

FLOOD PLAIN MANAGEMENT

OFFICE OF MANAGEMENT AND BUDGET
WATER RESOURCES BRANCH
Telecopier Cover Sheet

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NAME: Will Stelle / Brian Burke **FAX #:** _____

AGENCY: _____

FROM: Bruce Long

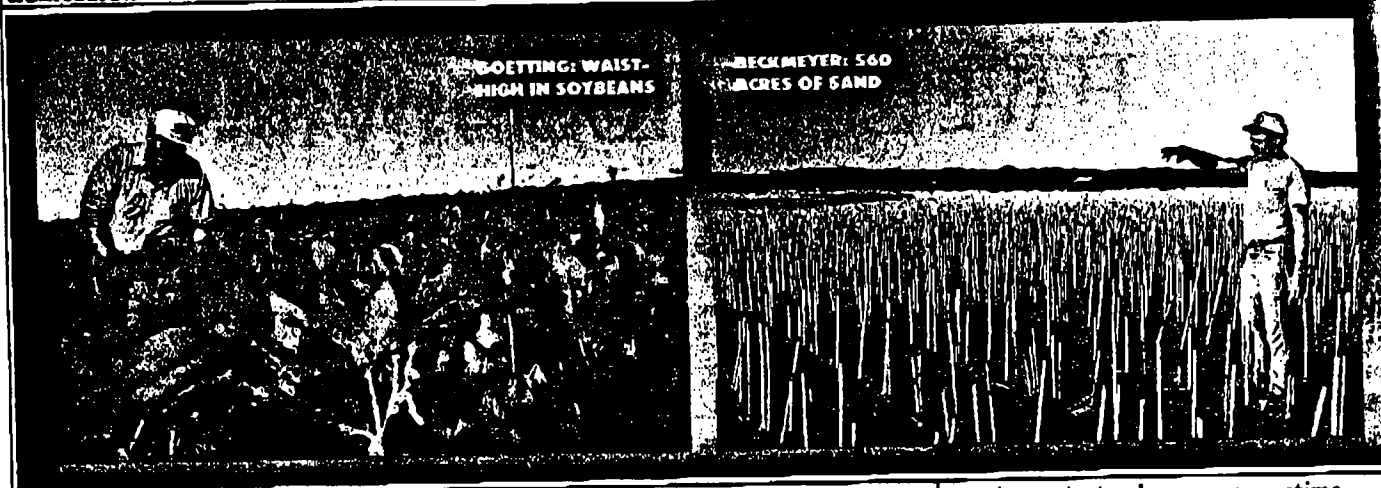
Number of pages to follow: 2

ADDITIONAL MESSAGES:

Full

Top of the News

AGRICULTURE



FOR FARMERS, DEVASTATION—AND BUMPER CROPS

Beyond the flood plain, a bountiful harvest is expected

Orion Beckmeyer and Ralph Goetting have long lived parallel lives. They attended grammar school together in Hartsburg, Mo. They both went off to the University of Missouri's agricultural college, then returned to their family farms in the Missouri River basin to raise corn, soybeans, and livestock. Close friends, they attend the same church.

The Flood of '98 busted the tidy symmetry. Swirling currents left Beckmeyer's 560-acre farm a sandy wasteland—upending barns and sucking the footings out from under storage bins that now tilt precariously. Six miles away, just over the rolling hills that stand guard against the Missouri, Goetting, 58, expects one of his best harvests ever. The rains forced him to plant late; but now the beans look great, the corn better than fair.

The flood and the Southeast's severe drought are past, giving way to a bitter-sweet harvest on the nation's farms. Because of the weather, farmers haven't finished bringing in the crops. But the Agriculture Dept. is already forecasting a harvest of 7.2 billion bushels of corn and 1.9 billion bushels of soybeans in 1993. The numbers are down slightly from last year's record crop but well in line with the five-year average.

NEW TRUCKS. Farm income, meanwhile, is expected to come in surprisingly high: The Agriculture Dept. figures income will reach a record \$62.5 billion, a 10% rise from 1992 (chart). Driving the prices of \$2.41 a bushel for corn and \$6.25 a bushel for soybeans, up

more than 12% from last year's levels.

Consider Iowa, where the Missouri River exacted a high toll. The state's total corn crop is expected to be 117 bushels an acre. That's off 20% from last year's record crop but flat with 1991.

To city dwellers who remember weeks of summer TV images of flooded fields, a normal harvest seems unlikely. But damage was limited to the river bottoms, and the summer's heavy rains were actually a boon to farms above the floods. For those on dry land, says Bob McElroy, senior financial analyst at the Agriculture Dept., 1993 is turning out to be a very good year. "If you're sitting [on high ground] out in Chillicothe, Ohio, you'll sell a great soybean crop at \$7 a bushel, and it's time to buy a new truck," McElroy says.

Turns out that as the water started to recede, farmers throughout the Midwest headed to their farm-equipment dealers. Sales, which had declined in 1992 and 1991, will turn up slightly this year, an

equipment trade group estimates. Through August, sales of tractors were up 10.5% from 1992 levels, while combine sales rose 15.1%. The upturn helped drive up third-quarter profits at Deere & Co. more than tenfold, to \$100.1 million, while tractor sales at J. I. Case division of Tenneco Inc. showed a strong increase. Lenders, including the revitalized Farm Credit System, loosened up funds, boosting farm loans slightly, to \$52.7 billion, and renegotiating payment terms to many farmers hit by the floods.

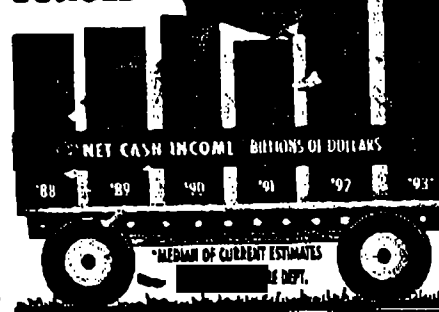
WHILE THEY'RE HOT. But harvests look bleak in the drought-ridden states of Georgia, North Carolina, and South Carolina. Soybean crops in those states should fall by 52% this year, according to the Agriculture Dept., though the drought's impact nationwide will only be slight.

Likewise, the damage remains awesome to growers in the Midwest's river bottoms. They're returning to the fields, but the costs of reclaiming their land can be overwhelming. Huge Caterpillar Inc. tractors that can plow through the giant sand drifts left by the flood waters are hiring out at \$600 an acre—far more than the \$400 an acre the government is providing for flood relief. "For some of these folks, the cost of reclamation exceeds the land's value," says Daniel Cassidy, an economist at the University of Missouri.

Orion Beckmeyer knows just what he means. He's back in the fields his family has farmed for five generations. Beckmeyer has plenty of money left over from last year's record corn harvest—enough to buy supplies for next year, he says, "unless you spend it all on bulldozer work." With the money he'll spend cleaning up his fields, "you could buy a new farm," he says. But like many other farmers, he would rather rebuild his old one.

By David Greising
in C

U.S. FARM INCOME SURGES



**EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
ROUTE SLIP**

TO: Ron Cogswell
TJ Glauthier

cc: Mark Weatherly
Kevin Neyland

Take necessary action
Approval or signature
Comment
Prepare reply
Discuss with me
For your information
See remarks below

 X

FROM:  Bruce B. Long

DATE: October 8, 1993

REMARKS: Article on Post Flood Ag Production and Income



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

September 29, 1993

NOTE TO: SEE DISTRIBUTION LIST
FROM: ~~Bruce Long~~
SUBJECT: Environmental Flood Recovery, Program Summaries

We have not made sufficient progress in the past several weeks in either identifying or describing attractive alternative agency programs. It is extremely important that you bring hard copies along with a computer disk (in Wordperfect) of your agency programs to the task force meeting now scheduled for Friday, October 1st, at ~~10:00 in room 248 NEOB.~~ These programs can either be in the emergency supplemental or in the base.

The program summaries that you bring should be modified using the attached format. Key items include the agency contact (should be a person at the lowest local level that can both explain the program and answer questions about resource availability at the local level), application procedures and time line (should be sufficiently detailed that the reader knows how to access the resources and whether the resources will be available within a timeframe that meets the applicant's needs), eligibility requirements, and programmatic/funding constraints (whether there are dollar/acre or other similar limits).

These descriptions must be written with the user in mind -- the DFO review teams, State representatives, and the general public. They should enable the reader to understand what tools are available to achieve the various alternatives we are promoting: wetland restoration, flood easements, relocation of farm structures, or relocation of urban structures.

I am establishing a sub-task force made up of agency representatives (point of contact) to work collectively on the alternative programs catalog. Immediately following Friday's meeting, I would like to meet with each agency's point of contact, in room 8026 NEOB, to begin work on this sub-task force. The point of contact should have access to whatever information resources are necessary to prepare the required material. The task force will meet every business day at CMB until the catalog is completed. Our goal is to complete the catalog by October 7th.

Thank you for your cooperation. I will be calling each of you to discuss this new summary and process. However, if you have questions, call Jim Kazel or me at 202-395-4590.

**SHORT-TERM
ENVIRONMENTAL FLOOD RECOVERY
ALTERNATIVE AGENCY PROGRAMS**

Department: _____

Agency: _____

Program Name: _____

Agency POC: _____ **Phone:**(____)_____

Program Function (Describe):

Applicability (Describe):

Resource Deliverable: ☐ Grant ☐ Loan ☐ Direct ☐ Tech. Assist. ☐ Other (Describe)

Program Target: ☐ Individual ☐ Business ☐ State ☐ Local Gov. ☐ Other (Describe)

Total Funding Source/ \$ (mil): ☐ None ☐ Emergency Suppl. ☐ FY 93 Carryover
☐ FY 94 Basic Program ☐ Other (Describe)

Eligibility Requirement(s):

Cost Sharing Requirement(s): ☐ None ☐ Other (Describe)

Repayment Requirement(s): ☐ None ☐ Other (Describe)

Application Procedure(s):

Application Time Line:

Programmatic/Funding Constraint(s):

Other Comments:

October 1, 1993

FEDERAL PROGRAMS OFFERING ALTERNATIVES TO TRADITIONAL FLOOD CONTROL PROGRAMS

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 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 would 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.

Strategies

1. Restore wetlands that previously provided fish and wildlife habitat and flood storage.
2. Buy flood easements for frequently flooded cropland, making payment for crop losses when flooded. This will negate the need for levees and increase the natural storage capacity of the flood plain while allowing the continued farm production.
3. Elevate or relocate all or parts of communities. This will reduce damages, reduce the need for levee construction and maintenance, and also increase natural storage.
4. In Ag lands, relocate or elevate sparse farm structures and continue farming land. This will permit continued use of the land with its attendant economic benefits, but eliminate the repeated disruption and costs of flood damage to structures.

The attached matrix illustrates how various Federal programs can be combined to support these strategies. Following the matrix is a more complete discussion of the four strategies and summaries of the programs that gives information on their objectives, cost-sharing requirements, available funding, and other important characteristics.

DRAFT

01-Oct-93

ALTERNATIVE FLOOD CONTROL PROGRAMS

Specific Programs	Alternative to Levees			
	Restore Wetlands	Ag Flood Easements	Relocate Farm Houses	Urban Relocations
Agriculture				
Wetland Reserve	X			
Emer Wtshd Prot	X	X		
Commerce - EDA				
Flood Relief Pro				X
Corps of Engineers				
1135 (Env Restor)	X	X	X	X
EPA				
State Revolving Fnds	X		X	X
Sec 319 Grants	X	X	X	X
Wtr Pol Cntr (Sec 106) (Tech Asst.)	X		X	X
Wetlands Prot	X	X	X	X
FEMA				
Hazard Mit. Grants			X	X
Property Purchase (Sec 1362)			X	X
HUD				
CDBG			X	X
SBA				
Disaster Loans			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 put 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, to the extent practicable, wetlands lost to development.

Among the hardest hit by the flood are 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.

To do this, the Administration requested and Congress provided language in the emergency supplemental that allows SCS funds (up to \$60 million) 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 not the only program that can be used for this purpose. The Farmer's Home Administration's "Farm Debt Restructure Conservation Easement" program offers landowners an opportunity to be forgiven debt for what may now be nonproductive land while at the same time contributing to the restoration of important natural values. The Department of Interior's Fish and Wildlife Service offers a program known as "Partners for Wildlife", funded

at about \$3 million in 1993, that can provide technical and financial assistance to private landowners willing to restore wetlands and riparian habitat. Similarly, its "Land Acquisition" program can be used for the purchase of wetland or other lands that qualify for inclusion in the National Wildlife Refuge System. This program was funded at over \$76 million in 1993.

Other programs that can contribute to restoration of wetlands include the Army Corps of Engineers "1135" program (longer term), and the Department of Agriculture's ASCS "Water Bank" program. Planning and technical assistance can be funded from EPA "Wetlands Protection -- State Development Grants". Each of these programs is described in detail in the attached program summaries. 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.

Midwest Flood Recovery Program
Department and Agency
Alternatives to Repair and Restoration of Levees
And Other Repairs and Restorations

Department: The Department of Agriculture

Agency: Agricultural Stabilization and Conservation Service
(ASCS)

Program Name: Water Bank Program (WBP)

Program Description: The WBP objectives are to preserve, restore, and improve wetlands of the Nation. The WBP is administered by ASCS through state and county Agricultural Stabilization and Conservation (ASC) committees with technical assistance by SCS and other cooperating agencies.

Program Implementation Guidance: SCS provides technical assistance to protect, improve, or restore eligible wetlands. Assistance involves identifying eligible wetlands, assisting wetland owners to develop the necessary conservation plan, and assisting participants in applying contracted conservation treatment. The assistance is provided to ASCS on a reimbursable basis.

Budgetary Resources

<u>FY 93</u>	<u>FY 93 Emergency Supplemental</u>		<u>FY 94</u>
Direct	Direct	Contingency	Likely
0	None	None	0

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: Farm Debt Restructure Conservation Easements

Program description: Through provisions of the Consolidated Farm and Rural Development Act (Con Act) (7 U.S.C 1921 *et seq.*) the Farmers Home Administration (FmHA) makes and services a variety of loans to rural communities including loans for farm ownership and operation. FmHA typically provides loans to farmers and ranchers who are unable to obtain credit elsewhere. Section 349 of the Con Act authorizes FmHA to reduce the debt of delinquent and nondelinquent borrowers in exchange for conservation easements placed on environmentally-sensitive real property that secures FmHA loans. This program has been available since 1985; however, few borrowers have requested consideration for conservation easements in favor of other loan servicing options (e.g., loan write-down and deferral).

Program Implementation guidance: Currently, FmHA is not utilizing this program in the flood area. FmHA should encourage all borrowers located in the flood damage vicinity and the associated watershed to consider exchanging conservation easements for debt reduction. This debt restructure program 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 by the landowners 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 exchange debt for conservation easements.

Since the funding required to establish debt reducture conservation easements already exists in FmHA's loan portfolio, no additional funds are needed. Establishing easements while reducing borrower debt load will assist borrowers to remain current on FmHA payments in the long run, maximizing loan repayment capability.

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: Extensive use of this provision may result in reducing the amount of disaster assistance funds needed in some areas.

Midwest Flood Recovery Program
Department and Agency
Alternatives to Repair and Restoration of Levees
And Other Repairs and Restorations

Department: The Department of Agriculture

Agency: Agricultural Stabilization and Conservation Service

Program Name: Wetlands Reserve Program (WRP)

Program Description: The WRP 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.

Program Implementation Guidance: To participate in WRP, the land owner must submit an intention to enter into the program. SCS in consultation with the FWS will determine land eligibility and develop a wetland reserve plan of operation for the acres that are eligible.

Budgetary Resources

<u>FY 93</u>	<u>FY 93 Emergency Supplemental</u>	<u>FY 94</u>
Direct	Direct	Contingency
\$50 million	0	0
		Likely
		\$67 million

Comment on Resources

Program administration is under the authority of ASCS. SCS provides technical assistance on wetland designs. In FY 94 the program is authorized to be offered in 20 states. To effectively use the program, opportunities for landowners to signup must be offered at least 2 months before spring planting.

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:

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	FY93 Emergency Supplemental	FY94
Direct	<u>Direct</u> <u>Contingency</u>	Likely
<u>Approp.</u>		<u>Approp.</u>

MIDWEST FLOOD RECOVERY PROGRAM
DEPARTMENT AND AGENCY
ALTERNATIVES TO REPAIR AND RESTORATION OF LEVEES
AND OTHER REPAIRS AND RESTORATIONS

Department: Interior

Agency: U.S. Fish and Wildlife Service

Program name: Partners for Wildlife

Program description: The U.S. Fish and Wildlife Service, under the authorities of the Fish and Wildlife Act of 1956 (16 U.S.C. 742A-742J), administers the Partners for Wildlife program which provides financial and technical assistance to private landowners willing to restore wetlands and riparian habitat. The program uses a non-acquisition approach to voluntary habitat restoration on private lands that complements the Service's land acquisition program. The program has been well received. In the disaster area alone, almost 2,000 landowners have been assisted in restoring over 65,000 acres of small wetlands. Demand for the program exceeds our financial capacity to respond. In FY93 and FY94 an additional 9,000-10,000 acres of restoration will occur each year with normal funding. With over 21,000,000 acres of drained wetlands in the watershed a larger scale restoration program is needed for the rapid rate of runoff to be reduced.

Program Implementation guidance:

Our goal should be for every landowner in the watershed to be able to 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.

Budgetary resources that are or could be made available:

(BA in millions of dollars)

FY93 Direct <u>Approp.</u>	FY93 Emergency Supplemental <u>Direct</u> <u>Contingency</u>	FY94 Likely <u>Approp.</u>
\$3.3 million (Regions 3 & 6)	0 0	\$3.3 million

Comments on resources:

With additional funding (i.e., \$6,000,000) the annual restoration target could be increased from 10,000 to 25,000 acres under this cooperative program. Extensive implementation of this program will restore wetland functions such as: flood water retention, flood flow attenuation, groundwater recharge, water quality improvements (sediment and contaminant filter), fish and wildlife habitat.

Program Name: Section 319 Grants

Program Description: Funds are provided to States to implement nonpoint source programs pursuant to Section 319 (h) of the Clean Water Act. Under this provision, funds are awarded for implementing approved State nonpoint source management programs. These grants can be used for funding watershed resource restoration activities which include wetlands and other aquatic habitat.

Program Implementation Guidance: Grants are awarded to the State agency designated by the Governor as the lead agency for nonpoint source pollution control. The lead agency may distribute grant funds to state and local governments, interstate and intrastate agencies, public and private nonprofit organizations and institutions.

Contact: For information on the contact person in the appropriate Region, contact the EPA Wetlands Hotline at 1-800-832-7828.

Budgetary Resources: FY93 \$50 million
FY94 \$80 million requested

Program Name: Wetlands Protection - State Development Grants

Program Description: This grant program provides financial support through EPA's Regional offices, to States and Federally recognized Indian Tribes to support development and enhancement of wetland protection programs. Projects funded by this program must clearly demonstrate a direct link to increasing a State's ability to protect wetland resources.

Program Implementation Guidance: Appropriate application forms can be requested from and should be submitted to the appropriate EPA Regional office. Grants are usually approved within 4 months of receipt of a complete application. States are required to provide at least a 25% match of the Federal funds awarded through this grant program. Each application will be reviewed by EPA according to the following criteria: success of previous projects; likelihood of success; transferability to other States; potential environmental results; and investment and commitment of the State. For FY 93, one priority project area designated to receive preference in funding decisions is watershed protection approach demonstration projects with a substantial wetlands component. It is very likely that this project area will again be identified as a priority in FY 94. Funds are allotted to states by the EPA Regional offices on a competitive basis.

Contact: For information on the contact person in the appropriate Region, contact the EPA Wetlands Hotline at 1-800-832-7828.

Budgetary Resources: \$10 million FY93
\$10 million FY94 requested

MIDWEST FLOOD RECOVERY PROGRAM
DEPARTMENT AND AGENCY
ALTERNATIVES TO REPAIR AND RESTORATION OF LEVEES
AND OTHER REPAIRS AND RESTORATIONS

Department: Defense

Agency: U. S. Army Corps of Engineers

Program name: Section 1135 of WRDA 86, as amended

Program description: Section 1135 provides for modifications in the structures and operations of water resource projects constructed by the Corps for the restoration of fish and wildlife habitat. The modifications must be consistent with the authorized purposes of the project being modified, the non-Federal share of the costs shall be 25 percent, and specific Congressional authorization is required if the estimated costs of a proposed modification exceed \$5 million. Annual appropriations for the program are limited to \$25 million.

While the modifications are to be constructed, to the extent possible, on existing project lands, and are not to be land intensive, any additional lands, easements, rights-of-way, relocations, and/or disposal areas (LERRDs) which are required are to be provided by the non-Federal sponsor. The value of provided LERRDs will count towards the non-Federal sponsor's 25 percent share. However, work-in-kind is not credited. The non-Federal sponsor is responsible for the incremental costs of the operation, maintenance, repair, restoration, and replacement (OMRR&R) of the project modification.

Program Implementation Guidance: To date numerous memoranda have been issued providing implementation guidance and a draft regulation has been distributed for comment and interim use.

A memorandum is being prepared with specific guidance regarding the potential of implementing some modifications using this authority during the repair of Federal levees.

Budgetary resources that are or could be made available:

(BA in millions of dollars)			
FY93	FY93 Emergency Supplemental		FY94
Direct	Direct	Contingency	Likely
Approp.			Approp.
\$5 mill.			\$7.5 mill.

Comments on Resources:

emc/30 Aug. 93

September 29, 1993

NOTE TO: Brian Burke
Will Stelle

Attached is a short paper that is intended to describe the Administration's program for restoring wetlands as a part of the post-flood recovery. This is one of four alternatives (the others being flood easements, relocation of farm structures and the relocation of urban structures) being offered through the menu of programs funded by the supplemental or base budgets.

Please review and comment by COB tomorrow (Thursday). The addition of other programs to the menu would be especially appreciated.

Thanks.



9/29

DRAFT**RESTORE 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 put 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, to the extent practicable, wetlands lost to development.

In addition, among the hardest hit by the flood are farmers. Many lost at least one year's crop. In addition, the land itself has been ravaged by flood waters causing gullies and scours or leaving behind great sand dunes that render the land too expensive to farm. The Administration wants to offer some of these farmers 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.

To do this, the Administration requested and Congress provided language in the emergency supplemental that allows SCS funds (up to \$60 million) 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 land protected by SCS levees. Those behind Corps of Engineers levees are also eligible for consideration.

This is not the only program that can be used for this purpose. The Farmer's Home Administration's "Farm Debt Restructure Conservation Easement" program offers landowners an opportunity to be forgiven debt for what may now be nonproductive land while at the same time contributing to the restoration of important natural values. The Department of Interior's Fish and Wildlife Service offers a program known as "Partners for Wildlife", funded at over \$3 million in 1993, that can provide technical and

financial assistance to private landowners willing to restore wetlands and riparian habitat. Similarly, its "Land Acquisition" program can be used for the purchase of wetland or other lands that qualify for inclusion in the National Wildlife Refuge System. This program had over \$4 million in 1993.

Other programs that can contribute to restoration of wetlands include the Army Corps of Engineers "1135" program (longer term), and _____. Each of these programs is described in detail in the attached program summaries. 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 on these programs.



United States
Department of
Agriculture

Soil
Conservation
Service

Federal Building
210 Walnut St., Ste. 693
Des Moines, IA 50309-2180

LEVEE REPAIR REPORT (EWP)

September 20, 1993

Number of DSR's prepared: 68
Amount: \$925,875

Number of Levees being worked on: 3
Amount: \$79,524

Number of Levees fixed with Private funds (City): 1
Amount: \$3,000

Number of Levee breaks funds committed for but not yet under contract: 9
Amount: \$339,051

Number of Levee contracts completed: 1
Amount: \$54,315

PRIMARY CONCERNS:

Many streams and floodplains are just now visible.

Expect to receive 35-50 more DSR's when streams go down.

DSR's on hand were assigned to one of three funding agencies on September 14, 1993 as follows:

FEMA: 14 damage survey reports
Amount: \$455,100

COE: 11 damage survey reports
Amount: \$3,231,400

SCS: 34 damage survey reports
Amount: \$901,100

DSR's received after September 14, 1993:

UNASSIGNED: 8 damage survey reports
Amount: \$233,276

James M. Reel
Leader, WRPS



The Soil Conservation Service
is an agency of the
Department of Agriculture

AN EQUAL OPPORTUNITY EMPLOYER

SEP-24-1993 07:32 FROM USDA: IOWA SCS STATE OFC TO

SEP-24-1993 07:32 FROM USDA: IOWA SCS STATE OFC TO

515 284 4394

DATE OF THIS REPORT: Sep 20, 1993

[illegible]

CARROLL	4 347-06	DIKE	\$8,000		N	2				
CARROLL	4 347-07	DIKE	\$2,200		N	2				
CARROLL	4 347-08	DIKE	\$2,300		N	2				
CARROLL	4 347-09	DIKE	\$1,400		N	2				
CASS	4 327-03	DIKE	\$3,000		E	2	CITY COMPLETED			Dike repair wing dam
CEDAR	6 366-02	DIKE	\$30,000							
CLAY	1 393-01	DIKE	\$13,500							
CLINTON	6 390-05	DIKE	\$20,000							
CLINTON	6 390-10	DIKE	\$15,000							
CLINTON	6 390-12	DIKE	\$26,000							
CLINTON	6 390-13	DIKE	\$10,500							
DALLAS	5 365-06	DIKE	\$10,000		E	1				Levee dng
DES MOINES	6 29-01	DIKE	\$18,000		N	3				4000'
DES MOINES	6 29-04	DIKE	\$2,000,000		N	3				600'
DES MOINES	6 370-6	DIKE	\$5,500		E	2	Co. Prior.=6			
FREMONT	4 310-01	DIKE	\$5,000	3-167			CONTRACTED			
HARRISON	4 320-04	DIKE	\$25,000	3-210	E	1	CONTRACTED	41/34/04 95/54/02	2	
HARRISON	4 320-06	DIKE	\$50,000	3-501	E	1	COMPLETED	41/42/26 95/41/42	2	9/13/93
HARRISON	4 320-11	DIKE	\$56,270		E	2				800'
HARRISON	4 320-3	DIKE	\$89,000		E	1	CONTRACTED	41/51/07 95/54/53	2	
HARRISON	4 320-7	DIKE	\$78,700		E	1	FUNDS COMMITTED			2975'
HARRISON	4 320-8	DIKE	\$10,000		E	1	FUNDS COMMITTED			300'
HARRISON	4 320-9	DIKE	\$25,000		N	3				?
IOWA	6 353-01	DIKE	\$50,000		E					700'
IOWA	6 353-02	DIKE	\$63,000		E		Co. Prior.=3			900'
IOWA	6 353-04	DIKE	\$18,000		E	1	Co. Prior.=2	COE/9/20 G6	5	Sites
IOWA	6 353-05	DIKE	\$4,000		E	1				
JACKSON	3 340-01	DIKE	\$15,400		N	2				2000 yd
JACKSON	3 340-02	DIKE	\$6,000		E	1				200 yds
JASPER	5 326-01	DIKE	\$75,000		E	1	FUNDS COMMITTED			
KEOKUK	6 334-10	DIKE	\$1,800		N	5	Co. Prior.=14	41/29/34 92/22/28	2	
LEE	6 348-01	DIKE	\$70,000		N	4				
LEE	6 348-02	DIKE	\$22,700							
LEE	6 348-03	DIKE	\$5,888							
LEE	6 348-04	DIKE	\$6,450							
LEE	6 348-08	DIKE	\$17,780		E					
LEE	6 348-15	DIKE	\$14,000							lev 1000'
LEE	6 348-19	DIKE	\$14,000							
LEE	6 348-22	DIKE	\$100,000							1350000'
LEE	6 348-24	DIKE	\$30,332							
LEE	6 348-30	DIKE	\$18,667							
LEE	6 348-31	DIKE	\$49,777							
LOUISA	6 356-10	DIKE	\$50,800		N	5	FEMA			
LOUISA	6 356-11	DIKE	\$387,000		N	5	FEMA			
LOUISA	6 356-12	DIKE	\$56,800		N	3	FEMA			
LOUISA	6 356-23	DIKE	\$550,000		E		COE			
LOUISA	6 356-26	DIKE	\$25,000							
LOUISA	6 356-3	DIKE	\$50,000		N	3				
LOUISA	6 356-4	DIKE	\$100,960		N	3				5 Sites

EMERGENCY WATERSHED PROTECTION STATEWIDE DIKES REPORT

PAGE 2

DATE OF THIS REPORT: Sep 20, 1993

COUNTY	A	DSRNUM	PROBLEM	CONTRACT	DSR-ESTIM	OBLIGATED	CONTRACT	E	NE	P	COMMENTS	LATITUDE	LONGITUDE	C	DESCRIPTION
	R			NUMBER				DATE		R					O
	E									I					N
	A									O					F
										R					I
										I					D
										T					E
										Y					N
															C
															E

LYON	1	398-01	DIKE		\$20,000				E	1					1000'
MONTGOMERY	4	301-01	DIKE		\$25,000				N	4	FUNDS COMMITTED				Bridge
MONTGOMERY	4	301-02	DIKE		\$62,500				N	2	Co. Prior.=18				
MUSCATINE	6	374-02	DIKE		\$55,000										DD #2
PLYMOUTH	1	376-01	DIKE		\$100,000				E	1					
POLK	5	362-04	DIKE		\$70,131	1					FUNDS COMMITTED				
POLK	5	362-05	DIKE		\$41,900	1					" "				
POLK	5	362-06	DIKE		\$38,450	1					FUNDS COMMITTED				
POLK	5	362-07	DIKE		\$34,630	1					FUNDS COMMITTED				
POLK	5	362-1	DIKE		\$5,390	1			E	2	" "	9/17			
POLK	5	362-2	DIKE		\$1,750	1			E	2	" "	9/17			
SCOTT	6	163-01	DIKE		\$15,000				E	1					1200'
SHELBY	4	321-13	DIKE		\$13,000				N	3	Co. Prior.=8				300' brch
WAPELLO	6	313-10	DIKE		\$2,000										
WOODBURY	1	318-11	DIKE		\$3,500				E	1					?
WOODBURY	1	318-16	DIKE		\$35,000				E	1					
WOODBURY	1	318-17	DIKE		\$30,000				E						
WORTH	2	392-01	DIKE		\$2,900				N	1					100'

SUMMARY

TOTALS

DSR Levee Estimate	Levee OBLIGATED
\$4,925,875.00	\$133,839.00
DSR Estimate	OBLIGATED
\$22,549,932.00	\$84,505.00

Ferris 310-03 / Riverton / WS in danger.

JMR
9/16/93

LEVEE PROJECTS
Priorities for Construction
of Levees:

1. Loss of life imminent
 2. Possible loss of life and important public infrastructure
 3. Loss of important infrastructure
 4. Loss of less important infrastructure and agricultural crops
 5. Loss of agricultural crops
- * less important infrastructure being gravel roads

Fax Transmittal
LEVEE PROJECTS

FROM: James M. Reel
Levee Coordinator
Soil Conservation Service
Federal Building
210 Walnut Street, Ste. 693
Des Moines, IA 50309-2180
(515) 284-4125
FAX (515) 284-4394

DATE: 9/17/93

Number of pages to follow: 3

TO: All Area Offices
Council Bluffs Eng Office
Atlantic Eng Office
Denison Eng Office
Creston Eng Office
Indianola Eng Office
Fairfield Eng Office
Iowa City Eng Office
Adel FO
Ankeny FO
Atlantic FO
Burlington FO
Carroll FO
Dewitt FO
Donnellson FO

Harlan FO
Lemars FO
Logan FO
Newton FO
Northwood FO
Ottumwa FO
Red Oak FO
Rock Rapids FO
Sidney FO
Sigourney FO
Sioux City FO
Spencer FO
Wapello FO
Williamsburg FO

I have been assigned as Levee Coordinator for the Soil Conservation Service.

As a result of that responsibility, I have met with my counterparts from the Federal Emergency Management Agency (FEMA) and the Corps of Engineers (COE) to determine which agency should work on the Damage Survey Reports (DSR's) received to date.

As a result of a meeting held on September 14, 1993, assignments were made to the various agencies as indicated on the attached tables, which are headed as either SCS, FEMA or COE. This means that those agencies listed would be responsible for funding any projects which might come from those particular DSR's.

All DSR's should continue to be sent thru the Emergency Operations Center (EOC) in Indianola and they will forward them to me. If you have any questions or comments concerning the information presented, please contact me at (515) 284-4135.

COMMENTS:

James M. Reel
Levee Coordinator

LEVEE PROJECT

AGENCY SCS

September 14, 1993

COUNTY	DSR #	EST. COST x 1,000	PRIORITY	DOLLARS OBLIGATED x 1,000
Carroll	347-06	8		
Carroll	347-07	2.2		
Carroll	347-08	2.3		
Carroll	347-09	1.4		
Clay	393-01	13.5		
Clinton	390-05	20		
Clinton	390-10	15		
Des Moines	370-06	5.5		
Fremont	310-01	6.6		6.6
Harrison	320-03	45		45
Harrison	320-04	27.9		27.9
Harrison	320-06	54.3		54.3 c
Harrison	320-07	78.7	FC	
Harrison	320-08	10	FC	
Iowa	355-04	18		
Iowa	355-05	4		
Jasper	326-01	75	FC	
Lee	348-02	22.7		
Lee	348-03	5.9		
Lee	348-04	6.5		
Lee	348-08	17.8		
Lee	348-15	14		
Lee	348-22	100		
Montgomery	301-01	25	FC	
Montgomery	301-02	62.5		
Polk	362-01	5.4		
Polk	362-02	1.8		
Polk	362-04	70.1	FC	
Polk	362-05	41.9		
Polk	362-06	38.5	FC	
Polk	362-07	34.5	FC	
Wapello	313-10	2		
Woodbury	318-16	35		
Woodbury	318-17	30		
SUBTOTAL	34	\$901,000		

FC

c

Funding Committed
Contracts Completed

LEVEE PROJECT AGENCY FEMA

September 14, 1993

COUNTY	DSR #	EST. COST x 1,000	PRIORITY	DOLLARS OBLIGATED x 1,000
Cass	327-03	3		
Clinton	390-12	86		
Dallas	365-06	10		
Harrison	320-11	56.3		
Harrison	320-09	25		
Keokuk	334-10	1.8		
Louisa	356-04	101.9		
Louisa	356-10	50.8		
Louisa	356-12	56.8		
Louisa	???	17.2		
Lyon	398-01	20		
Plymouth	376-01	25		
Shelby	321-13	13		
Woodbury	318-11	3.5		
Worth	392-01	2.9		
SUBTOTAL	14	\$473.2		

FC - Funding Committed
c - Contracts Completed

LEVEE PROJECT AGENCY COE

September 14, 1993

COUNTY	DSR #	EST. COST x 1,000	PRIORITY	DOLLARS OBLIGATED x 1,000
Des Moines	29-01	18		
Des Moines	29-04	2,000		
Iowa	355-01	50		
Iowa	355-02	65		
Jackson	340-01	15.4		
Jackson	340-02	6		
Lee	348-01	70		
Louisa	356-03	50		
Louisa	356-11	387		
Louisa	356-23	550		
Scott	163-01	15		
SUBTOTAL	11	\$3,226.4		

FC
c

Funding Committed
Contracts Completed

INTER AGENCY POLICY FOR IOWA

INTERAGENCY COORDINATION AND REVIEW OF LEVEE REPAIR PROJECT

● IMPLEMENTATION

- THE FEDERAL INTERAGENCY LEVEE REVIEW COMMITTEE FOR IOWA CONSISTS OF REPRESENTATIVES OF THE FOLLOWING FEDERAL AGENCIES:
 - FEDERAL EMERGENCY MANAGEMENT AGENCY
 - U.S. ARMY CORPS OF ENGINEERS
 - SOIL CONSERVATION SERVICE
 - U.S. FISH AND WILDLIFE SERVICE
 - ENVIRONMENTAL PROTECTION AGENCY
- THE STATE OF IOWA PARTICIPATES IN THE REVIEW OF THE LEVEE PROPOSALS.
- UPON RECEIPT OF A REQUEST FOR ASSISTANCE, THE SPONSORING AGENCY NOTIFIES OTHER MEMBER AGENCIES OF THE REQUEST, IN ORDER THAT THESE AGENCIES MAY PARTICIPATE IN THE INITIAL REVIEW, FIELD INSPECTIONS, PRELIMINARY DESIGNS, AND DSR PREPARATION. THIS USUALLY OCCURS 7-14 DAYS PRIOR TO SUBMITTING A FORMAL REQUEST FOR APPROVAL TO THE FILE²C.

INTERAGENCY COORDINATION AND REVIEW OF LEVEE REPAIR PROJECT

● IMPLEMENTATION (CONTINUED)

- THIS EARLY PARTICIPATION IS DESIGNED TO ALLOW CONSIDERATION AND NEGOTIATION OF ALL COMMENTS BY THE NON-SPONSORING AGENCIES.
- THE SPONSORING AGENCY THEN FORMALLY SUBMITS THE DSR OR REPORT TO THE FILCC REQUESTING APPROVAL TO PROCEED.
- THE 24 HOUR CLOCK STARTS AT THIS TIME. THE REQUEST IS FAXED TO THE REVIEWING AGENCIES AND IF NO ADVERSE COMMENTS ARE RECEIVED, THE REQUEST IS DEEMED TO BE APPROVED.
- IN THE EVENT THAT ADVERSE COMMENTS ARE RECEIVED, ACTION IS SUSPENDED, THE SPONSOR IS NOTIFIED, AND THE PACKAGE IS REFERRED TO THE FEMA FEDERAL COORDINATING OFFICER FOR A FINAL DECISION.

● REPORTING

- A DATABASE SYSTEM IS BEING DEVELOPED TO TRACK THE REQUESTS AND AID IN THE PREPARATION OF REPORTS.

INTERAGENCY COORDINATION AND REVIEW OF LEVEE REPAIR PROJECT

●PROBLEMS

- NUMBER OF LEVEE PROJECTS - THERE MAY BE AS MANY AS 300-400 INDIVIDUAL LEVEE PROJECTS IN IOWA ALONE.
 - DIFFERENCES IN REPAIR PROJECTS - THE SCS, FOR EXAMPLE, MAKES NO EMERGENCY REPAIRS, PER SE, AND ALL PROJECTS ARE RECONSTRUCTED AS PERMANENT PROJECTS, WHEREAS BOTH FEMA AND COE AUTHORIZE EMERGENCY REPAIRS.
 - THERE IS A DIFFERENCE IN MATCH REQUIREMENTS, I.E., 75/25%, 80/20%, OR 100%. THE APPLICANT IN SOME CASES CAN SHOP AROUND FOR THE BEST DEAL.
 - FEMA CAN AUTHORIZE THE USE OF THE 406 FUNDS FOR ALTERNATE PROJECTS, I.E., RELOCATION,BUY-OUT, OR ELEVATION. THE SCS AND COE CANNOT USE THE REPAIR OR RECONSTRUCTION FUNDS FOR ANY OTHER USE.
-

INTERAGENCY COORDINATION AND REVIEW OF LEVEE REPAIR PROJECT

• PROBLEMS (CONTINUED)

- SCS DOES HAVE FUNDS FOR IT'S WETLANDS PROTECTION PROGRAM. THE COE HAS NO ALTERNATE FUNDS. IF IT'S APPLICANTS REFUSE REPAIR THE FUNDS ARE USED FOR ANOTHER REPAIR PROJECT.
- THERE IS NOT ENOUGH TIME OR INFORMATION TO MAKE A REAL ASSESSMENT OF THE IMPACT OF A LEVEE REPAIR ON A BASIN-WIDE BASIS IN THE TIME ALLOWED
- A FEMA HAZARD MITIGATION TECHNICAL PERSON NEEDS TO BE ASSIGNED TO PARTICIPATE IN THE INITIAL REVIEW, FIELD INSPECTIONS, DESIGN, ETC. TO PROPOSE AND ASSESS THE ALTERNATIVES TO REPAIR OR RECONSTRUCTION TO THE PRIOR CONDITION.

GIVEN TO ME
by G. Gitter on Corps of Engineers 33, 34, 39 & 40
9/15/93
ROCK ISLAND DISTRICT PL84-99
Levee Rehabilitation

9/7/93

ITEM NO.	PROJECT NAME	LEVEE CLASS	STATE	COUNTY(IES)	RIVER/STREAM	PROJECT TWP/OC	REQUEST RECEIVED	NOTIFY DFO	ALT. ACTION LETTER	PL84-99 ELIGIBLE?
22	Union Township	N-A-U	MO	Lewis	Miss.	Hanshaw	8/16/93	8/17/93	8/21/93	No
24	Louis Co. L.D. #11	N-A	LA	Louis	Iowa R.	Niles	7/20/93	8/2/93	8/24/93	Yes
25	Louis Co. L.D. #14	N-A	LA	Louis	Iowa R.	Niles	9/1/93	9/3/93	9/7/93	Yes
26	Louis Co. L.D. #8	N-A	LA	Louis	Iowa R.	Niles	7/22/93	7/23/93	8/27/93	Yes
27	Zuma-Curve Creek	N-A-U	IL	Rock Island	Rock R.	Borch	3/20/93	8/11/93	8/25/93	Yes
28	Zempel-Mumal D. & L.D.	N-A	IL	Fulton	Spoon	Borch	8/10/93	8/11/93	8/27/93	Yes
29	Green Island L.D.	N-A	LA	Jackson	Miss.	Borch	7/19/93	7/20/93	8/26/93	Yes
30	Spoon River Project #1	N-A	IL	Fulton	Spoon	Holden	8/20/93	8/22/93	8/27/93	Yes
31	Lower Pleasant Valley	N-A	IL	Fulton	Spoon	Borch	8/20/93	8/22/93	8/27/93	Yes
32	Henderson Co. #3 D.D.	N-A	IL	Henderson	Miss.	Wassenhove	8/20/93	8/22/93	8/27/93	No
33	Union TWP (Pavement)	N-A	LA	Des Moines	Sandy/Six	Wassenhove	7/15/93	7/16/93	8/27/93	No
34	Polk Co. D.D. #25	N-A	LA	Polk	Stark	Wassenhove	7/28/93	7/29/93	8/27/93	No
35	Mississippi-Fox L.D. #1	N-A	MO	Clark	Miss./Fox	Wassenhove	7/16/93	7/19/93	8/27/93	No
36	Hager Slough Special D.D.	N-A	IL	Cass	Sangamon	Stewart	8/24/93	8/25/93	8/26/93	Yes
37	Edland Drainage & L.D.	N-A	IL	Fulton	Spoon	Holden	8/24/93	8/25/93	8/27/93	Yes
38	Clear Lake D.D.	N-A	IL	Cass	Sangamon	Silman	8/26/93	8/27/93	8/27/93	Yes
39	Eichelberger Levee	N-A	LA	Monroe	Cedar River	Wassenhove	9/1/93	9/3/93	9/7/93	No
40	Avery Levee	N-A	LA	Wapello	Des Moines		9/3/93	9/7/93	9/7/93	No
41	Blue Joint Ditch	N-A	IL	Henry	Miss.		9/3/93	9/8/93		No
42	City of Nauvoo	N-U	IL	Hancock	Miss.		9/3/93	9/8/93		No
43	Montgomery-Rabstman	N-A	IL	Whiteside	Miss.		9/3/93	9/8/93		No
44	Niota D.D.	N-A-U	IL	Hancock	Miss.		9/3/93	9/8/93		No
45	Goose Lake D.D.	N-A	IL	Carroll	Miss.		9/3/93	9/8/93		No
46	Rapids City	N-U	IL	Rock Island	Miss.		9/3/93	9/8/93		No
47	Moline LFPP	N-U	IL	Rock Island	Miss.		9/3/93	9/8/93		No
48	Hampton	N-U	IL	Rock Island	Miss.		9/3/93	9/8/93		No
49	Union Special D.D.	N-A	IL	Whiteside/Lee	Miss.		9/3/93	9/8/93		No
50	Union D.D. #2	N-A	IL	Whiteside	Miss.		9/3/93	9/8/93		No
51	Whiteside-R.I. D.D.	N-A	IL	Whiteside/R.I.	Miss.		9/3/93	9/8/93		No
52	East Dubuque	N-U	IL	Jo Davies	Miss.		9/3/93	9/8/93		No
53	Warren	N-U	IL	Hancock	Miss.		9/3/93	9/8/93		No
54	Chickens	N-U	IL	Henderson	Miss.		9/3/93	9/8/93		No
55	Oquawka	N-U	IL	Henderson	Miss.		9/3/93	9/8/93		No
56	River Road D.D.	N-A	IL	Whiteside	Miss.		9/3/93	9/8/93		No
57	Hamilton	N-U	IL	Hancock	Miss.		9/3/93	9/8/93		No
58	Green River Special D.D.	N-A	IL	Henry	Green		9/3/93	9/8/93		No
59	Lower Green River D.D.	N-A	IL	Henry	Green		9/3/93	9/8/93		No
60	St. Francisville Levee	N-A-U	MO	Clark	Des Moines		9/3/93	9/8/93		No

N - NON-FEDERAL

A - AGRICULTURAL

U - URBAN

U.S. ARMY CORPS OF ENGINEERS

**LEVEE REHABILITATION
PROGRAM**

AGENDA

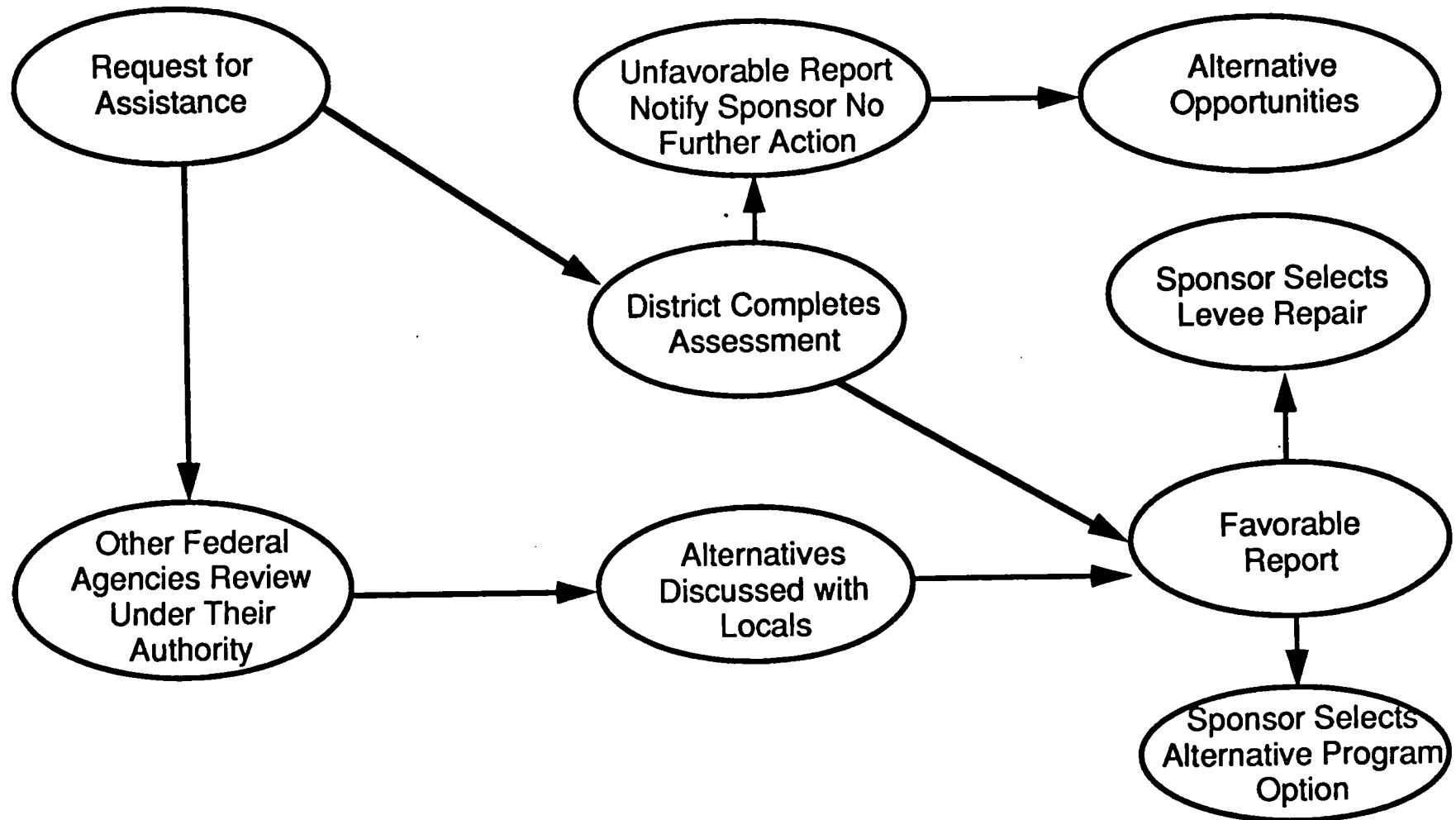
- **OVERVIEW OF CORPS LEVEE REHAB PROGRAM**
- **NEAR TERM PROGRAM**
- **LONG TERM PROGRAM**
- **INTERAGENCY LEVEE ALTERNATIVES PROCESS**

LEVEE REHABILITATION PROGRAM OVERVIEW

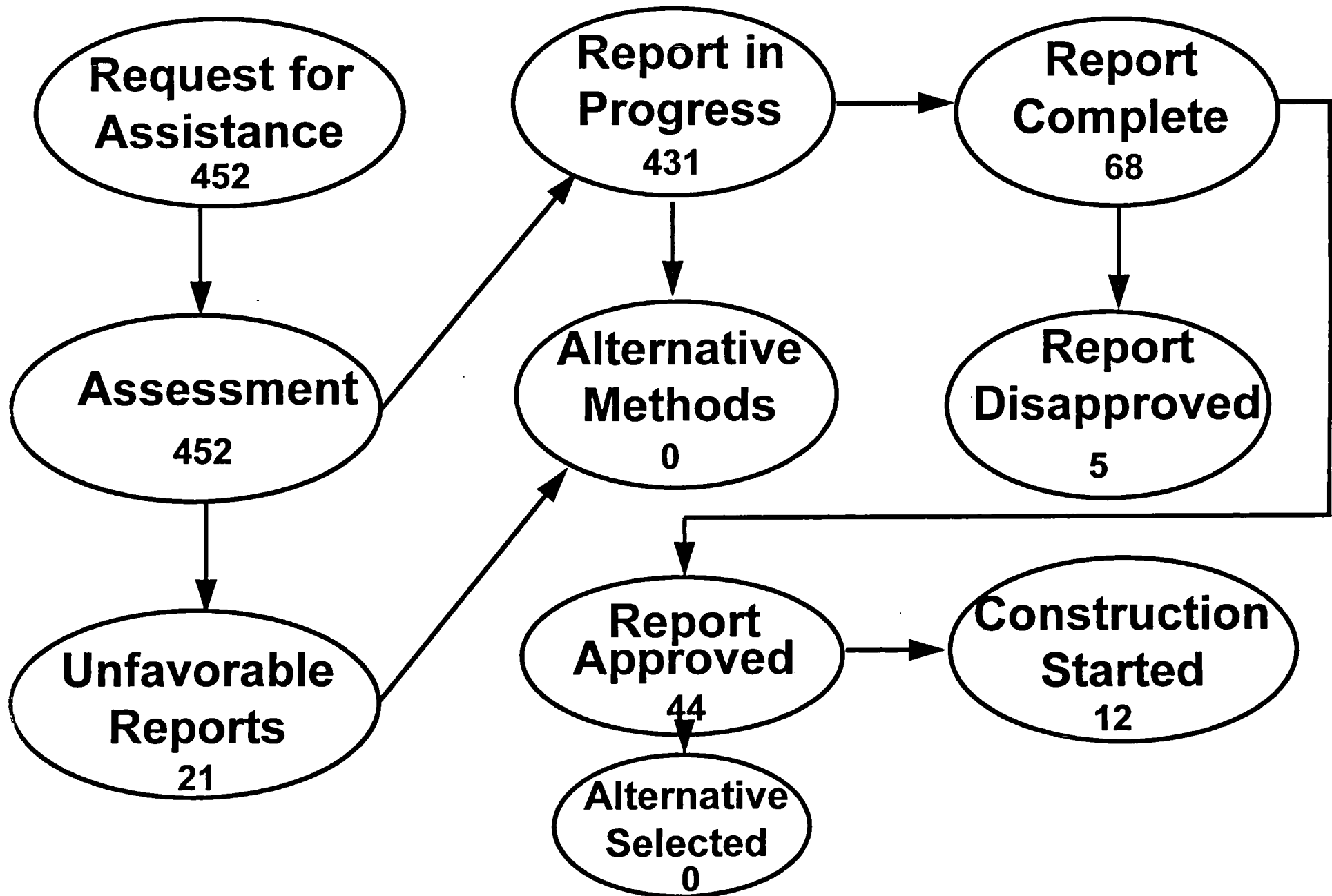
CATEGORY:	<u>Total Number</u>	<u>Total Damaged</u>	<u>Percent Damaged</u>
Federally Constructed/Federally Maintained	12	3	25.0
Federally Constructed/Locally Maintained	<u>219</u>	<u>50</u>	<u>22.8</u>
Subtotal	231	53	22.9
Non-Fed/Locally Maintained & Eligible	268	167	62.3
Non-Fed/Not Eligible	<u>1079</u>	<u>894</u>	<u>82.8</u>
Subtotal	1,347	1,061	78.8
TOTAL	1,578	1,114	70.6

Footnote: Figures represent only those Levees within Corps jurisdiction or which the Corps has knowledge of. The figures do not include those levees within the SCS or other agency programs and therefore do not represent the total universe.

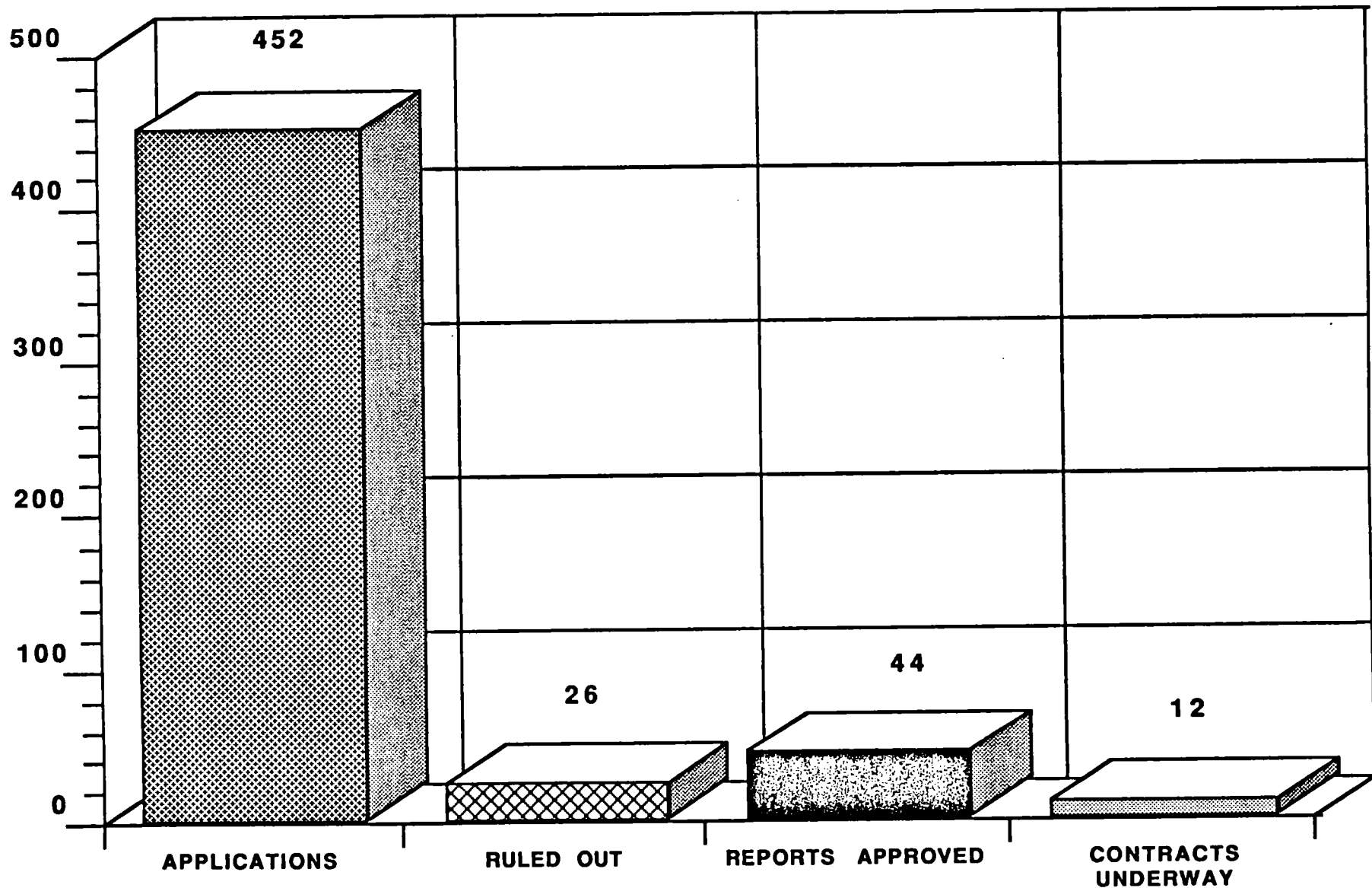
LEVEE REHABILITATION PROGRAM APPLICATION PROCESS



Levee Rehab Progress



LEVEE REHABILITATION STATUS REPORT



LEVEE REHABILITATION PROGRAM

PROJECTS APPROVED for INITIAL REPAIRS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION AFFORDED (ACRES)	ESTIMATED COST (000)	STATUS
LMVD	BOIS BRULE	MO	FLA	26,060	3102	CAN
	FT CHARTRES	IL	FLA	15,900	2039	CAN
	HARRISONVILLE	IL	FLA	27,000	1036	CI
	KISSINGER	MO	LPA	2,370	300	CAN
	ST. LOUIS	MO	FLU	3,790	460	CAN
MRD	MONARCH CHESTERFIELD	MO	LPU	5,621	460	CI
	R471-460	MS & KS	FLU	10,500 cropland Elwood	1419	CC
NCD	DES MOINES & MISS RIVER D.	MO	FLA/U	10,989	2045	CA
	FABUIS RIVER D.D.	MO	FLA/U	14,200	2030	CA
	GREEN BAY L & D.D.	IA	FLA	14,400	2177	CA
	GREGORY D.D.	MO	FLA	8,000	3797	CA
	HUNT-LIMA	IL	FLA/U	28,500	5234	CA
	INDIAN GRAVE D.D.	IL	FLA	17,777	11	CA
	MARION CO. D.D.	MO	FLA/U	4,000	1573	CA
	SNY ISLAND D.D.	IL	FLA/U	44,200	4441	CA
	SOUTH RIVER D.D.	MO	FLA	10,000	5451	CA

Status: CI - Construction Initiated, CC - Construction Completed, CAN - Construction Approved/Not Started, CA - Contract Awarded

Category:

- FFU - Federally constructed/Fed Maintained/Urban
- FFA - Federally constructed/Fed Maintained/Agriculture
- FLU - Federally constructed/Locally Maintained/Urban
- FLA - Federally constructed/Locally Maintained/Agriculture
- LPU - Locally constructed/Locally Maintained; eligible for assistance/Urban
- LPA - Locally constructed/Locally Maintained; eligible for assistance/Agriculture
- LNU - Locally constructed/ Locally Maintained; Not in Corps levee rehab program/Urban
- LNA - Locally constructed/Locally Maintained; Not in Corps levee rehab program/Agriculture

LEVEE REHABILITATION PROGRAM

PROJECTS APPROVED for FINAL REPAIRS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION	ESTIMATED	BCR	ALTERNATIVES	
				AFFORDED (ACRES)	COST (000)		STATUS	SELECTED
LMVD	NO FINAL REPAIRS							
MRD	BOWMAN LEVEE	IA	FLA	615	25	22	CAN	IAC
	CORNING MILL CREEK	MO	FLA	2,025	1	3.5	CAN	IAC
	FAIRFAX-JERSEY CREEK	KS	FLU	2,000 urbanized industrial land	1083	105.9	CAN	IAC
	LITTLE SIOUX - NAGEL	IA	FLA	11,000	213	4.1	CI	IAC
	LITTLE SIOUX - SMITHLAND	IA	FLA	55	35	1.8	CI	IAC
	LITTLE SIOUX DIVERSION WEIR	IA	FLU	Part of Federally Authorized System	177	1.6	CI	IAC
	LOWER PLATTE NRD LEVEE	NE	LPU	Water Works, Homes	283	1.8	CI	IAC
	MISSOURI L 536	MO	LPA	13,000	1	1.5	CI	IAC
	MISSOURI L 550	MO	FLA	38,500	3	2.4	CI	IAC
	MISSOURI L594	IA	FLA	13,000	615	2.2	CI	IAC
	MISSOURI L611-614	IA	FLA	22,000	46	56.1	CI	IAC
	MISSOURI R 548 (BROWNVILLE)	NE	FLA	4,500	245	11	CI	IAC
	MISSOURI R 562	NE	FLA	6,400	233	7	CAN	IAC
	R 548 (LITTLE NEMAHA)	NE	FLA	12,100	137	4.7	CAN	IAC
	RA 471-460	KS	FLU	10,500 cropland Elwood KS portion of Wathena, KS Rosecrans Airport, Air National Guard Base	587	2.9	CAN	IAC
NCD	TURNER, LINCOLN & CLAY	SD	LPA	360	37	1.5	CAN	IAC
	BLACK RIVER FALLS	WI	LPU	20	100	2.8	CAN	IAC
	GREEN ISLAND	IA	LPA	4,886	300	3.8	CAN	IAC

Status: CI - Construction Initiated, CC - Construction Completed, CAN - Construction Approved/Not Started, CA - Contract Awarded, IAC - Interagency Coordination Completed, No Alternative Selected by Sponsor

Category:

- FFU - Federally Constructed/Federally Maintained/Urban
- FFA - Federally constructed/Fed Maintained/Agriculture
- FLU - Federally constructed/Locally Maintained/Urban
- FLA - Federally constructed/Locally Maintained/Agriculture
- LPU - Locally constructed/Locally Maintained; eligible for assistance/Urban
- LPA - Locally constructed/Locally Maintained; eligible for assistance/Agriculture
- LNU - Locally constructed/ Locally Maintained; Not in Corps levee rehab program/Urban
- LNA - Locally constructed/Locally Maintained; Not in Corps levee rehab program/Agriculture

LEVEE REHABILITATION PROGRAM

STATUS OF REPORTS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION AFFORDED (ACRES)	STATUS
LMV	BIG SWAN	IL	FLA	12,300 - 20 Homes	II
	BLUFFDALE	IL	LPA	1,000	II
	BOIS BRULE	MO	FLA	26,060	IAC
	BREVATOR	MO	LPA	1,841	II
	CAP AU GRIS	MO	LPA	3,491 - 50 Homes, Town of Winfield	II
	CHOUTEAU	IL	LPA	2,400	II
	CLEAR CREEK	IL	FLA	18,000	RI
	COLUMBIA	IL	FLA	14,000	II
	COLUMBIA BOTTOMS	MO	LPA	4,000	II
	CONSOLIDATED N. COUNTY	MO	LPA	1,950	II
	DEGOGNIA FOUNTAIN BLUFF	IL	FLA	36,200	RI
	EAST CAPE GIRARDEAU	IL	FLA	9,400	RI
	EDGAR LAKES	IL	LPA	3,000	RI
	ELDRED	IL	FLA	10,500 - 15 Homes	II
	ELSBERRY	MO	LPA	23,481 - 50 Homes, Town of Elsberry	II
	FISH LAKE	IL	FLU	2,440	RI
	FOLEY	MO	LPA	1,214 - 60 Homes	II
	FT. CHARTRES	IL	FLA	15,900	IAC
	GABORET/CABROLET	IL	LPA	800	II
	GRAND TOWER	IL	FLA	14,800	RI
	HARRISONVILLE	IL	FLA	27,800 - 200 Homes, Town of Valmeyer	IAC
	HARTWELL	IL	FLA	8,900 - 5 Homes	II
	HILLVIEW	IL	FLA	12,900 - 40 Homes	II
	INDIAN CREEK	IL	FLA	500 - 8 Homes	RI
	KASKASKIA	IL	FLA	9,460 - 60 Homes	II
	KEATCH	IL	FLA	8,400 - 3 Homes	II
	KINGS LAKE	MO	LPA	3,300	II
	KISSINGER	MO	LPA	2,370	IAC
	KUHS	MO	LPA	550	II
	MACOUPIN	IL	FLA	NA	RI
	MAIN ST. CAPE GIRARDEAU	MO	FLU	URBAN	RI
	MAUVAISE TERRE	IL	FLA	4,000 - 35 Homes	II

Status: RI - Report Initiated RC - Report Completed Waiting for Approval II - Initial Field Investigation Underway RA - Report Approved

LEVEE REHABILITATION PROGRAM

STATUS OF REPORTS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION AFFORDED (ACRES)	STATUS
LMV	MEREDOSIA	IL	FLA	8,100 - 4 Homes	RI
	METRO EAST	IL	FLU	61,645	RI
	MILLER POND	IL	FLA	4,300	RI
	NORTH ALEXANDER	IL	FLA	3,600	RI
	NUTWOOD	IL	FLA	11,300 - 6 Homes, Town of Nutwood	II
	PIKE GRAIN	MO	LPA	1,340	II
	PRAIRIE DU PONT	IL	FLU	9,560	RI
	PRAIRIE DU ROCHER	IL	FLA	13,000 - 325 Homes, Town of Prairie Du Rocher	RI
	PRESTON	IL	FLA	16,200	RI
	ROBERTSON	IL	LPA	1,000	RI
	SANDY CREEK	MO	LPA	944	RI
	SCHAFER	IL	LPA	100	II
	SCOTT COUNTY	IL	FLA	10,500 - 15 Homes	II
	SPANKEY	IL	FLA	800	II
	ST. LOUIS	MO	FLU	3,790	IAC
	ST. PETERS	MO	LPA	1,000	RI
	STE GENEVIEVE	MO	LPA	7,000 - 400-500 Homes & Businesses	II
	STONE-MURDOCK	MO	LPA	360	RI
	STRINGTOWN	IL	FLA	2,800	RI
	VALLEY	MO	LPA	NA	RI
	VALLEY CITY	IL	FLA	4,500 - 8 Homes	II
	WINFIELD	MO	LPA	2,826 - 90 Homes	II
	WOOD RIVER	IL	FLU	13,700	RI
MRD	ABILENE	KS	FLA	TOWN OF ABILENE, KS	RI
	ARGENTINE	KS	FLU	2,031 RESIDENTIAL, COMMERCIAL, INDUSTRIAL AREAS	RA
	BEAN LAKE	MO	LPU	6,000	RI
	BIG PAPIO	NE	LPU	URBAN AREA	RI
	BIRMINGHAM	MO	FLU	4,400 CROPLAND, A COMMERCIAL PARK, TOWN OF BIRMINGHAM	RI
	CANON DRAINAGE DISTRICT	MO	LPA	14,608	RI
	CAPITAL VIEW	MO	LPU	2,185	RI

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LEVEE REHABILITATION PROGRAM

STATUS OF REPORTS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION AFFORDED (ACRES)	STATUS
MRD	CEDAR CITY, SEC 1 & 2	MO	LPU	2,185	RI
	CHARITON RIVER	MO	FLA	19,000 AGRICULTURAL LAND	RI
	CHARRETTE BOTTOM L.D.	MO	LPA	9,200	RI
	CID	MO	FLU	732 PRIMARY INDUSTRIAL AREA	RI
	CLEAR CREEK	NE	LNU	LINCOLN WATER DIST.	II
	COLE'S LAKE D.D. NO. 2	MO	LPA	2,093	RI
	DUTZOW LEVEE	MO	LPU	2,950	RA
	EAST BOTTOMS	MO	FLU	URBAN INDUSTRIAL DISTRICT, BUSINESS PARKS,	RI
	ELK-CREEK-CLYDE	KS	FLU	TOWN OF CLYDE, KS	RI
	ELLIOT	IA	LNU	CITY OF ELLIOT	II
	FARMER'S D.D.	MO	LPA	1,584	RI
	FORTMEYER	MO	LPA	1,800	II
	GARDEN OF EDEN LEVEE, #1	MO	LPA	7,600	RA
	GARDEN OF EDEN LEVEE, #2	MO	LPA	3,500	RI
	GARDEN OF EDEN LEVEE, #3	MO	LPA	9,200	RI
	HARTSBURG, SEC. 1	MO	LPU	1,900	RI
	HARTSBURG, SEC. 2	MO	LPU	1,000	RA
	HAWIAN VILLAGE	NE	LNU	HOUSING DEV.	II
	HENRY POHL LEVEE	MO	LPA	2,511	RI
	HINKLE LEVEE	MO	LPA	8,640	RI
	HOAGE	IA	LNA	AGRICULTURAL	II
	HOLT CO. LEVEE DIST. #10	MO	LPA	13,000	RI
	HOWARD BEND L.D.	MO	LPU	6,000	RI
	HOWARD COUNTY LEVEE	MO	LPU	5,000	RI
	IDECKER	MO	LNA	AGRICULTURAL	II
	JAMES RIVER	SD	LPA	Agriculture (3 Levee system)	II
	JOELDECKER	NE	LPA	AGRICULTURAL	II
	KIMSEY HOLLY CREEK	MO	FLA	14,500 CROPLAND	RA
	KS DEPT. OF CORRECTIONS	KS	LPA	3,200	RI
	L246	MO	FLA	31,900 AGRICULTURAL LAND	RI
	L400	MO	FLA	3,860 OF AGRICULTURAL LAND	RI

Status: RI - Report Initiated RC - Report Completed Waiting for Approval II - Initial Field Investigation Underway RA - Report Approved

LEVEE REHABILITATION PROGRAM

STATUS OF REPORTS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION AFFORDED (ACRES)	STATUS
MRD	L408	MO	FLA	7,500 CROPLAND, 2,100 AC. OF 3 SMALL (45 HOMES, 6 BUSINESSES) COMMUNITIES	RI
	L448-443	MO	FLA	18,000 CROPLAND, 50 FARMS, AND ONE SMALL COMMUNITY	RI
	L455	MO	FLU	5,900 CROPLAND, 1600 AC. URBAN AND INDUSTRIAL LAND	RI
	L476	MO	FLA	5,600 CROPLAND	RI
	L488	MO	FLA	7,100 CROPLAND, 1,300 AC. FARMS, ROADS, RAILROADS	RA
	L497	MO	FLA	6,000 CROPLAND	RI
	LAWRENCE	KS	FLU	HIGHLY DEVELOPED RESIDENTIAL, INDUSTRIAL	RI
	LITTLE SIOUX RIVER	IA	FLA	Agriculture	II
	LITTLE TARKIO	MO	LPA	4,778	RI
	MALTA BEND	MO	LPA	2,052	RI
	MANHATTAN	KS	FLU	1,300 HIGHLY DEVELOPED RESIDENTAIL, COMMERCIAL AND INDUSTRIAL AREAS	RA
	MAZE	NE	LPA	AGRICULTURAL	II
	MRL - 561	MO	FLA	AGRICULTURAL	II
	MRL-651	MO	FLA	AGRICULTURAL	II
	MRL-L575	IA	FLA	HAMBURG, IA RURAL	II
	MRL-R-573	NE	FLA	AGRICULTURE	II
	NEW HAVEN	MO	FLU	TOWN OF NEW HAVEN, MO	RI
	NISHNABOTNA RIVER	IA	LPA	AGRICULTURE	II
	NORTH K.C. AIRPT SECT	MO	FLU	KANSAS CITY DOWNTOWN AIRPORT, RAILROAD	RA
	NORTH K.C. LEVEE DIST.	MO	FLU	2,500 RESIDENTIAL AND INDUSTRIAL AREA WITH WATERWORKS, RAILROADS, AND A PRIMARY BUSINESS PARK	RI
	OAKLAND UNIT	KS	FLU	HIGHLY DEVELOPED RESIDENTAIL, COMMECIAL	RI
	OSAWATOMIE	KS	FLU	450 OF RESIDENTIAL, COMMERCIAL AND MUNICIPAL PROPERTIES	RI
	PLATTE COUNTY D.D.	MO	LPA	6,000	RI
	PRISON FARM	MO	LPU	1,500	RA

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LEVEE REHABILITATION PROGRAM

STATUS OF REPORTS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION AFFORDED (ACRES)	STATUS
MRD	R351 -SECTION 2	MO	FLA	8,000 HIGHLY DEVELOPED FARM UNITS, RAILROADS, AND ATHERTON, MO	RI
	R353 - SECTION 1	MO	FLA	8,000 HIGHLY DEVELOPED FARM UNITS, RAILROADS, AND ATHERTON, MO	RI
	R482	KS	FLA	4,700 CROPLAND	RI
	R500	KS	FLA	1,600 CROPLAND	RI
	R512-513	NE	FLA	7,100 CROPLAND	RI
	ROOT LEVEE	MO	LPA	29,630	RI
	SALINE LAFAYETTE	MO	LPA	6,000	RI
	SALT CREEK	NE	FLU	URBAN (LINCOLN)	RI
	SICKEL	NE	LNA	AGRICULTURAL	II
	SOLDIER CREEK UNIT	KS	FLU	HIGHLY DEVELOPED RESIDENTIAL, COMMERCIAL,	RI
	UNION TOWNSHIP	MO	LPA	1,500	RI
	VOELDECKER	NE	LPA	AGRICULTURE	II
	WAKENDA	MO	LPA	29,650	RI
	WESTERN SARPY CO	NE	LNU	I-80	II
	WHITHAM	MO	LPU	4,140	RA
NCD	DES MOINES LFP	IA	FLU	CITY OF DES MOINES	RI
	EFFLAND DRAINAGE & L.D.	IL	LPA	274	RI
	GUTTENBERG	IA	FLU	CITY OF GUTTENBERG	IAC
	IA RIVER/FLINT CREEK	IA	FLA	48,000	RI
	LOST CREEK D & L	IL	FLU	3,300	RI
	LOUISA CO L.D. #11	IA	LPA	3,200	IAC
	LOUISA CO L.D. #14	IA	LPA	850	RI
	LOUISA CO L.D. #8	IA	LPA	2,300	IAC
	LOWER PLEASANT VALLEY	IL	LPA	930	RI
	SOUTH RIVER D.D.	MO	FLA	10,000	II
	SPOON RIVER PROJECT #1	IL	LPA	1,907	RI
	ZEMPLE/MUTUAL D & L	IL	LPA	1,100	RI

Status: RI - Report Initiated RC - Report Completed Waiting for Approval II - Initial Field Investigation Underway RA - Report Approved

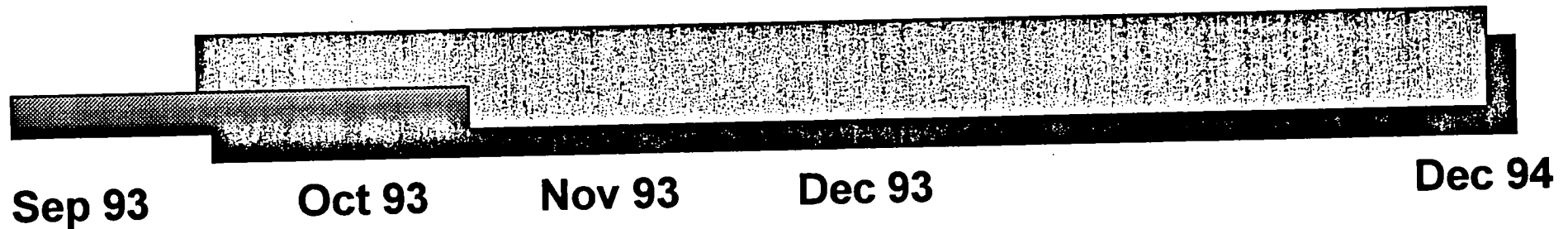
LEVEE REHABILITATION PROGRAM STATUS OF REPORTS

DIVISION	LEVEE NAME	LOCATION	CATEGORY	PROTECTION AFFORDED (ACRES)	STATUS
Category:	FFU - Federally constructed/Fed Maintained/Urban				
	FFA - Federally constructed/Fed Maintained/Agriculture				
	FLU - Federally constructed/Locally Maintained/Urban				
	FLA - Federally constructed/Locally Maintained/Agriculture				
	LPU - Locally constructed/Locally Maintained; eligible for assistance/Urban				
	LPA - Locally constructed/Locally Maintained; eligible for assistance/Agriculture				
	LNU - Locally constructed/ Locally Maintained; Not in Corps levee rehab program/Urban				
	LNA - Locally constructed/Locally Maintained; Not in Corps levee rehab program/Agriculture				

Status: RI - Report Initiated RC - Report Completed Waiting for Approval II - Initial Field Investigation Underway RA - Report Approved

TIMELINE FOR REMAINING WORKLOAD

Initial Repairs



All reports will be processed by mid-November to mid-December with all initial repairs completed by the end of this construction season. Some final repairs will be completed this construction season with most final repairs being completed in 1994.

INTERAGENCY PROCESS

INTERAGENCY LEVEE REHAB ALTERNATIVES PROCESS

- **Actions in Process by IA Teams**
 - **Insure Repair Plans Reflect Environmental Sensitivity**
 - **Insure Maximum Time and Opportunity is Available for Alternatives Process**
 - **Development of Target Areas of Opportunity in Various Basins**
 - **Insure All Levee Repair Applications are Reviewed**
 - **Sponsors of Both Eligible and Ineligible Levee are Candidates for Alternatives**

INTERAGENCY LEVEE REHAB ALTERNATIVES PROCESS (Cont'd)

- **Comments on IA Process**

- **Menu of Alternative (Non-Structural) Programs is Very Limited to Date**
- **Teams are Reluctant to Present Options to Levee Sponsors Which may not be Funded in the Near Term**
- **Levee Sponsors Facing Potential Additional Damages From Next Storm are not Receptive to Non-Structural Options**
- **Areas With Numerous Levees Ineligible for Repairs Present Best Opportunity for Alternatives**
- **Large Percentage of Eligible Levees Will Have Repairs Completed Next Year Due to Limited Construction Season Provides Additional Time to Explore Non-Structural Alternatives**
- **Structural and Non-Structure Alternatives are Not Always Mutually Explored**

EXAMPLE OF ENVIRONMENTAL CONSIDERATIONS UNDER LEVEE REHABILITATION

**GARDEN OF EDEN DRAINAGE DISTRICT, GRAND
RIVER, MO.**

- **Levee System Damaged by Flood**
- **Repair Will Include Obtaining Dredged Fill Material From a Degraded Wetland Adjacent Levee Repair Site**
- **Wetland Values That Have Been Lost Due to Naturally Occurring Siltation Process Will be Restored**

NEAR TERM PROGRAM

LEEVE REHABILITATION PROGRAM

- **What is Anticipated to be Accomplished This Calendar Year?**
 - **All Field Investigations Related to Request for Assistance Completed**
 - **All Initial Repairs to be Completed**
 - **Some Final Repairs to be Completed with Most to be Completed Next Year**

LONG TERM PROGRAM

LEEVE REHABILITATION PROGRAM

- **What Will be Accomplished Next Year?**
 - **Large Portion of Final Repairs will be Completed Next Year Due to Limited Construction Season**
 - **Provides Additional Time to Pursue Alternative Solutions**
 - **Long Term Goal is to Have all Eligible Levees Repaired by Dec 94**

Wetlands Restoration Meeting
August 19, 1993

Name	Org.	Phone	Fax
Jim Kirel	OMB/Cops	202-395-4590	202-395-4652
Brian Burke	DPC	202-456-2995	202-456-7028
Dick Krimm	FEMA	202-646-3692	202-646-4060
Jane Bullock	FEMA	202-646-3436	202-646-4276
Jim Douglas	DOI	202-208-7963	202-208-5078
Russ Earnest	DOI-FWS	202 208 4646	202 208 4616
MOLLIE BEATTIE	DOI	202-200-4700	"
KARL F. OTTE	USDA-SCS	202-720-9574	202-690-1462
Bob Stearns	DD-CW	202-272-0126	202-504-4389
STAN GENEVA	USARMY CE	202-272-0099	202-272-8812
Michael Huerta	DOT	(202) 366-5781	(202) 366-7952
Jack Gibbons	OSTP	(202) 456-7116	395-1571
Richard SANDERSON	EPA	202 260 5053	202 260 0129
David Davis	EPA/owow	202-260-7166	202-260-6294
Katie McGinty	OEP	456-6224	456-2710
TV Ganthier	OMB	395-4561	395-4639
William Smith	WH/COP	456-6224	456-2710
Mark Weatherly	OMB	395-3446	395-4941
STUART KASDIN	OMB	395-3446	395-4941
Scott CAMERON	OMB	395-6822	395-6899
Michael DERIAN	USDA	720-6643	720-8819
John Maynor	USDA	720-6643	720-8819
Michele Altemus	DOI-FWS	208-4717	208-6965
Oleta Fitzgerald	USDA	720-0619	720-8819
Joe CANNY	DOT	366 4540	366-7127
CHRIS HEISER	OMB	395-4610	395-1307
CHRIS EDEY	OMB	395-3120	395-4639

**STATUS OF FEMA/USACE/SCS
COORDINATION ON LEVEE REHABILITATION**

FEMA, the Corps of Engineers (USACE), and the Soil Conservation Service (SCS) have authorities to repair disaster-related damages to levees. The USACE, under PL 84-99, has authority to repair federal levees it built and non-federal levees that have public sponsors and meet operations and maintenance requirements. The SCS, under its Emergency Watershed Program, has authority to fund publicly sponsored levees in watersheds less than 400 square miles in size. FEMA can fund the repair of publicly owned levees under the Stafford Act.

FEMA met with the USACE and SCS on July 22-23 and July 28 in Kansas City, MO to develop a coordinated federal response to effectively address the repair of levees in the nine midwestern states that were recently declared major disasters. The objectives of the coordination are:

- (1) to develop a user friendly application process for assistance to repair levees;
- (2) to identify the levees that are within the authority of each agency to repair;
- (3) to encourage each agency to use the same cost share for repairing levees;
- (4) to communicate each agency's levee policies to all regional personnel and to potential applicants;
- (5) to establish a process which will discourage applicant from shopping among the agencies for the best levee deal;
- (6) to develop joint public notices and public meetings through the FEMA public assistance process and other forums;
- (7) to develop procedures to review program progress and discuss evolving problems; and,
- (8) to develop joint policy and procedural guidelines.

To date, the task force has determined that the following interagency policy and procedural issues must be coordinated among the agencies;

1. cost share
2. public sponsorship
3. repair of deliberate breaks
4. dewatering
5. maintenance deficiencies

6. reconstruction within designated floodways
7. level of protection
8. one stop policy/issue resolution process
9. interagency review process
10. permitting problems/floodplain management concerns

There is agreement among the agencies on all of the above policies.

The USACE has begun to identify levees that are in its rehabilitation program that were damaged during the floods.

The task force met with DFO staff, USACE and SCS state personnel in Moline, IL on Thursday, August 6. FEMA/USACE/SCS coordination team established at DFO.

The task force met with DFO staffs, USACE and SCS state personnel in Davenport, IA and in Earth City, MO on Friday August 7. FEMA/USACE/SCS levee coordination teams have been established at each DFO.

As of August 16, the DFOs have received a total of 135 Notices of Interest for levees. A damage survey report has been prepared for one levee in Wisconsin.

The USACE has sent its draft policy guidance on levees to the Office of Management and Budget for comment (Attachment 1).

FEMA has summarized its levee policy and will disseminate it to field personnel this week (Attachment 2).

SCS is preparing levee policy guidance for its field personnel.

The task force has prepared a draft program summary to distribute to all FEMA, SCS, and USACE field personnel (Attachment 3).

The USACE has established an office in St. Louis to coordinate levee rehabilitation in all 9 states that have been declared disasters.

Future actions:

- (1) The task force will meet with FEMA Public Assistance Officers, USACE and SCS state personnel in St. Louis on Thursday, August 19, 1993 to discuss action plan.
- (2) The USACE, FEMA, and SCS will continue to build an inventory of damaged levees, and proactively contact levee sponsors.
- (3) The interagency teams at each DFOs will continue to coordinate levee issues.
- (4) The interagency public information team will develop and disseminate information about the interagency

levee coordination efforts.

August 16, 1993

Attachments

ATTACHMENT 3

FEMA POLICY FOR LEVEE REPAIR

1. Levee must be owned by eligible applicant (State or local government or certain private nonprofit organization).
2. Levee must be an actively used and maintained facility.
3. Levee must not be eligible for repair under another Federal agency's program.

If USACE does not approve repairs under PL 84-99 for levees that do not meet their maintenance standard, FEMA would also deny assistance for the same reason.

If USACE does not approve repairs under PL 84-99 because it determines that the level of damage is considered maintenance, and therefore the responsibility of the local sponsor, FEMA will not fund the repair effort.

Levees that do not meet USACE or SCS definition of a "flood control work" may be considered by FEMA.

4. Eligible work will be to restore levees to predisaster condition.
5. Dewatering of areas behind levees by breaching the levees or pumping could be eligible if there was a threat to health and safety or improved property. Breaches would be eligible for repair.
6. Removal of flood fight measures placed on the levees can be eligible if such removal is necessary to eliminate a health and safety threat, to operate the levees as a public facility or to repair the facility.
7. All eligible work must comply with all Federal, State, and local regulations (e.g., the National Environmental Policy Act and E.O. 11988).
8. The cost share will be 75% Federal and 25% nonFederal.
9. Secondary levees riverward of the primary levees are not eligible unless they protect human life.
10. Cost effective hazard mitigation measures may be considered on a cost-shared basis.

G U I D A N C E O B J E C T I V E S

- **PROVIDE A FAST TRACK PROCESS FOR HIGHEST PRIORITY REPAIRS**
- **ESTABLISH POLICY PARAMETERS TO DEFINE P.L. 84-99 PROGRAM APPLICABILITY**
- **AFFIRM ECONOMIC AND ENVIRONMENTAL ANALYSES OF THE REHABILITATION OPTION**
- **PROVIDE MEANINGFUL ANALYSIS OF LOCALLY ACCEPTABLE ALTERNATIVES WHICH PROVIDE
APPROPRIATE PROTECTION AND ENVIRONMENTAL OUTPUTS**

F A S T T R A C K H I G H P R I O R I T Y R E P A I R S

- INTENDED TO FILL BREACHES
- DISCRIMINATORS
 - URBAN VS. AGRICULTURAL
 - PROBABILITY OF FLOOD DAMAGE WITHOUT REPAIR
 - COST

P O L I C Y P A R A M E T E R S

- COST SHARING
- PUBLIC SPONSORSHIP
- CONFORMANCE TO DESIGN GUIDELINES
- REPAIR OF DELIBERATE LEVEE BREAKS
- REPAIR OF SECONDARY LEVELS
- MODIFYING EXISTING LEVELS OF PROTECTION
- USE OF FEDERAL FUNDS FOR PAYMENT OF LOCAL SHARE
- RETENTION OF FLOOD FIGHT MEASURES

A L T E R N A T I V E A N A L Y S I S

- PREPARE ECONOMIC AND ENVIRONMENTAL ANALYSIS FOR REHAB ALTERNATIVE
 - IF REHAB "FAILS" TEST, CANNOT BE CONSTRUCTED UNDER P.L. 84-99
 - REFER PROJECT TO INTERAGENCY COMMITTEE
 - MAY STILL BE USED TO MEET ENVIRONMENTAL OBJECTIVES
 - IF REHAB "PASSES", GO ON TO FURTHER TESTS
- ASSESS ACCEPTABILITY OF ALTERNATIVES BY LOCAL POPULATION
 - IF ALTERNATIVES ARE LOCALLY UNACCEPTABLE, PROCEED WITH REHAB
- COMPARE COSTS OF ALTERNATIVES TO REHAB ALTERNATIVE
 - IF ALTERNATIVE COSTS EXCEED SOME THRESHOLD (x2 ?), PROCEED
 - IF ALTERNATIVE COSTS LESS THAN REHAB, FAVOR ALTERNATIVE
 - IF ALTERNATIVE COSTS ARE "IN BETWEEN", ASSESS ENVIRONMENTAL OUTPUTS IN COMPARISON TO COSTS

A L T E R N A T I V E S

- **MODIFY PROJECT DURING REPAIR TO RESTORE FLOOD PLAIN VALUES**
- **FLOWAGE EASEMENTS**
- **PROVIDE LIMITED PROTECTION TO STRUCTURES, ETC.**
- **BUY OUT PROPERTY OWNERS**



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0108



August 13, 1993

REPLY TO
ATTENTION OF

MEMORANDUM FOR MR. T. J. Glauthier, Associate Director of
Natural Resources, Energy and Sciences,
Office of Management and Budget,
Room 260, Old Executive Office Building,
Washington, D. C. 20503

SUBJECT: Levee Rehabilitation Program - 1993 Midwest
Floods

The attached memorandum is being transmitted for
review and comments as a result of the meeting held on
August 12, 1993, of the Environmental Flood Recovery
Interagency Working Group.

We anticipate transmittal of this policy and
guidance to the Army Corps of Engineers field offices by
COB Monday, August 16, 1993, and would appreciate
receiving any comments before that time.

Sincerely,

Robert N. Stearns
Acting Assistant Secretary of the Army
(Civil Works)

Attachment



DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CECW-OE-D (500-1-1b)

MEMORANDUM FOR

Deputy Director of Civil Works for the Upper Mississippi River
Basin
Commander, Lower Mississippi Valley Division
Commander, Missouri River Division
Commander, North Central Division

SUBJECT: Levee Rehabilitation Program - 1993 Midwest Floods

1. Reference CECW-OE-D memorandum, dated 6 Aug 93, Subject: Levee Rehabilitation Policy and Guidance - Public Law 84-99.
2. The purpose of this memorandum is to forward policy and guidance as discussed in paragraph 2 of referenced memorandum. This memorandum will serve as a basic policy framework for levee rehabilitation under Public Law (PL) 84-99 as the result of the 1993 Midwest Flood. Field implementation of this guidance should allow for a logical, flexible approach to expediting the levee repair program while maintaining important documentation of project eligibility determinations.
3. To address critical needs for immediate closure of breached levees we have developed a fast track approach to repair breaches in levees that have no or minimal levels of protection remaining, and substantial benefits (urban/agricultural) are clearly at risk. Enclosure 1 is a flow chart and narrative describing the fast track process. Initial repair would include filling in breaches back to original levee height without the preparation of a full Rehabilitation Project Report (a short form report is required). Public sponsorship and cost share requirements must also be met. As required, final repair will take place using the normal report preparation procedure.
4. PL 84-99 Levee Rehabilitation Policy is affirmed as follows:
 - a. Environmental Policy. All PL 84-99 Rehabilitation actions will conform to the National Environmental Policy Act (NEPA) and applicable environmental regulations. District Commanders shall also meet the requirements in Appendix M of ER 1105-2-100 (Endangered Species Act) to the fullest practical extent.
 - b. Cost Share. The 80/20 cost share requirement is retained for non-Federal levee repair. The Corps will allow sponsors to use discretionary funds from other

Federal agencies provided the granting agency confirms in writing that there are no legal or policy constraints. There is no cost share for repair of Federally constructed levees.

c. Public Sponsorship. There is no change in the requirement for public sponsorship for non-Federal levees.

d. Engineering and Maintenance Guidelines. There is no waiver of the guidelines for non-Federal levees as written in Appendix E of ER 500-1-1. Owners whose levees were previously determined ineligible will not receive Corps assistance under PL 84-99.

e. Economic Justification. Procedures for justification of initial repair of levee breaches are covered in paragraph 3 and enclosure 1. Economic justification procedures and other requirements for permanent repairs are being reviewed. In the interim you should follow the economic justification procedures and other requirements in ER 500-1-1 in preparation of reports.

f. Deliberate Levee Cuts. Repair of deliberate levee cuts will not be carried out by the Corps under PL 84-99. An exception will be made for those levees that were deliberately breached to protect the integrity of the structure and thereby reduced the overall anticipated damages. In those cases only, repairs may be accomplished under PL 84-99 if the cut was made in consultation with the Corps of Engineers.

g. Dewatering. Costs associated with dewatering will continue to be borne by the local interests. Costs associated with dewatering may be eligible for assistance from FEMA under the Stafford Act.

h. Repair of Secondary Levees. Secondary levees will not be repaired under PL 84-99 except as provided in paragraph 5-1.r. of ER 500-1-1 to protect human life.

i. Reconstruction in-Kind versus Betterments. Rehabilitation assistance is limited to pre-flood conditions. Set backs would be permitted if a new alignment is less expensive and is environmentally acceptable. Modifications or betterments will not be considered as a part of emergency repairs.

j. Retention of Flood Fight Measures. Emergency measures conducted under PL 84-99 flood fight actions are temporary and must be removed by the local sponsor. Exceptions may be made for measures such as stability or seepage berms if they contribute to the structural integrity of the unit and are environmentally acceptable.

CECW-OE-D

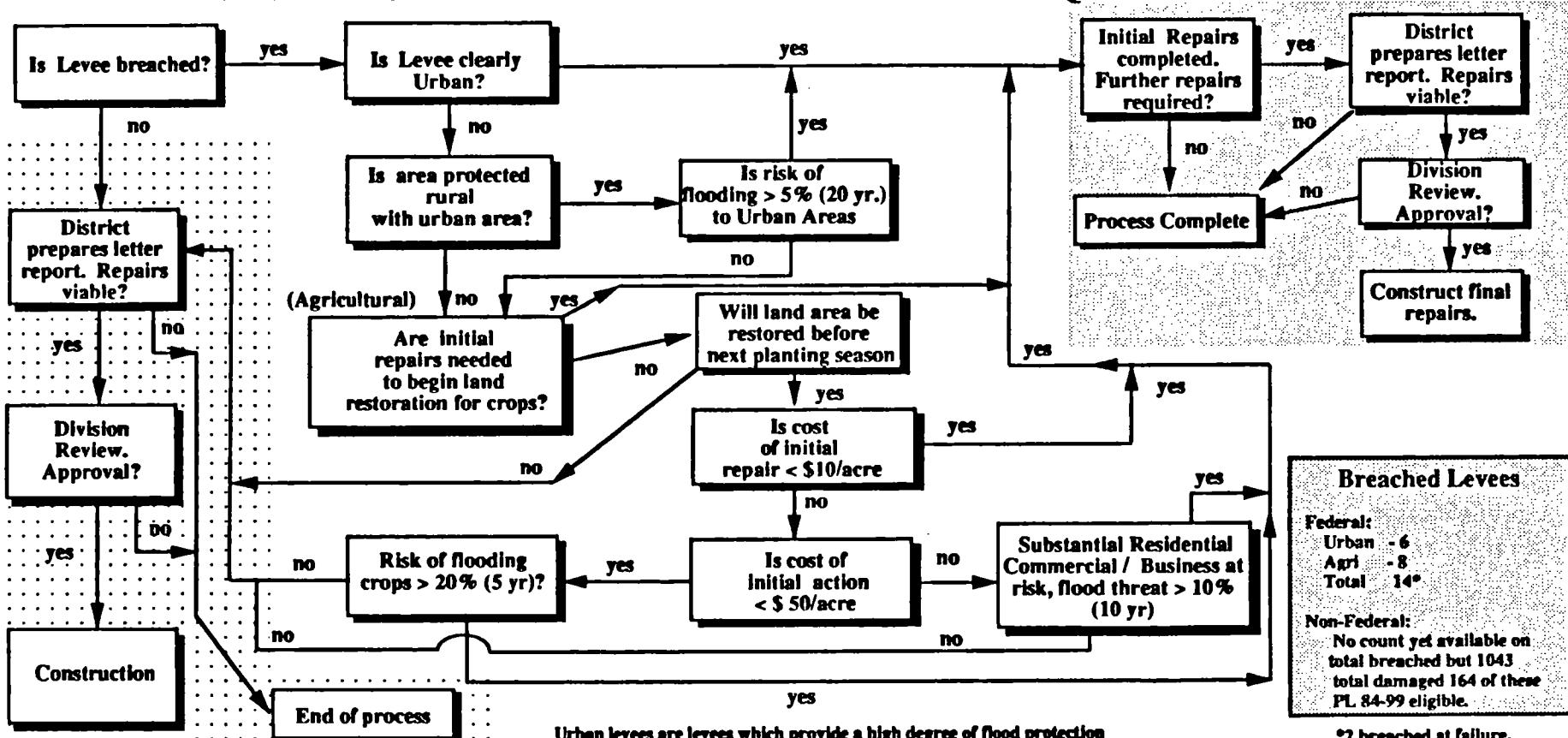
SUBJECT: Levee Rehabilitation Program - 1993 Midwest Floods

6. In order to assist in your efforts, a series of definitions has been prepared for your use (see enclosure 2). If further definitions are required, please advise this office.
7. The Deputy Director of Civil Works (Forward) is developing a levee database for management of this effort, which will be used as the single source of information by all of us who will be addressing these issues. Enclosure 3 provides a categorization of levees along with the available eligibility programs.
8. My point of contact on this action is Mr. Ed Hecker, Chief, Readiness Branch (202) 272-0251.

3 Ends

STANLEY G. GENEGA
Brigadier General, USA
Director of Civil Works

DEPARTMENT OF THE ARMY CORPS OF ENGINEERS - CIVIL WORKS FAST TRACK LEVEE REHABILITATION PROJECT REQUIREMENTS



Urban levees are levees which provide a high degree of flood protection (50 or 100-yr. level of greater) to predominately Urban areas.

Breached Levees	
Federal:	
Urban	- 6
Agri	- 8
Total	14*
Non-Federal:	
No count yet available on total breached but 1043 total damaged 164 of these PL 84-99 eligible.	

*2 breached at failure, 12 overtopped and then breached.

PROCEDURES FOR JUSTIFICATION FOR EMERGENCY REMEDIAL ACTIONS

Introduction. The following justification criteria for expedited decisions for closing levee breaches have been developed to reduce the threat of recurrence of substantial flood damages to life and property until decisions can be made regarding full restoration of damaged levees. They have been developed in light of the short time which may be available in some areas to accomplish construction before the winter season makes construction activities impossible. These provisions should not be used for full restoration decisions or where there is sufficient time to prepare a full Rehabilitation Report.

Justification Criteria. The closing of breached levee sections may be undertaken for the following P.L. 84-99 qualified levees where the conditional provisions are met.

1. Federal and Non-Federal Urban levees where the threat to life and property is considered greater than was present in the pre-flood condition.
2. Federal and Non-Federal levees which protect predominately agricultural land but have one or more Urban areas where the risk of flooding in the current condition to Urban areas is greater than 5 percent (20-yr or more frequent flood event would cause damages to properties in Urban areas). A determination must be made that in the breached condition, actual physical damages would be caused in the urban area by the occurrence of a 5 percent chance flood event.
3. Federal and Non-Federal Agricultural levees which must have the breaches filled to drain lands and/or initiate land restoration and crop production. There must be documentation that Department of Agriculture officials familiar with the area believe that such actions can and will be initiated within the next six months.
4. Federal and Non-Federal Agricultural levees where lands are likely to be returned to crop production by next the planting season, and,
 - 1) The cost of remedial action is less than \$10 per acre, or,
 - 2) The current risk of substantial flooding to residential, commercial, public, and industrial properties is greater than 10 percent (10-yr or more frequent flood event would cause damages to developed properties), or,
 - 3) The cost of remedial action is less than \$50 per acre protected and the risk of flooding is greater than 20 percent chance (5-yr or more frequent flood event would flood croplands). The number of acres protected is the land area behind the levee which is lower than the pre-flood levee height.

ENCLOSURE 1

• Other Conditional Provisions.

1. Appropriate environmental compliance procedures are met
2. An engineering judgement is made that there is reasonable expectation that the levee could withstand a flood event for the next year below the top of the low point of the temporarily repaired levee.
3. All breaches in a continuous levee which affect the residual risks and other conditions specified in the Justification Criteria must be filled and the costs included in the justification decision.

Note: Risk of flooding as used in the justification criteria pertains to the risk of actual lands and properties being flooded and not the level of protection afforded by the breached levee.

DESIGNATED DEFINITIONS FOR LEVEE REHABILITATION INFORMATION

Levee: A structure of earth or stone built parallel to a river to protect land from flooding.

Federal Levee: A levee system constructed by a Federal Agency such as the U.S. Army Corps of Engineers, the Soil Conservation Service, or the Bureau of Reclamation. Levees actually constructed by non-Federal interests, but incorporated into a Federal system by specific Congressional action (Law) are also designated as Federal levees. Previous rehabilitation or reconstruction of a non-Federal levee under an emergency authority by a Federal agency does not make the levee a Federal levee.

Non-Federal Levee: Any levee system constructed by other than a Federal agency which is operated and maintained by a Public Sponsor.

Urban Levee: Levees which provide a high degree of flood protection (50 or 100 year level or greater) to predominately Urbanized areas.

Urban Areas: Urban areas are cities, towns, or other incorporated or unincorporated political subdivisions of States that provide general local government for specific population concentrations, and occupy an essentially continuous area of developed land containing such structures as residences, public and commercial buildings, and industrial sites.

Public Sponsor: A legal subdivision of a state or a state government; local unit of government; qualified Indian Tribe, Alaska Native Corporation or tribal organization; or a state chartered organization, such as a levee board.

Deliberate Levee Cut: A deliberate cut made in a levee to protect the integrity of the structure threatened by overtopping from forecasted river stages and to reduce overall anticipated damages expected to occur to the existing structure by the current flood event. Deliberate levee cuts are made upon judgement by the local interest.

Dewatering Levee Cut: This is an intentional cut in a levee which is considered an engineering/construction method used to dewater the area immediately behind a levee where pumping is not feasible or timely

Dike: In most areas of the U.S., an earthen structure built partway across a river for the purpose of maintaining a navigation channel. In other areas, the term is used synonymously with *levee*.

ENCLOSURE 2

**DESIGNATED DEFINITIONS FOR
LEVEE REHABILITATION INFORMATION**
(Continued)

Flood Plain: The portion of a river valley that has historically been inundated by a river during floods. The Corps of Engineers encourages local governments to zone their flood plains against development and thereby avoid property damage and reduce obstruction to passage of flood waters.

Floodway: Designated land left clear of development for the passage of flood waters.

Flood Stage: The height of a river above which damages begin to occur. Normally the level at which a river overflows its banks.

Hundred Year Flood: More accurately referred to as a "one percent chance flood," a flood of a magnitude which, according to historical statistics, has one chance in 100 of occurring in any given year. (This does not mean that, once such a flood occurs, the location will not experience another flood for the next 99 years!)

Major Flood: A general term indicating high water that causes extensive inundation and property damage, usually characterized by evacuation of people and animals and closure of highways.

Saturation: A condition in soil which all space between soil particles is filled with water. Such conditions occur after prolonged periods of rainfall, snowmelt and force any additional rainfall to run off into streams. Saturation also occurs in earthen levees during extremely long periods in which the flood waters remain above flood stage, a condition that can cause the levees to weaken.

Work In-Kind: This is the part of the sponsor's cost share that is other than cash.

LEVEE CATEGORIES/ELIGIBILITY

	PL-99	O&M GENERAL	FEMA	SCS	PRIVATE
FFU		X			
FFA		X			
FLU	X				
FLA	X				
LPU	X				
LPA	X				
LNU			X*	X	X
LNA			X*	X	X

1st LETTER

F = FEDERALLY CONSTRUCTED

L = LOCALLY CONSTRUCTED

2nd LETTER

F = FEDERALLY MAINTAINED

L = LOCALLY MAINTAINED

P = LOCALLY MAINTAINED, ELIGIBLE FOR ASSISTANCE

N = LOCALLY MAINTAINED, NOT IN THE CORPS LEVEE
REHABILITATION PROGRAM

3rd LETTER

U = URBAN

A = AGRICULTURE

* MUST BE STATE OR LOCAL GOVERNMENT OWNED

DEPARTMENT OF THE INTERIOR
ALTERNATIVE FLOOD CONTROL STRATEGIES

Statement of Principles

The Federal response to the 1993 flood should focus on both the restoration of traditional flood risk protections (i.e., levees, drainage and diversion facilities) and the use of alternative flood control measures.

Reconstruction priority should be placed on residential, industrial or commercial lands, areas with significant risk to human health or safety, or areas with cultural or historic sites.

Reconstruction in other areas must be proceeded by a careful assessment of:

- the relationship of reconstruction activities to flood peaks, duration, and associated flood problems encountered in residential, industrial or commercial lands, areas with significant risk to human health or safety, or areas with cultural or historic sites; and
- the economic and environmental feasibility of incorporating alternative approaches to reducing flood risk into the flood control system for the area (e.g., floodplain floodwater storage, increasing flood water retention, and wetland restoration in the watershed). Economic analysis should include an evaluation of all costs and benefits over time associated with the alternative.

Efforts to address flood control systems should include actions to reduce the rate of inflow from the watershed (e.g., restoration of wetlands and improved soil and water retention practices). The entire watershed should be considered when determining where reconstruction and alternative flood control measures will be implemented.

Repairs to Department of the Interior facilities and lands must conform to these principles, and should be designed with natural flood control and floodplain compatible management strategies as a primary consideration.

Using its existing authorities and capabilities, DOI will work with other Federal agencies to reduce or eliminate, to the extent possible, the potential for future flood-related problems and/or associated disaster payment outlays.

DOI Programs and Capabilities to Assist in Flood Response

Department of the Interior (DOI) programs, capabilities and technical expertise are extensive and should be used in any post-flood action plan. The skills and information housed in the Department are available to the flood response agencies.

DOI bureaus have an extensive network of data gathering capabilities for providing the information necessary for enlightened decision-making. This includes data and interpretation on flood risk, flood peaks and duration, floodplain storage and other water retention techniques, water quality, detailed mapping of topography, soil types, erosion and other physical changes, and status of fish and wildlife quantity and quality and other aspects of the ecosystem. With proper funding this suite of physical and biological information can guide the decisions affecting the entire Mississippi River drainage area and specific areas within the system.

Resource Inventory and Analysis

(Mapping, monitoring, surveying, water quality, GIS, hydrology)

The National Wetland Inventory, under the Emergency Wetlands Resources Act of 1986 (P.L. 99-645), has prepared detailed wetland habitat maps, at the scale of 1:24,000 for the entire Upper Mid-West. A portion of the maps have been digitized. This digital data can be used in conjunction with other data in the geographic information system (GIS) to develop alternative flood control strategies. A report to Congress entitled "Wetlands, Losses in the United States 1780's to 1980's" documents wetland losses by state that have occurred over the last 200 years. Restoring these wetlands would provide flood storage during future floods.

Environmental Contaminants Program (USFWS), comprised of a network of field biologist and support personnel within Ecological Services, who apply toxicological information, bioassessment tools and techniques, and related technical assistance to address the myriad of contaminants problems confronting fish and wildlife and their habitat. The contaminants program coordinates with other Service programs, other Federal agencies, State agencies, non-government organizations, and the private sector as a means of sharing expertise, economizing, and developing the most effective solutions toward protecting environmental quality.

Geological Survey (USGS) USGS expertise includes: Data collection, analysis, and interpretation (including modeling) of environmental factors on earth science processes. Applicable expertise includes: geology,

watershed runoff, geomorphology, streamgaging, sediment transport, water quality, toxic contaminants, ground water resources, mapping, and remote sensing. USGS also coordinates the preparation and dissemination of topographic maps, digital cartographic data, aerial photography and satellite imagery to support land resource planning and decisionmaking at all levels of government. The USGS maintains an inventory of available maps and data to support Federal and State emergency response planning and disaster mitigation.

National Biological Survey. The National Biological Survey, a new bureau at the Department of the Interior effective at the start of Fiscal Year 1994, brings biological research, inventory and monitoring and information transfer capabilities to Federal alternative flood control efforts. The NBS will have the capability to undertake long and short term biological research - both applied and basic - as well as inventorying and monitoring fish and wildlife resources. Because the NBS is being created by combining the biological expertise of scientists from several Interior bureaus, it can offer the skills of biological scientists and technicians, veterinary medical scientists, physical scientists, mathematicians and statisticians, social scientists and museum specialists.

The NBS will focus on providing ecosystem information to resource managers, which could be of particular value to agencies involved in alternative flood control. Specifically, the NBS's National Fisheries Contaminants Research Center in Columbia, Missouri, and the NBS's Large Rivers and Aquatic Systems program are valuable resources in understanding the biota of the Mississippi in support of reconstruction.

Environmental Management Technical Center, Onalaska, Wisconsin. Congress authorized the Long Term Resource Monitoring Program (LTRMP) for the Upper Mississippi River System (UMRS) via the Water Resources Development Act of 1986. The Long Term Resource Management Plan is being implemented by the Environmental Management Technical Center located in Onalaska, Wisconsin.

Capabilities and Specialities include: technical expertise in physical, biological and chemical science providing sophisticated data collection, analysis and research on ecological issues; aerial photography using flight planning software and a high resolution camera equipment; use of satellite imagery for production and classifying scenes of land cover for the floodplain of the UMRS; digitizing data for inclusion in a spatial data base and for subsequent evaluation; use of global positioning systems to locate

field study sites; computer analysis of spatial data using Geographic Information System software and technical staff; and production of cartographic products, technical reports, graphic designs and other documents.

Bureau of Reclamation (surveying). Reclamation has the capability to provide surveying staff and maintains state-of-the-art surveying equipment and technology. Reclamation also has computer-assisted capabilities for generating area-capacity data. The Great Plains Region maintains an indefinite quantities contract with a private surveying firm. **(hydrology)** Reclamation can provide assistance with respect to flood hydrology and general surface hydrology. **(water quality)** Laboratory capabilities include inorganic and organic analysis of water samples for chemical, biological, and physical parameters of water samples. Reclamation has considerable aquatic sampling equipment including nets, electrofishing boats, and other limnological sampling gear. Reclamation is currently providing technical support to the Corps of Engineers in response to the flood.

National Park Service. The National Park Service has personnel and facilities available through the **Water Resources Division** in Denver that can provide watershed management, hydrology expertise, floodplain delineation, wetlands delineation and rehabilitation, and have extensive GIS capabilities for accomplishing this. The **Denver Service Center** has extensive personnel and capabilities to plan, design, develop, restore and rehab facilities. In addition, the NPS has extensive inventories of cultural and historic sites in the flood area.

Interagency Support

Contracting and Construction Oversight

Reclamation Regional Offices can provide procurement and contracting services and construction oversight assistance for a wide range of related activities. Reclamation is currently providing technical support regarding damage assessment.

Procedural

Endangered Species Act; Fish and Wildlife Coordination Act; Clean Water Act; and National Environmental Policy Act technical assistance is being provided by the Fish and wildlife Service to assist with the primary flood response. The FWS is mobilizing staff in their Ecological Services Field Offices in St. Paul, MN, Rock Island, Marion, IL, and Columbia, MO, to assist the primary

flood response agencies (Corps of Engineers, SCS, FEMA). Other Field Offices in Bismarck, ND, Pierre, SD, Grand Island, NB and Manhattan, KS, are also capable of assisting.

Fish and Wildlife Service biologists are prepared to assist Corps and SCS engineers with damage assessment surveys and reporting, environmental impact evaluation, and the development of measures to minimize the impacts to fish and wildlife resources from flood response actions.

FWS biologists will review and comment on environmental documentation prepared under the National Environmental Policy Act (NEPA); on Corps civil works projects and permit applications (Section 10/404, Clean Water Act) as well as remedial efforts under SCS Emergency Watershed Protection Program; and conduct evaluations and prepare recommendations pursuant to the Fish and Wildlife Coordination Act (FWCA).

FWS biologists will conduct interagency consultations under Section 7 of the Endangered Species Act to assist the primary agencies in their compliance with that Act during the flood response while minimizing adverse effects on endangered or threatened species. FWS biologists will help the States develop and fund projects to restore habitats for endangered and threatened species that have been damaged by the floods.

Fishery Assistance: The Service's Fishery Resource Offices in Winona, Minnesota; Carterville, Illinois; and Columbia, Missouri manage fishery resources on Service lands throughout the Mississippi River Wildlife and Fish Refuge and the Mark Twain National Wildlife Refuge. The Fishery Offices also provide technical assistance to tribal fisheries management on the upper Missouri River, management expertise for interjurisdictional fisheries, monitoring of nonindigenous species such as zebra mussels, and assistance for listing and recovery of threatened and endangered fish such as pallid sturgeon and paddlefish on the Mississippi and Missouri Rivers.

1990 Farm Bill and Agricultural Credit Act of 1987. Technical assistance is being provided to the USDA and to private landowners. Major activities include: swampbuster, wetlands reserve, Farmers Home Administration wetland easement identification and FmHA land transfers for conservation purposes.

USDA will be making wetland determinations and will be reviewing on-site recovery actions in the disaster area so that farmers can begin repairs in a manner that does not conflict with the swampbuster statute. The Fish and Wildlife Service is prepared to assist, pursuant to statute, in these activities.

As the wetlands reserve program is implemented, either via normal appropriations or through disaster funds, the Service will

provide assistance in site selection and will participate in the formulation of restoration plans.

When FmHA disposes of inventory property the Service is the technical agency charged with the identification of wetlands and restorable wetlands that need to be placed under permanent easement. In most cases the Service also implements the wetlands restoration actions that may be necessary and assumes easement administration responsibility. The amount of inventory property in the disaster area will increase and the Service will provide the added technical assistance support effort needed.

Under the **Agricultural Credit Act** of 1987 property is, subject to USDA determination and agreement, transferred from the FmHA inventory to state or Federal agencies for conservation purposes. Following the disaster it is likely that added interest in the transfer of high risk properties will occur. The Service is prepared to assist with identification of such property for transfer and is willing to assume administration or assist states in securing administration of such lands. The conservation use of such properties is compatible with flooding.

Incident Management

National Park Service, Ranger Activities Division, has two Type I All Risk Management teams (ARM) that respond to national disasters affecting NPS areas with skilled maintenance and technical personnel organized under the Incident Command System (recent deployment was for Hurricane Andrew in Florida).

Wetland Restoration

The **Partners for Wildlife** effort (under the Fish and Wildlife Act of 1956), is a private lands based restoration program based on voluntary landowner participation. Funds are appropriated to the "*Trust Species Habitats - Technical Assistance and Habitat Restoration*" component of the Fish and Wildlife Enhancement subactivity. Over the last 7 years approximately 10,900 landowners nationwide have participated in the restoration of over 200,000 acres of wetlands. In the disaster area alone, almost 2,000 landowners have been assisted in restoring over 65,000 acres of small wetlands. In FY93 and FY94 an additional 4,000-5,000 acres of restoration will occur each year. With additional availability of funding (i.e., \$6,000,000) the annual restoration target could be 25,000 acres under this cooperative program. With over 21,000,000 acres of drained wetlands in the watershed a larger scale restoration program is needed for the rapid rate of runoff to to be reduced. This is one available tool.

North American Waterfowl Management Plan (NAWMP) (implemented through the North American Wetlands Conservation Act of 1989) has as its goal protecting more than 6 million acres of existing wetland habitat in the United States by the year 2000. Under the plan, several million additional acres of wetlands will be restored and enhanced for migratory birds in Canada, Mexico, and the U.S. The primary goal of the NAWMP is, "To enhance and protect high quality wetland habitat in North America that supports a variety of wetland-dependent wildlife and recreational uses." The NAWMP is being implemented through innovative Federal-state-private partnerships within and between states and provinces, including the Services Partners for Wildlife Program. Through the Upper Mississippi-Great Lakes Joint Venture implementation plan, priority wetlands conservation strategies and locations in the watershed have been identified. In six major sub-watersheds of the Mississippi River, a total of 1.3 million acres are proposed for restoration (675,000 acres at an average cost of \$500/acre) or acquisition (458,000 acres at an average cost of \$1000/acre).

To date in the Upper Mississippi and Missouri Drainage Basins, through the North American Wetlands Conservation Act of 1989, the Plan has affected 117,000 acres in \$39.5 million in projects of which two-thirds of the funding is in non-federal matching dollars.

Bureau of Reclamation. Reclamation personnel possess significant knowledge and expertise in aquatic, wetland and riparian ecology. Much of this experience is derived from wetland restoration projects. Capabilities include function, design, and modeling of wetlands and riparian systems for multiple use such as recreation, water quality improvement, fish and wildlife, erosion control, and salinity control.

Geological Survey. USGS is providing a watershed perspective to wetland restoration, i.e., put wetland restoration efforts in context with the topography and hydrology. USGS can provide existing photo-imagery to support flood mitigation efforts, and can perform satellite image analysis of flood, changes in stream pattern, changes in crop cover and other vegetative characteristics, land use, and land cover change. USGS has extensive capabilities for geographic information systems (GIS) for computer integration of earth science data, digital map and elevation data, and digital imagery to model natural phenomena, such as floods, in support of Federal and State planning and resource management decision-making.

Environmental Contaminants Program (USFWS), has conducted numerous natural resource damage assessments intended to support response and remedial activity. Evaluation of data/information during a natural resource damage assessment requires technical biological expertise centered around the resource and site specific restoration plans to restore injured habitats. The program has expertise in preparing response contingency plans, identifying remediation techniques, determining protective levels of contaminants, identifying restoration techniques, planning and implementation of habitat restoration, as well as coordination with other Federal, State and non-government agencies in these activities.

Mississippi Interstate Cooperative Resource Agreement (MICRA).

The Fish and Wildlife Service and the Bureau of Reclamation are signatories to MICRA. MICRA encourages cooperative management of interjurisdictional fishery resources and was signed by the 28 Mississippi River basin states. The goal of the Agreement is to improve the conservation, development, management, and utilization of interjurisdictional fishery resources in the Mississippi River Basin through improved coordination and communication among management entities. Through cooperative programs, MICRA will consider the needs of both commerce and fisheries management on an ecosystem-wide basis.

Land Acquisition/Management

National Wildlife Refuge System lands in the floodplain of the disaster area cover approximately 265,000 acres. Management activities on these lands allow for implementation of alternative flood control strategies which are compatible with the purposes for which the refuge areas are established. The Fish and Wildlife Service has six proposed FY 1994 refuge acquisition projects in the floodplain (totaling 26,116 acres and \$12,200,000). When completed these six projects are expected to cover 331,149 acres and cost approximately \$178,000,000 at FY 1994 land values. The acquisition process, based on funding limitations will span many years. With added funding the process could be expedited.

The Fish and Wildlife Service has several additional land acquisition projects in the planning stage on the Illinois, Minnesota, Missouri and Mississippi Rivers. These proposals are primarily to protect remaining wildlife habitats along these rivers but can be expanded considerably to consider other purposes such as preserving natural flood storage areas. In addition there are other proposals in the

watersheds of these big river systems that can be expanded to significantly store water in the upper reaches of these river watersheds and slow the flow rate by converting the land use from agriculture row crops to natural wildlife habitat.

National Park Service Land Resources Division provides mapping, appraisal, acquisition and land exchange services. Nine park units are located in the flood area.

Bureau of Indian Affairs. The Secretary of the Interior has the trust lead role for the Federal relationship with Indian Tribes. There are 89 Indian Tribes located within the 9 state flood designated region. Nine (9) of these Tribes have received flood damage to houses, schools, roads, farmland, and conservation structures: i.e, the Menominee in Wisconsin; the Iowa, Kickapoo, Prairie Band of Potawatomi, and Sac & Fox of Kansas and Nebraska; and the Kaw, Otoe-Missouria, Tonkawa, and Ponca of Oklahoma. In addition, there are numerous Statutory authorities which provide for the acquisition, disposal and leasing of Indian lands for various purposes.

**Federal Statutes Pertinent to DOI Involvement
In The Flood Response**

1. **Endangered Species Act of 1973 (16 U.S.C. 1531-1534), as amended.** The Endangered Species Act mandates that all federal agencies use their authorities to ensure that their activities do not jeopardize the continued existence of a threatened or endangered species. In addition federal agencies are to promote the protection and recovery of these species. All federal agencies must consult with the Fish and Wildlife Service to ensure compliance with ESA.
2. **Fish and Wildlife Act of 1956 (16 U.S.C. 742A-742J) as amended.** Under this authority the FWS carries out the voluntary private-lands-based habitat restoration program, commonly referred to as "Partners for Wildlife." The Act authorizes the Service to engage in activities that will promote "...the development, management, advancement, conservation, and protection of wildlife resources..."
3. **Fish and Wildlife Coordination Act of 1934, (16 U.S.C. 661-117) as amended.** The Act requires consultation with the Fish and Wildlife Service before U.S. waters are impounded, diverted, or otherwise controlled or modified to ensure wildlife receives equal consideration. In the category of water-related activities for which federal permits are required, wildlife agencies can make recommendations with respect to wildlife conservation and enhancement.
4. **Food, Agriculture, Conservation, and Trade Act of 1990.** The FACT Act amends the Food Security Act of 1985. The Act requires Department of Agriculture agencies (e.g., Farmers Home Administration, Agricultural Stabilization and Conservation Service, and Soil Conservation Service) to consult with the FWS to ensure conservation of important resources, especially wetlands. The Act authorizes Farmers Home Administration to (1) place conservation easements on properties held in their inventory, and (2) trade conservation easements for debt forgiveness. Under the "Swampbuster" provisions of the Act, wetlands cannot be converted to agriculture for the purpose of commodity crop production. USDA must consult with the FWS on "Swampbuster" issues. The Act authorizes the Secretary of Agriculture (USDA) to establish the Wetland Reserve Program to acquire permanent easements from willing landowners for the restoration and protection of wetlands. Easements on existing and former wetlands now in crop production will be acquired and the wetlands restored.

5. **Upper Mississippi Wild Life and Fish Refuge Act of 1924.** This Act authorizes the acquisition and establishment of the Upper Mississippi National Wildlife Refuge with the protection of wildlife as the primary purpose. The Refuge was established as mitigation for the navigation channel and set the precedent and is a classic example of a refuge preserving a floodplain in a natural condition. Structures on the refuge counteract the sediment input caused by other structures/activities.
6. **Federal Aid in Wildlife Restoration Act of 1937, (16 U.S.C. 669-669i) as amended.** More commonly known as the Pittman-Robertson Act, serves as the principal mechanism for providing federal assistance to states for the acquisition, restoration, and maintenance of wildlife habitat; for the management of wildlife areas and resources; and for research into problems of wildlife management.
7. **Federal Aid in Fish Restoration Act of 1950, (16 U.S.C. 777-777k) as amended.** More commonly known as the Dingell-Johnson Act, is essentially identical to the Pittman-Robertson Act, except that it provides federal assistance to states for projects pertaining to fish.
8. **Water Resources Development Act of 1986.** The Act authorizes the Long Term Resource Monitoring Program for the Upper Mississippi River System. The monitoring is being implemented by the FWS Environmental Management Technical Center in Onalaska, Wisconsin in cooperation with the five Upper Mississippi River Basin States; Illinois, Iowa, Minnesota, Missouri and Wisconsin. The mission of the program is to provide high quality scientific and technical support in a timely and cost-effective manner.
9. **North American Wetlands Conservation Act of 1989 (16 U.S.C. 4401-4413)** This Act provides for a matching grant program with private partners to support wetland conservation projects.
10. **Migratory Bird Conservation Act of 1929 (16 U.S.C. 715-715d, 715e, 715f-715r) as amended.** This Act authorizes the FWS to acquire wetlands habitat for the conservation of North American waterfowl from the Migratory Bird Conservation Fund (a dedicated Fund containing deposits from Duck Stamp sales as well as other fees).
11. **Transfer of Certain Real Property for Wildlife Conservation Purposes Act.** This Act as amended provides that Federal surplus lands can be transferred to the Secretary of the Interior without reimbursement.

12. **Agricultural Credit Act of 1987.** This Act authorizes the Farmers Home Administration to transfer properties held in their inventory to Federal and state agencies for conservation purposes.
13. **Emergency Wetland Resources Act of 1986 (16 U.S.C. 3901-3931).** This Act authorizes the purchase of wetlands or interests in wetlands, which are not acquired under the authority of the Migratory Bird Conservation Act, consistent with National and Regional priority conservation plans and state concept plans using Land and Water Conservation Fund monies.
14. **Water Bank Act of 1970, as amended.** The Act provides that the Department of Agriculture will coordinate with the Department of the Interior when entering into contracts with landowners to protect wetlands and retire adjoining agricultural lands.
15. **National Wildlife Refuge System Administration Act of 1966, as amended.** The Act allows for management practices on refuges which support the policy goals if they are consistent with the purposes for which the refuges are established.
16. **The Reclamation Act of 1902.** The Act restricts the Bureau of Reclamation's water resource activities to the 17 Western States. BR, however, can provide technical assistance to other agencies and outside parties in other geographical areas on a cost-reimbursable basis.
17. **Robert T. Stafford Disaster Relief and Emergency Assistance Act, (Public Law 93 - 288) as amended.** The Bureau of Reclamation may provide public works and engineering support to assist State(s) and local areas in needs related to lifesaving or life protection following a major disaster.
18. **Public Law 84-99** gives the Bureau of Reclamation authority to assist the COE in activities after a catastrophic event has occurred. These activities may include participation in levee rehabilitation inspection teams, survey teams, and construction inspection.
19. **National Park Service Organic Act of 1916 (16 U.S.C. 1).** This Act gives the National Park Service the authority to manage over 360 natural and cultural areas.
20. **Historic Sites Act.** Expands the National Register of Historic Places and established a guaranteed loan program to direct grants for properties listed on the National Register, and a grants-in-aid program to the States and the

National Trust for Historic Preservation for acquisition, restoration and preservation of historic properties.

21. **Archeological and Historical Preservation Act of 1974.** Authorizes the National Park Service to conduct a variety of activities to assist Federal agencies in identifying, evaluating, preserving, and/or salvaging architectural and archeological resources.
22. **National Parks and Recreation Act of 1978.** Created the Urban Park and Recreation Recovery Program (UPARR) which provides grants to local governments to rehabilitate existing indoor and outdoor recreation facilities.
23. **Snyder Act 1921.** (42 Stat. 208; 25 U.S.C. 13) This Act authorizes appropriations and expenditures for the administration of Indian Affairs, and for other purposes.
24. **Protection of Indians and Conservation of Resources Act of 1934.** (48 Stat. 984; 25 U.S.C. 461). This Act provides for the protection and management of Indian natural resources from deterioration, to prevent soil erosion, assure full utilization, and like purposes.
25. **Geological Survey Organic Act of 1879** (20 Stat. 394; U.S.C. 31). This Act established the Geological Survey and provides for "the classification of the public lands, examination of geological structure, mineral resources, and products of the national domain." The USGS is authorized to perform surveys, investigations, and research covering topography, geology, hydrology, and the mineral and water resources of the United States and its Territories. These provide for the gaging of streams and determining the water supply of the United States, including the investigation of underground resources.
26. **Minnesota Valley National Wildlife Refuge Act.** This Act is a classic example of preserving a natural flood plain in an urban situation. Congress established the refuge for wildlife, education and recreation.

August 16, 1993

NOTE TO: G. Edward Dickey (DOD/CORPS)
Richard Krimm (FEMA)
James Lyons (USDA)
Karl Otte (USDA/SCS)
Mollie Beattie (DOI/FWS)
John Gibbons (OSTP)
Robert Wayland (EPA/OW)
Brian Burke (DPC)

FROM: T.J. Glauthier and Katie McGinty

SUBJECT: Environmental Flood Recovery, Interagency Working
Group Meeting

The next meeting has been scheduled for our interagency working group on environmental flood recovery actions. It will be Thursday, August 19th, 10:00 a.m., room 248 of the Old Executive Office Building (17th and Pennsylvania Avenue).

Please contact Bruce Long's secretary, Renée (395-4590), by COB Tuesday (August 17th) to let us know who will be attending. We'd like to keep the group size down to have as effective a working group as possible.

We will discuss your progress to date in furthering the goals of this task force.

Please come to the meeting with the following:

1. Army, FEMA, SCS -- Copies of any guidance you intend to send to your field organizations regarding the funding approval for rehabilitation of levees. Include proposed guidance for conducting economic, environmental, and other evaluations supporting the build/no build decision and the consideration of alternatives.
2. All Agencies -- Brief description of programs that, in your judgment, provide cost effective alternatives to levee reconstruction. These could include land purchase or easements, flood proofing or relocation of structures, etc. These descriptions can be the same as those assembled by Secretary Espy for his report to the President.

Remember, we also have our meeting with Secretary Espy on Tuesday, August 17, 12:30 - 1:30 p.m. For this meeting, we want to limit participation to one or two senior people per agency.

cc: Will Stelle (OEP)
Keith Laughlin (OEP)
Mark Schaefer (OSTP)
Robert Stearns (DOD/CORPS)
Michael Davis (DOD/CORPS)
Frank Thomas (FEMA)
Laurence Zensinger (FEMA)
Jane Bollock (FEMA)
Michele Altemus (DOI/FWS)
Russell Earnest (DOI/FWS)
Gary Margheim (USDA/SCS)
Edgar Nelson (USDA/SCS)
Ron Cogswell (OMB)
Bruce Long (OMB)
Ken Ryder (OMB)
Steve Redburn (OMB)
Chris Heiser (OMB)

ENVIRONMENTAL FLOOD RECOVERY INTERAGENCY WORKING GROUP

Co-Chairs Katie McGinty, TJ Glauthier

Staff Chairs Will Stell, Bruce Long

Purpose To evaluate and help implement alternatives to full levee reconstruction that will provide a better balance between flood damage reduction and environmental values in the course of recovery from the current Midwest flooding. The response to this flood will serve as the beginning of a broader examination of the Federal government's response to flood threats nationwide.

Products Short term (2 - 4 weeks): First round "guidance" to the Corps, SCS, and FEMA regarding the priority to assign to the various types of levees in the region -- Federally-constructed and locally-maintained, non-Federal levees in the Corps inspection program, and non-Federal primary and secondary levees outside the program, as well as the procedures to follow in evaluating and the terms for delivering an appropriate Federal response to levee damage.

Medium term (2-3 months): Development of more formal guidance in conjunction with the relevant agencies -- e.g., Corps, Agriculture, DOI, FEMA, SBA, HUD -- regarding ways in which alternatives to levee reconstruction should be evaluated, offered, and delivered to non-Federal interests. Development of alternative programs and incentives for landowners to volunteer for relocation, easements, or other alternatives to levee reconstruction. The goals of this effort would be reduced flood damage and increased environmental values.

Long Term (12 months): Appoint a commission of agency, academic, state and local officials and other experts to review all policies relating to riverine floodplain use and riverine ecosystem management. The commission should, among other things, recommend for consideration policies and programs that will provide alternatives to traditional flood facilities.

Longer term (24 months): Corps comprehensive study of the Upper Mississippi and Missouri Basins designed to evaluate alternative approaches to floodplain management that can provide a better balance between dams and levees where those are critical and in other situations a more natural river system of flood plains, wetlands, and other natural systems. The timing of this study will be such that it, and the implementation studies that would follow, can benefit from the findings and recommendations of the above-mentioned commission.

Agencies White House: OEP, OMB, DPC, NEC, OSTP
Corps, USDA, EPA, DOI, FEMA, HUD, SBA, DOT, NOAA

Non-Federal Groups Farm community, environmental groups, Hill staff, technical experts, and governors or their representatives.

Environmental Flood Recovery Interagency Working Group

ACTIVITY	AGENCY			
	Corps	SCS	FEMA	Other Agencies
Levee Rebuilding • Eligibility	Accepted into Corps Flood Control and Coastal Emergencies program Public sponsor Economically justified 80/20 cost share	If not included in Corps program Public sponsor Economically justified Environmenally sound 75/25 cost share	If not included in Corps or SCS program Public sponsor Facility was actively used 75/25 cost share Covered	— —
• Voluntary levee breaches	Covered if approved by Corps	Covered	Covered	—
Alternative Programs to Levee Rebuilding	If not economic, don't rebuild	Wetlands Reserve Program – FY 93 Emergency Supplemental provides authority – Provides for agricultural lands to be restored into wetlands by obtaining a perpetual lease from landowners	Hazard mitigation, Section 404 program – wide range of options such as purchase and relocate structures, obtain land easements, 50/50 cost sharing National Flood Insurance Program – wide range of assistance	To be determined

EMERGENCY SUPPLEMENTAL REQUEST FOR MIDWEST FLOODS
COMPARISON OF AMOUNTS
(in millions of dollars)

16-Aug-93
05:47 PM
BRB:kbh

	1993	1994
Direct.....	4,141	1,100
Contingent funds released on 12 Aug 93.....	402	---
Contingent funds not yet released.....	779	---
OMB ESTIMATE, Budgetary Resources.....	5,322	1,100
This counts loan levels, not the BA subsidy for those loans.		
Subtract out contingent funds not yet released.....	-779	---
OMB ESTIMATE, Budgetary Resources of funds available as of 12 Aug 93.....	4,543	1,100
Subtract out loan levels for:		
Agriculture, RDA, Business and Industry Loan Guarantees.....	-50	---
Agriculture, Farmer's Home Administration, ACIF Loans.....	-87	---
Agriculture, Farmer's Home Administration, RHIF Loans.....	-15	---
Small Business Administration, Disaster Loans.....	-292	---
And add in the subsidy Budget Authority for these same loans:		
Agriculture, RDA, Business and Industry Loan Guarantees.....	3	---
Agriculture, Farmer's Home Administration, ACIF Loans.....	22	---
Agriculture, Farmer's Home Administration, RHIF Loans.....	6	---
Small Business Administration, Disaster Loans.....	60	---
OMB ESTIMATE, Total Budget Authority.....	4,190	1,100

* Totals may not add due to rounding.

EMERGENCY SUPPLEMENTAL FOR MIDWEST FLOODS

Agency/Accounts	Budget Authority (millions of dollars)	
	1993	1994
Department of Agriculture:		
Commodity Credit Corporation fund.....	1,050.000	100.000
CCC, change pro-rate from 50.04% to 100%.....	--	1,000.000
Commodity Credit Corporation fund (contingent) ²	300.000	--
Agricultural Stabilization and Conservation Service:		
Emergency conservation programs.....	30.000	--
Salaries & Expenses.....	12.000	--
Soil Conservation Service.....	35.000	--
Rural Development Administration:		
Business & Industry loan guarantees.....	(50)	--
Subsidy BA.....	2.705	--
Emergency Water Grants.....	20.000	--
Farmer's Home Administration:		
ACIF Loans.....	(87)	--
Subsidy BA.....	21.788	--
RHIF Loans.....	(15)	--
Subsidy BA.....	5.985	--
Very Low-Income Housing Repairs.....	15.000	--
Extension Service.....	3.500	--
Commerce:		
NOAA Operations, Research & Facilities.....	1.000	--
EDA (emergency relief).....	100.000	--
Education:		
Impact Aid assisting local schools (contingent) ²	70.000	--
Pell grants.....	30.000	--
HUD:		
CDBG planning with State/locals.....	25.000	--
CDBG community development.....	175.000	--
HOME.....	50.000	--
Interior:		
Fish and Wildlife Service.....	30.000	--
National Park Service Construction.....	0.900	--
Historic Preservation Fund.....	5.000	--
U.S. Geological Survey.....	1.439	--
Bureau of Indian Affairs.....	3.878	--
Labor:		
Job Training.....	43.500	--
Job Training (contingent) ²	11.100	--
Transportation:		
Federal-aid highways (emergency relief).....	100.000	--
Local Rail Freight Assistance (contingent) ²	21.000	--
United States Coast Guard.....	10.000	--
Army Corps of Engineers:		
Flood control and coastal emergencies.....	120.000	--
Operations & Maintenance.....	55.000	--
Commission on National & Community Service:		
Emergency Relief Services.....	2.000	--
Environmental Protection Agency:		
Pesticide clean-up, drinking water systems repair, and leaking underground storage repair.....	33.950	--
Federal Emergency Management Activity:		
Disaster Relief.....	1,735.000	--
Legal Services Corporation (contingent) ².....	0.300	--
Small Business Administration:		
Disaster loan program loan level.....	(291.545)	--
Subsidy BA.....	60.000	--
Administrative expenses.....	10.000	--
Totals ¹		
Funding designated as emergency.....	3,787.645	1,100.000
Contingent funding.....	402.400	--
TOTAL BUDGET AUTHORITY ¹.....	4,190.045	1,100.000

¹ Totals may not add due to rounding.

² Contingent funding, released 12 Aug 93.
Other contingent funding not yet released
is not listed in this table.

OFFICE OF THE
ASSISTANT SECRETARY OF THE ARMY
(CIVIL WORKS)
Room 7126, Pulaski Bldg.
20 Massachusetts Ave., N.W.
Washington, D. C. 20314-1000

FAX TO: Brian BurkeDATE: 9/27OFFICE: DPCPhone: 202-456-2995Fax: 202-456-7028SUBJECT: Shop AroundPages to follow: 1

FROM: DR. ROBERT N. STEARNS
DEPUTY ASSISTANT SECRETARY
PROJECT MANAGEMENT

Phone: (202) 272-0126 Fax: (202) 504-4389

COMMENTS:

Where were you on this day ???

THE ORIGINAL and OFFICIAL MUSIC LIST

WIBG • RADIO 99

SURVEY NO. 128

WEEK OF MARCH 6 TO MARCH 12, 1961

TOP 99 RECORDS OF THE WEEK

This Week	Last Week	Title	Artist	Label	This Week	Last Week	Title	Artist	Label
1	1	Pony Time	Chubby Checker	PAR	50	70	Asia Minor	Kokomo	FEL
2	2	There's A Moon Out Tonight	Capris	OLD	51	57	Bye Bye Baby	Mary Wells	MOT
3	4	Don't Worry	Marty Robbins	COL	52	58	Tunes Of Glory	Cambridge Strings/Miller	CO/LO
4	25	Surrender	Elvis Presley	RCA	53	55	All Of Everything	Frankie Avalon	CHA
5	7	Where The Boys Are	Connie Francis	MGM	54	63	Cherry Berry Wine	Charlie McCoy	CAD
6	3	Calcutta	Lawrence Welk	DOT	55	65	Pony Express	Danny & the Juniors	SWA
7	8	Ebony Eyes	Everly Brothers	WAR	56	64	A Lover's Question	Ernestine Anderson	MER
8	10	Dedicated To The One I Love	Shirrelles	SCE	57	82	Let's Go Again	Hank Ballard	KIN
9	11	Wheels	String A Longs	WAR	58	66	Cowboy Jimmie Joe	Lolita	KAP
10	5	Shop Around	Miracles	TAM	59	99	Tonight My Love Tonight	Paul Anka	ABC
11	6	Good Time Baby	Bobby Rydell	CAM	60	69	Raisin' Sugar Cane	Untouchables	MAD
12	9	Baby Sittin' Boogie	Buzz Clifford	COL	61	71	I'd Like To Know	Lenny Welch	CAD
13	20	You Can Have Her	Roy Hamilton	EPI	62	72	Most Beautiful Words	Della Reese	RCA
14	12	Spanish Harlem	Ben E. King	ATC	63	73	Little Boy, Little Girl	Al Martino	TWE
15	16	Ain't That Just Like A Woman	Fats Domino	IMP	64	74	Some Of Your Lovin'	Johnny Nash	ABC
16	21	Apache	Jorgen Ingmann	ATC	65	88	Blue Moon	The Marcells	CPX
17	23	Angel On My Shoulder	Shelby Flint	VAL	66	78	Kokomo	Flamingos	END
18	19	Jimmy's Girl	Johnny Tillotson	CAD	67	79	What'd I Say	Jack Eubanks	MON
19	24	Lazy River	Bobby Darin	ATC	68	86	Find Another Girl	Jerry Butler	VEE
20	17	All In My Mind	Maxine Brown	NOM	69	76	Rome Wasn't Built In A Day	Kenny Dano	SHE
21	33	Gee Whiz	Carla Thomas	ATL	70	80	That Lucky Old Sun	Velvets	MON
22	15	Wings Of A Dove	Ferlin Husky	CAP	71	83	Lonely Blue Nights	Rosie	BRU
23	26	Little Boy Sad	Johnny Burnette	LIB	72	84	Merry Go Round	Mary Johnson	UA
24	22	What A Price	Fats Domino	IMP	73	81	I Told You So	Jimmy Jones	CUB
25	27	Riders In The Sky	Ramrods	AMY	74	85	Early Every Morning	Dinah Washington	MER
26	30	Walk Right Back	Everly Brothers	WAR	75	87	Tonight I Fell In Love	Tokens	WAR
27	28	Rom-Bunk-Shush	Ventures	DOL	76	89	That's Why	Donnie Brooks	ERA
28	34	Think Twice	Brook Benton	MER	77	90	The Second Time Around	Frank Sinatra	REP
29	31	Love My Life Away	Gene Pitney	MUS	78	91	Ling Ting Tong	Buddy Knox	LIB
30	18	Calendar Girl	Neil Sedaka	RCA	79	92	Where There's A Will	Al Kasha	BRU
31	13	Story Of My Love	Paul Anka	ABC	80	94	Mr. Loneliness	Gene Vincent	CAP
32	39	Stayin' In	Bobby Vee	LIB	81	93	A Tear Fall	The Damians	MOH
33	36	Your Friends	Dee Clark	VEE	82	95	I Want To Love You	Dale Hawkins	CHE
34	35	No One	Connie Francis	MGM	83	96	Don't You Feel It	Freddie Houston	CAR
35	14	Emotions	Brenda Lee	DEC	84	97	Bounty Hunter	Nomads	RUS
36	53	Hearts Of Stone	Bill Black Combo	HI	85	-	Targ's Theme	Ferrante & Teicher	UA
37	41	Wait A Minute	Coodsters	ATC	86	98	A Hundred Pounds Of Clay	Gene McDaniels	LIB
38	42	Havin' Fun	Dion	LAU	87	-	I Don't Know Why	Clarence Henry	ARG
39	43	What Would I Do	Mickey & Sylvia	RCA	88	-	California Sun	Joe Jones	ROU
40	49	Please Love Me Forever	Cathy Jean	VAL	89	-	Not Me	U.S. Bonds	LEG
41	47	Model Girl	Johnny Mastro	COE	90	-	Early In The Morning	Ray Charles	ATL
42	48	Ginnie Bell	Paul Dino	PRO	91	-	Little Pedro	The Olympics	ARY
43	50	Watusi	Vibrations	CHE	92	-	Little Miss Stuckup	The Playmates	ROU
44	54	For My Baby	Brook Benton	MER	93	-	The Touchables	Dickie Goodman	MAR
45	51	Happy Birthday Blues	Kathy Young	IND	94	-	Heart Of Gold	George Tinley	HER
46	52	To Be Loved	Pentagons	DON	95	-	Little Sad Eyes	The Castells	ERA
47	61	I Don't Want To Cry	Chuck Jackson	WAN	96	-	I Pity The Fool	Bobby Bland	DUK
48	60	That's How I Feel	Sam Cooke	RCA	97	-	Take Good Care Of Her	Adam Wade	COE
49	62	Once Upon A Time	Rochelle and the Candies	SWI	98	-	Cimarron	Snyder & Manning	ABC
50	-	-	-	-	99	-	Your One And Only Love	Jackie Wilson	BRU

BEST BET ALBUMS

Spotlight On	Hank Ballard	KIN	Sound Off	Titus Turner	JAM
Sure Things	Little Willie John	KIN	Dance Annette	Annette	VIS
Dedicated To You	Ray Charles	ABC	Jimmy's Happy	Jimmy Clanton	ACE



PHILADELPHIA LISTENS TO WIBG! WIBG LISTENS TO YOU!
WHAT ARE YOUR TOP 9 FAVORITES ON THIS WEEK LIST?

1.
2.
3.
4.
5.
6.
7.
8.
9.
MAIL TO: WIBG, PHILADELPHIA 3, P.
ADD

THE WHITE HOUSE
WASHINGTON
September 23, 1993

MEMORANDUM FOR T.J. GLAUTHIER
KATIE MCGINTY

FROM: Brian Burke

SUBJECT: Comments on PEIS initiative and the Directive
Establishing a Scientific Assessment and Strategy
Team

The PEIS proposal and the Directive for Establishing a Scientific Assessment Strategy Team are both well done and essential to the Levee Task Force effort. However, as I discuss more fully below, they should be combined.

The Scientific Assessment and Strategy Team (SAST) which expects to complete its effort within two months ("short-term") and the EPA led PEIS group which intends to complete its effort within four months ("long-term"), should be combined to prevent overlap. The SAST directive calls for the development of a science-based blueprint for a long-range floodplain management strategy to assist decision makers as they identify priority areas for alternatives to levee reconstruction. The PEIS proposal seeks to develop a long-term strategy for flood recovery and floodplain management. I think there is considerable overlap both in their purposes and in their methodologies. For example, both initiatives anticipate outreach with experts, associations and governmental entities.

My suggestion is to include SAST in the PEIS process as the scientific assessment component, but to direct SAST to begin its assessment ASAP (as proposed) to assure that we have useful scientific data available to assist in the immediate buy-out considerations as they arise.

cc: Bruce Long
Mark Schaefer
Will Stelle

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF SCIENCE AND TECHNOLOGY POLICY
WASHINGTON, D.C. 20506

September 24, 1993

TO: Katie McGinty, T.J. Glauthier, Will Stelle, Bruce Long, Brian Burke

FROM: Mark Schaefer 

SUBJECT: Comments on the Programmatic Environmental Impact Statement Approach
to Developing a Comprehensive Upper Mississippi River Basin Plan

As I understand it, the advantage of the programmatic environmental impact statement (PEIS) approach is that it is a well established mechanism to bring a broad range of individuals together to evaluate a particular environmental problem. This is useful, but is it a viable mechanism to develop a comprehensive, scientific and technically sound strategic plan for a river basin as complex as the Mississippi? The presentations at our meetings and the proposal developed by EPA are not reassuring.

As presently written, I oppose the proposed PEIS approach for the following reasons:

- 1) The term programmatic EIS is going to confuse people. An EIS is traditionally conducted in response to a proposed action. It is normally not used in this context. I don't think it is the appropriate vehicle.
- 2) Science and technology are absolutely critical to the development of a credible comprehensive strategy. The best minds in the country should be brought together to focus on this effort. There is considerable expertise within federal agencies, but many of the best thinkers are in academic institutions and nongovernmental organizations throughout the country. The National Academy of Sciences and National Academy of Engineering have done excellent work in this area, but they have only peripheral involvement in the development of the plan as proposed.
- 3) The four proposed interagency teams and their chairs need to be thought through more carefully. The goal of the effort is to devise a comprehensive, long-range plan for the upper Mississippi. FEMA has very limited scientific expertise and it is to chair two committees under this proposal (half the effort). The Department of the Interior, which houses the U.S. Geological Survey, an organization with a half a billion dollar budget, 4,500 scientists and engineers, and 8,000 technical personnel dedicated to geology and hydrology, is a candidate with EPA for the "Values Restoration Team." Why is an emergency response agency with little scientific and engineering expertise in charge of developing a long-range plan for a river basin?

4) On page 6 is a brief heading entitled "Technical Oversight" which makes mention of the NAS in providing "guidance and reactions." The development of a plan of this kind requires much more involvement of outside individuals with technical expertise than just oversight. Economic analysis, hydrological modelling, engineering, data development and integration are central, not peripheral to the development of a comprehensive river basin plan.

Overall, I think this approach is heading us in the wrong direction. I will try to develop some alternative ideas over the weekend.



ASSOCIATION OF STATE FLOODPLAIN MANAGERS, INC.

P.O. Box 2051 Madison, Wisconsin 53701-2051 (608) 266-1926

MEMORANDUM

September 10, 1993

RE: Post Flood Recovery Meeting Summary
Hosted by ASFPM and Association of Wetland Managers

Dear Participant,

Chair

Doug Plasencia, P.E.
Div. of Soil & Water Conservation
203 Governor St., Suite 206
Richmond, VA 23219
(804) 371-6136
Fax (804) 371-7490

Vice-Chair

George Hosek
Michigan DNR
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Fax (517) 373-9965

Secretary

Peter Finke
Ohio DNR
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Fax (614) 447-9503

Treasurer

Alison M. Nicholson
Arkansas Soil & Water
Conservation Commission
101 E. Capitol, Suite 350
Little Rock, AR 72201
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Fax (501) 682-3991

Executive Director

Larry A. Larson, P.E.
Wisconsin DNR
P.O. Box 7921
Madison, WI 53707
(608) 266-1926
Fax (608) 264-9200

We sincerely appreciate your participation at Post Flood Recovery in the Mississippi River Basin meeting August 30-31 in St. Louis. Everyone at the meeting sensed a new beginning in our efforts to help the flood-affected property owners and communities recover in such a way that they will not again be devastated by the next flood.

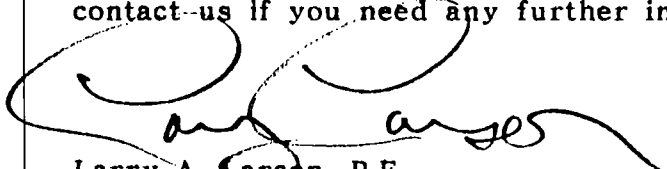
We wanted you all to have the enclosed "Meeting Summary Record" as soon as possible. It was compiled by Mary Fran Myers and French Wetmore. They did an excellent job of capturing the main items of discussion. However, if you're concerned that it does not exactly reflect the position of your agency, please contact us.

We are also completing an action agenda with an abbreviated summary of the issues - it should be in your hands in 7-10 days.

If possible, please join us again in St. Louis September 28-29 for the follow-on workshop, "Post Flood Recovery and Restoration of Mississippi Basin Floodplains, Including Riparian Habitat and Wetlands". This second workshop will focus on the opportunities for restoration of floodplain and wetland areas during this recovery. It will be preceded Monday September 27 with a meeting which will address the farm interests' recovery options.

Information about this workshop and registration is available from Jon Kusler, Association of State Wetland Managers, 518-872-1804 or Fax 518-872-2171.

Thank you again for your enthusiastic participation. We believe your continued involvement is critical to this effort. Please call or contact us if you need any further information or assistance.



Larry A. Larson, P.E.
ASFPM Executive Director

Doug Plasencia
ASFPM Chair

Jon Kusler
ASWM Executive Director



ASSOCIATION OF STATE FLOODPLAIN MANAGERS, INC.

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MEETING SUMMARY RECORD: POST FLOOD RECOVERY IN THE MISSISSIPPI BASIN St. Louis, Missouri August 30-31, 1993

INTRODUCTION

The flood of 1993 in the upper Mississippi basin and efforts to recover from the event offer an opportunity to people concerned with reduction of vulnerability to flood damages. Over the next few weeks, months, and years, the success of floodplain, emergency, dam safety and wetlands managers--the technical experts--will be judged by whether or not the help and advice they provide reduces the risk of damage from future floods. To facilitate exchange of information about recovery needs and program opportunities arising from this event, the Association of State Floodplain Managers (ASFPM) and the Association of State Wetland Managers (ASWM) hosted a meeting on August 30-31 in St. Louis, Missouri. Participants at the meeting represented the nine affected states, federal agencies involved in response and recovery activities, environmental organizations, the White House, and Congress. (See participant list, attachment #1)

The objective of the meeting was to provide an opportunity for field professionals and policy makers to exchange information on pending needs for this recovery and to initiate discussion for long term policy change. The expected result of this meeting was to identify the options and opportunities that exist for homeowners and communities during the recovery period that would lead to the prevention/reduction of future flood losses. This objective was met by sharing information on efforts currently underway, problems that still need solutions, and ideas for improving national flood recovery efforts to better serve citizens, communities, and the taxpayers.

In particular, people were asked to take the lessons of past flood events and put them in today's context. There was a call for avoiding the "arachnid syndrome"--where the itty bitty spider keeps going up the water spout. How can this cycle--the one that causes people to go back to the same place in the same way that resulted in extensive property damage and human suffering--be broken?

Several key issues were addressed:

- **Substantial Damage to Structures:** Codes require that structures damaged beyond 50% of their value must be rebuilt in compliance with NFIP standards. This often presents an overwhelming economic burden on victims who might be struggling just to replace what they had prior to a flood, much less add on the cost of elevation or relocation. Assistance programs are needed to help in this regard. Without adequate funding to support elevation and relocation, many families will be left in temporary housing for months while they wait for their political leaders to build up pressure on FEMA and the states to waive the rules.
- **Levees: Do we Rebuild Them All?:** Several levees were breached or overtopped in the Mississippi flood. In considering their reconstruction or repair, we must decide: if they should be bigger and higher; if we should

consider design for overtopping with compensation to property owners who provide flood storage; how we draw the line between emergency repair and permanent reconstruction; and what the impact of levees is on the larger basin water management system.

- Community Assistance for Recovery Planning: Local officials, in the wake of a flood, have to deal with day to day recovery issues--trying to get their communities back to a sort of normalcy. Looking at wise long term use of floodplains is something where the expertise of state and federal officials can be extremely useful. It is critical that such expertise is provided in cooperation with needs identified by the local community. To be successful, planning and decision making for long term recovery and redevelopment of flooded areas must be a bottom up process. Local citizens must share the vision of the future.

To examine these issues, the two day meeting was organized as follows. On day 1, reports were presented by federal and state agencies on current disaster mitigation efforts, and updates on these issues from the perspective of the White House and Congress were provided. On day 2, specific sessions relating to levee reconstruction, substantial damage, relocation of structures, and wetland restoration were held. The final session allowed for a review of recommended future directions and priorities for recovery. What follows is a summary of the discussions that took place.

OVERVIEW AND STATUS OF PRINCIPAL FEDERAL AGENCY POST DISASTER MITIGATION EFFORTS

Federal Emergency Management Agency (FEMA)

FEMA is focusing on four major points.

1. FEMA's goal in its mitigation efforts is to make it possible for any victim to know of available mitigation options and how to take advantage of them. In implementing this goal, two major policies will be followed: a) There is no consideration being given to a waiver or relaxation of the requirement that substantially damaged structures must be brought into compliance with NFIP standards. b) The emphasis for the expenditure of Section 404 Hazard Mitigation grant funds will be on elevation and relocation.
2. In order to achieve the above stated goal, there is an extensive outreach effort underway to let individuals know what options are available. For example, the Federal Insurance Administration is conducting workshops in the affected states. Innovative efforts such as contracting with local universities to provide planning assistance to communities are being implemented, and resources available through organizations such as regional planning councils are being utilized. FEMA welcomes ideas and suggestions for other ways to get the word out.
3. FEMA recognizes the need for technical expertise in recovery efforts, and intends to ensure experts from around the country--people knowledgeable in such activities as acquisition and relocation--will be available to assist communities that wish to undertake such projects. FEMA also plans to encourage state-to-state exchanges to provide this expertise.

4. FEMA estimates there will be \$45 million available in the hazard mitigation program in nine states. HUD has a supplemental appropriation of \$200 million, though it is not yet clear that these funds will be available for relocation projects. It is hoped that if there are more projects than money available, a strong case can be made to Congress on the need for additional appropriations.

U.S. Army Corps of Engineers (COE)
USDA/Soil Conservation Service (SCS)

The major topic discussed by these agencies was federal policy on levee repairs. It was noted, however, that USDA Secretary Espy has been designated by the President to be responsible for long term recovery, a counterpart to FEMA's short-term recovery responsibilities. Espy has created nine issue task forces: levees and wetlands; housing and community facilities; transportation, roads and bridges; environment; business development; public health; agriculture, livestock and crops; education; and public works. In addition, several other USDA agencies have programs to help people, businesses, farms, and communities recover.

Due to the numerous levee failures, there has been much discussion on whether or not they should be repaired. Levee-protected areas could be restored to wetlands, open space public use, or unprotected farmland. This may also allow for more flood storage.

A summary table on the status of levees by Corps District is included as Attachment #2. Of 229 federally constructed levees, 39 (17%) were breached or overtopped. There are 268 locally constructed "eligible" levees which are publicly maintained and which meet federal design standards. Of these, 164 (61%) were damaged. Of 1,079 locally constructed "ineligible" levees, 879 (81%) were damaged. The last category is not eligible for repair assistance under Corps authorities (PL 84-99) but may be eligible for SCS funding.

A FEMA/Corps/SCS team has been formed to develop a consistent policy for levee repair. It was agreed that the Corps would process requests for the larger, main-line levees. SCS would process the rest, as most of them were constructed to protect farmland, isolated farmsteads, and small rural communities. An interagency levee repair policy is in process of being finalized (it will be distributed through Corps and SCS channels) and representatives of the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (FWS) and the state have been added to the Disaster Field Office (DFO) teams in accordance with guidance issued in a memorandum from the Office of Management and Budget (OMB) on August 23 (Attachment #3), which calls for giving all affected parties an opportunity to comment before a levee repair request is approved.

There are three classes of levees: those protecting urban development where repairs are needed to protect lives and properties of substantial value, those protecting predominantly agricultural land plus roads and residences, and those protecting only agricultural land. The first group will likely be eligible for Corps repair assistance. The last group will likely be subject to the new policy where repair is not assured. This triage approach allows staff time to determine what happens to the second group.

When there is a request for Corps or SCS recovery funds to help repair a levee, a Damage Survey Report (DSR) will be completed. Under the proposed policy, SCS or the Corps will prepare a report that determines the cost of levee repair and the fair market value of the land. The costs will include debris removal and disposal, repair or replacement of infrastructure (roads, fences, buildings, etc.), regrading, restoration of fertility, and levee repairs. The review will also account for the natural and beneficial values of the land and whether the owner intends to continue farming it.

In those cases where the cost exceeds the value of the land, the levee will not be repaired. The landowner will be offered the opportunity to enroll the land in SCS' wetland reserve program. The wetlands reserve program can acquire individual parcels of land even if a levee is repaired.

The supplemental appropriation gave SCS \$60 million for levee repairs and the wetland reserve program but did not allocate how much goes to each. So far SCS has allocated \$25 million to perform restoration work. The majority of these funds will be used for debris removal, erosion control, and high priority levees.

The SCS DSR reports will be made available to other agencies, the owners, and the public through the DFO. Long term issues, such as levee improvements to protect to higher flood levels, are not addressed by this policy. They will take time to resolve under existing authorities through a process that will present nonstructural alternatives to the levee sponsors. The important change is that the previous existence of a levee does not mean that a levee belongs there.

It is likely that this policy will mean that secondary levees (smaller ones on the river side of a larger levee) will not receive repair assistance. A good "marriage" is seen between urban protection and floodwater storage in agricultural areas.

It was noted that levee improvements are eligible for funding under FEMA's Section 404 Hazard Mitigation Grants. However, FEMA's priority for the program is acquisition and relocation projects.

U.S. Environmental Protection Agency (EPA)

The EPA has received a total of \$33.9 million supplemental appropriation for the flood recovery effort. In addition to wetland restoration, the funds are being used to: 1) Identify and quantify the role of wetlands in flood loss reduction; 2) Review hydrology models and data and assess their adequacy; 3) Develop information to assist the development of the Corps' master plan for the Missouri River and development of cost benefit analyses of incorporating aquatic restoration; 4) Conduct public workshops on the benefits of aquatic restoration; and 5) Develop criteria to identify wetland restoration sites.

As EPA moves into the long term recovery process, it is concerned not only with levee reconstruction (or non reconstruction) but also with wastewater treatment facilities, drinking water facilities, and dangers to public health and safety (e.g., from air pollution caused by burning debris). The agency has drafted a proposed Programmatic Environmental Impact Statement (PEIS) that sets forth ideas for intergovernmental coordination for the long term recovery and management of the basin. The PEIS will serve as a mechanism to bring together local, state, tribal and federal governments.

U.S. Department of Interior (DOI)

The DOI is committed to the recognition of the importance of the ecosystem in watersheds and the Fish and Wildlife Service (FWS) is taking DOI's lead role in the flood recovery process. Concerns expressed regarding recovery include the following:

- There is a need for a long term planning process once the initial response is over.
- The OMB directive on levee repair and restoration does not match well with existing authorities under which the Corps and USDA carry out such efforts.
- It is not clear as to what constitutes a real alternative process. The DOI representative on the team reviewing levee repair requests at the DFO will work to ensure that communities are presented with more environmentally acceptable alternatives. It was noted that alternatives must be offered in a timely fashion, hence the question of how the "emergency" situation is defined.
- It is critical that the recovery be a bottom up process.

REPORTS FROM THE STATE POST DISASTER MITIGATION TEAMS

Reports on activities of the post disaster mitigation teams from nine states were presented (some by state representatives and some by federal representatives). Many have completed the 15-day reports; others are in draft form. Common themes ran through many of the reports. These themes included: general observations, programs being implemented to achieve mitigation, barriers to getting the job done, and needs identified that must be addressed if future damage from floods is to be avoided.

General Observations

- In some cases, entire communities were flooded 10' - 15' deep when levees failed. While several communities want to relocate, it is not clear what impact relocation will have on the benefit/cost studies on levee repairs
- Many communities experienced flooded water supply or wastewater treatment plants; floodproofing them will be a priority.
- The flood caused at least 12 dams in one state to fail or be substantially damaged.
- In some areas, this was the latest of repeated floods. It sped up mitigation planning activities already underway.

Common Mitigation Programs:

- Many states have identified a number of communities that are interested in pursuing acquisition and relocation programs. Some have established "outreach teams" to work with these communities or assigned a state or federal liaison to support the process for completing such a long term effort.

- Many teams are encouraging flood victims to use the IFG minimization money to undertake minor, inexpensive retrofitting projects (e.g., elevating utilities) to avoid damages in the future.

Needs/Recommendations:

- There is a need for better flood forecast and warning systems, including additional precipitation and stream gauging systems and the funds to install and maintain them.
- Guidance is needed for the design of bridge and culvert replacements that have been damaged or destroyed in many floods (repetitive loss issue).
- There is a need for increased funding for acquisition of wetlands for flood control.
- The flood hit at least 14 communities that had NFIP basement exceptions; it would be useful to assess how they fared.
- Local governments need help in building code enforcement in the post-disaster time frame. One suggestion was the establishment of emergency response building official teams that could be sent to an impacted area to assist local officials in determining substantial damage and in making building permit decisions.
- There is a need to revisit the concept that recreational uses (e.g., swimming pools, golf courses) are appropriate floodplain uses. Damage to these facilities can be very expensive.
- Improved watershed management planning guidance is needed that addresses the issue of protection of wetlands, that supports the implementation of mitigation projects, and that promotes multiobjective management of floodplains.
- There is a critical need for better public awareness, training, and education about flood hazards, flood response activities (e.g., how to sand bag), disaster relief programs, and mitigation options--both for citizens and local officials.
- Some impacted areas had not been mapped as special flood hazard areas and, as such, there is no flood insurance purchase requirement in these flooded areas. Mapping of these areas needs to be completed so people and local officials are aware of the risk and have the flood elevation data to protect new development.
- Thought should be given to the need for secondary levees to absorb the overflow in case of a breached or overtopped levee.
- Better (stricter) enforcement of floodplain ordinances is needed. It was suggested that building officials be certified for NFIP requirements.
- It must be recognized that certified levees can be overtopped in extreme events. Areas protected by such levees should still be considered as flood prone and the purchase of flood insurance of some minimal amount should be required as a condition of mortgages - a "residual risk policy".

- Information is needed on a site specific basis about the relation between flood stage and extent of flood damages.
- There is a need for better coordination between departments of transportation and floodplain management to ensure road and bridge projects comply with good floodplain management standards.
- The list of eligible activities for hazard mitigation grant funds should be broadened to include floodproofing for individual structures.

Barriers to Implementation of Mitigation Programs:

- The lack of affordable replacement housing for people willing to move if assisted by an acquisition and relocation project presents a problem.
- Slow processing of applications for projects eligible for hazard mitigation funds from FEMA causes people and communities to lose interest and willingness to participate.
- Insufficient financial resources at the state and local level to meet the 50% match required by the 404 hazard mitigation grant program is a major stumbling block for implementing mitigation programs.
- There is an apparent contradiction between disaster assistance programs related to the "sequence of events". For example, one program, such as temporary housing or the IFG, provides funds for home repairs and later the NFIP code enforcement or mitigation work confirms that the house should be acquired and demolished. By the time the latter options are offered to victims, they have lost interest in participating.
- There has been inconsistent implementation of how to determine "substantial damage" from state to state (i.e., replacement cost vs. fair market value) which causes confusion.
- In some instances there have been problems with different offices in the same agency putting out different information. Slow response of some agencies has also made things hard on the part time local officials.
- There is some evidence of a pattern of Write Your Own adjusters being more liberal in claims estimates than adjusters of direct write NFIP policies, causing confusion and a sense of inequity.
- Flood insurance policy owners who protected their buildings by the use of individual, temporary structural measures (e.g., sandbag levee) so that flood waters would not touch the building, but who subsequently suffered damage by seepage, hydrostatic pressure, or sewer backup felt they were doubly penalized because they were told these damages are not covered by the Standard Flood Insurance Policy. It was later noted that a memo statement had been issued by FEMA reversing this policy (Attachment #4).
- Local officials have to make a very difficult policy call when trying to determine what the appropriate protection level should be in an area where flood levels reached the 500-year flood, even though flood discharges (flow) may have been 100 year or less.

In addition to these themes, innovative mitigation efforts are underway in some of the states. For example, in Illinois FEMA has contracted with the University of Illinois to have up to 80 architecture and engineering students help in individual building evaluations and identifying community mitigation alternatives. In Iowa, 20 communities have been identified as having serious recovery problems. FEMA has contracted with Iowa State University to develop mitigation alternatives for up to ten of them. FEMA also contracted with Des Moines' Neighborhood Housing Services to use 404 funds to elevate and relocate substantially damaged homes, and they are looking at more contracts with similar nonprofit organizations around the state. A FEMA reservist mitigation adviser is working with several small towns in South Dakota to develop mitigation plans. One town developed an eight-page policy on acquisition, relocation, and fix-in-place as part of repair permitting. In another town, repairs were already made, so the community promoted voluntary flood audits to advise owners of mitigation possibilities. Finally, they are using temporary housing data to identify who has badly damaged houses. They will use this list to conduct a mitigation outreach program throughout the state.

WHITE HOUSE AND CONGRESSIONAL UPDATE WITH REGARD TO POST DISASTER MITIGATION

Reports from representatives of the White House Domestic Policy Council, Office of Science and Technology Policy, Office of Management and Budget, staff of the House Public Works and Transportation Committee, and former staff of the House Banking and Housing Committee indicated a commitment toward responding to the Mississippi flood in a different way by working for the institutionalization of policies to support long term mitigation.

In the short term, policy guidance in the form of an OMB memorandum to agencies involved in emergency repair and restoration of levees calls for consideration of nonstructural alternatives and design modifications that could provide greater local benefits of flood control, reduction of future potential flood damages to the applicant and adjacent up- and downstream localities, lower long-term cost to the Federal government, and natural resource protection. The guidance is viewed as a beginning; it is a policy framework designed to facilitate review of alternative approaches to levee reconstruction and to encourage leadership for consideration of alternatives by local sponsors. Guidance for long term recovery and a strategy for flood control for the upper Mississippi basin is being formulated.

Issues to be considered in this policy formulation:

- Floodplain management is a day in and day out process, which must dovetail with a disaster strategy.
- The current flood control strategy in the country is structurally biased; in particular cost benefit analyses used to review flood control projects favor structural solutions to flood problems.
- In terms of human resources, there has been a trend of decreased capabilities for floodplain management at both the state and federal level. This trend must be reversed.

- The relationship among multiple and competing uses of the water ways and adjacent land areas (e.g., navigation, flood storage, urban development, wetlands, agriculture).
- Multiple legislative authorities under which agencies carry out their programs.

Specific shorter term efforts underway at this time include: 1) Design of a regional GIS overlay project that could be used as a model for the rest of the basin. The overlays would include all data available on a particular region (ranging from soils type to flood insurance claims) that could be used in decision and policy making processes. 2) Development of a state-of-the-art hydrologic model for the basin. 3) Preparation of a research agenda on the flood in conjunction with the National Academy of Sciences. 4.) Assessment of current research underway and preparation of a catalogue of information about this research as well as a catalogue of experts on the Mississippi basin.

One piece of legislation currently under consideration by Congress is the Kerry bill (S.1405) that amends the National Flood Insurance Program. The bill focuses on loss control through mitigation and increasing compliance with flood insurance purchase requirements. It would provide an insurance mechanism for flood mitigation of structures. Many elements of this bill would have been useful in this flood recovery had it been in place.

The House Public Works & Transportation Committee has purview over the Disaster Relief Act, Corps of Engineers programs and parts of the Clean Water Act under EPA dealing with water quality. The Committee has members with strong interest in nonstructural and multi-objective management approaches.

The Oversight Subcommittee plans oversight hearings on Corps of Engineers programs and the Disaster Relief Act (this fall). They are interested in whether federal agencies are implementing nonstructural approaches and request that any comments be sent to them about that or about how benefit/cost calculations are made. The next Water Resources Development Act may address structural versus nonstructural and how to get at least equal consideration.

EXAMINATION OF POST DISASTER MITIGATION OPPORTUNITIES: FUTURE DIRECTIONS

REBUILDING PRIVATE AND PUBLIC LEVEES AND DAMS

The key question in the reconstruction of levees damaged from the flood is how to strike a balance between the need to restore flood protection quickly and the need for long term planning for alternative flood protection that incorporates concerns of ecosystem management.

From the Corps of Engineers perspective, in trying to strike this balance, several difficult issues arise:

- Who makes the decision whether a levee should be repaired or not. There is a consensus for a "bottom up" process, but there are many competing goals at the bottom. We should not assume that given alternatives, the local decision makers will opt for a nonstructural solution. In the end, it is the local sponsor who makes the final decision.

- Guidance for alternatives to simple reconstruction of the levees is not well formulated. Policy options suggested by headquarters' of federal agencies or other executive offices may not be implemented in the field simply because adequate information to do so does not exist.
- In reviewing reconstruction applications, what is the proper level of rigor of cost benefit analyses? Should it include non-localized impacts and should it include the value of wetlands beyond their flood control benefits, i.e., environmental benefits (and if so, how are they quantified)?

In the short term effort, the Corps is not willing to waive its engineering standards, and believes the dialogue among agencies is working, though more involvement on the part of state agencies would be welcome. The main challenge in the short term effort is to quickly educate project sponsors about the alternatives. A problem in this is the lack of technical tools (e.g., how to evaluate effects of a single project on the whole basin).

A major challenge for USDA in this process is determining how to adapt their water resources programs, which are rooted in policies that focused on drainage and irrigation, in current times where there is a trend toward basin wide, multi-purpose planning that considers not only flood control, but environmental concerns such as water quality.

Issues and Comments:

- How is the presentation of alternatives working in the field?
- If a levee is restored to its pre-flood condition, it may still not be providing 100-year protection. As such, substantially damaged structures are still subject to the elevation requirements.
- Given the above, a further question on how benefit cost is determined. If a building must be elevated or relocated to meet code requirements, the levee cannot be considered as providing the benefit of flood protection.
- Because many of the levees will not be eligible for reconstruction, it is in these areas where the most hope for viable alternative programs exist.
- This discussion is based on the assumption that the public majority wants flood protection restored. This may be a false assumption.
- The current federal system is biased toward entrenched interests. Hence, people who really want to pursue alternative flood control approaches are inhibited. If the White House and Congress are serious about wanting to look at a different way to recover from this flood, then procedures and policies are not enough. Financial resources have to be made available for nonstructural approaches.
- In reviewing benefit/cost analyses, how are downstream impacts considered, is it possible to develop a basic formula for downstream impacts, how is future loss accounted for, how are other government expenditures (e.g., subsidy to farmers to not plant crops) incorporated into the equation, and is the possibility of constructing setback levees considered as part of the analysis?

- How do we define the "emergency" period? When does it end so long term planning and projects can get underway? When do emergency assistance programs end so people have to start considering the true costs of their decisions?

SUBSTANTIAL DAMAGE SESSION

Some new mitigation tools are now available. New references include FEMA's Questions and Answers on Substantial Damage. Technical Information on Elevating Substantially Damaged Residential Buildings in the Midwest has illustrations of the techniques to raise different types of houses and typical Midwestern cost estimates.

Flood Hazard Mitigation and Surveying Buildings for Flood Hazard Mitigation are available from the Illinois Department of Transportation, Division of Water Resources. There have also been recent studies on prioritizing floodplain properties for acquisition, floodproofing open houses, and low interest mitigation loans. These studies are still in draft format. Copies may be available from the ASFPM office.

Two local success stories were described. Kampsville and Thebes, Illinois (population 400 and 200) were helped by regional planning commission staff to develop comprehensive flood mitigation plans. In both towns, there was no expectation of a levee or other structural flood control project. The plans called for a mix of measures, including acquisition, floodproofing, warning and emergency response plans, and regulations. Funding was obtained from a variety of agencies, including FEMA's 1362, HUD's CDBG, and the state. Over 50 properties were acquired in Kampsville and 30 in Thebes, effectively eliminating the latter's flood problem. Copies of the communities' plans are available from the Illinois Division of Water Resources.

The lessons learned from the 1990 flood in Highland, Indiana, were reviewed. A subdivision of 260 homes was flooded due to a levee failure and all houses were declared to be substantially damaged. There was not enough acquisition funding available, so the mitigation plan recommended buying only the worst hit area. The resulting opposition about splitting up the neighborhood led the Town Council to drop the idea.

Three important lessons were learned: First, a moratorium on reconstruction is needed to buy the time needed to develop the plan and keep people from becoming committed to moving back into repaired homes. Second, FEMA's Temporary Housing staff and other agencies should review the health hazards of allowing people to occupy flood homes that have not been properly cleaned and sanitized.

The third lesson was the importance of funding. Adequate funding for acquisition needs to be lined up early in the planning process. If it is not confirmed as available, then flood victims should not be given false hopes of being able to relocate. Further, it was felt that without funding to support acquisition or elevation, the substantial damage regulations will not be enforceable on a large scale after a flood. A report on the lessons learned in Highland is available from ASFPM.

One of the outcomes of the Highland and Hurricane Hugo floods was a workshop to review the substantial damage definition and what could be done to improve enforcement. One recommendation from the workshop to the Federal Insurance Administrator was to change the definition from 50% of market value to 50% of replacement cost. The change was proposed in the belief that all actors (building officials, contractors, insurance adjusters, etc.) would go by the same rules, make the definition simple and consistent with current practices, and use cost and building value data that are most readily available and least likely to be manipulated.

However, defining substantial damage using replacement cost would reduce the number of lower cost houses subject to the rules. Much of the flooded areas have lower cost housing. In these areas, using market value will result in requiring more buildings to be elevated or relocated. If the funds are available, using market value will likely result in more mitigation projects. State and federal staff are planning such mitigation projects in several repetitively flooded areas.

FEMA Region V has a three part program to ensure that the substantial damage requirement is being enforced by local officials:

1. Data collection: They make sure that the local officials are told which buildings could be substantially damaged. They use flood insurance claims information and windshield survey notes. They have a pilot project in Illinois to identify potentially substantially damaged buildings and record their locations using global positioning systems (GPS).
2. Education: Most flooded communities have attended workshops that laid out their responsibilities under the NFIP. FEMA gave them guidelines, checklists, and model permit application forms that ensure everything is considered in estimating damages. In southern Illinois, advice on seismic protection is being given. In addition, each community has been called and offered additional assistance, including building department staff loaned from other communities and surveying support from the SCS. A mobile reconstruction information center ("RIC") is being planned.
3. Monitoring: It is the Region's objective to be "a thorn in the community's side" in order to ensure that the regulations will be enforced. This will include windshield surveys.

When looking at acquisition for a building, three factors need to be considered: condition of the building, financial assistance, and economic status of the owner. The last item is often overlooked. It includes whether there is much equity in the building and whether relocation assistance is needed. If the owner is amenable to leaving and the move will not make him or her financially worse off, an acquisition project has a high likelihood of success.

The normal financial assistance programs include:

- SBA 4% disaster assistance loans (to fund relocation or elevation when required by code)
- FEMA's Temporary Housing
- FEMA's Individual and Family Grants' new minimization program (for smaller projects, generally for wet floodproofing basements)

- FEMA's Public Assistance funding for debris clearance (to remove the "debris" of an acquired house)
- HUD's Community Development Block Grant (CDBG)
- HUD's HOME program which has \$50 million reserved for the nine flooded states
- HUD's 203h program (the limitation to first-time home buyers was waived by the supplemental appropriation)
- State housing and development finance authorities
- Weatherization programs for energy efficiency from the Dept. of Energy

RELOCATION OF STRUCTURES SUBJECT TO DAMAGE

FEMA's Hazard Mitigation office wants to develop a directory of people and communities that have experience with relocation projects. FEMA will be able to pay their travel and expenses if they are available to help other communities with relocation projects. The following communities have completed relocation projects (funding source indicated in parentheses):

- Soldiers Grove, WI (HUD and local)
- Prairie Du Chien, WI (Corps)
- Richland Center, WI (SCS)
- Milwaukee, WI (local funds to develop greenways)
- Kampsville, IL (1362, HUD, and state)
- Thebes, IL (1362, HUD, and state)
- Tulsa, OK (1362 and local)

Tulsa's program was part of a larger, multi-objective program that was initiated following a killer flood in 1984. So far, the City has spent \$200 million, most of it for retention basins and channel work, but \$11 million has been for acquisition. It is being done in phases. There is a newly developed ranking system to help prioritize when properties should be acquired. The City recommends that communities obtain a steady funding source, such as a stormwater utility fee to finance operation and maintenance. The importance of willingness to make hard decisions, long range planning (that includes the issue of maintenance), strong political support, and a comprehensive approach were also emphasized.

The necessity of a multi-objective approach was stressed. All of the communities listed above used it. The benefits of a relocation project must be seen by all the local taxpayers. It was noted that successful projects must be viewed as an improvement for the entire community; that won't happen if the only objective is to help a few residents avoid being flooded.

These communities also had a local person who was the catalyst and promoter of the project. State and federal mitigation staff are advised to find that person (who may be the mayor, a city staffer, a businessperson, or a citizen) and support him or her as much as possible.

"Bottom-up planning" was agreed by all as the only way to get a relocation project designed and accepted by the residents. Assisting such planning efforts is a key federal and state duty. One way to do this is through regional planning commissions. They know planning, government community development programs, grants administration, and the local officials. FEMA can help the states pay their costs as well as the cost of consultants. FEMA also has reservists who are already working with communities.

It was recommended that FEMA develop a cadre of reservists, rather than try to quickly train local planning commissions in the details of flood mitigation. Another proposal was to use such reservists or consultants with mitigation expertise to provide back up to regional planning commission and university staff. FEMA's floodplain management course at the Emergency Management Institute is one way the agency is developing a cadre of people who can help others in time of disaster. The course will soon be available as a home study course.

The National Park Service's Rivers, Trails, and Conservation Assistance Program can help with planning assistance. The Corps of Engineers also has planning expertise and has developed several nonstructural local programs. The Corps' National Flood Proofing Committee is available to advise states and communities on floodproofing measures where relocation is appropriate or not cost effective.

RESTORATION OF FLOODPLAINS AND WETLANDS

There are three reasons why floodplain managers should be interested in restoration of wetlands:

- It will create flood storage and conveyance areas,
- Flood programs can capitalize on the funds, expertise, and broader political support available through wetlands programs, and
- It will improve water quality.

The need for and benefits of a closer working relationship are detailed in a discussion paper (Attachment #5).

How to develop a closer relationship was the subject of presentations by several representatives of state and local conservation and wetlands agencies and organizations. They had the following recommendations:

- Develop a regional plan through coordination with the various groups.
- Bridges need to be built between urban residents who are "environmentalists" and rural residents who often control state legislatures.
- Local interest is best obtained by developing projects. People respond to projects, whether it is stream cleaning or opposition to a proposed levee.
- State and federal planners have to realize that most people interested in environmental matters are volunteers. This means that:
 - they are not experienced in technical, biological or government terms,
 - they lack standing and contacts with key decision makers,
 - they lack time and money, and
 - their leadership changes often.
- The Mississippi River Basin Alliance is funded by the McKnight Foundation to prioritize the most critical locations for wetland restoration. They realize that they may have to write some areas off. Other efforts should be coordinated with this priority list. A master ecosystem plan is still needed.

- The policies of "no net loss" and local zoning don't work very well to preserve wetlands. The best approach is through acquisition.
- There is a broader community than just floodplain and wetland managers. Market research is needed to match programs with the desires of people.

The Association of State Floodplain Managers is working to convince floodplain managers that natural resource management is important. Much of this is being done through promoting a multi-objective management approach that incorporates the "quality of life" goal as an equal partner to protecting health, safety, and welfare. ASFPM has published a white paper on the topic (Attachment #6).

There are some barriers to incorporating protection of natural values into flood control programs. They include:

- The difficulty of incorporating natural resources into economic decision making models,
- The relative small size and clout of environmental groups and agencies compared to public works groups and agencies,
- Engineering handbooks that don't address newer topics, such as bioengineering,
- The lack of a technique or government regulation that addresses the additional flooding induced by levee construction, and
- The tendency for early post-disaster decisions to harden people's positions, making it difficult to look at alternatives later in a planning process.

This last concern was explored further. Two issues have been raised so far that tend to polarize people: levee restoration and wetland restoration. They are seen as incompatible opposites when they aren't. Levee restoration is vital to the current residents. It is their "security blanket." They want to see it done so they know they have some short-term protection.

Residents will not listen to discussions about long-term protection and acquisition until they know their levee can be restored. This is especially true of farmers who need the levees restored by this winter in order to make a living next year. Those who support acquisition and wetland restoration should not confuse restoring pre-flood levees with constructing 100-year flood levees.

FUTURE DIRECTIONS, PRIORITIES, OPPORTUNITIES:

The closing session consisted of brief presentations of the most pressing needs and promising opportunities that lie ahead for flood loss reduction:

Illinois

- The immediate priority is funds and programs to relocate, elevate, or buy out damaged properties--in some cases entire towns.

- There is a strong need to reassess benefit/cost analyses to include downstream effects and a separation of public vs. private benefits (e.g., presently the majority of benefits are private while the majority of costs are public).
- There is a need for a carefully structured and reliable model of the entire upper Mississippi basin. The model must evaluate both the effects of lost conveyance and storage, and must be able to display that lowering, notching, or degrading of levees will actually reduce flood stages.

Iowa

- It appears that states with strong floodplain management programs suffer fewer damages from flood events. Hence, the Federal government should promote stronger state programs.

Kansas

- There is a need to streamline the mapping process, especially for those areas that are flood prone, but not yet mapped.
- Disaster assistance personnel who meet the victims for the first time must be sure to explain the program requirements and conditions correctly.
- There is a need for better education and training of local officials in the requirements of the NFIP and on disaster assistance.
- There is a need for more proactive encouragement of hazard mitigation and preparedness plans and better coordination of such efforts among all state and federal agencies involved.

Minnesota

- Not every community was devastated by this flood. Several areas benefitted from previous mitigation projects.
- Floodplain regulations and zoning do work, but consideration should be given to changing the NFIP regulations to include at least a 1' freeboard requirement and to rethinking the NFIP's floodway encroachment standard where one foot, or even 6", may be too much.
- Federal program guidelines should give equal treatment to structural and nonstructural projects.

Missouri

- The importance of lender compliance is apparent when one realizes that Missouri currently has 4,000 fewer flood policies than it did 10 years ago.

Nebraska

- The opportunity now exists to implement relocation projects, particularly in areas where there have been perpetual problems.
- Communication with the federal agencies is a key to successful program

implementation and it must be continued.

- A consistent, continual flow of information on federal guidelines for projects is needed.

South Dakota

- Communication exchange (meetings like this) should be encouraged and continued. Interstate exchanges should be encouraged and local governments should be involved.
- In evaluating alternatives, all involved agencies should have a voice, and it is important not to forget maintenance costs in the evaluation.
- Funds are needed for relocation projects and they should be provided in a simple manner.

North Dakota

- There is a need for better mechanisms to deliver disaster and mitigation services. For example, the NFIP maps are more an insurance than mitigation tool. People assume if areas are not mapped, they are not flood prone.
- There is a problem when neighboring jurisdictions have different floodplain management criteria (e.g., North Dakota and Minnesota have different floodway encroachment criteria for the same river).

Wisconsin

- Better education is a need.
- FEMA should rethink the 50/50 cost share requirement of the hazard mitigation program. A better ratio would increase the number of projects.
- Communities need financial and technical help in developing long term recovery plans.

Department of Interior

- There is a need to develop ways to look at the cumulative impacts of small projects on the basin.
- Promoting multi-purpose use of watersheds.

USDA

- In the short term the need is effective coordination of disaster response activities.
- In the long term, the concept of coordinated, complimentary river basin plans that are locally led must be promoted.
- A major challenge is to use existing programs to achieve "modern" priorities.

U.S. Army Corps of Engineers

- In the short term, it is necessary to develop alternatives to full reconstruction of levees that can be presented to local sponsors, and also to be firm in regard to eligibility requirements for levee restoration.
- In the long run, the Corps needs to work cooperatively with others in the recovery effort. In particular, consideration of how to use existing authorities for environmental enhancements is required.

FEMA

- There is a need for better coordination between FEMA's immediate disaster assistance programs (e.g., temporary housing) and longer term mitigation programs.
- FEMA is working with Congress to change the cost share ratio from 50/50 to 75/25 on its mitigation programs.
- FEMA is spread thin, and there is a need to think of better ways to deal with large disasters such as this one with the same size staff that is available for smaller events.
- Hazard mitigation is an incremental process, and large events give us the opportunity to plant the seed for future mitigation efforts.
- The interagency hazard mitigation teams have been operating for more than 10 years and it is time to evaluate them to see if there is a way to improve federal agency integration to promote mitigation.

OMB

Underlying elements that need to be addressed include: how to determine substantial damage (replacement cost or fair market value); adequacy of current benefit cost analyses procedures; the importance of timing between decision making about recovery and the provision of actual benefits; and the need to take a broad view in the reconstruction and recovery efforts.

ASFPM

- We need to move forward in a problem solving mode. The ASFPM will do so by working for the passage of S.1405 and another supplemental appropriation, reviewing recovery progress at the annual conference in Tulsa next May, and continuing to encourage interstate meetings for information exchange.
- There is a need for a clearinghouse of information on activities underway related to the flood.
- We need to link the agricultural interests into these discussions.
- We need to move from short term response to the long term recovery process, though use this short term window of opportunity to make policy changes needed to improve long term recovery.

- There is a need for periodic regional meetings like this one between the federal agencies and state agencies who are all helping communities and landowners on recovery from this flood.

Attachments:

- 1a. Agenda
- 1b. Participant list
- 2. Levee damage estimate table
- 3. OMB Levee Reconstruction Guidance
- 4. NFIP policy on seepage
- 5. "Post Disaster Response and Recovery in the Mississippi Basin and the Restoration of Floodplain and Wetland Areas"
- 6. ASFPM Multi-Objective Management White Paper



POST FLOOD RECOVERY IN THE MISSISSIPPI BASIN

Sponsors: Association of State Floodplain Managers
Association of State Wetland Managers

AGENDA

Day 1 - August 30

STATUS OF FEDERAL AND STATE MITIGATION EFFORTS

12:00 pm - 1:00 pm

Registration

1:00 pm - 1:15 pm

Welcome, Goals

Larry Larson, ASFPM Executive Director

Doug Plasencia, ASFPM Chair

Jon Kusler, ASWM Executive Director

1:15 pm - 1:30 pm

Introduction

All participants will have 20-30 seconds to identify themselves and outline what they most want from the workshop

1:30 pm - 3:00 pm

Overview and Status of Principal Federal Agency Post Disaster Mitigation Efforts

* What activities are underway?

* What programs and incentives are available to landowners and governmental units?

* What activities are under consideration?

Panel members from FEMA, Corps of Engineers and Soil Conservation Service each have 20 minutes + 10 minutes of discussion

Moderator: Doug Plasencia

3:00 pm - 3:30 pm

Break

3:30 pm - 6:00 pm

Reports from the State Post Disaster Mitigation Teams

* What is the status of efforts in each state?

* What mitigation recommendations have been made?

* Are there innovative opportunities?

* What strategies are being considered beyond FEMA's Section 404 Hazard Mitigation Grant Program?

Each state gets 20 minutes to report

Moderator: Larry Larson

6:00 pm - 8:00 pm

Dinner (on your own)

8:00 pm - 10:00 pm

White House and Congressional Update with Regard to Post Disaster Mitigation

Discussion will focus on priority opportunities for mitigation.

Moderator: Jon Kusler



POST FLOOD RECOVERY IN THE MISSISSIPPI BASIN

AGENDA

Day 2 - August 31

EXAMINATION OF POST DISASTER MITIGATION OPPORTUNITIES: FUTURE DIRECTIONS

The following questions will be addressed for each of the strategies listed below:

- * What policies are in place?
- * What are the financial incentives?
- * What are the barriers to effective mitigation?
- * What opportunities exist? How might they be implemented?

8:30 am - 10:00 am

Rebuilding Private and Public Levees and Dams

Moderator: Doug Plasencia

10:00 am - 10:20 am

Break

10:20 am - 12:00 pm

"Substantial Damage" Issue, i.e. 50% damage rule

- * Floodproofing
- * Elevation on Fill

Moderator: John Gambel

12:00 pm - 1:00 pm

Lunch (on your own)

1:00 pm - 2:00 pm

Relocation of Structures Subject to Damage

Moderator: Larry Larson

2:00 pm - 3:00 pm

Restoration of Floodplains and Wetlands

Moderator: Jon Kusler

3:00 pm - 3:15 pm

Break

3:15 pm - 4:15 pm

Future Directions, Priority Opportunities

Each federal agency and state will make a brief presentation (3-4 minutes each) on what they see as priority future directions for interstate cooperation, Congressional action, White House action, etc.

Moderator: Larry Larson

4:15 pm - 4:30 pm

Concluding Remarks; Follow-up Actions

Larry Larson, ASFPM; Jon Kusler, ASWM



POST FLOOD RECOVERY MEETING
*** Aug. 30-31, 1993 ***
ATTENDEES

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Iowa	Jack Riessen
Kansas	Kerry Wedel Don Kostecki
Minnesota	Joe Gibson
Missouri	Dick Gaffney
Nebraska	Brian Dunnigan
South Dakota	Darrell Dvorak
Wisconsin	Larry Larson

EMERGENCY MANAGERS

Iowa	Jerry Ostendorf John Cavanagh Chris Finch
Kansas	James Alexander
Missouri	Dale Schmutzler Susan Case
Wisconsin	Margie Weigle

DAM SAFETY

Wisconsin	Sue Josheff
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Reg. 5	Joan Montfort
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"	Eric Berman
"	Bill Powers
Reg. 7	Jodi Broida
"	Marlee Carroll
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POST FLOOD RECOVERY MEETING
*** Aug. 30-31, 1993 ***
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Department of the Army
U.S. Army Corps of Engineers--Civil Works
Tabulation of Levees

8/12/93

Category	LMS		LMM		NCS		NCR		MRK		MRO		Total	
	Damaged	Total	Damaged	Total	Damaged	Total	Damaged	Total	Damaged	Total	Damaged	Total	Damaged	Total
Fed Constructed/Fed Maintained	0	0	0	3	0	0	3	8	0	3	0	1	3	15
Fed Constructed/Local Maintain	12	42	0	0	1	32	9	65	6	45	8	30	36	214
Total Federal	12	42	0	3	1	32	12	73	6	48	8	31	39	229
Non-Fed/Local Maintain & Eligible	20	27	0	0	2	83	6	22	110	110	26	26	164	268
Non-Fed not Eligible (See Note 3)	19	20	0	2	0	10	13	163	700	700	147	184	879	1079
Total non-Federal	39	47	0	2	2	93	19	185	810	810	173	210	1043	1347
Total	51	89	0	5	3	125	31	258	816	858	181	241	1082	1576

Notes:

1. "Damaged" levees include those that have breached or were overtopped. There may be additional levees that were not breached or overtopped that were damaged. These will require damage surveys to identify.
2. "Non-Fed/Local Maintain & Eligible" levees in the impacted area (within counties declared a disaster area) that were included in the districts' lists of levees that met the requirements for assistance under PL 84-99.
3. "Non-Fed not Eligible" levees include: a). those levees that were determined to be ineligible for assistance under PL 84-99, and b). those levees for which no application was submitted. The numbers are almost certainly incomplete (the actual total may be over 2000). Most are privately owned agricultural levees. Some of these levees may be eligible for assistance from the Department of Agriculture, Soil Conservation Service.
4. Current rough estimate of the total length of non-federal eligible levees is 1800 miles and the length of non-federal ineligible levees is 4000 miles.

Numbers in *Italic* are estimates

Att. #2

Att. # 3



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

August 23, 1993

To: Army Corps of Engineers
Federal Emergency Management Agency
Department of Agriculture
Department of Transportation
Department of Interior
Department of Housing and Urban Development
Environmental Protection Agency
Small Business Administration
Other Relevant Agencies

From: T.J. Glauthier, Associate Director, Natural Resources,
Energy and Science, Office of Management and Budget

Katie McGinty, Director, White House Office on
Environmental Policy

Re: Procedures for Evaluation and Review of Repair and
Restoration Projects for Levees

The purpose of this guidance is to ensure the proper consideration of relevant options for repair, reconstruction, and other alternatives to levee restoration necessitated by flood damage. It also is intended to ensure that relevant organizations have the opportunity to comment on project specifications and suggest appropriate modifications. The overall goal is to achieve a rapid and effective response to the damaged flood control system that will minimize risk to life and property, ensure a cost-effective approach to flood damage mitigation and floodplain management, and protect important environmental and natural resource values.

This guidance should be viewed as an opportunity to allow consideration of alternatives with input from Federal, State, and local interests. It is not intended to deny any party access to existing programs for levee repair and restoration, to create unexpected delays, or to force alternatives to repair and restoration on unwilling participants. Nor does this contravene any existing statutory or other requirements.

In acting upon applications for levee repair and restoration of damages incurred as a result of the Midwest floods of 1993, responsible Federal agencies shall follow procedures below:

- At the time of initiating evaluation of proposals for repair and restoration of flood-damaged levees, each agency shall notify the appropriate agencies represented in the Disaster

Field Office (DFO), so that interested agencies may contribute to the evaluation process. The Federal Emergency Management Agency shall provide space at its DFOs for representatives of relevant agencies.

- In evaluating applications for levee repair and restoration in the region of the Midwest floods of 1993, each agency shall consider, to the extent practical, nonstructural alternatives and design modifications that could provide greater local benefits of flood control, reduction of future potential flood damages to the applicant and adjacent upstream and downstream localities, lower long-term cost to the Federal government, and natural resource protection. Agencies are encouraged to include other interested agencies during their evaluation process, to the extent practicable.
- Prior to final action on each application, project proposals shall be made available for review and comment to other Federal and State agencies and local interests represented at the applicable DFO for a minimum period of 24 hours (excluding weekends and holidays). Comments are to be made available to the projects' applicants. Agencies shall take these comments into consideration when making final project decisions..
- On a monthly basis, each agency shall report to the Office of Management and Budget and the Office on Environmental Policy on the status of levee repair and restoration, including: applications received, comments received, and actions taken.



Federal Emergency Management Agency

Washington, D.C. 20472

August 27, 1993

POLICY STATEMENT NATIONAL FLOOD INSURANCE PROGRAM

COVERAGE FOR SEEPAGE, HYDROSTATIC PRESSURE, OR SEWER BACKUP

It has come to our attention that in the recent Midwest flooding there were instances in which a policyholder protected his or her building by the use of individual, temporary structural protection, such as sandbags or flood shields, so that the flood waters did not reach the insured building. We understand that, in some instances, it was the community which took the protective action by constructing temporary sandbag walls or flood shields. However, some of these buildings were damaged by seepage, hydrostatic pressure, or sewer backup. The Standard Flood Insurance Policy (SFIP) excludes coverage for these causes of loss under certain conditions. The Federal Emergency Management Agency does not wish to have these policyholders, who very commendably took action to protect their property and by so doing prevented covered flood damage to their buildings, to be penalized by their actions.

Therefore, pursuant to Article VIII.D of the Dwelling Form of the SFIP and Article VII.D of the General Property Form of the SFIP, I am hereby waiving the exclusion for loss from or by seepage, hydrostatic pressure, or sewer backup in Article III.A.2(ii) of the Dwelling Form and in Article III.A(4) of the General Property Form so that such losses are covered if individual, temporary structural protection, such as sandbags or flood shields, prevented surface flood waters from touching the insured building. The waiver will also apply where the protective action which prevented surface flood waters from touching an insured building was taken by the community.

Of course, in all cases, the facts would have to be established supporting the waiver.

In situations where additional coverage is provided by this waiver, the basement coverage limitation contained in Article V.F of both the Dwelling Form and the General Property Form will continue to apply. A list of the items covered and of the items not covered in basements is attached.

Donald L. Collins
Acting Administrator
Federal Insurance Administration

NATIONAL FLOOD INSURANCE PROGRAM SCOPE OF BASEMENT COVERAGE

ELEMENTS COVERED:

- FOUNDATION ELEMENTS
- REQUIRED UTILITY CONNECTIONS
- SUMP PUMPS
- WELL WATER TANKS AND PUMPS
- OIL TANKS AND THE OIL IN THEM
- CISTERNS AND THE WATER IN THEM
- NATURAL GAS TANKS AND THE GAS IN THEM
- PUMPS AND OR TANKS USED IN CONJUNCTION WITH SOLAR ENERGY
- FURNACES
- HOT WATER HEATERS
- CLOTHES WASHERS AND DRYERS
- FOOD FREEZERS AND THE FOOD IN THEM
- AIR CONDITIONERS
- HEAT PUMPS
- ELECTRICAL JUNCTION AND CIRCUIT BREAKER BOXES
- CLEAN-UP
- UNPAINTED DRYWALLS AND SHEETROCK WALLS, INCLUDING FIBERGLASS INSULATION, AND CEILINGS (REPLACE, AND IN SUBSTITUTION FOR FINISHED WALLS)
- ELEVATORS AND EQUIPMENT, EXCEPT FOR SUCH EQUIPMENT LOCATED BELOW THE BASE FLOOD LEVEL IF SUCH EQUIPMENT WAS INSTALLED ON OR AFTER OCTOBER 1, 1987

ELEMENTS NOT COVERED:

- CONTENTS
- IMPROVEMENTS SUCH AS FINISHED WALLS, FLOORS, AND CEILINGS
- BUILDING EQUIPMENT AND FIXTURES NOT SPECIFICALLY COVERED

Discussion Paper

(This background paper has been prepared to stimulate discussion in a workshop concerning post-disaster mitigation which will be held September 28 and 29 in St. Louis, Missouri by The Association of State Wetland Managers and The Association of State Floodplain Managers).

POST DISASTER RESPONSE AND RECOVERY IN THE MISSISSIPPI BASIN AND THE RESTORATION OF FLOODPLAIN AND WETLAND AREAS

by Dr. Jon Kusler¹

Recent severe flooding in the nine state regions of the upper Mississippi Basin with flood losses which may exceed \$12.5 billion dollars provides opportunities to "restore" selected wetland and floodplain areas. This background paper raises some of the key issues with such restoration based upon past experiences (see selected bibliography) and provides recommendations for encouraging such efforts in the short and long-term.

CONCLUSIONS, RECOMMENDATIONS

Based upon post flood response experience and floodplain and wetland restoration experiences in the past two decades, recommendations may be made with regard to restoration of floodplain and wetland areas in a Mississippi Basin post-flood context (Kusler, 1982; 1985; 1989; 1990):

1. The key to various types of past river and floodplain "restoration" efforts has, with little exception, been landowner support and community sponsorship. Federal agencies and states should, therefore;

- ♦ First, **educate private landowners and local governments** with regard to federal financial assistance for relocation, restoration, etc. They need to know what flood, post-disaster and natural resource funding is available, whether they qualify, and how to proceed.
- ♦ Second, **make financial and technical relocation and restoration assistance rapidly available** to landowners and local governments before redevelopment decisions are made. Landowners also need technical help in filling out forms, making plans, etc.
- ♦ Third, **support existing local, state, and federal regulations which apply to rebuilding including regulations pertaining to maintenance of floodways and "substantial" improvements.** Support for such regulations should be combined with technical and financial assistance.
- ♦ Fourth, **adopt a "go slow" approach to the rebuilding of smaller private levees with public funds** to insure that such levees will not "back-up" water on other landowners or governmental entities and that such rebuilding efforts are in the broader public interest. Federal funding for such reconstruction should be conditioned upon studies determining the impact of levees on flood conveyance.
- ♦ Fifth, **identify and prioritize sites with restoration potential.** Such sites need to be proactively identified in cooperation with landowners, local governments, nonprofits, and others. See discussion of "restoration" below.
- ♦ Sixth, **help form local citizen/local river corridor restoration groups with landowner, nonprofit, and government members to help decide what they want for their river corridor and how to implement this "vision".**
- ♦ Seventh, **provide longer term training and technical assistance to landowners,** local governments and nonprofits (e.g., the National Park Service Rivers and Trails Program; the U.S. Army Corps of Engineers Floodplain Management Program; the Soil Conservation Service Wetland Reserve; and restoration efforts) to help them develop and implement more detailed river corridor plans.
- ♦ Eighth, **provide longer term coordinated federal financial assistance on a cost-share basis** to help implement river corridor management plans.

2. From economic and political perspectives, restoration efforts can often best be approached from a multiobjective, river corridor perspective--future flood loss reduction, pollution control, protection and restoration of wildlife and fisheries habitat, recreation, and urban renewal (in some instances).

3. A broad concept of floodplain "restoration" should be applied to river corridor areas linked to specific floodplain and wetland functions and values, the potential for reducing future flood losses, and landowner needs. Restoration of floodplain and wetland areas should be approached broadly for evaluation, planning and implementation purposes in terms of a number of types and degrees of restoration including: (a) restoration of flood conveyance and storage while maintaining many existing uses, (b) creation of multiobjective recreational greenways, and (c) restoration of the ecological integrity of some areas to near settlement conditions.

WHY "RESTORE" FLOODPLAIN AND WETLAND AREAS

Partial or complete restoration of main stem and tributary floodplain and wetland areas may be desirable in specific contexts to both help meet landowner needs and achieve a variety of other goals:

(1) Lower future flood heights by removing artificial impediments (constrictions) to flood flows such as levees which back-up floodwaters on upstream and adjacent lands and increase downstream flood velocities and erosion. This can help floodplain landowners as well as reduce future public losses.

(2) Restore natural flood storage, thereby also lowering future flood heights and damages. This will also help floodplain landowners as well as reduce future public flood losses.

(3) Relocate from the floodplain, elevate or floodproof private houses, industrial and commercial facilities, sewage treatment plants, water supply plants, roads and other structures and facilities. This can help private and public landowners and reduce future flood insurance and disaster assistance payments and the economic and social disruption caused by flooding.

(4) Restore fish and wildlife habitat including endangered species habitat by restoring stream and river bank vegetation, wetlands, spawning grounds, etc. This can help private landowners.

(5) Restore water quality from point and nonpoint sources of pollution by restoring wetlands and vegetated filter strips.

(6) Reduce erosion and stream meander by revegetating stream banks and creating revegetated filter strips; and

(7) Restore natural recreational opportunities for hiking, birding, and canoeing or create new ones (e.g., bike paths) by restoring natural vegetation, wetlands, riparian habitat, free-flowing waters, etc.

The restoration of selected floodplain and wetland areas is consistent with the "net gain" goal recommended by the National Wetland Policy Forum and the recommendation by the National Academy of Sciences. (National Research Council, 1991).

EXPERIENCE IN OTHER CONTEXTS: MITIGATION OF FUTURE LOSSES

Recent flooding along the Mississippi has been particularly severe in terms of depth and duration of flooding. The Mississippi floodplain is also relatively unique because of its unparalleled length and width, because of the number of cities and villages located on the floodplain, and because of the size and number of levees. Yet, the issues and opportunities for mitigation of future flood losses and restoration of floodplain/wetland areas are similar to those of many smaller rivers and streams faced by the more than 20,000 communities in the United States with flood problems.

A relatively clear and consistent picture emerges from U.S. and international flood recovery efforts over the last 30 years and attempts to implement "mitigation" to reduce future losses. (See Kusler 1982; 1989; 1992). Many at least partially successful efforts have been undertaken by communities (likely more than 500) to partially "restore" floodplain areas after repeated flooding through the creation of "greenways", relocation of structures, bioengineering, and other approaches. However, these efforts have usually been undertaken to achieve multiple goals and not restoration of floodplains and wetlands to their natural conditions.

Several lessons from these efforts include the following:

(1) In general a very narrow window of opportunity has existed in efforts for relocation, floodproofing, and other individualized adjustments to reduce future flood losses. Often severely flooded and damaged landowners wish to move, relocate, or otherwise take measures to reduce future potential flood losses during the immediate period following a flood event while the consequences of the flooding is clear in their minds and they have not repaired and moved back into their structures. However, once they have received flood insurance, disaster assistance, and have begun or finished repair and moving back onto the lands, they are much less receptive to individual mitigation options. Instead, they are likely to push strongly for dams or levees or other measures at public expense to "remedy" the flood problem.

(2) In general, restoration efforts have been locally initiated and have involved broadscale community involvement. Land acquisition has usually been on a willing-seller basis. Many of the efforts have been at least partially funded at the local level. However, federal financial and technical assistance have played key roles.

(3) Virtually none of these restoration efforts have involved attempts to restore entire floodplain areas to natural conditions although many have involved at least partial restoration of wetlands or other natural areas within a broader management area. However, in the last 15 years a great deal has been learned scientifically about the restoration of wetlands, riparian zones, and other natural habitat. In addition, new sources of funds and technical assistance are available. For this reason, past efforts should not totally be viewed as a model for future efforts.

THE MISSISSIPPI FACTUAL CONTEXT

Any effort to "restore" Mississippi floodplains and wetlands must take place in the context of a highly complex and varied floodplain:

- ◆ A river and floodplain system with highly varied physical characteristics ranging from relatively high velocity streams, streams with narrow floodplains and almost no wetlands (mountainous headwater areas) to low gradient, slow moving streams with large floodplains and many wetlands (both headwater areas and the lower Mississippi).
- ◆ A floodplain utilized for a wide variety of activities (agricultural, residential, commercial) and degrees of development. Large, middle-size, and smaller urban areas are common. Much of the remaining floodplain is in agricultural and forestry use.
- ◆ A floodplain with a variety of types and degrees of flood control and flood loss reduction measures including a wide variety of combinations of levees, channel modifications, dams, and fills. Most urban areas are protected by federal or cooperative federal levees.
- ◆ A river and tributaries with highly modified hydrologic and sedimentation regimes and water quality due to flood control measures, clearing in the watershed, and discharges of point and nonpoint pollutants. Virtually all of the upper Mississippi is now subject to dams and locks which control the water levels (at least during nonflood river stages).

CONCEPTS AND REQUIREMENTS OF "RESTORATION"

It will not be possible to fully restore any Mississippi floodplain or wetlands to pre-1700 conditions due to the extensive hydrologic modifications in the Mississippi watershed and changes in flood levels, "normal" flows, low flows, hydroperiod, sediment regimes, water quality, and both vegetation and wildlife. But, various degrees and types of restoration are if certain floodplain and wetland functions are possible. Three major options for "restoration" of at least certain functions include:

(1) **Primary goal: future flood loss reduction.** One option for "restoration" while also reducing flood damages to landowners would be to not repair levees or raze existing levees at selected sites and to floodproof, elevate, or relocate structures in affected areas. The future flood loss reduction effects in lowering upstream and adjacent water levels for a particular discharge of flood by removing levees and other impediments could be determined through water surface profiles (e.g., HEC 2) with a fair amount of specificity and accuracy. Flood storage (in contrast with flood conveyance) could also be restored by not repairing certain levees or by breaching levees. However, it is more difficult to determine the effects of increasing flood storage on a large river such as the Mississippi.

Note, restoration of flood storage and conveyance does not necessarily require the restoration of areas behind breached or restored levees to a natural condition. Nor does it require public ownership. Back lying areas could continue to be used for agriculture, forestry, or other activities which do not affect conveyance or storage.

(2) **Goals: multiobjective use of river corridors; promote recreational and tourism values.** A second option is not only to restore flood storage and/or conveyance but a variety of other additional functions and values and to enhance recreational values. "Greenways" created by many communities are examples of such multiobjective efforts. Greenways usually involve public acquisition of areas, the relocation of structures (often on a willing-seller basis) and the creation of trails and public access points. Selected wetland and other natural areas may be partially restored to a natural (or semi-natural) condition within the broader greenway corridor.

(3) **Goals: restore wetlands, riparian zones, endangered species habitat, fishery habitat, etc.** A third option (and not necessarily inconsistent with options one and two) is total or nearly total restoration of some floodplain areas to natural or nearly natural conditions. As noted above, total restoration to pre-settlement conditions is virtually impossible due to highly modified hydrologic regimes. But, considerable restoration may be achieved in some contexts.

Restoration to pre-settlement conditions will not be a scientific or economic alternative for many filled areas and many urban areas due to continued water quality and other influences (runoff, sediment) and the highly modified hydrology. Restoration efforts may best take place (in most instances) in rural areas with modest land values, large parcels of land in single ownership, and limited alterations to existing hydrology such as levees or partial agricultural drainage of wetlands.

Restoration efforts should create not simply isolated pieces of restored lands, but linked parcels and corridors to permit movement of wildlife and fish and a broader range of habitats. Restoration efforts may best take place where a nonprofit (e.g., the Nature Conservancy) or a public agency (e.g., the U.S. Fish and Wildlife Service) can manage the land over time including control of nuisance species, controlled burns, etc. These areas are often adjacent to existing public or nonprofit lands.

RESTORATION OPPORTUNITIES

A variety of options are available to partially or wholly restore particular floodplain and wetland natural functions and values.

- ◆ Do not repair or provide public funding for damaged levees; raze existing levees. This could help restore flood conveyance and storage. From economic and political perspectives, this may be primarily an option with the smaller, private levees. However, partially damaged levees may continue to block flood flows (conveyance) and failure to rebuild levees will not, in itself, achieve most other restoration objectives.

- ◆ Construct "setback" levees rather than rebuild levees in place. This would, in some instances, help restore wetlands and riparian zones and provide river-front recreation areas.
- ◆ Rebuild levees with environmentally sensitive design and revegetation. This could reduce the environmental impact of levees and increase recreational use.
- ◆ Use bioengineering rather than riprap to stabilize stream and river banks. This could reduce environmental impact and increase natural wildlife, fisheries, scenic, and other functions.
- ◆ Relocate houses and other buildings from the floodplain, but maintain the floodplain in agriculture or other private open space uses. This could simultaneously reduce future flood losses while increasing flood storage and conveyance and a broad range of other functions.
- ◆ Elevate and/or flood-proof structures. This can reduce future flood losses and reduce the pressures/need for repair of levees or new flood control works.
- ◆ Create "greenways" with bike paths, etc. This can simultaneously reduce flood losses and increase recreational, tourism, and other functions.
- ◆ Passively restore wetlands and riparian zones by allowing areas behind levees, etc. to naturally revert to wetland. This can help restore a broad range of functions and values.
- ◆ Actively restore wetlands and riparian zones by filling drainage ditches, removing fills, etc. This can also help restore a broad range of functions and values.

IDENTIFYING (MAPPING) AREAS WITH RESTORATION POTENTIAL

One of the impediments to restoration is lack of detailed information and maps identifying areas with restoration potential. What information is needed to identify potential restoration areas and how might these be mapped or otherwise identified?

A pragmatic, multi-step approach should be taken for the identification of potential restoration areas:

(1) It may be useful to first identify (exclude) areas with low restoration potential due to high costs, the highly altered conditions of natural conditions, or political unacceptability. These will include intensively developed urban areas and some intensively developed rural areas with major levees, fills and other alterations. These areas may also include some urbanizing or rural areas with extensive infrastructure.

(2) It may then be useful to identify several types of areas with different sorts of restoration potential:

- (a) Areas behind breached levees (primarily rural areas behind smaller, agricultural levees) where the levees have significantly restricted flood conveyance or destroyed large areas of flood storage. Repair of the levees may not be desirable to provide flood storage or flood conveyance but relocation, elevation, or flood-proofing of structures in affected areas combined with continued private agricultural use of the floodplain may be appropriate. This will help restore flood storage and conveyance.
- (b) Urbanizing and rural areas with relatively low intensity development, limited infrastructure, limited critical facilities, smaller or no levees, serious flood damages from this flood event, and repetitive flood damages, and strong recreational needs where relocation, public acquisition, and creation of "greenways" may be appropriate.
- (c) Rural areas with limited or no development, agricultural or forestry uses, major existing wetlands, other significant wildlife or fisheries values, significant "lost" wetlands and restoration potential, and relatively modest land values. A combination of post-disaster funds and resource protection and management funds could be applied to facilitate relocation, acquisition, and restoration to expand existing National Wildlife Refuges or state or local parks, forests, or other wildlife areas. Some of this land could remain in private ownership; other lands might be placed in public ownership.

The following types of maps (or other inventories) would be helpful in identifying these areas:

- ◆ Maps showing breached levees, particularly smaller levees and the areas inundated by recent flooding behind these levees.
- ◆ Maps or other identification of levees in floodway areas which have caused and will cause increased flood heights on upstream or adjacent lands due to blockage of flood flows. Apparently these will need to be developed.
- ◆ Maps identifying levees and back lying areas which may provide significant flood storage. These maps will need to be developed.
- ◆ Flood maps (more generally) showing areas subject to frequent, damaging flooding including leveed areas. The Federal Emergency Management Agency (FEMA), the U.S. Geological Survey, the U.S. Army Corps of Engineers, or U.S.D.A. Soil Conservation Service flood maps are available for most main stem and major tributary areas but are not available for many smaller streams through the basin.
- ◆ Maps showing the numbers and types of structures in the floodplain, including their vulnerability to flooding, flood damages suffered in the recent flood, and flood damages suffered over the last 20 years (e.g., repetitive claim structures pursuant to the Flood Insurance Program.) FEMA flood maps show existing structures but not much of the rest of the information.

- ◆ Existing land use maps (agriculture, forestry, residential, etc.) and zoning maps. Local zoning maps are available for virtually all urban areas along the Mississippi and many rural areas.
- ◆ Maps showing the location of infrastructure and critical facilities in the floodplain and whether they have been subject to flooding. Zoning maps show some but not all of these areas.
- ◆ Maps of existing wetlands and "lost" wetlands. National Wetland Inventory maps will show existing wetlands; U.S.D.A. Soil maps will (in general) indicate "lost" wetlands.
- ◆ Maps showing sites of endangered species habitat. These are apparently available for some areas.
- ◆ Maps showing areas subject to water pollution and, conversely, areas with particularly great potential for reducing or preventing such pollution if restored.
- ◆ Land ownership (whether public or private) and the size of parcels.

FEDERAL FINANCIAL AND TECHNICAL ASSISTANCE

A variety of financial and technical assistance programs outlined in Table 4 exist to help private landowners and governments with restoration efforts. However, they are quite different in their intent and are implemented by different agencies. They include (1) disaster assistance, flood insurance, and other flood-related efforts, and (2) natural resource, river, and wetland-related efforts. These efforts need to be carefully coordinated.

PUTTING IT ALL TOGETHER

Experience with past flood events reveals that often a great deal of federal, state, local and private (e.g., Red Cross) technical and financial assistance is available to help flood victims but such assistance is often poorly coordinated, does not arrive when needed, and is not "bundled" in useful ways. Ironically, the greatest incentive for coordination of all forms of assistance is at the lowest level--the landowner and local governments. Yet landowners and local governments affected by disasters are at least able to provide such coordination due to lack of knowledge and the need to cope with a broad range of issues and problems (jobs, clean up, families, etc.). Landowners and local governments need planning and technical assistance help. They need to be brought together to think collectively about their future. They need help in applying for various types of assistance.

This sort of help can and should be provided by federal and state agencies. However, the "specialist" orientation of most agency staff reduce their ability to provide this sort of assistance. It can also be provided by land trusts, universities, and nonprofits. However, their ability is also limited by lack of knowledge of programs and techniques.

Rapid training programs combined with simple hand-outs, videos, and other materials could help federal and state agencies, universities, land trusts, and others.

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Table 1
Restoration Opportunities

- ◆ Raze or do not repair existing levees (particularly smaller, private levees which block flood flows).
- ◆ Construct "setback" levees.
- ◆ Rebuild levees with environmentally sensitive design such as revegetation.
- ◆ Use bioengineering rather than riprap to stabilize banks.
- ◆ Relocate houses and other buildings from the floodplain.
- ◆ Create "greenways" with bike paths, etc.
- ◆ Elevate and/or flood-proof structures.
- ◆ Passively or actively restore wetlands and riparian zones by blocking drainages, etc.

Table 2

Common Impediments to Restoration

Common impediments to restoration include:

- ◆ lack of restoration funds (in general) or lack of funds early enough to affect private and public decision-making;
- ◆ decisions to rebuild are made without knowledge of funding options;
- ◆ areas with high restoration potential are not identified to guide restoration efforts;
- ◆ inadequate information is available concerning structures and activities which block floodways and preempt significant flood storage areas;
- ◆ restoration "goals" are not adequately identified or disagreements arise with regard to such goals;
- ◆ inadequate involvement of landowners and local interest groups to work out a solution suitable for their needs; and
- ◆ lack of coordination of federal, state, local, nonprofit, and other programs.

Table 3

**Keys to Successful Restoration
(Wetland Restoration, Riparian Zone Restoration)**

- ◆ Landowner support.
- ◆ Community support.
- ◆ Identification of sites with high restoration potential.
- ◆ Expertise in design and project supervision.
- ◆ Restoration of the hydrology. If hydrology is restored, replanting is often not needed.
- ◆ Mid-course correction capability.
- ◆ Long-term monitoring, maintenance, and management capability.

Table 4

**Federal Programs Offering Potential Assistance to Landowners
for Restoration, Relocation**

Flood, Post Disaster Programs

Section 1362 Program, Federal Emergency Management Agency
Section 404 Program, Federal Emergency Management Agency
Disaster Assistance, Federal Emergency Management Agency
Flood Insurance Program, Federal Emergency Management Agency
Public Law 99 Assistance in Rebuilding Levees, U.S. Army Corps of Engineers
Public Law 566, U.S.D.A. Soil Conservation Service

Nature Resource, River, Wetland

Rivers and Trails Program, National Park Service
Partners for Wildlife, North American Waterfowl Management Plan, Waterbank Program, U.S. Fish and Wildlife Service
Wetland Reserve Program, U.S.D.A. Soil Conservation Service
Section 319 Watershed Planning Program, U.S. Environmental Protection Agency
Land and Water Conservation Fund, U.S. Department of the Interior



ASSOCIATION OF STATE FLOODPLAIN MANAGERS, INC.

MULTI-OBJECTIVE MANAGEMENT OF FLOODPLAINS

A White Paper

Background

Floodplain managers have traditionally viewed floodplains simply as areas with flood problems and have focused almost exclusively on programs and activities to prevent and reduce flood losses. At the same time, we have become frustrated that floodplain management programs are not always the top priority of floodplain residents or local officials and sometimes are not even being implemented.

A primary reason for this situation is that we often neglect to consider the numerous other, competing interests in floodplains. Besides being subject to floods, these areas contain homes and businesses, recreation sites, fish and wildlife habitats, commercial interests, economic centers, historic districts, sources of power generation, and unique natural features. To many residents and local officials, therefore, a floodplain management program is no more or less important or pertinent than other activities that take place on the floodplain. It should come as no surprise that floodplain management activities, like those of other programs, may not coincide with the interests and goals of property owners or community officials.

Because of their diverse values and uses, floodplains are the targets of numerous government programs and regulations. A single parcel of floodplain land, for example, may be subject to local, regional, state, and National Flood Insurance Program building regulations; wetlands development restrictions; historic preservation rules; and water quality standards. Other government programs may support development on the same flood-prone parcel of land, often for competing purposes. Under one program, structures may be built to control flooding, while another program helps remove structures in order to preserve natural habitats. One program may fund new infrastructure to help revitalize the local economic base, another may rehabilitate existing buildings for housing or historic preservation, and still another may support clearing the land for recreation.

All of these government programs and regulations, along with numerous private activities, have an impact on floodplain properties and on implementation of community-wide goals and objectives. Unfortunately, just as floodplain managers have often failed in the past to take into account the varied uses of floodplains, many of the other programs do not adequately consider the area's flood hazard or its unique natural features and beneficial values. Coordination of the various (and often conflicting) government programs is only accomplished at the local level, if at all.

It is time to recognize that floodplain management programs do not operate in vacuums. There is a wide range of local needs and goals with which flood protection efforts must be coordinated. If we ignore this reality, floodplain management programs will in turn be ignored by those working on other community priorities. On the other hand, if we embrace a management approach that can integrate the diverse values of floodplain lands, the variety of interests in them, and the needs and goals of the local community, everyone will benefit. We must look beyond the immediate interests and jurisdictions of our agency or organization and begin to work with other groups whose paths cross ours on the floodplain.

Multi-Objective Management

Multi-objective management is a process that

- (1) Identifies diverse local needs and goals related to floodplains and associated areas,
- (2) Identifies numerous special-purpose programs and resources--both private and public--that can support those needs and goals,
- (3) Develops a plan to best resolve the needs and achieve the goals, and
- (4) Coordinates and utilizes multiple programs and resources to implement the plan.

Successful multi-objective management must include a planning process through which local officials can develop the most appropriate mix of government and private sector programs to implement community goals and objectives. One part of that process is to identify, utilize, and integrate pertinent state and federal programs. The process also must resolve local conflicts and differences between the public and private sectors. It should recognize and utilize the input and determination of active individuals and citizen groups.

Multi-objective management also needs the cooperation of state and federal agency personnel. They must be sensitive to local needs, be familiar with other programs, and want to support local efforts to reduce flood losses and improve the community.

The Association's Role

The Association's role is that of facilitator and trainer. The Association will undertake activities to help local, state, federal, and private organization personnel learn about the multi-objective planning process and about state and federal programs that affect floodplains. Specifically, the Association calls for the following:

- (1) There should be an annual "roundtable" meeting of organizations and federal agencies involved in programs that affect floodplains. The roundtables would be forums for exchanging information on programs, recent developments, successful efforts, areas of conflict, and similar topics. They would provide an opportunity to assess the status quo and improve the integration of government programs and organization activities that affect multi-objective management.
- (2) A handbook on multi-objective management and related programs should be prepared for local government officials and interested citizens. The publication itself would be only one of the benefits of carrying out this activity. The preparatory work would provide a forum for refining the planning process, for identifying and cataloging appropriate federal and state programs, and for clarifying the role of participating agencies and organizations in multi-objective management.
- (3) The Association will continue to monitor and develop national and regional workshops and conferences that can foster the implementation of multi-objective programs. Such forums will help familiarize federal, state, local, and private agencies and organizations with multi-objective management, with other related programs, and with the needs and concerns of the other participants.
- (4) The Association will take a proactive role and work to educate its members and their agencies about the benefits of multi-objective management.

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SEPTEMBER 14, 1993

WHITE HOUSE
DOMESTIC POLICY STAFF
O.E.O.B. ROOM #210
WASHINGTON, D.C. 20501
VIA FACSIMILE
(202) 456-7028

ATTENTION: MR. BRIAN BURKE

RE: NATIONAL WATER PROBLEMS

DEAR MR. B. BURKE:

THE REASON I WAS SO "CAGY" ABOUT RELEASING DETAILS ON MY IDEA IS BECAUSE I WANT TO GET THE RECOGNITION IT DESERVES. ALSO I WOULD LIKE TO BE ASSIGNED TO THE PROJECT AS CONSULTANT/ADVISOR UNDER YOUR ADMINISTRATION OR UNDER A SPONSOR THAT WOULD WANT TO SEE THE PROJECT DEVELOPED. I AM OPEN FOR SUGGESTIONS.

PER MY PREVIOUS FACSIMILES AND PREVIOUS TELEPHONE CONVERSATIONS, I WANTED TO HAVE SOME ASSURANCE THAT MY IDEA STAYED MY IDEA THEREFORE, A SIMILAR PRESENTATION WAS MADE TO KMET CHANNEL 34 IN LOS ANGELES, CA. TO A MS. EMILY WOLK ON SEPTEMBER 3, 1993, FOR THE RECORD. MR. RENE SANTISTEBAN WAS PRESENT AS MY WITNESS. I WILL RELEASE SAME PACKAGE TO OTHER ENTITIES.

YOU HAVE INDICATED THAT YOU ARE THE RIGHT PARTY TO MAKE THE PRESENTATION TO. SO FIRST I WANT TO THANK YOU FOR YOUR COOPERATION. ALSO I WANT TO EMPHASIZE THAT ANY CRITICISM MADE, IS A CONSTRUCTIVE CRITICISM AND IS MADE ONLY IN AN EFFORT TO RESOLVE THE PROBLEM. HOPE THAT YOU UNDERSTAND THAT THIS PACKAGE WAS PREPARED IN A RUSH IN ORDER TO EXPEDITE, THAT I AM NOT A TECHNICAL WRITER AND THAT IS DIFFICULT TO EXPLAIN A TWO TO THREE YEAR, MULTI-MILLION DOLLAR PROGRAM IN SUCH A SHORT FORM. NOT EVERYTHING WILL BE DISCUSSED THOROUGHLY BUT EVERYTHING MENTION HAS A PURPOSE TO THE CONCLUSION.

I ALSO WANT TO GIVE CREDIT TO THE MAJOR TASKS THAT HAVE BEEN UNDERTAKEN MAINLY BY THE CORP.OF ENGINEERS ON THEIR DAMS, LOCKS, BRIDGES, LEVEES ETC. TOWARDS THE RESOLUTION OF THE PROBLEM.

THE IDEA IS A SOLUTION TO ALLEVIATE THE NATION WATER PROBLEMS AND WILL ALSO ALLEVIATE INDIVIDUAL STATES WATER PROBLEMS, NOT ONLY IN REGARD TO ABUNDANCE OF WATER BUT ALSO IN REGARD TO THE LACK OF WATER.

THERE ARE (3) THREE MAJOR PROBLEMS WHICH I ADDRESS AS FOLLOWS:

FIRST MAJOR PROBLEM WE HAVE BUILT DAMS TO RETAIN WATER, HAVE BUILT LOCKS TO GET ACCESS FOR NAVIGATION AND HAVE BUILT LEVEES TO GUIDE IT BUT TO DATE WE HAVE NOT BEEN ABLE TO CONTROL IT. IT IS OBVIOUS BY THE FLOODS WE HAVE HAD AND THE DROUGHTS WE HAVE HAD, JUST RECENTLY NAVIGATION CAME TO ALMOST A COMPLETE STOP DUE TO THE LACK OF WATER. IN 1993 WE HAD THE DEVASTATING FLOODS. THIS WEATHER PHENOMENON IS REFERRED TO AS QUOTE UNQUOTE "MOTHER NATURE".

SECOND MAJOR PROBLEM ACCORDING TO STATISTICS ABOUT ONE HUNDRED TRILLION GALLONS OF WATER ARE DUMPED JUST INTO THE GULF OF MEXICO. MOST OF THIS WATER IS WASTED NEVER TO BE RECOVERED.

THIRD MAJOR PROBLEM WE HAVE SOME STATES THAT NORMALLY GET WATER BUT NOW ARE GOING THROUGH A DROUGHT. PRESENTLY ARE ALSO APPLYING FOR DISASTER MONEY, EXAMPLE; SOUTH CAROLINA AND GEORGIA. ALSO WE HAVE OTHER STATES THAT HARDLY GET ANY WATER.

THE PHILOSOPHY OF MY IDEA NOT ONLY APPLIES TO THE NATIONAL LEVEL BUT TO ALOT OF THE STATES INDIVIDUALLY. EXAMPLE:

CALIFORNIA MAINLY SOUTHERN CALIFORNIA HAS LACK OF WATER BUT YET MANY, MANY GALLONS OF WATER ARE ALLOWED TO BE DUMPED INTO THE PACIFIC OCEAN, WASTED NEVER TO BE RECOVERED.

TEXAS AROUND SAN ANTONIO TO HOUSTON AREAS (SOUTH-EAST) FLOODS OCCUR FREQUENTLY BUT IN THE PAN-HANDLE AREA (NORTH-WEST) WATER IS VERY SCARCE.

MY IDEA WILL AND OR ALLEVIATE THE FOLLOWING:

*CREATE JOBS

*SAVE LIVES

***SAVE MONEY**

RIGHT NOW BILLIONS WILL BE SPENT TO "BAND-AID" THE PROBLEM. REMEMBER THAT QUOTE UNQUOTE "MOTHER NATURE" IS NOT GOING ANY WHERE AND WILL CONTINUE TO HAPPEN UNLESS WE RECTIFY THE PROBLEM.

***THOUSANDS OF PEOPLE ARE DISPLACED FROM THEIR HOMES WITH GREAT LOSSES.**

***CONSUMERS WILL PAY**

***ENVIRONMENTAL DAMAGE IS UNKNOWN.**

***PEOPLE ARE GOING THROUGH PHYSICAL, EMOTIONAL & FINANCIAL TRAUMA MANY FAMILIES AFFECTED DIRECTLY OR INDIRECTLY.**

***MONEY ALLOCATED FOR DISASTER DOES NOT INCLUDE HORRENDOUS LOSSES FROM INSURANCE COMPANIES. RED CROSS, SALVATION ARMY AND MANY OTHER PRIVATE VOLUNTARY SECTORS ARE BEING DEPLETED FROM THEIR FUNDS AND STILL ALL DAMAGES WILL NOT BE COVERED.**

***FARMERS ARE DEVASTATED.**

***DAMAGE TO THE INDUSTRIAL AND COMMERCIAL IS ENORMOUS ETC. ETC.**

MOST IMPORTANTLY IF MY IDEA BECOMES A REALITY IT WILL SOLVE THE ABOVE PROBLEMS. "STRIKE WHILE THE IRON IS HOT".

TO DATE WE HAVE NOT BEING ABLE TO CONTROL CATASTROPHES SUCH AS TORNADOS/CYCLONES/VOLCANOES/EARTHQUAKES. BUT WATER WE SHOULD BE ABLE TO CONTROL.

DATA WE HAVE, AND PLENTY. WE HAVE SPENT BILLIONS IN WEATHER SATELLITES. WE KNOW THE MIN. AVERAGE, MAX. RAIN. WE KNOW WHEN IT RAINS, WE KNOW WHERE. WE KNOW THE PATTERN OF THE PATH OF THE WATER. WE KNOW MIN. & MAX. DEPTHS IN THE RIVERS WE HAVE ELEMENTS MEASURING VELOCITY OF THE WATER, HOW DIRTY, HOW CLEAN ETC. ETC. DATA IS AVAILABLE PERIOD. IN MY PROPOSAL WE WILL USE ALL THIS KNOWLEDGE.

DUE TO THE SO CALLED, "WORLD WARMING" MORE EXTREME CONDITIONS WEATHER WISE WILL EXIST, THEREFORE PROBLEM WILL BE HARDER TO RESOLVE BUT WE HAVE AND ALWAYS HAVE HAD THE KNOWLEDGE TO TACKLE THE PROBLEMS. MORE ENGINEERING METHODS SHOULD BE USED AND WILL BE USED IN MY PROPOSED PROGRAM.

IN ORDER TO RESOLVE THE PROBLEM YOU HAVE TO UNDERSTAND WHAT YOU ARE DEALING WITH. REFER TO EXHIBIT "A" RIVERS MAP.

IF YOU TAKE THE MISSISSIPPI, MISSOURI, AND THE OHIO RIVER. JUST THESE THREE ALONE, YOU ARE DEALING WITH THE LONGEST RIVER SYSTEM IN THE WORLD AND THEREFORE ALSO IS THE BIGGEST INLAND NAVIGATION PROJECT IN THE WORLD. IF YOU ADD THE OTHER MAJOR RIVERS IN THE SYSTEM, SEE RIVERS MAP. YOU ARE TALKING ABOUT DRAINAGE FOR (2/3) TWO THIRDS OF THE U.S.A REPEAT 2/3 OF THE COUNTRY NOT EXACTLY A BACK YARD SITUATION. AS A MATTER OF FACT THE SYSTEM COLLECTS WATER FROM ABOUT THIRTY-ONE STATES AND CANADA.

IT TOOK THE FLOODS OF 1927 TO GET ACTION BY CONGRESS AND SECRETARY OF WAR THROUGH THE RIVER AND HARBOR ACT OF JAN 1, 1927 WITH CORP OF ENGINEERS UNDER SUPERVISION OF THE CHIEF OF ENGINEERS AND THEN THE FLOOD CONTROL ACT OF MAY 15, 1928 AND LATER THE OHIO RIVER FLOODS OF 1937, PLUS THE MISSOURI RIVER FLOODS OF 1943, 1947, 1951, & 1952 PLUS ANOTHER SERIES OF MAJOR FLOODS IN 1965, 1973, 1982, 1983 AND A FEW MAJOR DROUGHTS TO EMPHASIZE THE IMPORTANCE TO ALLOCATE PRECAUTIONARY METHODS THAT HAVE CONTINUED TO DATE. BASICALLY CONCENTRATION HAS BEEN TO SOLVE NAVIGATION AND POWER (ELECTRICITY) AS FIRST PRIORITY. YOU WILL NOTICE THE PATTERN OF FREQUENCY DUE TO POPULATION INCREASING ALONG THE RIVERS AND YOU WILL ALSO NOTICE THAT DOLLAR VALUE HAS INCREASED TREMENDOUSLY. FOR OTHER OBVIOUS VARIOUS REASONS. SOME INDIVIDUALS IN THE FLOOD PLAINS WERE TOLD THAT CERTAIN LEVELS OF FLOOD ONLY OCCUR EVERY 100 YEARS. SOME OF THOSE INDIVIDUALS ARE GOING ON THEIR 500 YEAR BIRTHDATE (THEY HAVE GONE THROUGH FOUR MAJOR FLOODS). AGAIN WATER CONTROL IS NOT WHAT IT SHOULD BE AND MUST BE IF WE ARE TO STOP DEVASTATIONS.

THERE ARE TWO OTHER MAJOR ACCOMPLISHMENTS THAT DESERVE CREDIT AND NEED TO BE MENTIONED.

NEW ORLEANS HAD ALOT OF FLOOD PROBLEMS. THE BONNET CARRE SPILLWAY WAS BUILT JUST ABOVE NEW ORLEANS. BY OPENING THE GATES OF THIS SPILLWAY ALL THE DANGER OF FLOODING NEW ORLEANS IS RELIEVED INTO THE PONTCHARTRAIN LAKE SAVING NEW ORLEANS FROM THIS DANGER. THIS PARTICULAR LAKE IS CONNECTED TO THE GULF OF MEXICO AND THAT IS WHY THIS PROGRAM WORKS.

I HAD A TELEPHONE CONVERSATION WITH THE CORP OF ENGINEERS REPRESENTATIVE IN LOS ANGELES, CAPT. TIM OROCK, KNOWN AS "CAPT ROCK" AND ALSO WITH YOU MR. BURKE AND THIS IS ONE OF THE OPTIONS THE CORP OF ENGINEERS IS DEBATING TO IMPLEMENT IN THE MIDWEST. I THINK ANYTHING WILL HELP BUT, I DO NOT THINK IT WILL WORK AS PLANNED, SINCE THERE IS NO GULF OF MEXICO IN THOSE FLOOD PLAINS TO ABSORB THE EXCESS WATER, TO THE CONTRARY IF YOU GET ALOT OF WATER LIKE IN 1993 YOU MIGHT JUST HAVE ANOTHER MASSIVE LAKE THAT WILL OVERFLOW CREATING A BIGGER DEVASTATION.

THE LAST MAJOR ITEM THAT NEEDS TO BE MENTIONED IS THE "TENNESSEE VALLEY AUTHORITY" PROGRAM. THIS PROGRAM WAS PUSHED BY FRANKLIN D. ROOSEVELT AND ONE SENATOR IN 1933 INTO DEVELOPING. IT MAINLY ELIMINATED FLOODS IN TENNESSEE. HERE AGAIN IT TOOK THE PRESIDENT TO GET THE PROGRAM INITIATED, THERE WERE SEVEN STATES INVOLVED AND IT WAS DURING THE DEPRESSION AND IT DID CREATE ALOT OF JOBS. (WE ARE NOW ALSO IN THE NEED OF HELP). THE PROGRAM BUILT ABOUT 32 DAMS (IN MY OPINION WENT OVERBOARD TO SOME DEGREE) BUT IT DID HELP THE ATOMIC ENERGY TREMENDOUSLY BUT IF YOU REFER TO THE RIVERS MAP, AGAIN EXHIBIT "A". YOU WILL NOTE THAT THE TENNESSEE RIVER IS IN A SPECIAL LOCATION IN THE RIVER SYSTEM. IN OTHER WORDS IT IS ISOLATED WITH NO OTHER RIVERS UPSTREAM OF IT OR NO ICE/SNOW MELTING INTO IT. IF THERE WAS TO BE A PROBLEM IN ABUNDANCE OF WATER, DAMS WILL BE OPENED AND EXCESS WATER WOULD GO INTO THE OHIO RIVER BECOMING SOMEONE ELSE'S PROBLEM. THIS PROGRAM HAS WORKED BEAUTIFULLY IT HELPS TO SOME DEGREE TO CONTROL WATER LEVEL AT CATO, TLL. APPROX. 4 FEET AND IT WAS ALSO A MAJOR ACCOMPLISHMENT, BUT HERE AGAIN THE PROJECT BY ITSELF DID NOT ALLEVIATE THE FLOODS OF THE OHIO RIVER. IT DID NOT HELP THE DROUGHT OF THE MISSISSIPPI RIVER IN RECENT YEARS. AND IT IS NOT HELPING THE NEIGHBORING STATES LIKE SO. CAROLINA AND GEORGIA IN THEIR 1993 DROUGHT. MY PROPOSED PROGRAM WILL ALLEVIATE ALL THOSE MAJOR GAPS.

FINALLY WE NEED TO KNOW THE BASICS OF THE QUOTE UNQUOTE "MOTHER NATURE" REFER TO EXHIBIT "B" CLIMATIC REGIONS, FOR THE PURPOSE OF THIS PRESENTATION DIVIDE THE COUNTRY INTO FOUR QUADRANTS. THE NORTHWEST FOR MY PURPOSE IS CONSIDERED SELF SUSTAINED. THE SOUTHWEST IS BASICALLY DESERT SO IT ALWAYS NEEDS WATER. THE NORTHEAST GETS SOME RAIN AND MELTED SNOW FROM CANADA AND THE SOUTHEAST GET PLENTY OF RAIN. IN GENERAL WE GET THE HOT MOISTURE FROM THE GULF OF MEXICO AND WE GET THE COLD FRONT FROM CANADA, THEY MEET AT ONE POINT ACROSS THE U.S. NORMALLY CREATING THE CLIMATIC REGIONS AS SHOWN ON THE MAP. DEPENDING ON THE CIRCUMSTANCES, VARIANCE AND EXTREMES OF THE WEATHER YOU GETS THE BENEFITS OR THE CONSEQUENCES.

THERE ARE FOUR (4) EXTREME CONDITIONS THAT COULD POSSIBLY EXIST. MY PROPOSED PROGRAM RESOLVES THEM AS FOLLOWS:

REFER TO PUMPING CONDITION #1 (DROUGHT AND RECIRCULATION) LET US START WITH THE ASSUMPTION THAT WE HAVE A NATIONAL DROUGHT. WE NEED A PUMPING SYSTEM TO TAKE WATER FROM WHEREVER TO WHERE THERE IS NONE.

- *PUMP FROM LAKE SUPERIOR AND OR LAKE MICHIGAN AND OR LAKE ERIE (CLOSEST TO UPSTREAM OF THE RIVERS SYSTEM TO MAINTAIN NAVIGATION AND POWER SUPPLY)

- *PUMP FROM NEW ORLEANS AREA, PREVENTING MOST OF THE WATER FROM GOING INTO THE GULF OF MEXICO (SALT WATER) USING WATER TO THE MAX.

WITH ABOVE PIPING NETWORK NOW WE DO NOT HAVE TO WORRY IN CASE OF DROUGHT. WE CAN AVOID THOSE 100 TRILLION OF GALLONS OF WATER BEING DUMPED INTO THE GULF OF MEXICO NEVER TO BE RECOVERED AND WE CAN ALSO PUMP WESTWARD TO STATES THAT ALWAYS NEED WATER. HOW FAR WEST? HOW MUCH? DEPENDING ON THE SOPHISTICATION OF THE SYSTEM AND THE AVAILABILITY OF WATER. NEED A CHECK AND BALANCE STUDY.

CONTINUE TO ANALYZE SAME CHART THE RESERVOIRS INDICATED IN THE CHART MIGHT REPRESENT A SERIES OF RESERVOIRS OR LIKE IN NEW ORLEANS POSSIBLY PONCHARTRAIN LAKE, IT CAN ALSO BE REPRESENTED BY EXISTING/NEW DAMS OR REFER TO EXHIBIT "C". OPEN MINE PITS IF YOU LOOK CLOSE YOU WILL FIND TWO (2) SEPARATE LOCOMOTIVES PULLING APPROXIMATELY (15) FIFTEEN RAILROAD CARS AND YOU CAN HARDLY SEE THEM. NO THIS IS NOT A PHOTOGRAPH OF THE GRAND CANYON. THIS MINE HAPPENS TO BE IN NEVADA BUT WE HAVE MANY MINES ABANDONED THROUGHOUT THE COUNTRY. IF YOU ARE ANALYSING SOUTHERN CALIFORNIA, REFER TO EXHIBIT "D" MAP OF SOUTHERN CALIFORNIA AGAIN IF YOU LOOK CLOSE YOU WILL FIND ALL THE DRY LAKES THAT WOULD BE AVAILABLE TO RECEIVE WATER.

NOW LET US TAKE JUST THE OPPOSITE REFER TO PUMPING CONDITION CHART #2. IN THIS CASE WE HAVE EXCESS OF WATER. YOU WILL NOTICE THE SOUTHWEST QUADRANT OF THE U.S. ALWAYS NEEDS WATER SO WE AGAIN PUMP WESTWARD FROM EVERYWHERE. ALSO THE RECIRCULATION SYSTEM FROM JUST ABOVE NEW ORLEANS WILL NOT ALLOW WATER TO BE DUMPED INTO THE GULF OF MEXICO. WE CAN ALSO PUMP TO THE GREAT LAKES.

NOW LET US TAKE THE OHIO RIVER FLOODS SCENARIO REFER TO PUMPING CONDITION CHART #3 HERE AGAIN YOU PUMP WESTWARD AND OR LAKE ERIE. THE RECIRCULATION SYSTEM SHOULD BE OPERATING TO AVOID WASTING WATER INTO THE GULF OF MEXICO. IF THE MIDWEST AREA NEEDS WATER YOU PUMP WATER FROM LAKE SUPERIOR AND OR LAKE MICHIGAN, YOU CAN ALSO PUMP FROM THE PAN-HANDLE OF TEXAS AND OF COURSE PUMP WATER OUT FROM THE DANGER OF FLOODS, MAINLY ALONG THE OHIO RIVER & MISSISSIPPI RIVER ALL THE WAY DOWNSTREAM TO NEW ORLEANS.

NOW LET US TAKE THE 1993 FLOOD SCENARIO REFER TO PUMPING CONDITION CHART #4 HERE AGAIN THE RECIRCULATION SYSTEM STAYS INTO OPERATION PREVENTING WATER FROM BEING WASTED INTO THE GULF OF MEXICO BY PUMPING WESTWARD. THE SOUTHEAST HAD A DROUGHT THEREFORE YOU PUMP ALSO TOWARD THAT AREA FROM THE LOUISIANA AREA AND FROM THE FLOOD DANGER AREA (MIDWEST). SINCE IN 1993 THERE WAS SO MUCH WATER YOU CAN PUMP TO THE SOUTHWEST FROM THE FLOOD PLAINS AND OR TO LAKE SUPERIOR AND OR TO LAKE MICHIGAN AND OR TO THE DROUGHT AREA FROM LAKE ERIE.

AS YOU CAN SEE NOW I HAVE RESOLVED THE FOUR MAJOR EXTREME POSSIBLE CONDITIONS THAT MIGHT EXIST, RESOLVING THE NATIONAL WATER PROBLEM, ANY OTHER CONDITIONS IS JUST A VARIATION OF THE FOUR CONDITIONS. IN COMBINATION OF RESOLVING THOSE CONDITIONS I HAVE PROVIDED WATER TO AREAS WHERE WATER IS NEEDED LIKE THE TEXAS PAN-HANDLE AND THE SOUTHERN PORTIONS OF NEW MEXICO, ARIZONA, NEVADA AND SOUTHERN CALIFORNIA ALSO RESOLVING THEIR LACK OF WATER PROBLEMS.

MY PHILOSOPHY CAN BE APPLIED TO INDIVIDUAL STATES. ACTUALLY ALOT OF THE NATIONS IN THE WORLD CAN FOLLOW SAME PHILOSOPHY. LET US ANALYZE TEXAS. THE SOUTHEAST OF TEXAS HAS EXCESS OF WATER BUT THE NORTHWEST AREAS NEED WATER. I DO NOT NEED TO EXPLAIN ANY FURTHER IT IS SELF EXPLANATORY AS TO THE SOLUTION REGARDLESS OF WHAT THE NATIONAL SYSTEM MIGHT DO OR NOT DO. THE OTHER EXAMPLE I USED WAS SOUTHERN CALIFORNIA. WE CAN SAVE ALL THE RAIN WATER FROM BEING DUMPED INTO THE PACIFIC OCEAN BY TRAPPING IT AND PUMPING TO SOME OF THOSE DRIED-UP LAKES ALREADY MENTIONED.

ONE OF THE REASONS THE FLOODS OF 1993 WERE SO DEVASTATING IS BECAUSE WATER IS VITAL TO PRODUCE ENERGY AND TO KEEP NAVIGATION OPEN NOT THAT ITS NOT IMPORTANT FOR IRRIGATION, COMMERCIAL, RAILROADS, POLLUTION CONTROL, WATER SUPPLY, FLOOD CONTROL & RECREATIONAL PURPOSES. BUT SINCE THE DROUGHT OF RECENT YEARS THE INSTRUCTIONS TO SUPERVISORS IN THE RIVER SYSTEM WERE TO "CONSERVE WATER"

SO LEVELS WERE ALLOWED TO GET HIGH NOT KNOWING THE WEATHER WOULD UPSKE THEIR PLANS BY SHIFTING THE SO CALLED SUBTROPICAL MOIST CLIMATIC REGION FURTHER NORTH INTO THE CONTINENTAL MOIST AREA SEE EXHIBIT "B" MOST OF THE HEAVY RAIN WAS IN THE FLOOD PLAINS IN THE MIDWEST. THE SUPERVISORS IN THE EXTREME NORTH OF RIVER SYSTEM ARE FACED WITH ABUNDANCE OF WATER SO THEIR DUTY IS TO AVOID FLOODS, THEREFORE THEY OPEN GATES TO ALLOW WATER TO GO DOWNSTREAM OF THE RIVER SYSTEM. BUT THE SUPERVISORS DOWNSTREAM (IN THE MIDWEST) ARE ALSO FACED WITH THE ORDER OF "CONSERVE WATER" NOW ALSO HAVE TO HANDLE THE EXCESS WATER FROM THE UPSTREAM SUPERVISORS. WELL YOU CAN SEE THE RESULTS IN THE 1993 FLOODS. SO IF YOU GET EXCESS WATER OR NOT ENOUGH WATER THAN QUOTE UNQUOTE "MOTHER NATURE" IS TO BE BLAMED. PLEASE UNDERSTAND THAT SUPERVISORS ARE NOT MAGICIANS THEY CAN NOT RESOLVE THE PROBLEM WHEN THERE IS NO ALTERNATIVE "BUILT-IN" IN THE SYSTEM.

WITH THE PIPELINE SYSTEM I PROPOSE LEVELS DO NOT HAVE TO BE KEPT SO LOW OR SO HIGH TO ENDANGER THE POSSIBILITIES OF A FLOOD OR A DROUGHT. SUPERVISORS WILL KNOW THAT IN CASE WATER LEVELS GET HIGH OR LOW THE NET WORK SYSTEM WILL BE THERE TO MAKE THE NECESSARY ADJUSTMENTS. YOU WILL NEED ONE MAIN CONTROLLING POINT FOR THE PROJECT.

MY PROPOSAL GOES FURTHER. THE RESERVOIRS/PITS/DAMS/ MAN MADE LAKES CAN BE OPENED FOR HOUSING DEVELOPMENT AROUND THEM. THE PEOPLE LIVING ALONG THE RIVERS CAN MOVE BACK IN INTO THEIR DEVASTATED AREAS. KNOWING THAT WE DO HAVE CONTROL OF THE WATER. THIS ALONE WILL OPEN PLENTY OF OTHER POSSIBILITIES TO A RECOVERY OF THE ECONOMY.

AGAIN, MY PROPOSAL GOES FURTHER, WATER IS THE LIFE OF NATURE, TREES AND VEGETATION ARE THE LUNGS WHEN IT COMES TO ENVIRONMENT. WATER IS A VERY DESIRABLE AND EXPENSIVE COMMODITY, JUST ASK ANYONE IN THE SOUTHWEST QUADRANT OF THE U.S. IF MY PROPOSAL IS DEVELOPED AND WATER IS BROUGHT INTO THOSE AREAS (DRY-DESERT LIKE) WE WILL OPEN NEW HORIZONS AND AGAIN WILL HELP THE ECONOMY BECAUSE PEOPLE WILL BE ABLE TO DISPERSE INTO AREAS THAT ARE CONSIDERED PRESENTLY UN-HABITABLE AREAS, A GOOD EXAMPLE IS SOUTHERN CALIFORNIA. THE ECOLOGY SITUATION WILL BE HELPED IN REFERENCE TO WORLD WARMING IF VEGETATION IS INSTITUTED IN THIS ISOLATED AREAS.

THE PIPING NETWORK IS NEEDED NOT ONLY TO MAKE THE PROGRAM WORK BUT TO CHANGE THE PRESENT PHILOSOPHY OF DEVASTATIONS GOES ALONG WITH "MOTHER NATURE", IN THE CASE OF WATER THIS MUST STOP. PRESENTLY THE CORP OF ENGINEERS SET UP AN OFFICE IN ST. LOUIS, MISSOURI TO REPAIR ALL THE DAMAGE THE FLOODS HAVE CREATED AND TO GET THE SYSTEM IN THE SO CALLED "PRE-FLOOD" CONDITION. IN OTHER WORDS GET IT READY FOR THE NEXT FLOOD. WE ARE SPENDING BILLIONS AGAIN JUST TO "BAND-AID" THE PROBLEM WITH NO RESULTS TO RESOLVE THE PROBLEM.

AS MENTIONED BEFORE THE PONCHANTRAIN LAKE PHILOSOPHY HAS BEEN CONSIDERED FOR THE MIDWEST BUT WITHOUT THE PIPING NETWORK, I THINK WE MIGHT BE CREATING A MONSTROSITY. IN CASE OF EXCESS WATER.

ANOTHER PROPOSED ALTERNATIVE, AS SILLY AS IT MIGHT SOUND, IS TO BUY THE LAND ALONG THE RIVERS (& ABANDON IT), SO IN CASE OF FLOODS THERE WILL BE NO ONE AFFECTED. DO YOU KNOW HOW MUCH MONEY THIS WILL TAKE? MOST PEOPLE WOULD NOT ABANDON SUCH A FERTILE AREA ANYWAY AS IT IS CONTEMPLATED PRESENTLY. EVEN IF THEIR PROPOSAL WAS APPROVED THE PROBLEM REALLY WOULD NOT COMPARE TO MY PROPOSED PROGRAM MONEY WISE OR OTHERWISE.

THE PROGRAM, I PROPOSED MIGHT REQUIRE ADDITIONAL SIMULTANEOUS MODIFICATIONS TO THE EXISTING SYSTEM LIKE DREDGING, LEVEE'S MODIFICATIONS AND ADDITIONS, DAMS ETC., ETC.. THE STUDY WILL BALANCE "WET" AREAS VS. "DRY" AREAS, INCLUDE THE RECIRCULATION SYSTEM AND OF COURSE THE RESERVOIRS. KEEPING IN MIND THAT THE ONLY WAY TO GET WATER OUT OF A "WET" AREA, IN CASE OF FLOOD, IS TO PUMP IT OUT, OR VISE-VERSA, THE ONLY WAY TO GET WATER INTO THE "DRY" AREA IN CASE OF DROUGHT, IS TO PUMP IT IN. ALSO THAT RESERVOIRS SHOULD BE DESIGNED INDEPENDENTLY OF THE AREA THEY SERVICE. IN OTHER WORDS A DRY LAKE IN A "DRY" AREA IN CASE OF DROUGHT IS NOT GOING TO HELP OR A FULL LAKE IN A "WET" AREA MIGHT BE ANOTHER CATASTROPHE.

THE MAIN SYSTEM CAN BE (SHOULD BE) IMPLEMENTED ASAP AND IMPROVEMENTS AND MODIFICATIONS CAN BE DONE AS MONEY IS ALLOCATED. YES MONEY HAS TO BE SPENT BUT IS MONEY SPENT TOWARDS A RESOLUTION RATHER THAN FIXING TEMPORARILY A DEVASTATION. THE PIPING SYSTEM NETWORK DOES NOT HAVE TO BE SEPARATE SYSTEM FOR EACH EXTREME CONDITIONS AS INDICATED FOR ILLUSTRATION PURPOSES. IN OTHER WORDS A PIPE LINE (SAME LINE) COULD BE USED WITH THE FLOW GOING IN THE (OPPOSITE) DIFFERENT DIRECTION TO ACCOMPLISH THE PURPOSE. THE OTHER CONSIDERATION IS TO AVOID USING PIPING AS MUCH AS POSSIBLE SUBSTITUTED BY CANALS WHERE EVER POSSIBLE.

FOR THE BENEFIT OF GETTING YOUR SUPPORT, I WILL LIST EXISTING MAJOR SYSTEMS THAT ARE OPERATING IN THE U.S.

*WATER FROM OWENS VALLEY IN CALIF. AND FROM THE COLORADO RIVER TO THE L.A. BASIN.

*WATER FROM CATSKILL MOUNTAINS TO NEW YORK CITY.

*WATER TO CHICAGO FROM THE LAKE.

*ALASKA PIPELINE.

*MILES AND MILES OF PETRO-CHEM PRODUCTS AND NATURAL GAS FROM THE SOUTHWEST CITIES OF THE ATLANTIC COAST TO THE MIDWEST OF THE COUNTRY AND TO CALIF.

I HAVE SELECTED A NAME FOR THE PROGRAM "INTERSTATE WATER CONTROL AND WATER CONSERVATION PROGRAM". IN THE CASE OF INDIVIDUAL STATES, I WOULD JUST SUBSTITUTE "INTERSTATE" BY THE STATES NAME. EXAMPLE: "TEXAS" WATER_____ AND "CALIFORNIA" WATER_____ ETC..

I AM CONFIDENT THAT IF WE CAN GO TO THE MOON, INVENT THE ATOM, HYDROGEN AND NUCLEAR BOMBS, BRING OIL FROM ALASKA, AND DO SO MANY OTHER GREAT TASKS. WE CAN SURELY CONTROL THE WATER.

I WANT TO COMMEND THE CLINTON ADMINISTRATION FOR TAKING THE APPROACH TO CHANGE FOR THE BETTER, WHAT HAD BEEN THOUGHT AS "THE WAY OF LIFE", NOT ONLY IN THE GOVERNMENT OPERATION BUT HOPEFULLY IN THE MEDICAL FIELD AND THE POLITICAL ARENA. I ALSO THINK THAT MAJOR PRIORITIES SHOULD CONTINUE TO BE SHIFTED DEPENDING ON THEIR URGENCY AND IMPACT ON THE COUNTRY AND THE PEOPLE. I DO NOT OPPOSE THE SPACE PROGRAM, I THINK WE HAVE LEARNED ALOT FROM THEM. BUT DO WE NEED PHOTOGRAPHS OF MARS PRIOR TO RESOLVING OUR BACKYARD PROBLEMS, LIKE THIS PROPOSAL THAT WILL HELP SO MANY PEOPLE.

I AM AWARE THAT THIS IDEAS HAD NOT BEEN CONTEMPLATED BEFORE, OTHERWISE THEY SHOULD HAVE BEEN IMPLEMENTED ALREADY TO AVOID SUCH DEVASTATIONS. I AM ALSO AWARE THAT THE CLINTON ADMINISTRATION ARE THE ONES THAT CAN INITIATE THE PROGRAM IN THE SHORTEST POSSIBLE TIME FRAME. OTHERWISE WE WOULD HAVE TO CONTACT STATE'S REPRESENTATIVES INDIVIDUALLY AND WE DO NOT HAVE THE LUXURY, TIME WISE, TO DO SO. THEREFORE AND THAT IS WHY, I ADDRESS THE SOLUTION DIRECTLY TO THE CLINTON ADMINISTRATION. WOULD YOU PLEASE SUBMIT THIS SO CONGRESS CAN PASS ON A "FAST TRACK" BILL.

AS I STATED AT THE BEGINNING OF THIS PRESENTATION I WOULD LIKE TO BE GIVEN PROPER RECOGNITION FOR DEVELOPING THE IDEA AND ALSO I WOULD LIKE TO BE GIVEN THE OPPORTUNITY TO SEE IT BECOME A REALITY. I AM ALSO FAMILIAR HOW TO PROCEED:

*A FEASIBILITY STUDY HAS TO BE PREPARED IT WILL NEED INPUT FROM MANY DEPARTMENTS

*A TASK FORCE SHOULD BE ASSIGNED TO THE PROJECT IN A "CRASH BASIS" TO EXPEDITE. ALOT OF DECISIONS BEING MADE NOW, WILL HAVE AN IMPACT DEPENDING ON OUTCOME.

*THE STUDY AND PROJECT WILL BE DONE IN PHASES BY PRIORITIES OF URGENCY AND ALLOCATION OF FUNDS.

*SOLICITATION FOR MAJOR CONTRACTORS WILL BE INSTITUTED IMMEDIATELY, SO THAT POSSIBLY THE BULK OF THE STUDY CAN BE DONE AT THE MINIMUM EXPENSE.

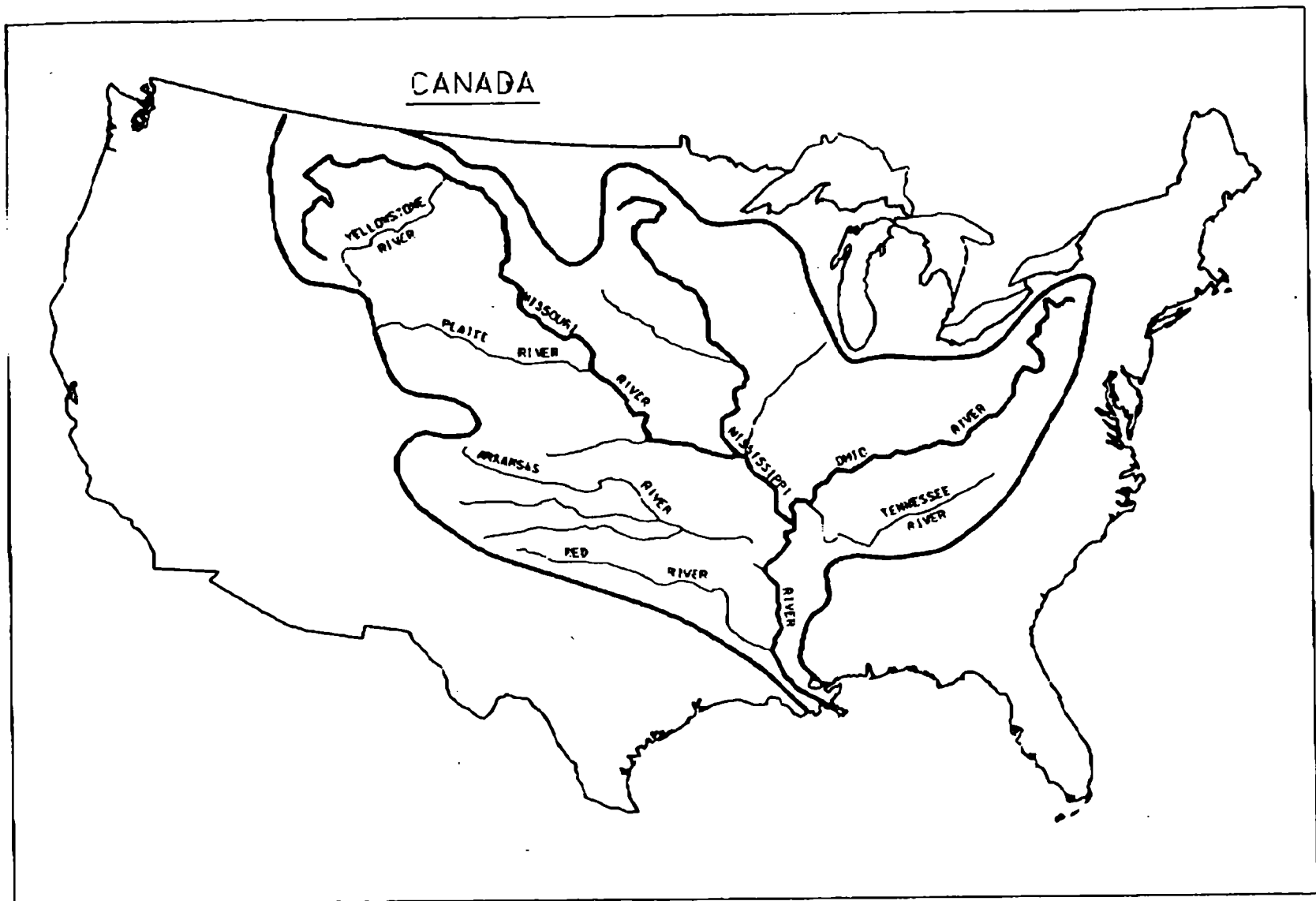
*THE STUDY WILL HAVE SCHEDULES, COST, DETAILS NECESSARY ETC. FOR EVALUATION ON A DECISION.

THE ABOVE ARE JUST FOR OPENERS, BUT AS YOU CAN SEE I'M FAMILIAR WITH THE PROCEDURES FOR ENGINEERING/DESIGN AND I ALSO HAVE EXPERIENCE IN THE CONSTRUCTION FIELD TO IMPLEMENT THIS PHENOMENAL IDEA TO A REALITY THAT WILL HELP SO MANY PEOPLE. FINALLY I INSIST THAT SOMETHING SHOULD BE DONE TO STOP FURTHER DEVASTATIONS AND I ASK FOR YOUR COOPERATION. SHOULD YOU HAVE ANY QUESTIONS, COMMENTS, SUGGESTIONS, PLEASE CONTACT ME.

VERY TRULY YOURS,



CARLOS DE LA PEZA



Locator map of the Mississippi River and its drainage basin.

EXHIBIT "A"

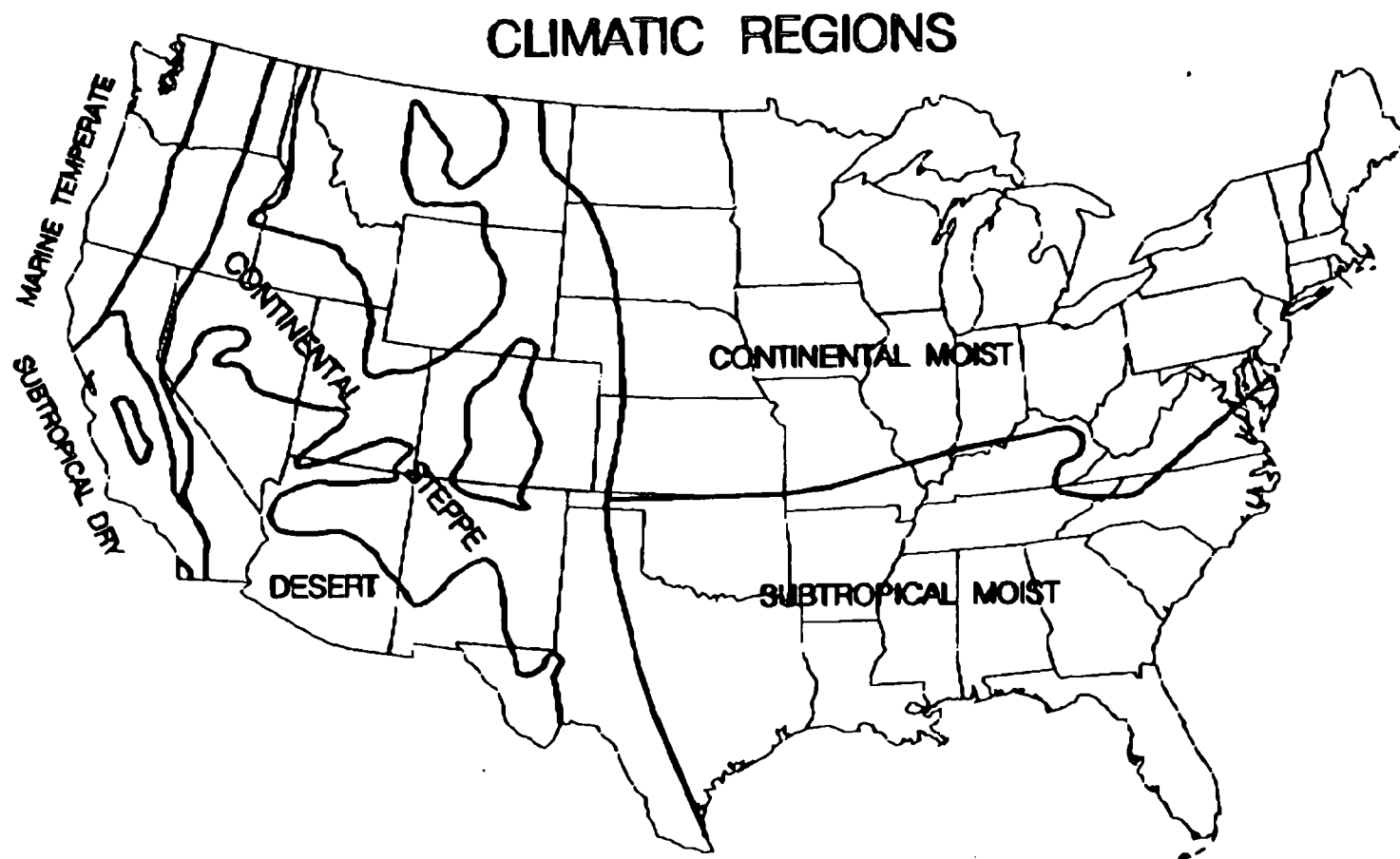
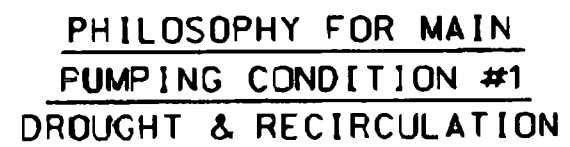
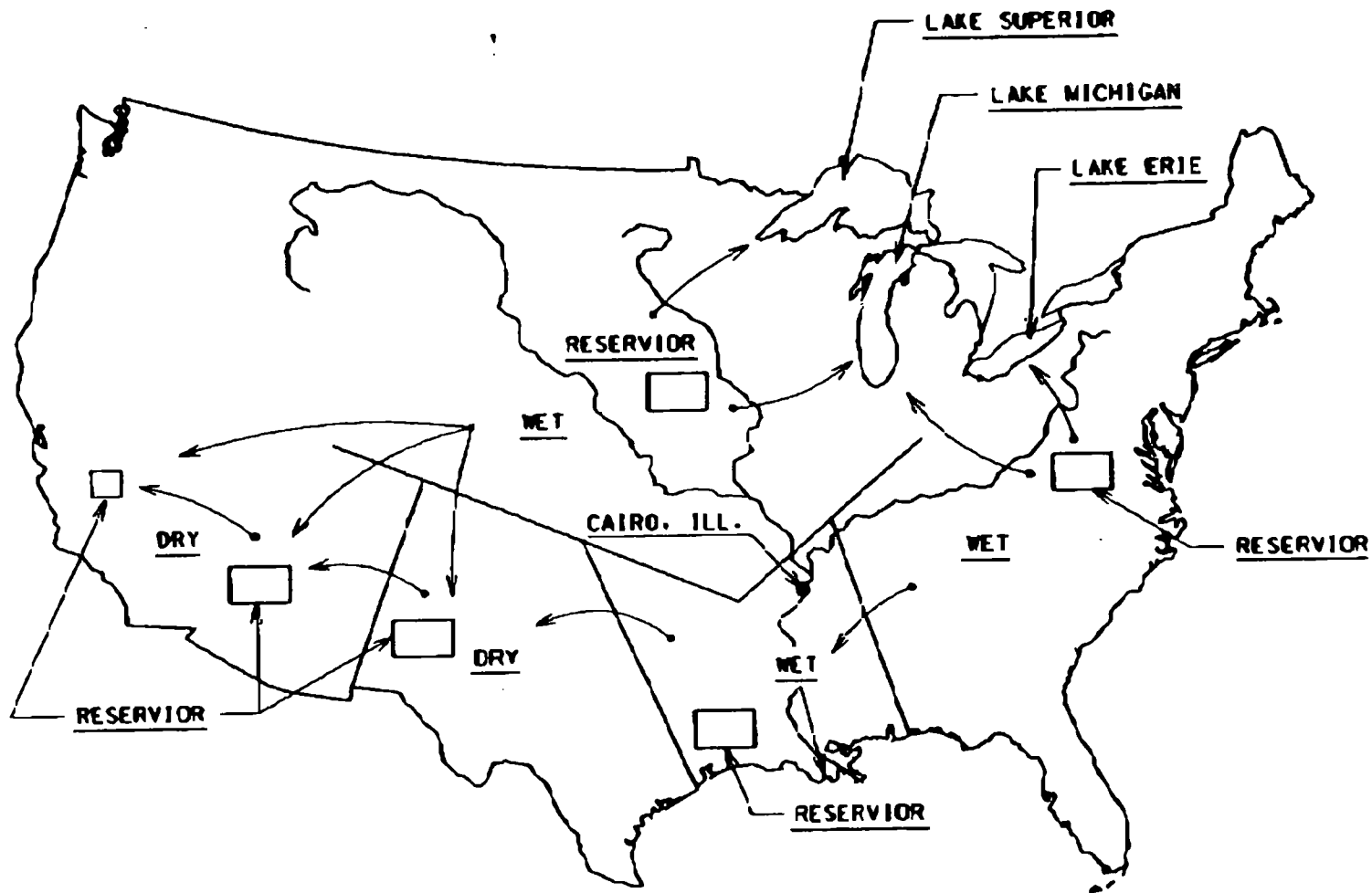


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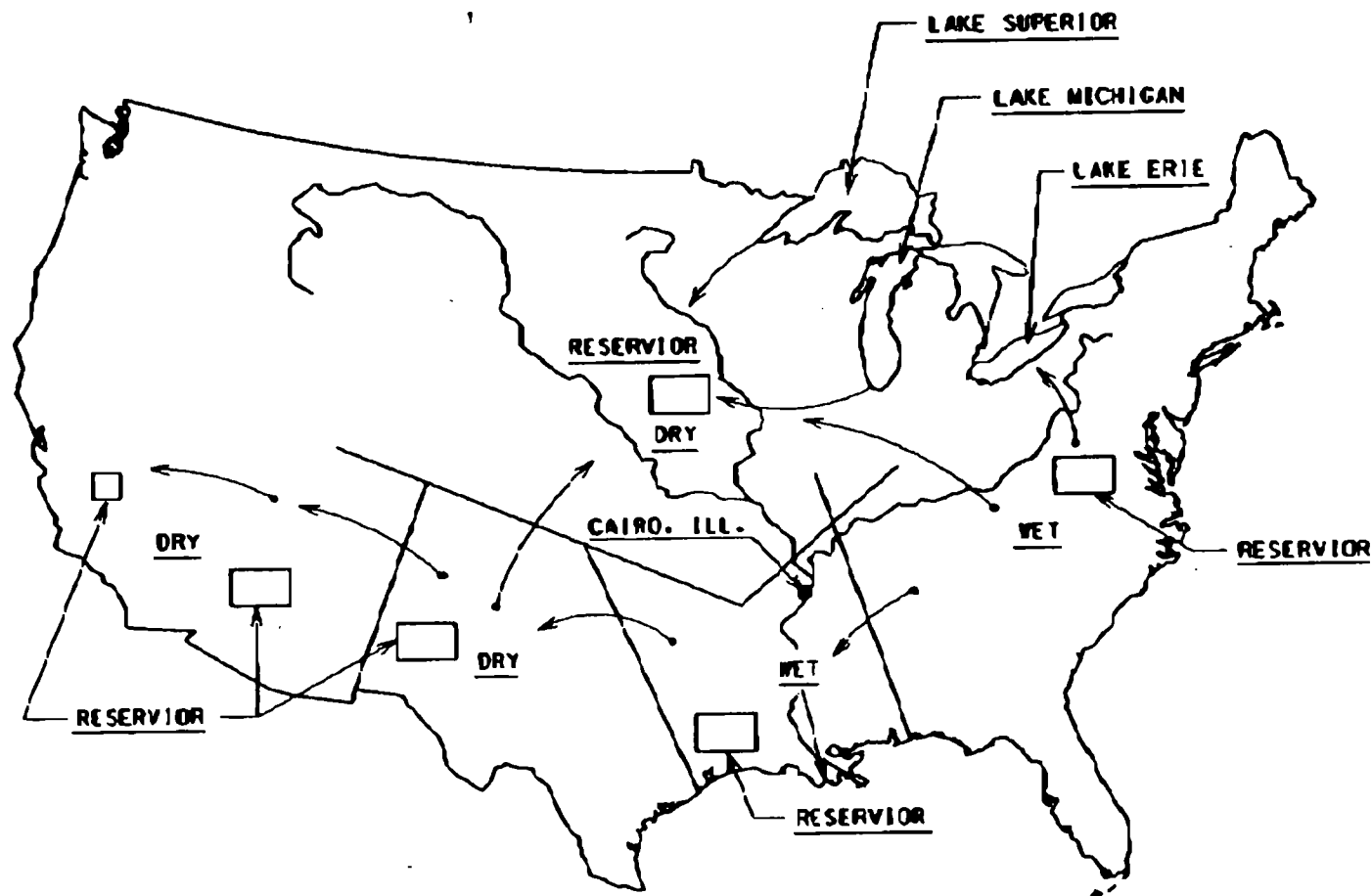


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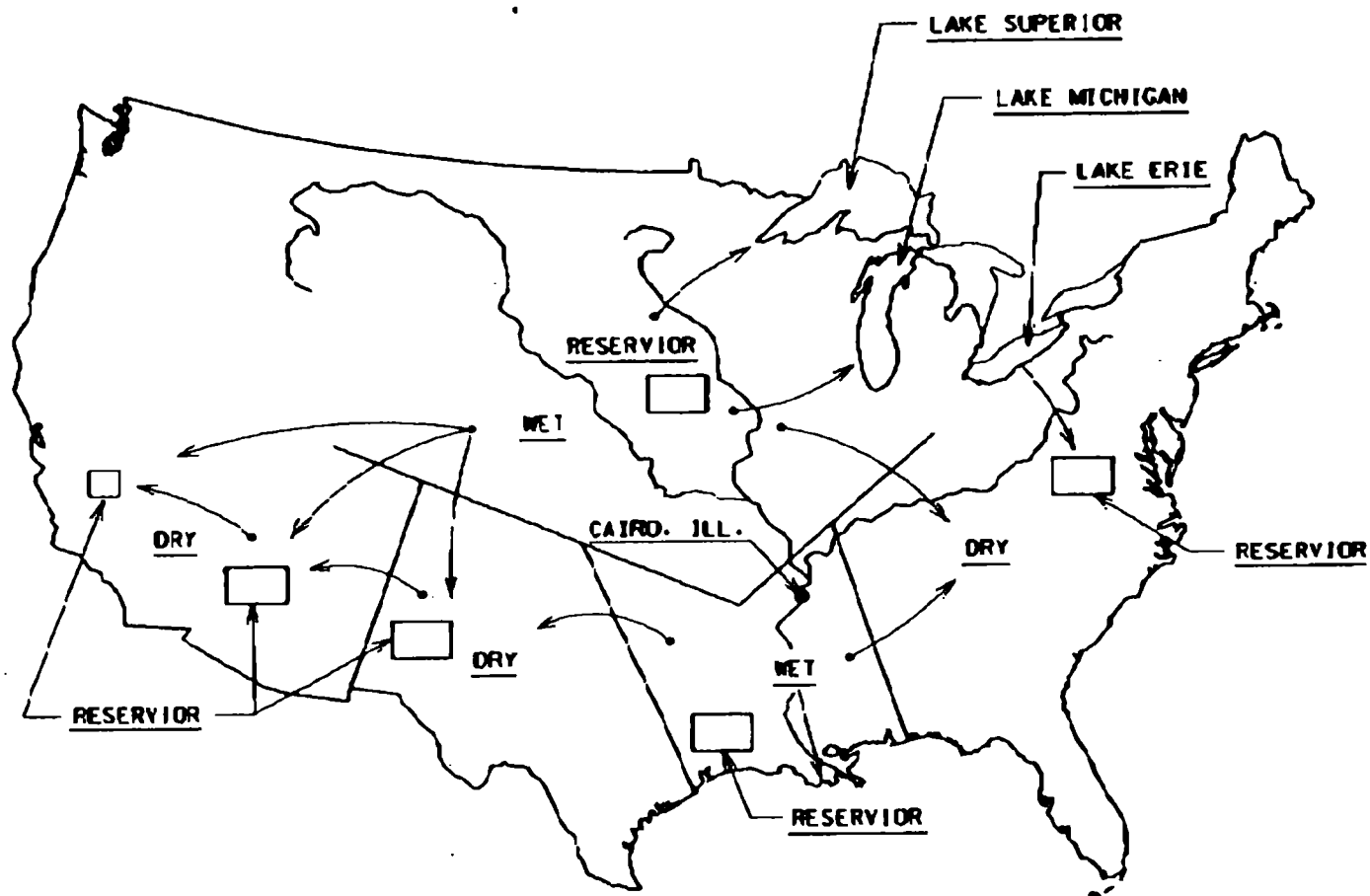




PHILOSOPHY FOR MAIN
PUMPING CONDITION #2
FLOODS



PHILOSOPHY FOR MAIN
PUMPING CONDITION #3
OHIO RIVER FLOODS



PHILOSOPHY FOR MAIN
PUMPING CONDITION #4
FLOOD OF 1993