner should be apprised of the opportunity to reduce their FmHA debt in exchange for conservation easements.

MIDWEST FLOOD RECOVERY PROGRAM
DEPARTMENT AND AGENCY
ALTERNATIVES TO REPAIR AND RESTORE LEVEES
AND OTHER REPAIR AND RESTORATION ACTIONS

Department: Agriculture

Agency: Farmers Home Administration

Program Name: Transfer of Inventory Real Property

Program description: The Farmers Home Administration (FmHA) makes and services farm ownership and operating loans to farmers and ranchers under provisions of the Consolidated Farm and Rural Development Act (Con Act) (7 U.S.C 1921 *et seq.*). FmHA typically provides loans to farmers and ranchers who are unable to obtain credit elsewhere. FmHA acquires real property through foreclosure and borrower voluntary conveyance actions on defaulted real estate loans. In many instances, FmHA provides financing to farmers who purchase inventory properties. Section 354 of the Con Act authorizes FmHA to transfer, without reimbursement, these inventoried properties to state and Federal agencies for conservation purposes.

Program Implementation guidance: To date, FmHA has approved the transfer of nearly 300 properties to state and Federal agencies for conservation purposes, encompassing over 95,000 acres of environmentally sensitive lands. These properties are not suited for continued agricultural use; wetlands and other natural resources on these properties have been restored or are in the process of being restored. FmHA should consider transferring all eligible inventory farm properties in the flood region to state and Federal conservation agencies for the purpose of restoring/establishing wetlands and other natural floodplain habitats. This would provide a very cost-effective means of establishing floodplain and watershed protection measures necessary to reduce damage caused by similar events in the future. In addition, transferring these properties and dedicating them to permanent conservation use is more economically and environmentally sensitive than selling these properties for continued farming, subject to future flood-related problems. Furthermore, before disaster assistance funds are expended to repair damaged inventory properties, transfer for conservation purposes should be considered.

Since FmHA already owns all interest in its inventory property, no additional funds are necessary to effect fee transfers for conservation purposes. By transferring these properties for conservation purposes, FmHA will not need to make additional loans on many properties that are not suited for continued agricultural use.

Budgetary resources that are or could be made available:
(BA in millions of dollars)

FY93	FY93 Emergency Supplemental	FY94
Direct	<u>Direct</u> <u>Contingency</u>	Likely
<u>Approp.</u>		<u>Approp.</u>

Comments on resources:

[Rework by Agency]

MIDWEST FLOOD RECOVERY PROGRAM
DEPARTMENT AND AGENCY
ALTERNATIVES TO REPAIR AND RESTORE LEVEES
AND OTHER REPAIR AND RESTORATION ACTIONS

Department: Agriculture

Agency: Farmers Home Administration

Program Name: Inventory Property Acquisition

Program description: The Farmers Home Administration (FmHA) makes and services farm ownership and operating loans to farmers and ranchers under provisions of the Consolidated Farm and Rural Development Act (Con Act) (7 U.S.C 1921 *et seq.*). These loans are typically provided to farmers and ranchers who are unable to obtain credit elsewhere. FmHA periodically acquires real property through foreclosure and borrower voluntary conveyance actions on defaulted real estate loans. These properties are typically sold back to farmers and ranchers subject to perpetual conservation easements placed on wetlands and floodplains in accordance with statutory and other affirmative requirements. The Con Act requires FmHA to reduce the sale price of inventory properties due to the establishment of wetland conservation easements. The amount reduced essentially reflects FmHA's estimate of the value of lost land use options on the anticipated easement areas. As a consequence of this Con Act requirement, FmHA is likewise reducing their bids for properties at foreclosure sales. As a result, fewer properties are obtained, fewer easements established and the government is able to retain fewer assets in failed loans.

Program Implementation guidance: In recognition of the public trust resource value of conservation easements reserved by the government on inventory properties, FmHA should appraise properties prior to acquisition such that the potential for easements does not reduce the property value. Under this scenario, the government is able to retain asset value in failed loans and protect and restore wetlands and floodplain values in the flood area through the inventory disposal process.

Budgetary resources that are or could be made available:
(BA in millions of dollars)

No additional funds are necessary; implementation of this action maximizes use of funds already existing in FmHA's loan portfolio.

FY93
Direct
Approp.

FY93 Emergency Supplemental
Direct Contingency

FY94
Likely
Approp.

DEPARTMENT OF COMMERCE

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: U.S. Department of Commerce

Agency: Economic Development Administration (EDA)

Program Name: Flood Relief Program

Agency Point of Contact:

Alfred L. Casals	Illinois	(217) 492-4224
Jack D. Price	Wisconsin	(715) 834-4079
John B. Arnold, III	Minnesota	(218) 720-5326
John Zender	Kansas	(303) 844-4902
Warren A. Albertson	Nebraska	(605) 224-8280
	South Dakota	
Forrest E. Koch	Missouri	(314) 539-2321
Robert Cecil	Iowa	(515) 284-4746
Cornelius P. Grant	North Dakota	(701) 250-4321

Program Function: Make grant awards to assist communities, industries, and firms adversely impacted by the Midwest floods and other disasters to assist in the long-term economic recovery of the affected area.

Applicability: EDA's recovery strategy is directed toward (1) initially providing disaster flood coordinator grants to help organize and mobilize the local response capabilities and to assist in the preparation of recovery strategies, (2) awarding economic recovery strategy grants to help local communities develop a comprehensive recovery plan and follow-on implementation projects, and (3) awarding implementation project grants. EDA anticipates a broad array of implementation project proposals and will give priority to those proposals which have greatest impact to enhance the commercial/industrial base of the affected area. EDA will also consider grant awards to respond to emergency infrastructure needs in advance of a final economic recovery strategy for the area; these grant awards would respond to unmet needs for public infrastructure improvements or alternative projects that are not adequately addressed by FEMA or other Federal agencies.

Form of Assistance: Grants for economic recovery planning, technical assistance, and construction of infrastructure.

Program Target: State, sub-State planning areas, local governments to help mitigate the dislocation to the economic base of the area.

Total Funding: \$200 million

Eligibility Requirements: States, units of local government, and certain non-profit organizations (i.e., community organizations) are eligible recipients; private for-profit entities are not eligible for EDA grants. Special economic adjustment grant funds may be redistributed as subgrants to other entities; they may not be redistributed (except as loans) to for-profit entities.

Cost-Sharing Requirements:

- Economic adjustment grants - 75 percent Federal/25 percent Local Match
- Technical assistance grants - 75 percent Federal/25 percent Local Match
- Public Works direct grants - 80 percent Federal/20 percent Local Match

Repayment Requirements(s): None.

Application Procedures(s): Following a review of project proposals, EDA will invite entities whose projects are selected for consideration to submit applications; the Application will include a Form SF-424, as approved by OMB Control No. 0348-0043.

Application Time Line:

- Planning and technical assistance grants - 60 days
- Economic adjustment grants (non-construction) - 60 days
- Economic adjustment grants (construction) - 120 days
- Public Works construction grants - 120 days
(from receipt of application by EDA)

Programmatic/Funding Constraints(s): Emergency Supplemental Program funds are available to EDA through September 30, 1995.

Other Comments: Through the mechanism of the Inter-agency Task Force for Flood Disaster Assistance, EDA will coordinate with other agencies at the program level and at headquarters to expedite efforts to eliminate program duplication. EDA will continue to coordinate program activity with other agencies within Commerce through existing mechanisms already in place.

Additional information is available in the Federal Register dated Monday, January 11, 1993 (pp. 3800-3813), copy of cover sheet attached.

Monday
January 11, 1993

Federal Register

Part IV

**Department of
Commerce**

Economic Development Administration

**Economic Development Assistance
Programs; Appropriations, 1993; Notice of
Funds Availability**

U.S. ARMY CORPS OF ENGINEERS

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Defense

Agency: U.S. Army Corps of Engineers

Program Name: Section 1135 of the 1986 Water Resources Development Act, as amended

Agency Point Of Contact:

Dudley Hanson	Illinois	(309) 788-6361
Louis Kowalski	Minnesota	(612) 220-0307
Owen Dutt	Missouri	(314) 331-8451
Mike Bart	Missouri	(816) 426-3671
Ken Cooper	Nebraska	(402) 221-7267

Program Function: To modify the structures or operations of water resource projects constructed by the Corps of Engineers (Corps) for the purpose of habitat restoration.

Applicability: This program can be used to restore historic wetlands in the flood area, provided the work involves modification of a water resources project constructed by the Corps. Examples of the types of projects which may be considered include installation of gated culverts in Corps levees, opening oxbows cutoff by Corps levees or navigation features, or realignment of a levee to allow areas between the levee and the channel to revert to historic floodplain habitat.

Form of Assistance: Direct funding to the Corps who contract for the work to be accomplished.

Program Target: State or local governments which operate and maintain Corps constructed projects.

Eligibility Requirement(s): Local sponsor required.

Total Funding: \$8.5 million

Cost-Sharing Requirement(s): The non-Federal share of the cost is 25 percent of the study and implementation, which includes any necessary lands, easements, rights-of-way, relocation, and/or disposal areas. Work-in-kind is not credited. The non-Federal sponsor is also responsible for 100 percent of the incremental operation and maintenance costs.

Repayment Requirement(s): None

Application Procedure(s): Potential project sponsors may contact the appropriate Corps district office to discuss S. 1135.

opportunities. There is no application procedure. If the project appears eligible, the Corps district office would provide preliminary information through Corps channels for review and approval of funding for report preparation. At that time, or shortly thereafter, a letter of intent indicating that the sponsor understands the process and cost-sharing requirements would be required prior to carrying out the feasibility study. Upon completion, the feasibility report would be submitted to Washington for review and implementation approval. Prior to construction, the non-Federal sponsor and the Corps would sign a Local Cooperation Agreement, (a contract) which specifies the funding and other requirements necessary for the project. The non-Federal sponsor would assume responsibility for the operation and maintenance of the completed Section 1135 project.

Application Time Line: Depending on the size and complexity of the project modification, the initial studies may take as long as 2 years, preparation of a final design may take an additional year and 1 or 2 years may be required for construction. The Corps is initiating a streamlined procedure to expedite Section 1135 projects in the Midwest flood area. The goal is to begin construction within one year of initiation of the feasibility study. Potential projects are currently being identified.

Programmatic/Funding Constraint(s): Section 1135 projects are normally limited to \$5 million per modification. The program limit is \$25 million in annual appropriations.

Other Comments: Levee districts and other public agencies with taxing authority normally serve as project sponsors. Private interests may qualify if there will be no requirement for future operation and maintenance of the Section 1135 modification. Large national nonprofit environmental organizations, such as Ducks Unlimited or the Nature Conservancy, also qualify as sponsors.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Defense

Agency: U.S. Army Corps of Engineers

Program Name: Section 22 of the 1974 Water Resources Development Act, as amended (Planning Assistance to States Program)

Point of Contact:

Dudley Hanson	Illinois	(309) 788-6361
Louis Kowalski	Minnesota	(612) 220-0307
Owen Dutt	Missouri	(314) 331-8451
Mike Bart	Missouri	(816) 426-3671
Ken Cooper	Nebraska	(402) 221-7267

Program Function: Provides for technical assistance to States and Federally recognized Indian tribes in the preparation of plans for the development, utilization, and conservation of water and related land resources.

Applicability: This program uses the Corps of Engineers (Corps) water resources expertise to support the states and Indian tribes in their comprehensive planning for the development, utilization, and conservation of water and related land resources. Typical activities studied under this Program are flood control, water supply, water conservation, water quality, hydropower, erosion, navigation, and methodologies to evaluate wetlands or other resources.

Form of Assistance: Cost-shared studies with a non-Federal sponsor.

Program Target: State and local governments and Federally recognized Indian tribes.

Total Funding: \$3 million

Eligibility Requirement(s): None.

Cost-Sharing Requirement(s): The non-Federal share of the costs shall be approximately 50 percent. In-kind services are not authorized.

Repayment Requirements(s): None.

Application Procedure(s): Each fiscal year, States and Indian tribes coordinate with the appropriate Corps Divisions and Districts to develop a priority listing of studies.

Application Time Line: Studies are funded based on the priority list for each State or Indian tribe, within the limits of available appropriations and subject to the Federal funding limitation and execution of a cost-sharing agreement. Depending on complexity, studies could be completed within several months or up to a year or more.

Programmatic/Funding Constraint(s): Federal participation limited to \$300,000 per State or Indian tribe, per year, and further constrained by available appropriations.

Other Comments: . None.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Defense

Agency: U.S. Army Corps of Engineers

Program Name: Section 206 of the 1960 Flood Control Act, as amended (Flood Plain Management Services Program)

Agency Point Of Contact:

Dudley Hanson	Illinois	(309)788-6361
Louis Kowalski	Minnesota	(612)220-0307
Owen Dutt	Missouri	(314)331-8451
Mike Bart	Missouri	(816)426-3671
Ken Cooper	Nebraska	(402)221-7267

Program Function: Provides for the furnishing of flood plain information and technical assistance to States, counties, and cities for prudent use of land subject to flooding from streams, lakes, and oceans.

Applicability: This program uses the Corps of Engineers (Corps) water resources expertise to provide information and studies on flood related problems to appropriate state and local governments. Examples include: developing and interpreting flood and flood plain data such as flood hazard mapping; providing a broad assessment of the impact of structural and nonstructural flood damage reduction measures; providing technical assistance on flood proofing systems and techniques; and assessing the possible impacts of land use changes on the physical, socio-economic and environmental conditions of the flood plain.

Form of Assistance: Technical assistance to State and local governments.

Program Target: Individuals, businesses, State and local governments.

Total Funding: \$7.6 million

Eligibility Requirement(s): Technical assistance and planning guidance is provided upon request, to State and local governments, other Federal agencies, and private persons, within the limits of available appropriations.

Cost Sharing Requirement(s): Section 206, as amended, provides for technical assistance and planning guidance to State and local governments without charge. Costs for implementation of any proposed measures is 100 percent non-Federal. The Corps must

recover approximately 100 percent of the cost of services provided to other Federal agencies and private persons.

Repayment Requirements(s): None.

Application Procedure(s): Written requests for services should be sent directly to the appropriate Corps representatives noted above.

Application Time Line: Requests are generally honored on a first-come-first-served basis, within the limits of available appropriations. Requests for available data could be provided within a few days of receipt of a request. More detailed investigations, which include development of new data or evaluation of existing data, could require from a week up to several months to complete.

Programmatic/Funding Constraint(s): Funds are allocated based on projected needs and capabilities. Funding of Section 206 technical assistance for the five Districts averaged \$185,000 for FY 1993. Section 206 efforts are not a substitute for other Corps Planning programs. Program managers are instructed to evaluate requests for applicability to other Corps programs prior to initiation of work.

Other Comments: None.

DEPARTMENT OF THE INTERIOR

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of the Interior

Agency: U.S. Fish and Wildlife Service

Program Name: Partners for Wildlife

Agency Point of Contact:

Tom Groutage	Illinois	(618) 997-5491
Jim Munson	Iowa	(515) 994-2415
Dave Wiseman	Kansas	(316) 392-5553
Lance Kuester	Minnesota	(612) 253-4682
Jerry Brabander	Missouri	(314) 876-1911
Kenny Dinan	Nebraska	(308) 382-6468
Kevin Willis	North Dakota	(701) 250-4418
Carl Madsen	South Dakota	(605) 697-2500
Eldon McLaury	Wisconsin	(608) 264-5469

Program Function: Provides financial and technical assistance to private landowners interested in restoring wetlands and riparian habitats on their land. The program uses a non-acquisition approach to voluntary habitat restoration on private lands.

Applicability: Landowners in the watershed receive, on a voluntary request basis, technical and financial assistance to restore as many of the 21,000,000 acres of drained wetlands in the watershed as possible, as well as provide assistance in restoring floodplain habitats.

Form of Assistance: Grants and Technical Assistance.

Program Target: Individual land owners, businesses, local government.

Total Funding: \$3.3 million

Eligibility Requirement(s): Landowners enter into a binding agreement with the U.S. Fish and Wildlife Service to restore and protect the site. At a minimum, agreements are for 10 years, however, landowners with intentions to protect the area perpetually are given higher priority for funding. The program is targeted at restoring wetlands and riparian (streamside), and instream habitats.

Cost-Sharing Requirement(s): The cost sharing is negotiated. The U.S. Fish and Wildlife Service can cost share with the Agricultural Stabilization and Conservation Service, State Agencies, Conservation Organizations, etc., on the same

restoration projects. With multiple cost-sharers, the landowner's expenditures can be minimized.

Repayment Requirement(s): If the landowner decides to return the restoration site to its prior agricultural use prior to the expiration of the cooperative agreement, the landowner must refund contribution to the project.

Application Procedure(s): Contact the State Coordinator, who arranges for a site visit and plan development (often working closely with the local Soil Conservation Service representative).

Landowner then applies for cost sharing. If approved, landowner implements restoration plan. Service verifies project completion and then issues a check to the landowner for the agreed-upon cost sharing.

Application Time Line: All projects submitted by early in the fiscal year (which runs from October 1 - September 30) stand a better chance at receiving funding than projects submitted late in the year. Financing generally available in less than 6 months when application is approved.

Programmatic/Funding Constraints: Funding is single-year funding. Multiple-year projects must reapply each year for additional funding.

Other Comments: In the disaster States, the Partners for Wildlife Program has assisted almost 2,000 landowners in projects that have restored over 65,000 acres of small wetlands.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of the Interior

Agency: U.S. Fish and Wildlife Service

Program Name: North American Wetland Conservation Fund

Agency Point Of Contact:

Jim Leach	USFWS	(612) 725-3313
Bob Streeter	USFWS	(703) 358-1784

[NEED AGENCY INPUT. NAMES/PHONE NUMBERS/STATE FOR STATE REPS]

Program Function: Provides Federal cost-share funding to stimulate public-private partnerships to protect, restore, and manage a diversity of wetland habitat for migratory birds and other wildlife. Also helps maintain the proper distribution and abundance of migratory birds. The program provides matching grants for protection and restoration of wetland ecosystems in the United States, Canada, and Mexico.

Applicability: Program emphasizes public/private partnerships to protect and restore wetland habitats.

Form of Assistance: Grants.

Program Target: Individuals, businesses, State and local governments.

Total Funding: \$2 million in the mid-west.

Eligibility Requirement(s): Any agency, group, or individual involved in the acquisition, restoration, enhancement, and management of wetland ecosystems and other habitat for migratory birds and other fish and wildlife.

Cost-Sharing Requirement(s): At least 1:1 match of non-Federal dollars.

Repayment Requirement(s): None.

Application Procedure(s): Submit grant application to the North American Waterfowl and Wetlands Office, 4401 N. Fairfax Drive, Room 110, Arlington, VA.

Application Time Line: U.S. Grant proposals are due April 15 and August 15.

Programmatic/Funding Constraint(s): There are many more worthy project proposals than can be funded.

Other Comments: None.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of the Interior

Agency: U.S. Fish and Wildlife Service

Program Name: Land Acquisition Program

Agency Point of Contact:

Ralph Morgenweck	Kansas	(303) 236-7920
	Nebraska	
	North Dakota	
Sam Marler	Illinois	(612) 732-3563
	Iowa	
	Minnesota	
	Missouri	
	Wisconsin	

Program Function: To purchase lands and permanent conservation easements for inclusion in the National Wildlife Refuge System.

Applicability: The sale of wetlands to the Federal government is an alternative to cropping flooded fields and swales. The acquisition program complements the Wetland Reserve Program because existing habitats and lands without cropping history may be eligible. The Service has procedures for acquiring lands and relocating landowners.

Form of Assistance: Direct purchase of lands and easements.

Program Target: Individual landowners, businesses, and local governments.

Total Funding: \$6.5 million

Eligibility Requirement(s): Lands with high natural resource values, approved by the Director of the U.S. Fish and Wildlife Service, Secretary of the Interior, and Congress.

Cost-Sharing Requirement(s): Costs associated with operations and maintenance on easement lands are borne by the landowner.

Repayment Requirement(s): None.

Application Procedure(s): Contact the Regional Director. An eligibility determination is then made. If eligible, the land is appraised and checked for National Environmental Policy Act compliance.

Application Time Line: [NEED AGENCY INPUT, HOW LONG AFTER THE APPLICATION IS APPROVED IS MONEY AVAILABLE?]

Programmatic/Funding Constraints: Acquisition of the property must be specifically authorized by Congress.

Other Comments: The Service may explore the possibility of acquiring valuable fish and wildlife habitat from willing sellers. The purchase of lands and easements within the floodplain and watershed could reduce future flood risk. Such risk reduction could be via acquisition of flood-prone lands or lands that have potential for wetland restoration.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of the Interior

Agency: National Park Service

Program Name: Rivers and Trails Conservation Program

Agency Point Of Contact:

Chris Brown

(202)343-3758

[NEED FIELD INPUT. NAMES/STATE/PHONE # FOR FIELD REPS]

Program Function: Program provides technical assistance to communities for river and trail corridor planning and open space preservation efforts. Program personnel are acknowledged experts in facilitating cooperative planning efforts; projects are all based on substantial involvement of varied community interests.

Applicability: Initiate consulting relationship with interested communities to help them identify non-structural options and set goals. Targeted NPS assistance with grassroots planning can help communities make informed choices, based upon consensus, about future growth and development that will help avoid future flood losses.

Form of Assistance: Technical assistance.

Program Target: State and local governments and Not-For Profit groups.

Total Funding: \$6.8 million

Eligibility Requirement(s): State-Local and public-private partnerships are required.

Cost-Sharing Requirement(s): None.

Repayment Requirement(s): None.

Application Procedure(s): Contact WASO [WHAT IS WASO ??] or NPS Regional Office. Formal application is prepared with NPS assistance after consultation.

Application Time Line: Applications for projects to begin October 1, 1993, and must be submitted by July 1, 1994. [NEED AGENCY INPUT. HOW LONG AFTER APPLICATION IS APPROVED IS GRANT AVAILABLE ?]

Programmatic/Funding Constraint(s): General limit of \$60,000/Project per year to provide technical assistance.

Other Comments: None.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of the Interior

Agency: National Park Service

Program Name: Federal Land Transfer; Federal Lands-to-Parks Program

Agency Point of Contact:

Wendy Ormont (202) 343-3759
[NEED AGENCY INPUT. NAMES, PHONE #, STATE OF FIELD REPS.]

Program Function: To encourage the establishment of public park and recreation opportunities. To identify, assess, and transfer available surplus Federal real property for acquisition for State and local parks and recreation, such as open space, and to advise disposing agencies of local resource conservation interests. Maintain oversight on transferred lands to ensure continued public safety, access, and use for parks and recreation.

Form of Assistance: Technical Assistance

Program Target: State and local governments.

Total Funding: \$498,000

Eligibility Requirement(s): Applicant must be State or local government.

Cost Sharing Requirement(s): Varies; possible contribution of land transfer expenses.

Repayment Requirement(s): None.

Application Procedure(s): Letter of request to NPS Director or Regional Director. For actual property transfer, a written application is required. [NEED AGENCY INPUT. WHERE CAN APPLICATIONS BE OBTAINED; WHO ARE THEY SENT TO ?]

Application Time Line: [NEED AGENCY INPUT.]

Programmatic/Funding Constraint(s): Transfers can only be made to State & local agencies [AGENCY OR GOVERNMENT ??].

Other Comments: None.

[DELETE - NO FUNDING]

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Department: Department of Interior

Agency: National Park Service

Program Name: Land and Water Conservation State Grants
(Contingency Fund Grants)

Agency Point Of Contact: Mike Rogers Phone: (202) 343-3700

Program Function: Land and Water Conservation Fund (L&WCF) grants are administered by recreation grant offices of the National Park Service under authority of Section 8 of 16 U.S.C. 4601, the L&WCF Act of 1965. The program makes matching grants (50 percent) to State and local Governments for parkland acquisition and for development of outdoor recreation facilities, including facility rehabilitation or redevelopment. There have been over 36,000 L&WCF grants totaling some \$3.1 billion since 1965. However, priorities for where money will be spent are set first through a State-by-State apportionment formula in the Act and then by States, based on their own plans and priorities, so that it is usually not possible for the Federal Government to direct funds for specific emergency needs. The exception to this in the past has been the Secretary's contingency fund, a set aside of a small percent of the annual funding total which can be used for competitive funding of projects on a nationwide basis without regard to the usual state allocation formula. Contingency fund grants have been used successfully for emergency relief in the past, as for rehabilitation of recreation facilities damaged by Hurricane Agnes in the 1970's. Since 1981, simultaneous with overall cutbacks, there have been no Contingency grants.

Applicability: L&WCF grants could contribute ONLY if there were a special appropriation for Contingency Fund grants in 1994. With such special authority, grants could be targeted to specific disaster areas (localities or states) for parkland acquisition priorities favoring those projects that provide the best non-structural alternatives to flood prevention/future damage reduction.

Form of Assistance: Grants

Program Target: State and local governments.

Total Funding: None.

Eligibility Requirement(s): State or General purpose local Governments are eligible to use grants for parkland acquisition or outdoor resource development.

Cost Sharing Requirement(s): 50 percent matching.

Repayment Requirement(s): None.

Application Procedure(s): Apply to cooperating State official. See "State Liaison Officer" list in 1993 catalog of FDA.

Application Time Line: 4 weeks to 6 months, depending on State.

Programmatic/Funding Constraints: Grantees must guarantee appropriate public access for recreation and permanent maintenance of assisted areas in public recreation/conservation uses.

ENVIRONMENTAL PROTECTION AGENCY

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: Environmental Protection Agency

Program Name: Capitalization Grants for State Revolving Funds
(State Revolving Fund)

Agency Point of Contact:

Jim Wheeler

(202) 260-5827

[NEED AGENCY INPUT. NAME/STATE/PHONE# OF FIELD REPS]

Program Function: Build or relocate wastewater treatment plants.

Applicability: [NEED AGENCY INPUT]

Form of Assistance: Loan.

Program Target: Local governments.

Total Funding: \$1.2 billion

Eligibility Requirement(s): [NEED AGENCY INPUT]

Cost-Sharing Requirement(s): [NEED AGENCY INPUT]

Repayment Requirement(s): 100 percent plus interest (below market rate).

Application Procedure(s): Every State is different, but each State has a designated SRF agency. The municipality applies to that agency.

Application Time Line: 30- to 60-day accelerated timeline is feasible.

Programmatic/Funding Constraint(s): Legislation only allows these funds to be used for limited nonpoint source activities and wastewater treatment facilities.

Other Comments: None.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: Environmental Protection Agency

Program Name: Clean Water Act Section 319 Grants

Agency Point of Contact:

Dov Weitman (202) 260-7088

[NEED AGENCY INPUT. NAME/STATE/PHONE# OF FIELD REPS]

Program Function: Funds are awarded to the States to implement the nonpoint source programs pursuant to Section 319(h) of the Clean Water Act.

Applicability: These grants can be used for funding watershed resource restoration activities which include wetlands and other aquatic habitat.

Form of Assistance: Grants

Program Target: State agencies

Total Funding: \$81.7 million requested in FY 1994 budget

Eligibility Requirement(s): Approved State nonpoint source management requirement

Cost-Sharing Requirement(s): 40 percent State match

Repayment Requirement(s): None

Application Procedure(s): States apply annually to EPA Regional Office.

Application Time Line: States are to submit final applications on March 1; decision are made by May 1.

Programmatic/Funding Constraint(s): Funding goes to all States; dollars per State are limited.

Other Comments: Only certain restoration activities are fundable: those that control nonpoint pollution and that are within the scope of approved State nonpoint programs, e.g., relocation of structures would not be fundable; wetland restoration would be fundable.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: Environmental Protection Agency

Program Name: Wetlands Protection - State Development Grants

Agency Point of Contact:

Lori Williams (202) 260-5084

[NEED AGENCY INPUT. NAME/STATE/PHONE # FOR FIELD REPS]

Program Function: To support development and enhancement of State and Tribal wetland protection programs.

Applicability: Projects must clearly demonstrate a direct link to increasing a State's ability to protect wetland resources.

Form of Assistance: Grants

Program Target: States and Federally recognized Indian Tribes

Total Funding: \$280,000; \$10 million requested in FY 1994 budget

Eligibility Requirement(s): State agencies with wetlands related programs and Federally recognized Indian Tribes

Cost-Sharing Requirement(s): Sponsor required to provide 25 percent of total cost.

Repayment Requirement(s): None.

Application Procedure(s): Application forms can be requested from and submitted to the appropriate EPA Regional office.

Application Time Line: 4 months

Programmatic/Funding Constraint(s): (1) Funds must be used to develop new or refine existing State wetland protection programs, (2) only State agencies and Federally recognized Indian Tribes are eligible, and (3) some funds can be passed through by State to other entities, but State must have a major role in the project.

Other Comments: Funds can possibly be used for wetland restoration, can be used for identification of but not purchase of flood easements, and cannot be used for relocation of farm or urban structures.

[DELETE - NOT RELEVANT]

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: Environmental Protection Agency

Program Name: Water Pollution Control - State and Interstate
Program Support (Section 106, CWA)

Agency Point of Contact: Carol Crow, (202) 260-6742

[NEED AGENCY INPUT. NAME/STATE/PHONE # FOR FIELD REPS]

Program Function: To assist States, Indian Tribes, and interstate agencies in establishing and maintaining adequate measures for prevention and control of surface and ground water pollution.

Applicability: Funds can be used for permitting, monitoring, pollution control studies, planning, surveillance and enforcement, advice and assistance to local agencies, training, and public information.

Form of Assistance: Grants

Program Target: State, interstate, territory and Indian tribal water pollution control agencies.

Total Funding: \$81.7 million

Eligibility Requirement(s): **[NEED AGENCY INPUT]**

Cost Sharing Requirement(s): **[NEED AGENCY INPUT]**

Repayment Requirement(s): **[NEED AGENCY INPUT]**

Application Procedure(s): Applications must be submitted to the appropriate EPA Regional Office, Grants Administration Branch.

Application Time Line: **[NEED AGENCY INPUT]**

Programmatic/Funding Constraint(s): Funds cannot be used for construction, operation, or maintenance of waste treatment plants, nor can they be used for costs financed by other Federal grants.

Other Comments: None.

FEDERAL EMERGENCY MANAGEMENT AGENCY

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: Federal Emergency Management Agency

Program Name: Hazard Mitigation Grant Program (HMGP)

Agency Point Of Contact:

FEMA or State Hazard Mitigation Officers

[NEED AGENCY INPUT. OFFICERS BY NAME/STATE/PHONE #]

Program Function: Provide 50/50 matching funds through States, to local communities, for projects that will effectively reduce a State or community's vulnerability to natural hazards.

Applicability: Designed to provide a source of funding to States and municipalities for mitigation measures identified after a disaster. The HMGP can be used to fund projects to protect either public or private property. Types of eligible projects include acquisition and relocation of structures to prevent future damage.

Forms of Assistance: Grants.

Program Target: State and local governments and certain private non-profit organizations or institutions and Native American Nations.

Total Funding: Funds available for the Hazard Mitigation Grant Program are:

STATE	DISASTER #	HMGP ESTIMATE AS OF 9/24/93
Illinois	DR 997	\$ 3,058,400
Iowa	DR 996	3,200,000
Kansas	DR 1000	4,200,000
Minnesota	DR 993	2,073,000
Missouri	DR 995	9,000,000
Nebraska	DR 998	3,251,000
North Dakota	DR 1001	784,800
South Dakota	DR 999	890,200
Wisconsin	DR 994	1,043,000
TOTALS		\$ 27,500,400

Eligibility Requirement(s): Projects must be cost-effective, must meet Federal environmental requirements, and must be consistent with the overall State Hazard Mitigation Plan.

Cost Sharing Requirement(s): 50/50 cost-sharing with the Federal government.

Repayment Requirement(s): None

Application Procedure(s): Contact FEMA or State Hazard Mitigation Officers.

Application Time Line: State notifies FEMA of intent to participate in the program within 60 days of disaster declaration. All HMGP applications must be submitted no later than 90 days after FEMA's approval of the State Hazard Mitigation Plan, or 270 days after the declaration date.

Programmatic/Funding Constraint(s): Projects must be consistent with FEMA's regulations for the HMGP as found at 44 CFR Part 206, Subpart N. Additional guidance for State and local applicants has been developed and is available from FEMA Headquarters Regional Offices. Several policy memorandum regarding issues raised during the recent series of disasters in the Midwest have been sent to our field staff, and will be incorporated into the HMGP guidance material. For acquisition and relocation projects, the community in which the property is located must agree to accept title to the property and restrict on the property deed any use of the property other than open space for public use.

Other Comments: HMGP funding is allocated on a State-by-State basis depending on the extent of damage. The program is managed by the State, who establishes priorities for funding individual projects. See attached table for the initial HMGP estimates for the nine Midwest States. Potential applicants and projects do not necessarily have to be located within the disaster area, but to be eligible for funding, a project must benefit the disaster area.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: Federal Emergency Management Agency

Program Name: Section 1362 Flooded Property Purchase Program

Agency Point Of Contact:

FEMA Regional Office, Natural and Technological Hazard (NTH)
Staff

[**NEED AGENCY INPUT.** NAMES/PHONE#/STATE OF STATE REPS]

Program Function: To purchase previously flood-damaged property located in flood risk areas and provide property owners the opportunity to relocate to nonflood-prone areas. To protect property owners against potential losses; reduce future costs due to flood damages; and provide incentive to flood prone communities to restore flood plain values, protect the environment, and provide recreational and open space resources.

Applicability: After a flood, representatives from the community and FEMA determine if the community wishes to participate in the Section 1362 program. If so, a "Community Agreement" is adopted in which the community agrees to accept title to purchased property and manage it for open space or non-development purposes. Once a Community Agreement has been adopted, eligible property owners have two options: sell the land and the buildings to FEMA for transfer to the community, or sell the land and retain ownership of the buildings by moving them to another location.

Form of Assistance: Sale, exchange, or donation of property and goods.

Program Target: Individuals, businesses, and local governments.

Total Funding: Annual appropriation of approximately \$4.7 million to be spent Nationwide within 2 fiscal years.

Eligibility Requirement(s): In every case, the property owner must have a flood insurance policy in force when the damage occurs; at least one of the following criteria must be met: 1) the currently damaged structure must have been damaged by at least three previous floods over a 5-year period, with an average damage of 25 percent or more of the value of the structure; 2) a single flood has damaged the structure 50 percent or more of its value or beyond repair of its preflood condition; and 3) any single event has left the structure damaged and irreparable, either due to local ordinance limitations or significantly increased building costs.

Cost-Sharing Requirement(s): None.

Repayment Requirement(s): None.

Application Procedure(s): FEMA regional offices will provide forms and technical assistance to the local communities upon request.

[NEED AGENCY INPUT. NEED MORE SPECIFIC DETAIL]

Application Time Line: Should be submitted immediately after the flood. [NEED AGENCY INPUT. HOW LONG DOES THE PROCESS TAKE ?]

Programmatic/Funding Constraint(s): The communities must be compliant with the National Flood Insurance Program requirements. Moreover, all property acquisitions must be cost effective and must meet Federal environmental requirements.

Other Comments: The community in which the property is located must agree to accept title to the property and agree to maintain it as open space for public use. Acquisition costs include pre-flood fair market value less flood insurance claim payments.

The funding for the Section 1362 program is provided through a reimbursement to the Emergency Management Planning and Assistance from the National Flood Insurance Fund. As authorized by the 1990 Omnibus Budget Reconciliation Act, all costs for the Section 1362 program activities will be borne by flood insurance policyholders.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: Federal Emergency Management Agency

Program Name: Technical Assistance for Implementing Hazard Mitigation Programs

Agency Point Of Contact:

State Hazard Mitigation Officer
[NEED AGENCY INPUT. NAMES/STATE/PHONE # OF FIELD REPS]

Program Function: Technical assistance to States and municipalities directly or through a contract with a local university, regional planning commission, or similar entity with expertise in planning and community development for the purpose of developing and recommending alternative strategies for disaster recovery measures that will reduce or eliminate damages from future hazards.

Applicability: Available in all nine States. Contracts are already available in Iowa and Illinois, and under development in Missouri.

Form of Assistance: Technical assistance.

Program Target: State and local governments.

Total Funding: Disaster Relief Fund. Amount to be based on scope of work.

Eligibility Requirement(s): None.

Cost-Sharing Requirement(s): None.

Repayment Requirement(s): None.

Application Procedure(s): State should contact Federal Coordinating Officer/FEMA Hazard Mitigation Officer. Community should contact State Hazard Mitigation Officer.

Application Time Line: [NEED AGENCY INPUT. HOW LONG DOES THE PROCESS TAKE ?]

Programmatic/Funding Constraint(s): None.

Other Comments: None.

***U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT***

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: U.S. Department of Housing and Urban Development

Program Name: Section 108 Loan Guarantee Program

NAMES OF CONTACTS

See list given under the CDBG program information.

NAME AND FUNCTION OF PROGRAM

Section 108 Loan Guarantee Program - Loan Guarantees to Public Entities for community and economic development.

FUNDING LEVELS AND PREDICTED ACCOMPLISHMENTS

For the States affected by the floods, approximately \$1 billion in loan guarantee assistance is available in FY 1993 for states for use in non-entitlement communities and for use by entitlement communities.

PROJECTED FUNDING AND ACCOMPLISHMENTS

FY 1993 - \$1 billion

Section 108 loan guarantees can be used to finance:

- acquisition of real property;
- rehabilitation of publicly owned real property, including renovation or reconstruction of public utilities (e.g., water & sewer systems);
- housing rehabilitation; and
- economic development.

PROGRAM TIME LINE

Communities can apply for assistance at any time.

Processing time averages 21 -45 days from date of submission to HUD Field Office.

Waivers which apply to the CDBG program could also apply to the Section 108 program. See item IV(c) in the section on Program Specific Information.

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: U.S. Department of Housing and Urban Development

Program Name: Community Development Block Grant (CDBG) Program

NAME AND FUNCTION OF PROGRAM

The Community Development Block Grant (CDBG) program annually allocates funds to metropolitan cities and urban counties and to states for use in nonentitlement areas which do not receive entitlement grants. The program allocates funds in accordance with a statutory formula. All activities funded by CDBG must meet one of the program's three broad national objectives: benefit to low and moderate income persons, elimination of slums and blight, or to meet urgent community development needs.

CURRENT FUNDING LEVELS AND PREDICTED ACCOMPLISHMENTS

At the beginning of Fiscal Year (FY) 1993, the Department allocated over \$3.9 billion dollars nationwide for the CDBG program. In accordance with the statutory formula, seventy percent of the funds were allocated to metropolitan cities and urban counties. Thirty percent of the formula funds were allocated to states (for distribution in nonentitlement areas). The Department has no FY 1993 or prior regular CDBG funding currently available for disaster-related efforts.

The eight states comprising the Midwest flood disaster area received \$188,433,000 in FY 1993 for distribution to nonentitled areas as follows:

<u>State</u>	<u>\$ (in 000's)</u>
Iowa	\$28,536
South Dakota	7,604
Illinois	38,643
Missouri	28,817
Nebraska	13,721
Wisconsin	29,462
Minnesota	22,516
Kansas	19,134

All of the states and the vast majority of entitlement communities have already committed FY 1993 funds for the specific purposes and projects outlined in the final statement. In many states which distribute the funds through a competitive process, grant awards to localities have already been publicly announced and grant agreements have been signed.

Both entitlement communities and states have the option of reprogramming or diverting available CDBG funds if they so desire, subject to an expedited amendment process which includes citizen review and comment. They may also use any program income on hand or expected to be received in the near future.

PROGRAM TIME-LINE

a) When can program be utilized (beginning period and closure):

\$20 million in initial CDBG funds would be made available immediately for immediate recovery needs and long-term revitalization planning. In order to insure quick access to these funds, they would be distributed on the basis of population.

The remainder of the CDBG funds would also be made available on the basis of final damage estimates, as soon as affected communities prepare and submit a strategic recovery plan for the coordinated community and economic revitalization of the affected areas. This plan would be developed by each state or entitlement community in coordination with HUD staff. It would include a plan for coordinating all federal, state, and local resources made available to the affected state or community for its recovery efforts. It would also include a strategic plan for coordinating and using federal resources with those of the state, the locality, and the private and non-profit sectors. This plan would be developed in consultation with the federal agencies participating in the flood recovery effort. It would be submitted to HUD in lieu of the normally required Final Statement and its submission would trigger availability of the balance of the CDBG funds.

The strategic plan must identify the uses the grantee expects to make of the CDBG funds, or in the case of a state, the method it will use to distribute the funds. An entitlement community will be required to certify that its planned use of CDBG funds has been determined in consultation with the various classes of intended beneficiaries of CDBG assistance, including at a minimum homeowners, owners of multi-family projects, business owners, developers, and residents of flood-damaged neighborhoods. A state will be required to certify that it has developed its distribution method in consultation with affected nonentitled communities.

In addition to the normal certifications grantees must provide under the regular CDBG program, grantees will certify that, prior to using any of these funds for purposes other than planning, it will have provided opportunity for citizen review and comment on the proposed uses (or for states the proposed distribution) of the funds. For this purpose, grantees will be authorized to select one of the following forms of citizen review:

- hold a public hearing to allow citizens (or local governments, for states) to nominate projects and activities to be assisted with the supplemental CDBG funds;
- hold a public hearing at which the grantee will announce its proposed uses of the supplemental CDBG funds, and allow citizens (or local governments, for states) to express their views on such proposed uses and nominate other uses; or
- prepare a description of the proposed uses of the supplemental CDBG funds, publish the description of proposed uses throughout the areas within the community (or the state) that were affected by the disaster, and provide opportunity for citizens (or for states, local governments) to comment on such proposed uses.

USE OF REGULAR CDBG FUNDS

(FY 1993 and prior years' funds already allocated to grantees)

Reprogramming Funds: Grantees may reprogram funds from grants already made under the regular CDBG program to be used for disaster recovery, if they so desire. When such funds would be proposed to be used for responding to emergency situations, grantees would still be required to amend the applicable final statement, but could do so by employing an expedited process for citizen review and comment.

Waiver of Rules: HUD will quickly respond to requests for waiver of any requirements of the regulations that are not statutory and that would be a substantial impediment to the grantee's recovery objectives. Waivers would be granted as necessary to authorize the following:

- shorten the current program year to permit receipt of FY 1993 or 1994 funds sooner than currently scheduled;
- allow the grantee to amend its certification to extend the length of time within which the low/mod income (70%) spending requirement must be met (for a period not to exceed three years); and
- extend the deadline for submittal of the annual performance report when the disaster delays its completion.

b) Time needed to process an application and disburse benefits in the most specific terms (#days):

HUD will prepare a grant agreement reflecting the allocated amount, identifying the waivers granted, and containing certain grantee certifications and submit it to the grantee within 30 days of the date funds are apportioned to HUD from OMB. Upon receipt of the executed agreement by the HUD Field Office (due within 30 days of the date HUD signs the grant agreement), the HUD Field Offices will need approximately 5 days to review and approve final statements and notify the grantee that the balance of funds have been added to the CDBG line of credit.

c) Are there regulatory or other changes required to make the program function more expeditiously for this effort, and describe them?

The Department is proposing to use the authority in the legislation to grant the following waivers of normal CDBG requirements:

Waive the usual restrictions on the use of CDBG funds for the new construction or reconstruction of housing;

Waive the restriction on the use of funds for the repair or reconstruction of buildings for the general conduct of government;

Waive the statutory cap on the amount of the grant that may be used for public services, and instead apply a cap of twenty-five percent for this purpose;

While grantees will be required to use the funds only for activities that meet one of the CDBG national objectives, waive the requirement that at least 70% of the funds must be used to meet the national objective of benefit to low- and moderate-income persons;

Waive the usual requirement with respect to complying with environmental reviews that the local public comment period and the HUD/State 15 day waiting period run sequentially, thereby allowing them to run in parallel;

Waive the restriction on the use of CDBG funds to reimburse local funds used to pay for costs incurred after

notification that a grant will be awarded to the state or community but prior to the award of the grant; and

Waive the requirement that state grantees must match the amount of CDBG funds used for the administration of the CDBG program.

In addition to these general waivers, a grantee may request that

HUD waive any other applicable requirement of the program. Any such request must be accompanied by an explanation as to why the requested waiver is justified by the need to spend the supplemental funds to meet the special needs for which they were appropriated.

AGENCY CONTACTS

HUD can allocate and award the supplemental CDBG funds and provide the necessary administrative support for the short term tasks of program start-up by diverting staff from current responsibilities both in Headquarters and the Field.

Washington, DC	John Simmons Deputy Director Office of Block Grant Assistance Washington, DC 20410 (202) 708-3587
Illinois	Jim Barnes (Community Planning and Development) 77 West Jackson Boulevard Chicago, IL 60604 (312) 353-2977
Wisconsin	Lana Vacha (Community Planning and Development) 310 West Wisconsin Avenue Milwaukee, WI 53203 (414) 297-3355
Minnesota	Alan Joles (Community Planning and Development) 220 Second Street, South Minneapolis, MN 55401 (612) 370-3068
Kansas	Elmer C. Binford, Acting RA Kansas City Regional Office 400 State Avenue Kansas City, KS 66101 (913) 236-2162 (913) 236-2169 (Fax)
Iowa	William H. McNarney, Manager Des Moines Field Office 210 Walnut, Room 239 Des Moines, IA 50309 (515) 284-4512 (515) 284-4743
Nebraska	Joe Jones, Deputy Manager Omaha Field Office 10909-Mill Valley Road Executive Tower Centre Omaha, NE 68154 (402) 492-3101

(402) 492-3150 (Fax)

Missouri Sandra Freeman, Environmental Officer
St. Louis Field Office
1222 Spruce Street
St. Louis, MO 63103
(314) 539-6528
(314) 539-6575 (Fax)

Colorado Ron Bailey, Coordinator
Denver Regional Office
1405 Curtis Street
Denver, CO 80202
(303) 844-4959
(303) 844-3407 (Fax)

South Dakota Don Olson, Coordinator
West 49th Street
Sioux Falls, SD 57105
(605) 330-4223
(605) 330-4465 (Fax)

North Dakota Keith Elliott, Coordinator
657 Second Avenue, Room 366
Fargo, ND 58108
(701) 239-5136
(701) 239-5249 (Fax)

U.S. SMALL BUSINESS ADMINISTRATION

SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS

Agency: U.S. Small Business Administration

Program Name: Physical Disaster Loans and Economic Injury
Disaster Loans

Agency Point of Contact: SBA disaster loan representatives are
in the Disaster Field Office (DFO) in every State.

[NEED AGENCY INPUT. NAMES/STATE/PHONE#]

Program Function: Federal disaster loans to nonfarm, private
sector owners of disaster damaged property for uninsured losses,
including homeowners and renters, businesses of all sizes, and
nonprofit organizations.

Applicability: Primary form of Federal assistance for disaster
damage to nonfarm, private property to help the owners fund
repair or replacement of uninsured or otherwise uncompensated
losses. Wetlands restoration: SBA disaster loan funds could be
used by a property owner to restore any property including
wetlands damaged by flooding. Flood easements: The SBA disaster
loan program is not suitable for addressing this goal directly,
but loans used to assist funding relocation out of a flood hazard
area can be an important part of reducing risks of future flood
losses. Relocation of farm structures: By law, agricultural
enterprises are not eligible for SBA disaster assistance; farmers
may seek similar assistance from USDA. Relocation of urban
structures: Owners of nonfarm, flood damaged properties may use
SBA disaster loan funds to help fund acquisition of a replacement
property at a different site. In cases of forced relocation
(where a building permit to repair the damaged property will not
be issued) or substantial damage (as defined by FEMA/NFIP) in a
special flood hazard area, the damaged property may be treated as
a total loss, making the property owner eligible for full
replacement value. Thus, the most acute cases are eligible for a
loan to build or purchase a replacement property (in the case of
substantially damaged units, the relocation property must be
outside a special flood hazard area). This assistance is
available to all nongovernmental, nonfarm property owners.

Form of Assistance: Loan, generally with an interest rate of
4 percent and terms up to 30 years, depending on borrowers
ability to repay. By law, borrowers able to use their own
resources to meet disaster needs without hardship (generally on
about 2-3 percent of applicants) have a higher interest rate,
generally 8 percent, and such businesses are limited by law to a
term of 3 years. Prior liens may be refinanced, within certain
limits.

Program Target: Individuals (homeowners and renters), businesses (of all sizes), and nonprofit organizations. This covers the entire private sector, except for agricultural enterprises (similar assistance is available from USDA programs).

Total Funding: As of October 1, 1993, about \$465 million in disaster loan funds will be available.

Eligibility Requirement: Include all property owners except governmental units and agricultural enterprises, including homeowners, renters, businesses of all sizes, and nonprofit organizations. Applicant must have suffered the disaster loss, that is, owned the damaged property. Eligibility is limited to uninsured or otherwise uncompensated losses. Applicants must have ability to repay loans. Full collateral is not required, but applicants must pledge any available collateral.

Cost-Sharing Requirement: None.

Repayment Requirement: All loans must be repaid. Applicants must be able to make loan payments from current income or cash flow from operations. The law offers low interest rates, long terms, refinancing of prior liens, and other tools to make the loan assistance affordable to many disaster victims who could not otherwise afford to pay for the disaster recovery. Terms of each loan are established by SBA in accordance with each borrowers' needs and ability to repay.

Application Procedure: Applicant must complete SBA disaster loan application, available from SBA representatives at all DFO's. SBA representatives are available to assist in completing the application and to answer questions.

Application Time Line: SBA processes most disaster business loan applications in 1 to 3 weeks from receipt by SBA, and most disaster home loan applications within about 1 week. Timing of loan closing is determined by each borrower. Disbursement of loan funds is similar to a construction loan and is in increments as the borrower completes repairs. Duration of reconstruction projects varies widely as a function of the complexity of each project.

Programmatic/Funding Constraints: By law, disaster loans to businesses and nonprofit organizations are limited to \$1.5 million, and SBA has authority to waive that statutory maximum for businesses which are major sources of employment. Disaster loans to homeowners are limited to \$100,000 for real estate, \$20,000 for personal property, \$100,000 for refinancing of prior liens, and \$24,000 for additional mitigation devices not required by code. Governmental entities are not eligible.

Other Comments: Some levees are privately owned by businesses or nonprofit organizations. Governmental entities are not eligible for SBA assistance; private entities established by governmental units may be eligible. Potentially, some private owners of levees may seek SBA disaster loan assistance.

In addition to loans for physical disaster damage, small businesses located in the declared disaster area which have suffered adverse effects of the flood are also eligible for SBA economic injury disaster assistance. Economic injury disaster loans are working capital loans to help a small business meet necessary obligations during the period adversely affected by a disaster. A business need not have sustained property damage to qualify for economic injury assistance; decreased revenues caused by a disaster and resulting in insufficient cash flow to meet all ongoing obligations is a common form of eligible economic injury. These loans are at 4 percent with terms up to 30 years.