

A Federal and National Response to the 1993 Flood on the Upper Mississippi River: Notes and Reflections

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Background

1. Most flood damages were to crops and agricultural lands. The losses of crops are temporary and will be replaced next year when new crops are planted. The losses to the nation from this lost production are economically trivial because only a small fraction of cropland (even in the region) was affected and because carry-over stocks in storage assure adequate national supplies.

2. About 40,000 homes or about 120,000 people in those households were affected to some degree. This number is a small fraction of the total population of the basin. The affected people were in small communities and in dispersed housing away from the major urban centers.

3. The urban centers and virtually all manufacturing capacity in the region were only modestly inconvenienced by the flood. The Des Moines water plant was simply in the wrong place or was not properly protected. This is a failure of foresight for protecting a critical component of the city's infrastructure.

4. Taken together points 1-3 suggest that "rural" areas bore the burden of damages, however levels of protection were close to what was economically justifiable.

5. Point 4, follows from the fact 1993 was a rare flow event. The return frequency of the flows is not yet established, but it will be around the 1% chance occurrence. We must recognize that structural protection against the 1993 flood flows could not be justified because the 1993 flood flows have a small likelihood of occurrence.

6. The independent and separate structural parts of the flood control system worked about as well as they should have. Levees that were exceeded by the flows were simply not expected to hold under these stresses. Of course, some levees might have failed at flow levels lower than their design, but I suspect this was the rare exception. Indeed, no dams failed, few large levees failed -- the engineering structures stood up.

7. The structural modifications made over *150 years* to the river system (drainage, dams and levees) have most certainly had some influence on the river runoff and flows. One effect has been to allow expanded farming in the upper tributary areas as water has been drained off fields and shunted downstream. Another alteration has been construction of over 2000 levees, many of which were designed and constructed by private interests, usually levee districts. Under law all the levees are maintained by such

districts, even if constructed by the Federal government. In effect the structural modifications to the river have the effect of redistributing flood flows and peaks in different ways for different river flows and runoff patterns. However, the 1993 flows simply overwhelmed the drainage capability and some parts of the levee system (in rural areas) and those areas were the locus of most of the damage.

8. The implications which follow from the above are -- admittedly - heretical to many. Our flood control programs have not been perfect, but the high level of damages in the Upper Mississippi is *not* evidence that the flood control program has failed. *If I don't question (for the moment) the plethora of market and policy incentives to land owners who occupy former wetlands and the flood plains*, or the redistributive effects of historical alterations to the system, then a risk assessment of the flood plain land uses probably would show that the land uses of the flood plain were about right, the levels of protection for those uses were about right and the damages incurred for this low probability event were about as would be expected.

9. What needs to be recognized is that damages incurred (or prevented) is not the measure of failure (or success) of national policy toward flood plain lands. To be sure, the focus on minimizing damages as an objective of national flood plain management policy is a long standing one, but is one which makes little sense. To minimize damages we should just not allow flood plains to have any development use, including agriculture. With no development damages would be zero, and damages could not be minimized more than that! This is of course illogical. *The national objective must be to make the "socially optimal" use of flood plain lands, however difficult it is to define "socially optimal"*. We are fixated on damage minimization because, it turns out that under certain assumptions the benefits of structural (not non-structural) flood control projects can be easily estimated as avoided damages. This has been the benefit estimation practice for over 50 years, and that may explain the attention to damage minimization. Indeed, the 1936 Flood Control Act does focus national policy on damage reduction. However, that focus can be explained by the particular circumstances at the time the Act was written and by the orientation of that period to structural projects.

10. The focus on damages is perpetuated when agencies such as the Corps and SCS each year provide the Congress with their estimates of damages prevented by their projects, as if those numbers justify their flood control infrastructure program. In response, critics produce data showing that national damage costs (in real dollars) of flood plain land uses have been rising each year. The debate is simply misleading. The inflation adjusted damage costs of using flood plains to generate economic activity have been rising each year. However, also on the rise are the inflation adjusted costs of using labor, or chemicals, or steel, or any other production input. The costs are rising because the economy is growing and we are getting richer. Poor nations have low flood damages because they have nothing to get damaged! In fact, if one compares the level of flood damages to the nation's wealth (GDP) since 1920 the ratio of damages to GDP is steady throughout the period. In economic terms this means that share of the nation's wealth consumed by damages from using flood plains is constant, while it is highly likely that economic benefits of such use have been grown substantially.

11. Does the argument in paragraph 10 mean that every single one of the nations flood control projects was justified and that each project's continuation is justified today? NO! Does paragraph 10 mean that the last increment of spending on flood control project construction has produced benefits in excess of the full public costs for those projects. NO! What paragraph 10 does mean is that a focus on flood control damages is not the correct focus for determining the merits of flood plain land use. The national flood hazard management program's value (projects and non-structural measures) is not described by damages prevented. but rather by the beneficial land uses permitted as a result of the program in relation to *all* its costs.

12. Given the frequent espousal of damages prevented as the measure of the flood control program's worth, it is not surprising that when we get the inevitable big, but rare, flood that the level of damages sustained becomes the basis for arguing that the flood control program has failed. *However, we ought to be asking this question as the policy focus: "Do the past and prospective future benefits of current flood*

plain land use outweigh these occasional damages and the ecological values of flood plains which are forgone?" This question recasts the whole framework for the national program toward flood plain lands.

13. At the outset, a new focus on benefits and costs of different flood plain land uses must recognize the policy and market incentives for the particular flood plain land uses now in place. Once we recognize that policy forces can direct private land use decisions an *analytical* definition of optimal land use becomes impossible without considering the rationale for the policies. Consider the example of having cropland in the flood plain. When our national policy goal was to increase farm output (for whatever reason) programs to drain the swamp and encourage cropping from fence-row to fence-row were supported. The projects to protect these agricultural lands from flooding also would have a policy rationale. As another example consider the "subsidies" of disaster aid and other compensations for risk taking which are made in the name of victim relief. This implies a Federal liability for flood protection and flood relief. Indeed flood relief -- disaster relief -- has expanded more rapidly than damages incurred in the past decade. Perhaps this is one of the few "politically safe" forms of spending left or perhaps the spending increases have been an unintended result of the programs design.

14. The policy logic that has supported the historical patterns of flood plain land use are now being challenged under the banner of ecosystem (watershed) restoration. Goals for the river and its related lands are now articulated for purposes which include functions and values arising from flood plains opened to the river and wetlands. In the wake of the recent flood, the nation should expand the debate about flood plains and wetlands beyond a narrow confining focus on flood damage reduction. If our goals for the use of our waters and land have changed, if yesterdays necessary social program to settle the flood plain is today's unwarranted subsidy, then maybe some of the farms should get out of the flood plain and let the native biological communities back in. Maybe we need to get more aggressive in making sure that people who locate in risk prone areas are acting in an informed and responsible way. However, deciding whether to move in these directions and deciding how far to go is more than a simple problem of calculation; it is about sorting out public policy preferences and society's willingness to advance those preferences.

15. The Upper Mississippi River flood opens up the opportunity to look at new outputs for that river by the restoration of some farmed and levee protected lands to wetlands and riparian areas . This restoration would be done in cooperation with federal and non-federal partners. Let me be clear however. I am (almost) convinced that restoration will have only a modest effect on flood flows and conveyance and hence the off site flood control benefits to be claimed will be slight. There is much asserted but little demonstrated about flood storage in wetlands and the effects of levees on channel constriction and flood peaks. There is a conceptual logic to the arguments, but the jury is still out (as far as I can tell) on the quantitative magnitude of these gains in specific sites and locations. I am more convinced that the benefits are in water quality and habitat values. Also if we remove some land use activity out of frequently flooded areas there may be a reduction in transfer payments (i.e. disaster payments, farm price supports and other subsidies) to those who expose themselves to these risks. Whether these reduced transfer payments are a national economic benefit is an analytical question which needs to be resolved.

16. As a start on a restoration agenda we need a better understanding of the hydrologic system in order to ascertain the hydrologic, and then economic and ecological, effects of "de-engineering" some parts of the Upper Mississippi. To take this system view may require a new approach -- or at least some reinvention of the old theories - to watershed management. How do we do a better job of integrating navigation planning into a whole watershed management effort as the Corps has initiated a feasibility study for navigation capacity expansion on the River? Everyone seems to be taking a new look at flood control on

the River, but isn't this too narrow a focus? And, as we look at restoration the extremes must be avoided in thinking about alternatives. The restoration goal must not be some gross wetlands acreage or linear mile target for riparian zone restoration. There needs to be some *landscape logic* to the restoration sites chosen. Maybe some areas should be wetlands again, but maybe a riparian corridor or flowage easement or just riparian buffer strips is what is needed. Also, most of the land we are talking about is private property and there will be economic impacts on individuals, communities and the nation. The ultimate approach has to be attentive to compatibility of uses and not just focus on the extreme of keeping levees and channels versus recreating a wetlands wilderness. Can we transfer the new system thinking and decision making approach being developed on the Columbia, the Everglades and the Missouri to the Upper Mississippi?

17. There is a current crisis mentality making it difficult to carefully spend the multiple billions of dollars in disaster aid recently authorized. The tension is between the need to respond and rehabilitate the devastation that has occurred and still keep options open to look at new water and related land resource use patterns. *A step forward in addressing this tension will come when we explain to citizens and political leaders that a new look at the river is needed, not only because of the flood, but also because of rapidly changing social preferences for the use of flood plains and wetlands.* It is these changes in preferences more than the flood which must motivate long term action; yet, it is the flood which is the excuse for action.

A Complete Strategy for the Upper Mississippi River

18. The long term challenge of reconsidering water and land use in the basin, should flow smoothly from the short term programs of spending for disaster mitigation. In the disbursement of this disaster aid there should be some attention to the possibility that there will be future changes to existing projects and to the landscape in order to serve new public restoration goals. The opportunity created by the attention to the flood should be used to establish and maintain long term political momentum to develop a full program review.

19. The programmatic steps in a full program are both short and long term and include the following:

- i) Immediately issue guidelines for the use of disaster funds, and provide technical assistance, to assure that opportunities for restoration are considered and taken advantage of during reconstruction of roads, bridges and levees. These opportunities may be as simple as changing the placement of a road, bridge or levee section in order to restore the connection of a wetlands to the river or to eliminate a fill from a wetland or flood plain. These opportunities will often come at no (or modest) incremental cost to the reconstruction.

- ii) Establish uniform interagency criteria which reflect sound economic logic and ecological opportunity that will define priorities for use of Federal funds for levee restoration. Establish programs having flexibility to use multiple sources of funds which will gain landowner acceptance for either rebuilding or deferral of levee rebuilding in those places where rebuilding might be of low priority.

- o Set top priority for levee reconstruction funds to restore damaged levees which protect concentrations of populations or commercial and industrial activity.

- o Assign low priority to agricultural levees reconstruction which does not pass an economic justification (see next section for a description). Develop ways to secure landowner (levee district) acceptability by adding flexibility to the rules governing expenditure of disaster relief and other Federal program funds.

- o Develop interim ecological screening procedures for use by the agencies in areas and projects where restoration should be pursued. Develop ways to add flexibility to the rules governing expenditure of disaster relief and other Federal program funds to pay for restoration.

iii) For the long term, establish a policy development process to set watershed goals and priorities, examine tradeoffs and develop financing options for Upper Mississippi River management and restoration.

iv) For the long term, establish cooperatively led technical study to include the Corps of Engineers, the USGS, the Biological Survey and other appropriate technical bodies. The report from the study should provide a professional consensus on both facts and models related to the following:

- o the return frequency of the 1993 flood event

- o the 1993 induced damages as a result of the levees (from the mainline Corps' levees versus the smaller levees).

- o the extent to which the existing levees are integral to the structural integrity of the navigation system, at least in the vicinity of the locks and dams.

- o an inventory of the location and status of levees.

- o protocols for estimating i) the capacity of for natural flood plain and wetlands storage for different magnitude flood events under different land use scenarios ii) the extent to which different configurations of levees can induce damages either upstream or downstream of their location. As part of this effort develop an agreement on the the models that will be used to address these questions.

- o protocols for describing and estimating the consequences of wetlands and riparian restoration for water quality and habitat in the watershed. As part of this effort develop an agreement on the the models that will be used to address these questions.

- o protocols for estimating the foregone economic outputs of restoration alternatives.

- o other technical matters deemed important for reaching regional consensus on restoration in the watershed.

v) In tandem with iii) and iv) establish a policy reform process charged with reviewing and recommending reforms to *national* disaster response spending for all types of disasters. The objective of the review should be to promote reforms that will lead to informed and responsible risk taking by individuals and business firms. This review should be informed by studies of why people in the Upper Mississippi Basin region did not purchase insurance and of the growing implied federal liability for loss compensation. The results from this policy review should be specific recommendations for executive actions and legislation on matters such as all-disaster insurance, Federal reinsurance, etc.

vii) Immediately upon completion of items iii) to v) initiate a multi agency watershed restoration study for the Upper Mississippi Basin directed to optimize the use of the water and related lands for multiple purposes and objectives, within the newly established policy framework.

A Crude Short Run NED Justification for Agricultural Levee Reconstruction

20. The immediate need is to assure that there is a justified use of disaster aid for agricultural levee rebuilding. It should be the case that there is a high degree of certainty that the rebuilding is justified (has a low probability of future study finding the rebuilding was not justified) or there would be a low cost to reverse a rebuilding decision.

21. At present there are three alternatives for each damaged levee

- i) no action, with the land retruning to it highest economic use without protection.
- ii) rebuild the levee, with the land retrurning to its highest economic use with protection
- iii) ecological restoration of flood plain and wetlands or purchase of flood flowage easements to allow continued cropping.

The no action alternative is the baseline against which the justification for rebuilding or restoration must be judged.

22. At the site specific level to justify rebuilding, the NED agricultural use value of the protected lands to the nation must *at least* exceed the cost of rebuilding. This crude screening rule does not consider the possibility that the rebuilding may exaggerate flood flows or peaks for some (not all) flood events and impose off site costs, nor does it consider the possible beneficial values of a flood plain left open to the river which would be forgone. Introducing these considerations might justify not rebuilding, even if the agricultural use values gained exceed the rebuilding costs.

23. To simplify the justification analysis it could be presumed that the land market will capitalize the possibility of flood losses and subsequent disaster relief into farm land prices. Also, tax liability and agricultural program benefits can be expected to be capitalized into land prices. If this capitalization occurs, then an NED justification for rebuilding can be based on a comparison of rebuilding costs with the increase in the *adjusted* land market price with versus without the rebuilding. The present value of rebuilding costs is the sum of the capital plus maintenance costs to reconstruct the levee.

24. The reason to adjust the land market price is to get a "transfer payment free" land price. This adjusted price should approximate the society's willingness to pay for the agricultural outputs of the land. The economic logic behind making this type of adjustment has been weel established. The *adjusted* land market price is the land price (for the rebuild or the no-action alternative) requires i) subtraction of the sum of the present value of crop price and income support payments (this adjustment is complicated by the different forms the programs take for the different crops); i) subtraction of expected crop and flood disaster assistance payments (aid plus insurance payments above premiums paid); addition of the tax payments on the income from the land.

25. If the land's yield potential was damaged by the 1993 flood then the post flood land potentail yield and price will be reduced, at least by the costs to repair any facilities such as drain tiles that are needed permit renewed farming.

26. Land prices with and without rebuilding need to be estimated. Calculations of the amounts for adjusting land prices can be made by knowing the disaster payment history, yield and cropping history of the tract. A presumed NED justification for rebuilding is when the rebuilding costs are less than the *difference* in the adjusted market price with versus without rebuilding. As an alternative to using land prices, crop budget anlysis or damages avoided methods may be used. If these alternatives are used adjustments for transfer payments still will need to be made. All these techniques offer approximations of the same willingness to pay values.

27. Failure to justify rebuilding using on-site agricultural values, defaults to the no action option. If the no action option appears warranted then the alternatives of restoration could be evaluated. Restoration will require some additional spending and is warranted when the cost of restoration yields benefits *off site*.

Flood benefits off site may be achieved without any modification costs from the no-action condition. Other restoration benefits may require hydrologic manipulations, building removal, isolation from neighboring property, etc. The NED cost of restoration equals the sum of the adjusted land market price (the forgone agricultural production benefits) plus the costs to restore the land.

28. For a short run analysis, the off site benefits are not easily computed in money terms. One positive factor favoring restoration would be flood retention or conveyance in relation to downstream damage centers. Rather than concoct an admittedly crude dollar measure of off site flood reduction benefits it may be more compelling to use geographic ranking to set priorities for restoration by areas of the watershed according to topography, presence of adjoining levees and landscape position. Some similar form of ranking might be used for evaluating the potential for off site environmental gains by landscape location. Landscape location can determine the level of sediment and nutrient trapping potential, habitat significance, corridors and connections, riparian versus isolated stream shading for example, and expected restoration success (colonizing species, hydrology etc.)

29. The first priority for restoration would be for areas where the no action alternative was found justified. Then those areas where the justification for rebuilding was "weak" might be also be considered as potential restoration areas. The application of the rating systems would then be applied to establish locations where the most restoration gains are achieved for each NED dollar forgone. There would be some need to develop simple ways to combine the flood control and environmental ratings.

Considerations in Implementing a Short Term Decision

30. An NED decision to not rebuild a levee, whether based on on-site or off-site justification, has a logic rooted in the accounting stance of the nation. For the landowners and the community, the NED justification may have little meaning. The expectation of transfer payments is part of their calculation of the merits of rebuilding. Indeed, they may perceive a de-facto right to such transfers, and, of course, the transfers are part of the land price so the loss of transfer payments is a real capital loss. Whether there is a legitimate basis for questioning claims to these transfers is a long term study question. If the near term decision to not rebuild must be made quickly, then that decision must be accompanied by cash payments to landowners to gain their acceptance. The required cash payments will be at least equal to the pre flood market value of the land *less* any private costs that must be borne to restore the lands pre flood productivity. The revenues for making these payments might come from savings in existing program costs (transfer payments and levee rebuilding) if there is flexibility in how existing program funds may be spent. Purchase of flood flow easements at lower than fee simple land prices (this might be simply purchasing farmers crop insurance for them) might be paid from the sum of levee reconstruction savings. *Tapping this diverse revenue stream would take some real budgetary magic to redirect funds from that combination of programs.*

31. Restoration would be justified by off site benefits. Here the revenue streams that are conceptually possible from the no action alternative would be inadequate to pay for restoration. In addition there is also precedent in some programs to offer local communities payments in-lieu-of- taxes for property tax revenues forgone when federal programs direct land to those uses having a low market value. In this case the WRP and CRP funds and other revenues may need to be tapped. This further complicates the problem of assembling revenues from different sources to do something other than rebuild levees.

32. Lessons may be learned from the design of the CRP and WRP programs which remove land from agricultural production and promote its restoration. They have rating systems which are used to set priorities among bids received from farmers to enter the program. They also have limits on the extent of restoration which can occur in a region in order to assure that the local farm economy is not adversely affected by withdrawing land from production. Finally and most importantly, those programs assure landowner acceptance by seeking voluntary enrollment in the programs. This last point illustrates the

need to approach the levee rebuilding decision as a partnership between the Federal government and the affected community and landowners This last point introduces the financing problem.

34. To implement the alternatives justified by the NED analysis in the short run will require an almost heroic effort at doing the analysis, assembling the financing and gaining community acceptance. I am pessimistic that there is the organizational capacity to do this even if legal authority was modified. However, the opportunity to use the concerns about the recent flood to rethink our approach to the Upper Mississippi River as part of a long term strategy (paragraph 19) must be pursued while the interest is high. Getting this long term review underway should be the priority.

OFFICE OF MANAGEMENT AND BUDGET
WATER RESOURCES BRANCH
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FROM: Bruce Long

Number of pages to follow: 9

ADDITIONAL MESSAGES:

11/04/93

16:25

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**HOUSE OF REPRESENTATIVES
Committee on Public Works and Transportation
Subcommittee on Investigations and Oversight**

**586 Ford House Office Building
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Fax: (202) 226-0922

DATE 11/3/93

FAX TO Bruce Long

FROM Jack Wells

TOTAL PAGES 9 (including this cover sheet)

Please contact sender _____ at (202) 225-3274 if all pages are not received.

MESSAGE Here's the bill that was reported
out by the Subcommittee today. The
Volkmer language is in Sections 2 & 3;
The Durbin language is in Sections
4 and 5. The full committee markup
is next week, and we will probably be
proposing amendments then.

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103D CONGRESS
1st Session**H. R. _____**

IN THE HOUSE OF REPRESENTATIVES

Mr. APPEGATE (for himself, Mr. MINETA, Mr. SHUSTER, and Mr. BORN-
LERT) introduced the following bill; which was referred to the Committee
on _____

A BILL

To improve hazard mitigation and relocation assistance in
connection with flooding, to provide for a comprehensive
review and assessment of the adequacy of current flood
control policies and measures, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Hazard Mitigation and
5 Flood Damage Reduction Act of 1993".

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1 **SEC. 2. HAZARD MITIGATION.**

2 (a) **FEDERAL SHARE.**—Section 404 of The Robert T.
3 Stafford Disaster Relief and Emergency Assistance Act
4 (42 U.S.C. 5170c) is amended by striking “50 percent”
5 and inserting “75 percent”.

6 (b) **TOTAL CONTRIBUTIONS.**—Section 404 of such
7 Act is further amended by striking “10 percent” and in-
8 serting “15 percent”.

9 (c) **APPLICABILITY.**—The amendments made by this
10 section shall apply to any major disaster declared on or
11 after June 10, 1993.

12 **SEC. 8. PROPERTY ACQUISITION AND RELOCATION ASSIST-**
13 **ANCE.**

14 Section 404 of The Robert T. Stafford Disaster Re-
15 lief and Emergency Assistance Act (42 U.S.C. 5170c) is
16 further amended—

17 (1) by inserting “(a) **IN GENERAL.**—” before
18 “The President”; and

19 (2) by adding at the end the following:

20 “(b) **PROPERTY ACQUISITION AND RELOCATION AS-**
21 **SISTANCE.**—

22 “(1) **GENERAL AUTHORITY.**—In providing haz-
23 ard mitigation assistance under this section in con-
24 nection with flooding, the Director of the Federal
25 Emergency Management Agency may provide prop-
26 erty acquisition and relocation assistance for

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1 projects which meet the requirements of paragraph
2 (2).

3 "(2) TERMS AND CONDITIONS.—An acquisition
4 or relocation project shall be eligible for funding
5 pursuant to paragraph (1) only if—

6 "(A) the recipient of such funding is an
7 applicant otherwise eligible under the hazard
8 mitigation grant program established under
9 subsection (a);

10 "(B) the recipient of such funding enters
11 into an agreement with the Director under
12 which the recipient provides assurances that—

13 "(i) properties acquired, accepted, or
14 from which structures will be removed,
15 under the project will be dedicated and
16 maintained in perpetuity to uses which are
17 compatible with open space, recreational,
18 or wetlands management practices;

19 "(ii) new structures will not be erect-
20 ed in designated special flood hazard areas
21 other than (I) public facilities which are
22 open on all sides and functionally related
23 to a designated open space, (II) rest
24 rooms, and (III) structures which are ap-

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1 proved in writing before the start of con-
2 struction by the Director; and
3 "(iii) no future disaster assistance for
4 any purpose from any Federal source will
5 be sought or provided for any property ac-
6 quired or accepted under the acquisition or
7 relocation project."

8 **SEC. 4. FLOOD CONTROL AND FLOODPLAIN MANAGEMENT**
9 **POLICIES.**

10 (a) **TASK FORCE.**—The Secretary of the Army shall
11 conduct studies to assess national flood control and flood-
12 plain management policies.

13 (b) **CONTENTS.**—The studies conducted under this
14 section shall—

15 (1) identify critical water, sewer, transpor-
16 tation, and other essential public facilities which cur-
17 rently face unacceptable flood risks;

18 (2) identify high priority industrial, petrochemi-
19 cal, hazardous waste, and other facilities which re-
20 quire additional flood protection due to the special
21 health and safety risks caused by flooding;

22 (3) evaluate current Federal, State, and local
23 floodplain management requirements for infrastruc-
24 ture improvements and other development in the
25 floodplain and recommend changes to reduce the po-

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1 tentia loss of life, property damage, economic losses,
2 and threats to health and safety caused by flooding;

3 (4) assess the adequacy and consistency of ex-
4 isting policies on nonstructural flood control and
5 damage prevention measures and, where appro-
6 priate, identify incentives and opportunities for
7 greater use of such nonstructural measures;

8 (5) identify incentives and opportunities for en-
9 vironmental restoration as a component of the Na-
10 tion's flood control and floodplain management poli-
11 cies;

12 (6) examine the differences in Federal cost-
13 sharing for construction and maintenance of flood
14 control projects on the Upper and Lower Mississippi
15 River systems and assess the effect of such dif-
16 ferences on the level of flood protection on the
17 Upper Mississippi River and its tributaries; and

18 (7) assess current Federal policies on prevent
19 repair and maintenance of both Federal and non-
20 Federal levees and recommend Federal and non-
21 Federal actions to help prevent the failure of these
22 levees during flooding.

23 (c) CONSULTATION.—In conducting studies under
24 this section, the Secretary of the Army shall consult the
25 heads of appropriate Federal agencies, representatives of

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1 State and local governments, the agricultural community,
2 the inland waterways transportation industry, environ-
3 mental organizations, recreational interests, experts in
4 river hydrology and floodplain management, other busi-
5 ness and commercial interests, and other appropriate per-
6 sons.

7 (d) REPORT.—Not later than June 30, 1995, the
8 Secretary of the Army shall transmit to Congress a report
9 on the results of the studies conducted under this section.

10 **SEC. 5. FLOOD CONTROL MEASURES ON UPPER MIS-**
11 **SISSIPPI AND LOWER MISSOURI RIVERS AND**
12 **THEIR TRIBUTARIES.**

13 (a) STUDIES.—The Secretary of the Army shall con-
14 duct studies of the Upper Mississippi River and Lower
15 Missouri River and their tributaries to identify potential
16 solutions to flooding problems in such areas and to rec-
17 ommend specific water resources projects that would likely
18 result in economically and environmentally justified flood
19 damage reduction measures in such areas.

20 (b) CONTENTS.—The studies conducted under this
21 section shall—

22 (1) reflect public input;

23 (2) include establishment of baseline conditions
24 to allow for a full assessment of economic and envi-
25 ronmental costs and benefits associated with flood

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1 damage reduction projects and changes in land use
2 patterns;

3 (3) identify options for development of com-
4 prehensive solutions for improved long-term flood
5 plain management;

6 (4) identify feasibility studies of specific
7 projects or programs that are likely to improve flood
8 damage reduction capabilities;

9 (5) assess the impact of the current system of
10 levees and flood control projects and current water-
11 shed management and land use practices on the
12 flood levels experienced on the Upper Mississippi
13 River and Lower Missouri River and their tribu-
14 taries in 1993 and evaluate the cost-effectiveness of
15 a full range of alternative flood damage reduction
16 measures, including structural and nonstructural
17 measures, such as the preservation and restoration
18 of wetlands;

19 (6) recommend flood control improvements and
20 other flood damage reduction measures to reduce
21 economic losses, damage to public facilities, and the
22 release of hazardous materials from industrial, pe-
23 trochemical, hazardous waste, and other facilities
24 caused by flooding of the Upper Mississippi River
25 and Lower Missouri River and their tributaries; and

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1 (7) assess the environmental impact of current
2 flood control measures and the flood control im-
3 provements recommended under this section.

4 (c) CONSULTATION.—In conducting studies under
5 this section, the Secretary of the Army shall consult the
6 heads of other Federal agencies with water resources and
7 floodplain management responsibilities.

8 (d) REPORT.—Not later than June 30, 1995, the
9 Secretary of the Army shall transmit to Congress a report
10 on the results of the studies conducted under this section.

11 **SEC. 6. EMERGENCY RESPONSE.**

12 Section 5(a)(1) of the Act entitled "An Act authoriz-
13 ing construction of certain public works on rivers and har-
14 bors for flood control, and for other purposes", approved
15 August 18, 1941 (33 U.S.C. 701n(a)(1)), is amended by
16 inserting before the first semicolon the following: "or in
17 implementation of nonstructural alternatives to the repair
18 or restoration of such flood control work if requested by
19 the non-Federal sponsor".

PUBLIC WORKS & TRANSPORTATION COMMITTEE
U.S. HOUSE OF REPRESENTATIVES
FAX NO: 202/225-4623

TO: Will Stahl

FROM: Karen Rose

NO. PAGES TO FOLLOW: 12

- ☐ Surface Transportation Subcommittee (225-6715)
- ☒ Water Resources and Environment Subcommittee
(225-4360) - 0060
- ☐ Public Buildings & Grounds Sub. (225-6715)

DESCRIPTION OF THE HAZARD MITIGATION AND FLOOD DAMAGE REDUCTION ACT OF 1993

The Hazard Mitigation and Flood Damage Reduction Act of 1993 addresses three issues related to the recent Midwest flood. Those issues are: (1) providing assistance from existing appropriations to people who elect to relocate out of the floodplain; (2) providing for a comprehensive review and assessment of the adequacy of current flood control policies and measures nationwide, and, in particular, for the Upper Mississippi and Lower Missouri River Basins; and (3) providing the Corps of Engineers the option to use non-structural alternatives in addition to restoration of flood control works at the option of the non-federal interest.

RELOCATIONS

Under section 404 of the Disaster Relief and Emergency Assistance Act, the President may contribute up to 50% of the cost of hazard mitigation, including acquisition and relocations, if the President determines such a program would be cost-effective and substantially reduce the risk of future damage. Ten percent of the estimated amount of grants made under Section 406 for repair, restoration and replacement to damaged public facilities are eligible for such hazard mitigation activities.

The bill would increase the share of Section 406 public assistance funds that can be used for hazard mitigation from the current 10% to 15% and increases the federal share from 50% to 75%. Participation in this program would require each grant recipient to dedicate and maintain in perpetuity uses of the acquired property that are consistent with proper floodplain management. FEMA estimates that this would increase the amount available for hazard mitigation from \$24 million to \$36 million.

FLOOD CONTROL AND FLOODPLAIN MANAGEMENT POLICIES AND STUDIES

The bill directs that the Army Corps of Engineers undertake a study to assess national flood control and floodplain management policies generally. The legislation directs that the study review many aspects of flood control policy including reducing the potential loss of life and property; the adequacy and consistency of existing policies on non-structural measures, as well as identify incentives and opportunities for environmental restoration. This study is to be transmitted to Congress by June 30, 1995.

The bill also requires the Corps of Engineers to undertake flood management studies for the Upper Mississippi and Lower Missouri River Basins. These studies are to consider, among other aspects of the river system, the impact of the current system of levees and flood control projects on the river and to recommend other flood control measures that would be appropriate. This study is to be coordinated with other interested government and other interests and be submitted to Congress by June 30, 1995.

OPTIONS TO LEVEE RECONSTRUCTION

Under Public Law 84-99, levees that are part of the Corps of Engineers levee program may be repaired or reconstructed if damaged by a flood. The law does not allow funds under this program to be used by the Corps for non-structural alternatives such as relocations. The bill would give the Corps the opportunity to offer nonstructural options to the non-Federal sponsor at the non-Federal sponsor's request.

[COMMITTEE PRINT]

NOVEMBER 3, 1993

103D CONGRESS
1ST SESSION

H. R. _____

IN THE HOUSE OF REPRESENTATIVES

Mr. APPLEGATE (for himself, Mr. MINETA, Mr. SHUSTER, and Mr. BOEH-
LERT) introduced the following bill; which was referred to the Committee
on _____

A BILL

To improve hazard mitigation and relocation assistance in
connection with flooding, to provide for a comprehensive
review and assessment of the adequacy of current flood
control policies and measures, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "Hazard Mitigation and
5 Flood Damage Reduction Act of 1993".

1 **SEC. 2. HAZARD MITIGATION.**

2 (a) **FEDERAL SHARE.**—Section 404 of The Robert T.
3 Stafford Disaster Relief and Emergency Assistance Act
4 (42 U.S.C. 5170c) is amended by striking “50 percent”
5 and inserting “75 percent”.

6 (b) **TOTAL CONTRIBUTIONS.**—Section 404 of such
7 Act is further amended by striking “10 percent” and in-
8 serting “15 percent”.

9 (c) **APPLICABILITY.**—The amendments made by this
10 section shall apply to any major disaster declared on or
11 after June 10, 1993.

12 **SEC. 3. PROPERTY ACQUISITION AND RELOCATION ASSIST-**
13 **ANCE.**

14 Section 404 of The Robert T. Stafford Disaster Re-
15 lief and Emergency Assistance Act (42 U.S.C. 5170c) is
16 further amended—

17 (1) by inserting “(a) **IN GENERAL.**—” before
18 “The President”; and

19 (2) by adding at the end the following:

20 “(b) **PROPERTY ACQUISITION AND RELOCATION AS-**
21 **SISTANCE.**—

22 “(1) **GENERAL AUTHORITY.**—In providing haz-
23 ard mitigation assistance under this section in con-
24 nection with flooding, the Director of the Federal
25 Emergency Management Agency may provide prop-
26 erty acquisition and relocation assistance for

1 projects which meet the requirements of paragraph

2 (2).

3 “(2) TERMS AND CONDITIONS.—An acquisition
4 or relocation project shall be eligible for funding
5 pursuant to paragraph (1) only if—

6 “(A) the recipient of such funding is an
7 applicant otherwise eligible under the hazard
8 mitigation grant program established under
9 subsection (a);

10 “(B) the recipient of such funding enters
11 into an agreement with the Director under
12 which the recipient provides assurances that—

13 “(i) properties acquired, accepted, or
14 from which structures will be removed
15 under the project will be dedicated and
16 maintained in perpetuity to uses which are
17 compatible with open space, recreational,
18 or wetlands management practices;

19 “(ii) new structures will not be erect-
20 ed in designated special flood hazard areas
21 other than (I) public facilities which are
22 open on all sides and functionally related
23 to a designated open space, (II) rest
24 rooms, and (III) structures which are ap-

1 proved in writing before the start of con-
2 struction by the Director; and

3 “(iii) no future disaster assistance for
4 damages relating to flooding will be sought
5 from or provided by any Federal source for
6 any property acquired or accepted under
7 the acquisition or relocation project.”.

8 **SEC. 4. FLOOD CONTROL AND FLOODPLAIN MANAGEMENT**
9 **POLICIES.**

10 (a) **STUDIES.**—The Secretary of the Army shall con-
11 duct studies to assess national flood control and floodplain
12 management policies.

13 (b) **CONTENTS.**—The studies conducted under this
14 section shall—

15 (1) identify critical water, sewer, transpor-
16 tation, and other essential public facilities which cur-
17 rently face unacceptable flood risks;

18 (2) identify high priority industrial, petrochemi-
19 cal, hazardous waste, and other facilities which re-
20 quire additional flood protection due to the special
21 health and safety risks caused by flooding;

22 (3) evaluate current Federal, State, and local
23 floodplain management requirements for infrastruc-
24 ture improvements and other development in the
25 floodplain and recommend changes to reduce the po-

1 tential loss of life, property damage, economic losses,
2 and threats to health and safety caused by flooding;

3 (4) assess the adequacy and consistency of ex-
4 isting policies on nonstructural flood control and
5 damage prevention measures and, where appro-
6 priate, identify incentives and opportunities for
7 greater use of such nonstructural measures;

8 (5) identify incentives and opportunities for en-
9 vironmental restoration as a component of the Na-
10 tion's flood control and floodplain management poli-
11 cies;

12 (6) examine the differences in Federal cost-
13 sharing for construction and maintenance of flood
14 control projects on the Upper and Lower Mississippi
15 River systems and assess the effect of such dif-
16 ferences on the level of flood protection on the
17 Upper Mississippi River and its tributaries; and

18 (7) assess current Federal policies on pre-event
19 repair and maintenance of both Federal and non-
20 Federal levees and recommend Federal and non-
21 Federal actions to help prevent the failure of these
22 levees during flooding.

23 (c) CONSULTATION.—In conducting studies under
24 this section, the Secretary of the Army shall consult the
25 heads of appropriate Federal agencies, representatives of

1 State and local governments, the agricultural community,
2 the inland waterways transportation industry, environ-
3 mental organizations, recreational interests, experts in
4 river hydrology and floodplain management, other busi-
5 ness and commercial interests, and other appropriate per-
6 sons.

7 (d) REPORT.—Not later than June 30, 1995, the
8 Secretary of the Army shall transmit to Congress a report
9 on the results of the studies conducted under this section.

10 **SEC. 5. FLOOD CONTROL MEASURES ON UPPER MIS-**
11 **SISSIPPI AND LOWER MISSOURI RIVERS AND**
12 **THEIR TRIBUTARIES.**

13 (a) STUDIES.—The Secretary of the Army shall con-
14 duct studies of the Upper Mississippi River and Lower
15 Missouri River and their tributaries to identify potential
16 solutions to flooding problems in such areas and to rec-
17 ommend specific water resources projects that would re-
18 sult in economically and environmentally justified flood
19 damage reduction measures in such areas.

20 (b) CONTENTS.—The studies conducted under this
21 section shall—

22 (1) reflect public input;

23 (2) include establishment of baseline conditions
24 to allow for a full assessment of economic and envi-
25 ronmental costs and benefits associated with flood

1 damage reduction projects and changes in land use
2 patterns;

3 (3) identify options for development of com-
4 prehensive solutions for improved long-term flood
5 plain management;

6 (4) identify feasibility studies of specific
7 projects or programs that are likely to improve flood
8 damage reduction capabilities;

9 (5) assess the impact of the current system of
10 levees and flood control projects and current water-
11 shed management and land use practices on the
12 flood levels experienced on the Upper Mississippi
13 River and Lower Missouri River and their tribu-
14 taries in 1993 and evaluate the cost-effectiveness of
15 a full range of alternative flood damage reduction
16 measures, including structural and nonstructural
17 measures, such as the preservation and restoration
18 of wetlands;

19 (6) recommend flood control improvements and
20 other flood damage reduction measures to reduce
21 economic losses, damage to public facilities, and the
22 release of hazardous materials from industrial, pe-
23 trochemical, hazardous waste, and other facilities
24 caused by flooding of the Upper Mississippi River
25 and Lower Missouri River and their tributaries; and



EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF MANAGEMENT AND BUDGET

WASHINGTON, D.C. 20503

THE DIRECTOR

November 3, 1993

Honorable Norman Mineta
Chairman
Committee on Public Works and Transportation
Washington, D.C. 20518

Dear Chairman Mineta:

The Administration supports the goals of H.R. 3012 and appreciates the efforts of the Committee to work with the Administration on this legislation.

The Administration understands that amendments may be introduced at the Subcommittee on Water Resources and Environment markup of H.R. 3012 to change the eligibility requirements for the reconstruction of non-Federal levees by the Army Corps of Engineers. This letter is to inform you that the Administration would oppose such amendments.

Such amendments would undermine the integrity of this assistance program by effectively removing the incentives in place since July 1986 for levee sponsors to properly construct and maintain levees, and could result in significantly increased Federal expenditures for additional levee repairs.

In 1986, the Corps of Engineers established nationwide standards of eligibility for owners of levees constructed by non-Federal interests who seek Federal assistance in the repair of flood control works damaged by floods. Those participating in the program have met eligibility requirements, including adherence to a strict operations and maintenance program that we believe has ensured the effectiveness of the structures and the validity of Federal assistance provided under the Corps' emergency authority (P.L. 84-99). Amendments to change the eligibility requirements would undermine the integrity of the levee rehabilitation assistance program and be unfair to sponsors nationwide who have been participating in the program and bearing the expense of meeting the standards.

We appreciate your consideration of these views.

Sincerely,

Leon E. Panetta

1 (7) assess the environmental impact of current
2 flood control measures and the flood control im-
3 provements recommended under this section.

4 (c) CONSULTATION.—In conducting studies under
5 this section, the Secretary of the Army shall consult the
6 heads of other Federal agencies with water resources and
7 floodplain management responsibilities.

8 (d) REPORT.—Not later than June 30, 1995, the
9 Secretary of the Army shall transmit to Congress a report
10 on the results of the studies conducted under this section.

11 **SEC. 6. EMERGENCY RESPONSE.**

12 Section 5(a)(1) of the Act entitled “An Act authoriz-
13 ing construction of certain public works on rivers and har-
14 bors for flood control, and for other purposes”, approved
15 August 18, 1941 (33 U.S.C. 701n(a)(1)), is amended by
16 inserting before the first semicolon the following: “, or in
17 implementation of nonstructural alternatives to the repair
18 or restoration of such flood control work if requested by
19 the non-Federal sponsor”.

CHUR

BUD SWARTER, Pennsylvania
RANKING REPUBLICAN

U.S. House of Representatives

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

SUITE 2165 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-4472

October 27, 1993

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DOUGLAS APPLEGATE, Ohio
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ROBERT A. BOREK, Pennsylvania
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PETER I. BLUTE, Massachusetts
HOWARD P. "BUCK" MCKEON, California
JOHN L. MICA, Florida
PETER HOEKSTRA, Michigan
JACK GUINN, New York

JACK SCHWENK, Minority Staff Director

The Honorable William H. Natcher
Chairman
Committee on Appropriations
H218 Capitol
Washington, D. C. 20515

Dear Chairman Natcher:

We are writing to express our concern regarding Senate amendment No. 1050 to the Department of Defense Appropriations Bill for fiscal year 1994, H.R. 3116. That amendment would substantively and radically change the Corps of Engineers levee rehabilitation assistance program. If enacted, it would allow non-federal interests that chose not to participate in the Corps program regarding the construction and maintenance of levees to be eligible to apply for federal financial assistance for repairs, notwithstanding such non-participation.

We strongly oppose the inclusion of this amendment in the Defense Appropriations bill. First, it clearly constitutes a change in existing law in a general appropriations bill in contravention to Rule XXI of the Rules of the House of Representatives. Second, the amendment would remove the incentive to participate in the Corps program. If local interests decide to apply for inclusion in the program, they have certain responsibilities, and in return, they are eligible to apply for federal assistance if a flood damages the levee. The amendment would allow those levee districts that did not comply with the Corps requirements to be eligible for assistance, thereby rewarding non-participation.

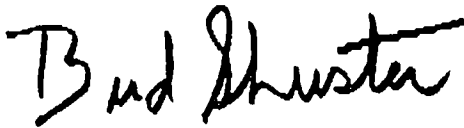
The Senate provision would reduce participation in the program for the future. It is clearly unfair to the levee districts which have complied with the Corps requirements. The cost of these additional levee repairs could be hundreds of millions of dollars, and would either come out of the funds provided for those levee districts that are already in the program or from additional appropriations. It is presently estimated that the levees which already are eligible for Corps assistance in rebuilding will require more than double the federal funds made available to date for the purpose of non-federal levee reconstruction. To place further demands upon the funds provided to assist participating non-federal interests by allowing non-participating interests to receive funding creates a significant issue of equity to those who participated.

11/05/93 10:00 AM 11/05/93 10:00 AM 11/05/93 10:00 AM 11/05/93 10:00 AM
The Honorable William H. Natcher
October 27, 1993
Page Two

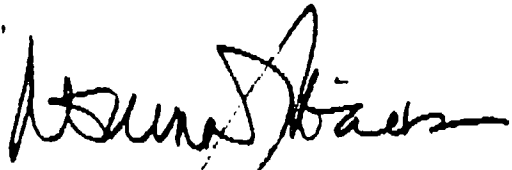
Finally, the amendment could result in the reconstruction of levees contrary to preferred flood plain management policy. There is serious consideration within the Administration of voluntary non-structural approaches to limit flood damages. Making more than 2000 additional levees eligible to apply for federal financial assistance would bias any future flood management to include more and higher levees.

The Committee on Public Works and Transportation is conducting a comprehensive examination of federal flood control and flood plain management policy. The Department of Defense Appropriations Bill is not the appropriate vehicle to determine that policy debate.

Sincerely yours,



BUD SHUSTER
Ranking Republican Member



NORMAN Y. MINETA
Chair, Committee on
Public Works and Transportation



**EXECUTIVE OFFICE
STATE OF MISSOURI
JEFFERSON CITY
65102**

MEL CARNAHAN
GOVERNOR

P. O. Box 720

October 25, 1993

President William J. Clinton
The White House
Washington, D.C. 20500

Dear Mr. President :

Thank you for the support and compassion you have shown as we continue to fight back from the devastating floods of 1993. No one state can expect to recover from a disaster of this magnitude without help from its neighbors. As you pointed out last summer in St. Louis, the emergency response effort was just a beginning. We all took great comfort in your assurance that the federal government stood ready to help Missouri rebuild.

It is to that end that I am writing to you today. We need your help with an especially crucial issue that is now before Congress. Missouri's congressional delegation has sponsored language in the defense appropriations bill which would extend the 84-99 Corps of Engineers levee repair program to levees which can qualify by September 30, 1994. This proposal would be extremely helpful for my state, and I urge you to support it. Further, in the August emergency supplemental appropriations bill, \$120 million was provided immediately to the Corps with an additional \$60 million available on a contingency basis. If additional resources are needed to carry-out an extension of the levee repair program, I ask that you authorize the release of contingency funds.

Missouri is unique in its location and topography and we have a host of thorny questions to address. In September, I announced the creation of a task force on flood plain management to take on some of these difficult issues. The task force (which includes federal, state and local participation) will be reviewing our river management system, housing policies, flood insurance program, and, of course, the complimentary conservation and agricultural use of the most productive land along our rivers. The task force will be working over the next few months to form consensus and develop a comprehensive long-range plan.

President William J. Clinton

October 25, 1993

Page 2

The issue of whether or not certain levees can be rebuilt using federal funds should not dictate the task force's deliberations. Rather, the task force should strive toward rational policy based on protecting some public facilities while leaving other areas available for alternative management. In hindsight, we know that the question of current levee ineligibility is not a result of rational planning but of local feuds, excessive red tape, and our own state laws which have complicated the formation of levee districts. I'm sure, as a former Governor, you can appreciate the need for local planning to resolve such a complex problem, and I assure you we are working in that direction.

Mr. President, this issue is critical to our effort to rebuild our state's economy. I hope that you and the Corps of Engineers will work with us as we attempt to move forward in a rational and responsible manner.

Very Truly Yours,

A handwritten signature in black ink, reading "Mel Carnahan". The signature is written in a cursive, flowing style with a large initial "M".

Mel Carnahan

MC/jf

Itemized Activities for Floodplain Management Review
3 November 93

- o GOAL: The goal of the review will be to develop a set of recommendations for the President on modifications to Federal floodplain management programs that will better protect life, property and the ecology of the Upper Mississippi River Basin.
- o ESTABLISH COMMITTEE. The Floodplain Management Task Force institutes a review of long-term floodplain management issues through a core Interagency Floodplain Management Committee comprised of USDA, COE, DOI, FEMA, and EPA.
- o ASSEMBLE CORE STAFF. The Committee immediately assembles a core staff to conduct the review, comprised of an Executive Director and nine professionals with administrative support (see longer Memorandum).
- o TEAMS. The Committee establishes three groups:
 - 1. Flood Damage Susceptibility Team;
 - 2. River Flows Management Team; and
 - 3. Floodplain Restoration Team.
- o WORKPLANS. Under the guidance of the Executive Director, each Team develops a detailed workplan and schedule for the issues within its area that would:
 - 1. Identify the major issues;
 - 2. Identify the major information requirements for addressing the issues;
 - 3. Identify the major constituencies affected by the issues; and
 - 4. Develop a detailed schedule for scoping out the options, soliciting regional input and developing the draft options.
- o WORKPLAN APPROVAL. The Committee reviews and approves the workplan for each Team consolidated into a single whole by the Executive Director.
- o IMPLEMENTATION. Each Team executes its approved workplan through the core staff and under the guidance of the Executive Director, subject to oversight by the Committee.
- o TECHNICAL SUPPORT. The Scientific Assessment and Strategy Team (DOI/OSTP) provides continuing technical support to the work of the Committee, as do the individual agencies on an ad-needed basis.

— See Leonard Chodman paper.
Shobman

Prof. Dept. of Ag and Applied Economics, VA Tech, VA.

THE WHITE HOUSE

WASHINGTON

MEMORANDUM TO: Floodplain Management Task Force
FR: Katie McGinty and T.J. Glauthier
RE: Proposal for Floodplain Management Review
DATE: 2 November 93

Attached for your review is a revised proposal for an Review of Floodplain Management in the Upper Mississippi River Basin which will be one of the topics for tomorrow's meeting. This proposal has been developed by a small working group of affected agencies over the last several weeks. There is substantial interest within the Administration and on Capitol Hill in pursuing a review of long-term floodplain management issues, and we look forward to discussing it with you tomorrow.

Distribution List:

Name	Agency	Fax
Richard Krimm	FEMA	646-4060
Larry Zensinger	FEMA	646-3304
Bob Stearns	Army	504-4389
Mollie Beattie	DOI-FWS	208-6966
Michael Huerta	DOT	366-7952
Richard Sanderson	EPA	260-0129
David Davis	EPA/OWOW	260-6294
Jim Lyons	USDA	720-4732
Oleta Fitzgerald	USDA	720-8819
James McMullen	USDA-ASCS	720-4619
Karl Otte	USDA-SCS	690-1462
Thomas Wheri	USDA-SCS	690-1462
Gene Morrison	HUD	401-6752
Truman Goins	HUD	708-3363
William K. Lim	DOC	482-0995
Alfred Judd	SBA	205-7728
Jack Gibbons	OSTP	395-3261
Mark Schaefer	OSTP	395-1571
T.J. Glauthier	OMB-NRD	395-4639
Brian Burke	DPC	456-2995
Kathy Way	DPC	456-2334

A Review of Floodplain Management
in the Upper Mississippi River Basin

(November 2, 1993)

I. Introduction

The Floods of 1993 have vividly demonstrated the importance of effective floodplain management and response. We spend enormous sums annually on floodplain management, risk reduction, disaster response and payments for flood losses, and yet people, property, businesses and the environment continue to suffer repeated losses. The Floods of 1993 provide the Federal government with an important opportunity to reexamine and improve its current approaches to floodplain management.

The subject of floodplain management is enormously complex, involving a broad array of Federal, state and local programs and responsibilities. Any effort to fashion an improved long-term approach must account for and reflect this complexity: a Federal perspective alone is not adequate. Moreover, any analysis of the general subject of floodplain management must recognize the limited Federal role, with the states and local authorities holding primary responsibilities for a wide range of activities within the floodplain.

Opportunities for improvements in the Federal roles may present themselves. We therefore propose to undertake a review of existing Federal programs and policies affecting activities in the floodplain for the purposes of developing a set of recommendations for improvements. The review should provide significant and sustained opportunities for state, local and nongovernmental interests to provide information and perspectives on the issues under review. Agriculture, the transportation industry, the environmental community and many other groups have significant interests that must be heard if the review is to succeed. The review should also build upon existing studies and reports. Much work, many studies and great expertise already exist on the subject of floodplain management, and this past work should serve as the starting point for our current effort.

II. Statement of Purpose and Goals

The purpose of this review is to identify the major policy issues involving Federal floodplain management, to develop a set of findings on those issues and a set of recommendations to the President.

The goal of the recommendations is to ensure that the array of Federal programs relating to uses and activities in the floodplain reduce risks to human health, property and the environment through effective floodplain management and improved coordination among Federal agencies and between Federal, state and local authorities. Comprehensive floodplain management should encompass those activities that reflect a proper balance of:

- o reducing risks of flooding through improved flood control (both structural and nonstructural), flood storage and watershed management;

- o reducing risks to life and property from flooding;
- o conserving and restoring the natural and beneficial functions and values of the greater Mississippi River Basin; and
- o reducing the costs of floodplain management to the general taxpayer.

III. Selected Topics for Review.

a. ISSUES RELATING TO FLOOD DAMAGE SUSCEPTIBILITY. The Committee will examine a range of issues relating to Federal programs affecting flood damage susceptibility, focusing on strategies and incentives affecting land use within the floodplain and susceptibility to flood damage and disruption. It would address such issues as:

- o Federal programs directly affecting development activities within the floodplain (land use measures, building codes, infrastructure financing or construction, etc);
- o Minimizing the costs of flood control and response to the general taxpayer;
- o Federal incentives affecting development in the floodplain (flood insurance; crop insurance; disaster assistance; tax policy, other); and
- o Federal programs that would minimize risk of damage from flooding (facilities siting, flood proofing, flood insurance, etc.).

b. ISSUES RELATING TO RIVER MANAGEMENT. The Committee will also address a range of issues relating to the management of the river systems and their related hydrology. It will focus on strategies to improve the management of the hydrology of the river basin to improve overall floodplain management. It would address such issues as:

- o the improved use of a mix of flood control and flood management options (levees, flood storage, improved watershed management, etc.)
- o the restoration of watersheds and important ecosystems; and
- o the identification of high value areas for inclusion into existing conservation programs (wetlands reserve, greenways, etc.) that will enhance beneficial values of the floodplain.

IV. Geographic Scope

The geographic scope of the study would be those areas affected by or contributing to flooding along the Upper Mississippi River basin including the Missouri River and tributaries. The findings and recommendations produced by this effort, however, might well be applicable to broader national floodplain management practices and policies.

V. Organization

INTERAGENCY FLOODPLAIN MANAGEMENT COMMITTEE. The White House, the Office of Management and Budget (OMB) and the U.S. Department of Agriculture will establish and oversee an Interagency Floodplain Management Committee. The Committee will be comprised of several "core" Federal agencies with major program responsibilities in floodplain management and the environment (COE, USDA, FEMA, DOI, EPA) with other agencies participating on an as-needed basis (DOT, HUD, SBA, etc.).

The organization of work assignments and the division of the committee into subgroups as the review progresses will be left to the discretion of the Committee. The Committee itself will meet every other week initially, and as the review progresses on an as-needed basis. Each of the core agencies participating in the review will assign a policy-level person at the Assistant Secretary or Deputy Assistant Secretary as its representative to the Committee. Additional agency representation or assistance will be determined on an as needed basis.

VI. STAFFING

The Committee will be staffed by a core full time temporary staff which will be located in one central location. An Executive Director would be responsible for the overall conduct of the review by the staff, and for reporting directly to the chairs and Members of the Committee. All staff would be provided by the participating agencies on a full time basis at no cost to the review, as described below.

Executive Director.

Administrative/ Research Assistant.

Secretary.

Program Specialists:

Floodplain management (2)

Federal assistance programs (1)

Economists (2)

Ecologists (2)

Hydrologists (2)

NOTE: Each of these latter three categories would consist of experienced staff that could bring not only a familiarity with the particular discipline cited, but also some program and policy experience as well. To the extent that in-depth capabilities are required on specific issues, the individual participating agencies will be available to provide that assistance.

ADDITIONAL "On call" SUPPORT

Legal Support
Public Communications
Computer Assistance

TECHNICAL SUPPORT

The Committee would use the Scientific Assessment Team (OSTP/DOI) and the Economics Team (OMB) to provide information, analysis and technical support for its work. The Economics Team would be an informal team convened on an as-needed basis.

V. Procedure and Schedule

Step 1. Information Gathering. The Subcommittees will review all existing reports and information on the subject, and identify the significant technical information needs. There exists an impressive body of work on the general subject of floodplain management, and it should serve as the starting point for the review.

[JANUARY -- APRIL]

Step 2. Regional Input. An important aspect of this process is to undertake a systematic and sustained effort to gather information from a wide range of groups within the region. These groups include state and local government officials, the agricultural community, the transportation industry, the environmental community and the general public.

[JANUARY -- APRIL]

The Committee would employ several approaches to accomplish this. First, the Committee or its representatives (individual Members or the senior staff) would attend and participate in the large number of conferences and workshops currently planned by a wide array of organizations in the region.

[ONGOING]

Secondly, the Committee would organize or contract out for the organization of three one-day meetings within the region to formally solicit information on the key issues that the Committee anticipated would arise in its review. These meetings would likely consist of two parts: a public hearing type component, and a private meeting of specialists within the region to address specific issues of concern to the Committee. The details on the organization and conduct of the workshops would be left to the Committee and staff for further development.

[JANUARY -- FEBRUARY]]

Finally, established regional groups with expertise in the topic would be called upon from time to time as importance sources of information. The Upper Mississippi River Basin Association would serve as an important conduit for coordinating

state input. Nongovernmental organizations such as the National Association of Conservation Districts, the Association of State Floodplain Managers and representatives of the environmental community would also be invited to offer their observations.
[ONGOING]

Step 3. Identify Major Issues for Review. The next step would be to identify the major issues and their options that appear to deserve further development based upon the entire array of information initially developed by the Committee and staff.
[FEBRUARY -- MARCH]

Step 4. Identify Program Costs and Benefits. The Committee will also seek to analyze the costs and benefits of each option including the options' contribution to flood control and flood damage minimization. This analysis can be as sophisticated as necessary to address key issues in the time frame available.
[MARCH-APRIL]

Step 5. Drafting Issues and Findings. The staff with guidance from the Committee will formulate a range of preliminary findings and options specifically to address the significant issues. During the course of this stage the Committee should maintain communications with the interested groups. The Committee will also develop a decision framework or system with which to score the relative economic, social, environmental values of each option.
[APRIL]

Step 6. Recommendations. The Committee will review and modify the findings, options and recommendations and formulate them into a final report to Secretary Espy and the President.
[MAY 1st]

VII. BUDGET

We note that these numbers are "rough" as they are dependant upon decisions yet to be made regarding the format of workshops reporting mechanisms, publishing requirements, etc. Assumptions regarding each entry are provided.

1. Three Regional Workshops: \$150,000
Assumes meeting room at hotel to accommodate 300, plus 10 breakout rooms, and each workshop limited to two days. Estimates do not include any food or beverage service. A traveling party of 12 from working group and an additional 4 facilitators from Washington with overnight accommodations to work the main session only. Facilitator for breakout sessions would be more. Workshops of this significance will no doubt require formal transcript and publishing. The House Public Works and Transportation Committee uses a syndicated reporting service to provide a transcript of hearings,

and the transcript is then published through GPO. A typical field hearing would cost \$4,000 for transcripts and publishing of 300 copies, 100 pages in length. I include \$15,000 in above estimate.

2. Coordination with States and Interest Groups: \$40,000
Assumes travel and overnight lodging for 2 people, 40 trips.
3. Office support \$20,000
Assumes no funds for salaries, just pencils, paper, etc.
4. Consultants to Review Draft Analysis Reports: \$50,000
Assumes 6 "academics" at \$1,000 per trip for travel and honorarium.
5. Publication of Reports: \$30,000
Assumes draft and final reports.
6. Communications Consultant \$20,000
7. Summary:

Workshops:	\$150,000
Interest Group Coordination:	\$ 40,000
Office Support:	\$ 20,000
Consultants:	\$ 50,000
Report Preparation:	\$ 30,000
Communications:	\$ 20,000
Subtotal	\$310,000
Contingencies	\$40,000
Total	\$350,000

OUTSTANDING ISSUES

1. Relationship of this effort to the Corps reconnaissance study for the Upper Mississippi basin in the 1994 Energy and Water Appropriations Conference Report.

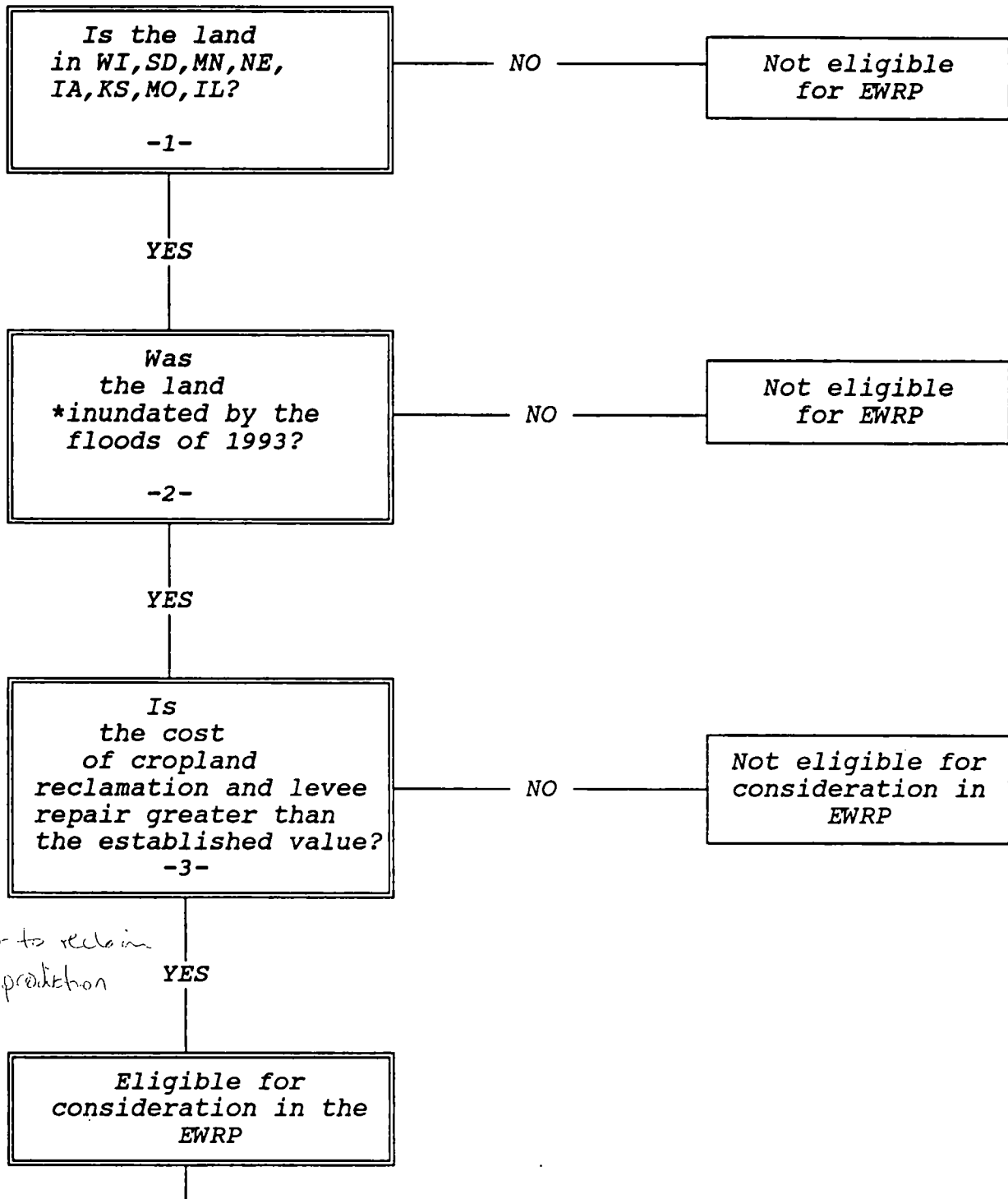
Recommendation: This review would constitute the first phase of that study, defining ultimately the key recommendations of which will require extensive additional detailed development and analysis, which could serve as the second phase.

2. Relationship to Legislation Authorizing a Comprehensive Study of the Basin.

Recommendation: Work with House and Senate Committees over the next several weeks to ensure compatibility of the legislative directive with this initiative.

3. Funding.

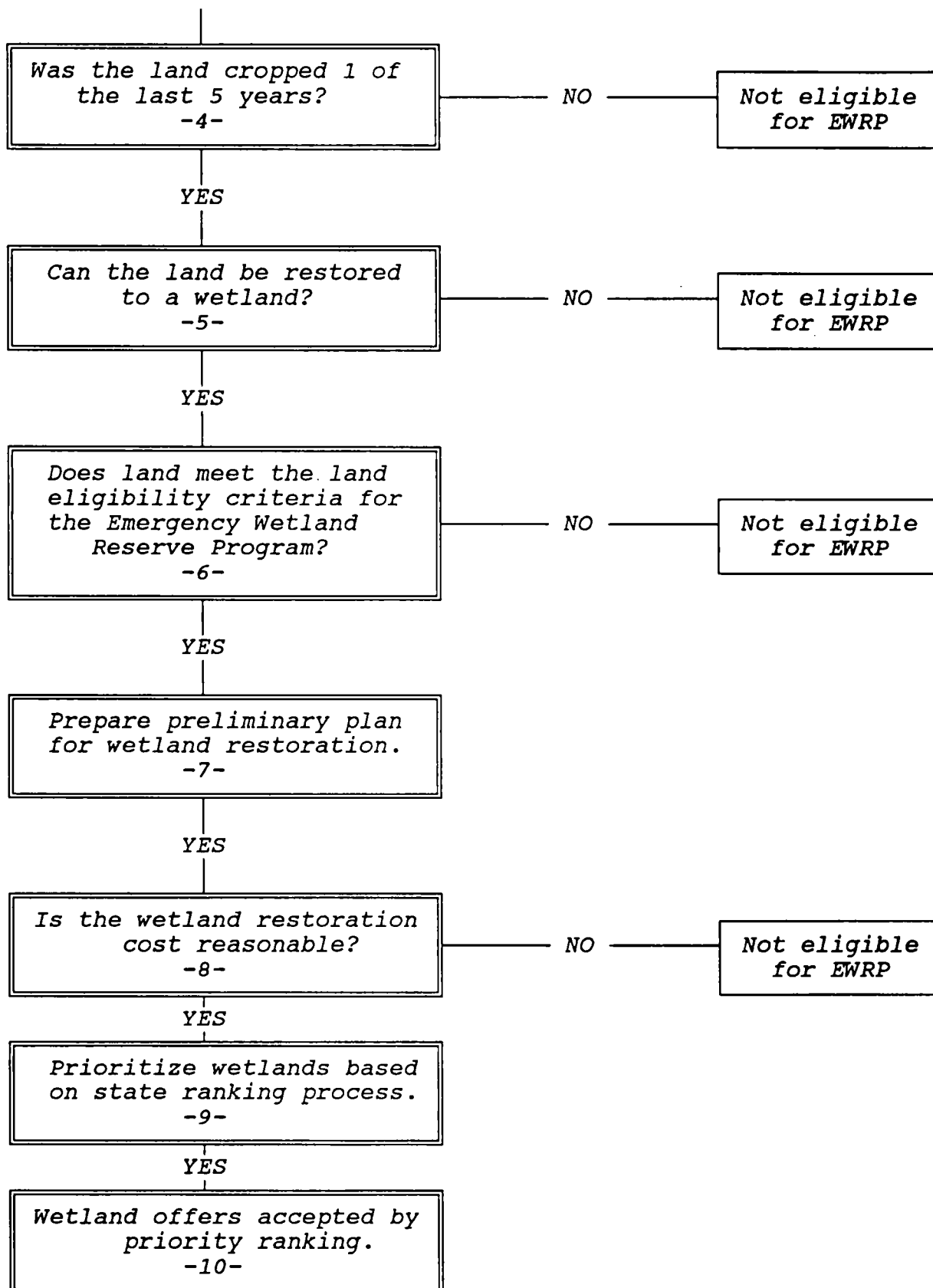
Emergency Wetlands Reserve Program (EWRP) Eligibility



Post flood
value as
reclaimed.
i.e. the cost to reclaim
& back to production

*Inundation includes water from out bank flows on unleveed streams, levee failures due to over-topping or blow-out, intentional levee breeches, drainage system failure, and back water.

Emergency Wetlands Reserve Program (continued)



BILLING CODE: 16-UI-40175

DEPARTMENT OF AGRICULTURE

Soil Conservation Service

7 CFR Part 623

Emergency Wetlands Reserve Program

AGENCY: Soil Conservation Service, USDA.

ACTION: Interim rule.

SUMMARY: The Emergency Supplemental Appropriations for Relief From the Major, Widespread Flooding in the Midwest Act of 1993, Pub. L. 103-75, 107 Stat. 739 authorizes the use of funds appropriated under the Act, which are otherwise available for waterway and watershed repair under the Emergency Watershed Protection Program of the Soil Conservation Service (SCS), to restore cropland, which was inundated by the 1993 Midwest floods, to wetlands for the purposes of the Wetlands Reserve Program (WRP) authorized by Title XII of the Food Security Act of 1985, as amended (16 U.S.C. 3837-3837f). This rule sets forth the policies, procedures, and requirements of the Emergency Wetlands Reserve Program (EWRP) that have been established to implement the wetland restoration and conservation provisions of Public Law 103-75. The EWRP will be available only in the following States: Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota, and Wisconsin. This rule does not affect the policies, procedures, or requirements of the WRP as published at 7 CFR Part 703.

EFFECTIVE DATE: (Insert date of filing with the Office of the Federal Register). In order to be considered, comments must be submitted in writing and within 30 days of this effective date.

FOR FURTHER INFORMATION CONTACT: Edward G. Riekert, Director, Watershed Projects Division, SCS, USDA, P.O. Box 2890, Washington, DC 20013; telephone (202) 720-3527

SUPPLEMENTARY INFORMATION: The WRP was established under the authority of sections 1237-1237f of the Food Security Act of 1985, as amended, 16 U.S.C. 3837-3837f, and is administered by the Agricultural Stabilization and Conservation Service (ASCS) pursuant to regulations found at 7 CFR Part 703. Under the WRP, persons who own croplands and other related lands that have wetland characteristics or the potential for restoration of such characteristics and who agree to the restoration and long-term maintenance of those lands as wetlands may be eligible to enroll the lands in the WRP and receive a payment

for the long-term maintenance easement and some cost-sharing assistance for the restoration costs.

The Emergency Supplemental Appropriations for Relief From Major, Widespread Flooding in the Midwest Act of 1993, Pub. L. 103-75, 107 Stat. 739, provides appropriations for the repair of "damages to the waterways and watersheds resulting from the Midwest floods and other disasters of 1993" under the Emergency Watershed Protection Program of the SCS. See 107 Stat. 742. That section of the emergency appropriations legislation further provides that if the Secretary of Agriculture "determines that the cost of land and levee restoration exceeds the fair market value of an affected cropland, the Secretary may use sufficient funds provided (under this section) to accept bids from willing sellers to enroll such cropland inundated by the Midwest floods of 1993 in any of the affected States in the Wetlands Reserve Program as authorized by subchapter C of chapter 1 of subtitle D of title XII of the Food Security Act of 1985."

Pursuant to the delegations of authority of the Department of Agriculture contained in 7 CFR Part 2, the EWRP will be administered by the SCS as an adjunct to the WRP administered by the ASCS. The policies, procedures, and requirements provided in this rule are separate from and do not affect the policies, procedures, and requirements related to the WRP that are contained in 7 CFR Part 703 and administered by ASCS.

Under the EWRP, SCS will purchase wetland conservation easements from persons owning cropland that was damaged by the 1993 Midwest floods if those lands have the potential for restoration to wetland conditions with hydrologic conditions of inundation or saturation of the soil and hydrophytic vegetation, and if the owner voluntarily agrees to restore and maintain those conditions. The functions and values of the wetlands for wildlife habitat, water quality improvement, flood water retention, floodway enhancement, ground water recharge, open space, aesthetic values, and environmental education. Furthermore, the wetland conservation easements will permanently prohibit use of the affected land as cropland. Additionally, the easement shall require permanent maintenance of the wetland conditions, except in the case of natural disaster.

Eligible land for purchase will include farmed wetlands or prior converted wetlands (converted prior to December 23, 1985), together with adjacent lands on which the wetlands are functionally dependent so long as the likelihood of successful restoration of such land and the potential wetland values merit inclusion in the program with minimal costs. Farmed wetlands are lands that were drained, leveled, or otherwise manipulated prior to December 23, 1985 (the effective date of the Food Security Act of 1985) to the extent that agricultural

crop production was made possible, but which continue to exhibit wetland characteristics. SCS will also consider for enrollment in the program: (1) farmed wetlands and adjoining lands with substantial wetland functions that are enrolled in the Conservation Reserve Program (CRP) administered under 7 CFR Part 1410 and were severely damaged by the 1993 Midwest floods; (2) other lands that would not otherwise be eligible if it is determined that inclusion in the program would promote the wetland values of the land.

The SCS State Conservationist will determine (1) the estimated costs of restoring the affected cropland to productive capacity and the estimated costs of repairing any associated levee, dike or other floodwater control systems; and (2) the fair market value (FMV) of the affected cropland based on an "as if restored" basis. If the estimated costs of the restoration and repair exceed the FMV of the affected cropland, the land will be eligible to be considered for enrollment in the EWRP. If the land is determined to be suitable for enrollment, the SCS State Conservationist will determine the FMV of the permanent easement offer that will be made. In determining the costs of cropland restoration, flood control system repair, the FMV of the affected cropland, and the FMV of the permanent easement, the SCS State Conservationist may use reasonably available information from appropriate sources to make the determinations.

Owners of lands determined to be eligible for enrollment in the EWRP and for which SCS makes an offer of enrollment may submit a bid of acceptance to the local SCS office.

To assure maximum benefits to the Federal Government, the SCS State Conservationist, in consultation with the U.S. Fish and Wildlife Service and input from a technical committee established by the State Conservationist, will establish a ranking process to determine the priority of the parcels offered for enrollment into the EWRP. The State Conservationist will use the following criteria to establish a priority ranking for which enrollment in the EWRP will be offered and bids of acceptance accepted: (1) protection and enhancement of habitat for migratory birds, (2) floodway expansion, (3) proximity to other protected wetlands, (4) level of wetland hydrologic conditions that could potentially be restored under the EWRP, and (5) other factors determined appropriate by SCS.

The emergency watershed repair and wetland reserve provisions of Public Law 103-75 were passed in response to the devastating cropland losses caused by the Midwest floods of 1993. This disaster requires an immediate response to relieve flood damages. Complying with the normal comment procedures set forth in the Administrative Procedures Act would delay efforts to assist those harmed by the flood, further aggravating their losses, and would, therefore, be contrary to

the public interest. Because of the urgency, SCS has determined that good cause exists to make this rule effective immediately. However, this interim rule affords the public a 30 day period following the effective date to submit written comments. SCS will consider all comments submitted in a timely manner and will amend the rule if justified by the comments. Comments should be submitted, in writing, to the individual listed above as the information contact.

This interim rule has been reviewed under Executive Order 12866 and has been determined not to be a "significant regulatory action." Furthermore, it has been determined that the Regulatory Flexibility Act is not applicable to this rule since SCS is not required by 5 U.S.C. 553 or any other provision of law to publish a notice of proposed rulemaking with respect to the subject matter of this rule.

The purpose of the EWRP is similar to that of the WRP, that is to restore certain cropland to wetlands and maintain them in wetland condition. An environmental assessment was prepared for WRP and it was determined that the program activities would not have a significant impact on the quality of the human environment. Therefore, an environmental impact statement was not needed for the WRP and, likewise, is not needed for this program. Copies of the environmental assessment for the WRP are available upon request.

This program is not subject to the provisions of Executive Order 12372 because it involves direct payments to individuals and not to State and local entities. See notice related to 7 CFR Part 3015, subpart V, published at 48 FR 29115 (June 24, 1983).

The information collection requirements of the interim rule at 7 CFR Part 623 have been submitted to OMB for approval under provisions of 44 U.S.C. chapter 33 in accordance with OMB emergency procedures set forth at 5 CFR 1320.18. An OMB control number will be assigned in accordance with these procedures. The public reporting burden for the information collections that would be required for compliance with these regulations is estimated to average 22 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

List of Subjects

7 CFR Part 623

Administrative practices and procedures, Compliance procedures, Easements, Natural resources, Technical assistance, Wetlands Reserve Plan of Operations.

INTERIM RULE

Accordingly, Title VII of the Code of Federal Regulations is amended by adding a new part 623 to read as follows:

PART 623--EMERGENCY WETLANDS RESERVE PROGRAM

Sec.

- 623.1 Purpose and scope.
- 623.2 Definitions.
- 623.3 Eligible person.
- 623.4 Eligible land.
- 623.5 Ineligible land.
- 623.6 Transfer of lands from the CRP to the EWRP.
- 623.7 Terms of the easement.
- 623.8 Easement value.
- 623.9 Easement priority.
- 623.10 Application to participate.
- 623.11 Obligations of the landowner.
- 623.12 Payments to landowners by SCS.
- 623.13 Wetland Reserve Plan of Operations.
- 623.14 Easement modifications.
- 623.15 Transfer of land.
- 623.16 Monitoring and enforcement of easement terms and conditions.
- 623.17 Violations.
- 623.18 Access to land.
- 623.19 Assignments.
- 623.20 Appeals.
- 623.21 Scheme and device.
- 623.22 Filing of false claims.

Authority: 16 U.S.C. 3837-3837f; Pub. L. 103-75, Chapter 1, 107 Stat. 739, 742.

Sec. 623.1 Purpose and scope.

(a) The regulations in this part set forth the policies, procedures, and requirements for the Emergency Wetlands Reserve Program (EWRP). Under the EWRP, SCS will make offers to purchase wetland conservation easements from persons owning croplands that were damaged by the 1993 Midwest floods if those lands have the potential for restoration to wetland conditions and if the owner voluntarily agrees to restore and maintain those conditions. The easements are to be purchased to promote the restoration and maintenance of wetland characteristics, such as hydrologic conditions of inundation or saturation of the soil and hydrophytic vegetation. The functions and values of the wetlands for wildlife habitat, water quality improvement, flood water retention, floodway enhancement, ground water recharge, open space, aesthetic values, and environmental education will thus be promoted. The wetland conservation easements will permanently prohibit

use of the affected land as cropland. Additionally, the easement shall require permanent maintenance of the wetland conditions, except in the case of natural disaster.

(b) The EWRP is available only in the following States: Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota, and Wisconsin. Certain cropland areas within these States have been determined to have been inundated by the Midwest floods of 1993. As more fully defined and described in this part, eligible land may include farmed wetlands or prior converted wetlands (wetlands converted prior to December 23, 1985), together with adjacent lands on which the wetlands are functionally dependent so long as the likelihood of successful restoration of such land and the potential wetland values merit inclusion in the program with minimal costs.

Sec. 623.2 Definitions.

The following definitions shall be applicable for the purposes of this part:

(a) Agricultural commodity--means any crop planted and produced by annual tilling of the soil, or on an annual basis by one trip planters, or alfalfa and other multiyear grasses and legumes in rotation as approved by the Secretary. For purposes of determining crop history, as relevant to eligibility to enroll land in the program, land shall be "considered planted to an agricultural commodity" during a crop year if, as determined by ASCS, an action of the Secretary prevented land from being planted to the commodity during the crop year.

(b) Applicant--means a person who submits to SCS an application to participate in the EWRP.

(c) Commodity Credit Corporation--a wholly owned government corporation within the U.S. Department of Agriculture.

(d) Conservation District (CD)--means a subdivision of a State or local government organized pursuant to applicable State law to promote soil and water conservation practices.

(e) Conservation Reserve Program--means the program under which long-term payments and cost-share assistance is provided to individuals to establish permanent vegetative cover on cropland that is highly erodible or environmentally sensitive.

(f) Prior converted wetland--means wetland that has been drained, dredged, filled, leveled, or otherwise manipulated (including any activity that results in impairing or reducing the flow, circulation, or reach of water) prior to December 23, 1985, for the purpose, or that has the effect, of making the production of agricultural commodities possible if

such production would not have been possible but for such action.

(g) Cost-share payment--means the payment made by SCS to assist program participants in establishing the practices required in a WRPO.

(h) Chief--means the Chief of the Soil Conservation Service, or the Chief's designee.

(i) Easement--means the real property interest acquired by SCS under this part for wetland restoration and maintenance and which is properly filed with the appropriate local or State government official.

(j) Easement area--means the land to which the approved wetland restoration practices and wetland conservation restrictions are to be applied.

(k) Fair market value (FMV)--means the price that a willing seller would accept and a willing buyer would pay in an open, informed transaction.

(l) Farmed wetland--means wetland that was drained, dredged, filled, or otherwise manipulated prior to December 23, 1985 to the extent that the production of agricultural commodities was made possible, but which continues to meet wetland criteria [refer to 7 CFR 12.32(a)(3) for descriptions of farmed wetlands].

(m) floodwater control systems--means dikes, levees, or other similar structural measures for the protection of cropland from flooding.

(n) FWS--means the Fish and Wildlife Service of the United States Department of the Interior.

(o) Local SCS office--means the office of the Soil Conservation Service serving the county or combination of counties in which the landowner's farm or ranch is located.

(p) Participant--means a person(s) owning land subject to a perfected easement purchased by the Soil Conservation Service under this part.

(q) Offer--means the total payment SCS will make to a landowner to purchase an easement.

(r) Permanent easement--means an easement in perpetuity.

(s) Potential wetland--means land which has not been and is not now a wetland but could likely develop wetland characteristics in the future.

(t) Practice--means the wetland and easement area development restoration measures agreed to in the WRPO to accomplish the desired program objectives.

(u) Technical assistance--means the assistance provided to land owners to facilitate implementation of the WRPO.

(v) Wetland--means land that (1) has a predominance of hydric soils; (2) is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and (3) does support a prevalence of such vegetation under normal circumstances.

Sec. 623.3 Eligible person.

To be eligible to participate in the EWRP, a person must be the owner of eligible land for which enrollment is sought and must have been the owner of such land for at least the preceding 12 months prior to the time the enrollment offer is declared by SCS, as provided in this part. The person shall provide to SCS adequate proof of ownership of the land. SCS may waive the 12 month ownership requirement if:

(a) the land was acquired by will or succession as a result of the death of the previous owner; or

(b) adequate assurances have been presented that the new owner of such land did not acquire such land for the purpose of placing it in the EWRP.

Sec. 623.4 Eligible land.

(a) Except as otherwise provided in this section, land is eligible for enrollment in the EWRP only if SCS determines that the land:

(1) was inundated by the Midwest floods of 1993;

(2) if restored to productive condition, would have a fair market value that is less than the estimated costs of restoring the land to productive condition and repairing related floodwater control systems;

(3) is wetland farmed under natural conditions, a farmed wetland or prior converted wetland, or potential wetlands which are cropland; and

(4) is wetland that has been restored on the land under a CRP contract, or under a Federal or State wetland restoration program with an easement for a period of less than 30 years.

(5) is likely to have its wetland value restored with minimal costs.

(b) To be eligible for enrollment in the EWRP, land must also:

(1) be determined by ASCS to have been annually planted or considered planted to an agricultural commodity in at least 1 of the 5 previous crop years; or

(2) be land under a CRP contract, in which case, the land need only to have been planted to an agricultural commodity during 2 of the 1981 through 1985 crop years.

(c) Other lands may be considered eligible if the inclusion of such lands in the EWRP easement would significantly add to the functions and values of the wetlands to be restored under this part, as determined by SCS.

(d) The criteria and procedures contained in 7 CFR Part 12 will be used to identify wetlands, converted wetlands, and farmed wetlands.

Sec. 623.5 Ineligible land.

Notwithstanding any other provisions of this part, the following land is not eligible for enrollment in the EWRP:

(a) land that contains either timber stands or trees established in connection with a CRP contract;

(b) lands owned or acquired by an agency of the Federal Government;

(c) land already subject to a deed restriction prohibiting the production of agricultural commodities or the alteration of existing wetland hydrologic conditions;

(d) land located between the pre-flood mainstem levees and the river; or,

(e) land that was restored to wetland conditions, as required under Part 12 of this title, to mitigate the conversion of wetland to cropland use.

Sec. 623.6 Transfer of lands from the CRP to the EWRP.

Land that is subject to an existing CRP contract administered under 7 CFR Parts 704 and 1410 may be transferred into the EWRP only if:

(a) the land and landowner(s) meet the requirements of this part; and

(b) the application for transfer into the EWRP is approved by Commodity Credit Corporation (CCC), if found to be in the interest of the program. If such transfer is requested by the owner and approved by CCC, the CRP contract for the property will be terminated or otherwise modified subject to such terms and conditions as are mutually agreed by the landowner, CCC, and SCS.

Sec. 623.7 Terms of the easement.

Landowners will grant to SCS an easement which shall run with the land and be in favor of SCS and its assigns or delegates. The easement shall require the land to be monitored as specified by the WRPO to promote the purposes of this part, including but not limited to maintenance of the restored wetland for entire length of the easement. Such easement shall: (1) be a permanent reserve interest easement; (2) require that the maintenance of the land be in accordance with the terms of the easement and with the terms of the WRPO and shall be the responsibility of the owners of the property and their successors of any kind, including, but not limited to, the owners' heirs and assigns; (3) grant to SCS a right of access in favor of SCS and its delegates, assigns and successors of any kind, to the portion of the property which is subject to the provisions of the easement. Maintenance of such access shall be the responsibility of the owner and their successors of any kind; (4) reserve to SCS the right to permit such compatible uses of the easement area as may be identified in the WRPO; (5) reserve to the landowner those compatible uses identified in the WRPO that are permitted to be pursued by the landowner; (6) be signed by each person with an interest of any kind in the land covered by the easement; (7) permanently prohibit use of the easement area for cropland, except to harvest an agricultural commodity planted before the easement is perfected; and (8) require permanent maintenance of the wetland conditions, except in the case of natural disaster.

Sec. 623.8 Easement value.

SCS offers for easements will be based on the fair market value, as determined by the SCS State Conservationist, of the land covered by the easements. Fair market value will be based on post-flood conditions as if reclaimed. Land easement values will be determined by the State Conservationist in consultation with a technical committee. A technical committee shall include representatives of: ASCS, Extension Service, and FWS. Additionally, the State Conservationist may collect information from other sources as he deems necessary. Coordination between States will be provided by the Chief, SCS.

Sec. 623.9 Easement priority.

The State Conservationist, in consultation with the FWS and with input from a technical committee and other interested Federal agencies, will establish a ranking process to establish the priority of parcels offered into the EWRP. This process will consider: (1) protection and enhancement of habitat for migratory birds, (2) floodway expansion, (3) proximity to other protected wetlands, (4) level of hydrology restored, and (5) other factors as determined appropriate by SCS.

Sec. 623.10 Application to participate.

(a) A person seeking to enroll land in the EWRP must apply for enrollment on an approved SCS form. The application to participate must be filed with the local SCS field office during an announced period for such submissions.

(b) A person submitting an application to participate shall not be obligated to accept an SCS offer to purchase an easement if one is forthcoming.

(c) An application to participate must be signed by all owners of the property or their duly authorized representative(s).

Sec. 623.11 Obligations of the landowner.

(a) All owners of land who accept an EWRP offer from SCS shall:

(1) Comply with the terms of the easement.

(2) Comply with all terms and conditions of the WRPO for the full life of the easement.

(3) Ensure that the easement granted to SCS is superior to the interest of all other parties who may have an interest in the easement area, except as authorized by SCS. Such action shall include, but not be limited to, obtaining a written statement of consent to such a superior easement from those holding a security interest or any other encumbrance on the land covered by the easement. Additionally, the landowner shall perfect the easement with superior SCS interest in accordance with State law.

(4) Agree to the permanent retirement of the aggregate total of crop acreage bases, and allotment and mandatory quota on the farm or ranch in order to maintain the base allotment on quota acres at or below the number of acres of cropland after the easement has been perfected.

(5) Not allow grazing or commercial use of the land covered by an easement except as provided for in the WRPO.

(6) Comply with Federal or State noxious weed laws in the manner specified in the WRPO.

(7) Control other identified weed and pest species, in the manner specified in the WRPO.

(8) Be responsible for repairs, improvements, and inspections of the WRPO practices as necessary to maintain existing public drainage systems when the land is restored to the condition required by the terms of the easement, the contract, and the easement.

(9) Be permitted to control public access, in accordance with the WRPO, on the land enrolled in the program.

(10) Implement any additional provisions that are required by SCS in consultation with FWS in the contract, WRPO, or easement, in order to, as determined by SCS, facilitate the administration of the EWRP.

(11) Not alter the vegetation, except to harvest already planted crops or forage, or hydrology on such acres subsequent to perfection of the easement by the landowner, except as provided for in the easement or WRPO.

(12) Be responsible for the long-term management of the easement in accordance with the terms of the easement and related agreements including the WRPO. Owners may enter into agreements with Federal or State agencies or private organizations to assist in the management of the easement area. No SCS funds will be provided to these agencies or organizations for management expenses. Responsibility for management of the easement shall in all cases remain with the owner and the owner's successors of any kind regardless of whether arrangements are made for third-party management.

(13) Agree that each person with an interest in the land covered by an easement under EWRP, shall be jointly and severally responsible for compliance with the WRPO, the easement, the provisions of this part, and for any refunds or payment adjustment which may be required for violation of any terms or conditions of the WRPO, the easement, or provisions of this part.

(14) Refrain from taking any action on the easement area unless specifically authorized in the reserve interest easement or the WRPO; and,

(15) secure any necessary local, State and Federal permits prior to commencing restoration of the designated area.

(b) In addition, program participants and their successors of any kind may:

(1) Not alter wildlife habitat and other natural land features of the enrolled land unless authorized by the WRPO.

(2) Not engage in any activities on other land on the farm on which the easement exists that will, as determined by SCS: (i) alter the flow of surface or subsurface water into or out of the easement area except as specified in the WRPO; or (ii) be otherwise inconsistent with the terms of the easement.

(c) The activities of any person on the property shall be considered for purposes of this section to be the actions of the program participant. However, if the SCS determines that the activities of the person were beyond the control of the program participants, SCS may adjust the remedies provided for in this part to the extent determined consistent with program goals. Obligations created by the easement shall run with the land and shall bind all persons having an interest in the property at any time whether such interest is created by death of the owner, sale, assignment, or otherwise.

Sec. 623.12 Payments to landowners by SCS.

(a) SCS will share the cost with landowners of rehabilitating the enrolled land in the EWRP as provided in the WRPO. The amount of the cost-share assistance shall be specified in the contract. Eligible costs for such cost-share assistance by SCS shall only include those costs which SCS determines are appropriate and shall be subject to the following restrictions:

(1) the State Conservationist will establish cost-share rates of between 75 to 100 percent of the actual cost of establishing or installing the practices specified in the WRPO; or pay the average cost of establishing the practices specified in the WRPO, based on the historical cost of establishing the practices in the State;

(2) cost-share payments may be made only upon a determination that an approved practice or an identifiable unit of the practice has been completed in compliance with SCS approved standards and specifications; and

(3) cost-share payments may not be made for the maintenance of the practice except as specifically permitted in writing by the State Conservationist.

(b) Notwithstanding paragraph (a)(3) of this section, cost share payments may be authorized for the replacement or

restoration of practices for which cost share assistance has been previously allowed under the EWRP, but only if:

(1) replacement or restoration of the practice is needed to meet the objectives for which the easement was established; and

(2) the failure of the original practice was due to reasons beyond the control of the participant.

(c) (1) SCS shall pay the amount agreed upon by SCS and the landowner for the purchase of the easement in a lump-sum amount after the easement is perfected in compliance with State law, except in the case of paragraph (c)(2) of this section.

(2) For all easements, SCS shall pay no more than 75 percent of the total easement price pending completion of the practices to restore the wetlands as provided under the WRPO. The remaining amount shall be paid when SCS determines the restoration is complete.

(d) After an easement is perfected, SCS will reimburse landowners for fair and reasonable expenses incurred for title searches, filing expenses, and related costs, as determined by SCS.

Sec. 623.13 Wetlands reserve plan of operations.

(a) After SCS has accepted the applicant for enrollment in the program, a WRPO will be developed by the landowner and SCS, in consultation with FWS.

(b) The WRPO shall:

(1) include an aerial photo displaying the land offered for enrollment;

(2) specify the manner in which the eligible land shall be restored, operated, and maintained to accomplish the goal of the program, including, but not limited to:

(i) measures to control noxious weeds and insect pests in order to comply with applicable Federal, or State noxious weed and pest control laws; and (ii) measures to control other specified species of weeds, insects or pests;

(3) specify compatible land uses for personal enjoyment for which the landowner may be compensated. These compatible land uses shall be reserved to the landowner in the easement. Such uses may include, among others: (i) recreational use, hunting and fishing; (ii) managed timber production including harvesting; and (iii) managed haying or grazing consistent with the goals of the program;

(4) set out cost estimates of the practices required by the WRPO, the offer for the easement, and other reimbursement costs;

(5) identify access routes to be maintained for wetland restoration activities and future management and easement monitoring in connection with the land to be enrolled;

(6) make provisions deemed necessary for maintaining public drainage systems if present on lands subject to the WRPO;

(7) contain scheduled implementation dates for restoration practices;

(8) contain other provisions or limitations as SCS, in consultation with the FWS, determines to be necessary.

(c) SCS in consultation with FWS will collect from State or Federal agencies whatever additional information is deemed necessary for the development of the WRPO with the landowner.

(d) The WRPO must be signed by SCS, FWS, Conservation District (CD), and the landowner(s). However, if agreement between SCS and FWS, or CD at the local level is not reached within 20 calendar days, the WRPO shall be developed by the State Conservationist of SCS in consultation with FWS or CD.

(e) The WRPO may require that a temporary vegetative or water cover be established on the property if immediate establishment of a permanent cover is not practicable or otherwise desirable.

(f) The terms of an approved WRPO shall not relieve the program participant of any obligation or term imposed or provided for in the contract, the easement, or this part.

(g) The WRPO, where appropriate, will provide for the development of a tree planting plan with the assistance of the FS or State forestry agency.

(h) The WRPO, where appropriate, will provide for the development by SCS of detailed plans for weed control, structural measures and their operation, vegetation establishment and management, and other measures as needed.

(i) Revisions of the WRPO to enhance or protect the value for which the easement was established may be made at any time at the request of either SCS, FWS, the owner and upon the concurrence of the all three parties.

Sec. 623.14 Easement modifications.

After the easement has been perfected, no change will be made in the easement without a written request by the participant and the written consent of the Chief. Approval may be granted to achieve the goals of EWRP or facilitate the practical administration and management of the easement area or the program and the approval will not adversely affect the functions and values for which the easement was established. A modified easement shall be perfected in accordance with State law and SCS superior interest shall be reserved by the landowner in accordance with Secs. 623.7 and 623.11(a)(3).

Sec. 623.15 Transfer of land.

(a) If a new owner purchases or obtains the right and interest in, or right to occupancy of, the land subject to a EWRP easement, such new owner shall be subject to the terms and conditions of the easement. The participant who is the signatory to the easement shall be entitled to receive all remaining payments, if any, for the purchase of the easement. Eligible cost-share payments shall be made to the participants with respect to costs actually incurred.

(b) Upon the transfer of the property subject to an EWRP easement, any remaining cost-share payments shall be paid to the new owner or purchaser only if the new owner or purchaser becomes a party to the WRPO within 60 days of the perfection of the deed transferring title to the new owner. Such payments shall be paid in the manner agreed to by the participant and the buyer. The new owner or purchaser shall be responsible for assuring completion of all measures and practices required by the contract and the WRPO.

(c) Any transfer of the property prior to the perfection of the easement shall void any SCS offer or WRPO unless the new owner agrees to accept the offer within 60 days of the perfection of the deed transferring the land to the new owner.

Sec. 623.16 Monitoring and enforcement of easement terms and conditions.

(a) SCS or its representative shall be permitted to inspect each easement area at any and all times determined necessary by SCS to ensure that:

(1) structural and vegetative restoration work are properly maintained;

(2) the wetlands and adjacent upland habitat of the easement area is being managed as required in the WRPO and the terms of the easement; and

(3) uses of the area are consistent with the terms and conditions of the easement and the WRPO.

(b) If an owner or other interested party is unwilling to voluntarily correct, in a timely manner, deficiencies in compliance with the terms of the WRPO, the EWRP easement, or any related agreements, SCS may at the expense of any person who is subject to the EWRP easement correct such deficiency. Such SCS action shall be in addition to other remedies available to SCS.

(c) Monitoring and enforcement responsibilities may be delegated by SCS at any time to other Federal or State agencies. Landowners may transfer management responsibilities only to Federal, State, or local agencies or private organizations that have been approved by SCS in advance as having the appropriate authority, expertise, and resources necessary to carry out such delegated responsibilities.

Sec. 623.17 Violations and remedies.

(a) If a violation of the terms and conditions of the contract, the WRPO, or the recorded EWRP easement occurs, the easement shall remain in force and SCS may:

(1) require the owner to fully restore the easement area to fulfill the terms and conditions of the easement and WRPO; and

(2) require the owner, who received payments from SCS for any purpose under this part, to refund all or part of such payments received together with interest, as determined appropriate by SCS.

(b) If an owner fails to carry out the terms and conditions of an easement, appropriate legal action may be initiated. The owner of the property shall reimburse SCS for all costs incurred including, but not limited to, legal fees.

Sec. 623.18 Access to land.

In order to determine eligibility and compliance with respect to this part, representatives of the Department, or designee thereof, shall have the right of access to:

(a) land which is the subject of an application made in accordance with this part,

(b) land which is subject to an easement made in accordance with this part, and

(c) records of the participant showing status of all ownership interest in lands subject to this part.

Sec. 623.19 Assignments.

Any participant entitled to any cash payment under this program may assign the right to receive such cash payments, in whole or in part.

Sec. 623.20 Appeals.

(a) A participant in the EWRP may obtain a review of any administrative determination concerning land eligibility, development of a WRPO, or any adverse determination under this part in accordance with the administrative appeal regulations provided in Part 614 of this title.

(b) Before a person may seek judicial review of any action taken under this part, the person must exhaust all administrative appeal procedures set forth above, and for purposes of judicial review, no decision shall be a final agency action except a decision of the Chief of SCS under these procedures. No adverse action will be taken against a participant under this part until the administrative appeals have been exhausted.

Sec. 623.21 Scheme and device.

(a) If it is determined by SCS that a landowner has employed a scheme or device to defeat the purposes of this part, any part of any program payment otherwise due or paid such landowner during the applicable period may be withheld or be required to be refunded with interest thereon, as determined appropriate by SCS, and the contract with the landowner may be terminated. In such a case, SCS may also continue to hold the easement interest acquired under this part.

(b) A scheme or device includes, but is not limited to, coercion, fraud, misrepresentation, depriving any other person of payments for cost-share practices or easements for the purpose of obtaining a payment to which a person would otherwise not be entitled.

(c) An owner of land subject to this part who succeeds to the responsibilities under this part shall report in writing to SCS any interest of any kind in the land subject to this part that is retained by a previous participant. Such interest includes a present, future or conditional interest, reversionary interest or any option, future or present, with respect to such land and any interest of any lender in such land where the lender has, will, or can obtain, a right of occupancy to such land or an interest in the equity in such land other than an interest in the appreciation in the value of such land occurring after the loan was made. A failure of full disclosure will be considered a scheme or device under this section.

Sec. 623.22 Filing of false claims.

If it is determined by SCS that any participant has knowingly supplied false information or has knowingly filed a false claim, such participant shall be ineligible for any payment under this part. False information or false claims include claims for payment for practices which do not meet the specifications of the applicable WRPO. Any amounts paid under these circumstances shall be refunded, together with interest as determined by SCS, and any amounts otherwise due such participant shall be withheld.

Signed this __ day of October, 1993, in Washington, D.C.

Acting Chief
Soil Conservation Service

RICHARD A. GEPHARDT

3D DISTRICT, MISSOURI

MAJORITY LEADER

COMMITTEE ON THE BUDGET

PERMANENT SELECT
COMMITTEE ON INTELLIGENCE

Congress of the United States
House of Representatives
Washington, DC 20515

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DATE: _____

TO: _____

FROM: _____

RE: _____

Will Stelle
Jim Hamby

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Hon. Richard A. Gephardt
Majority Leader
Subcommittee on Water Resources and Environment
House Public Works Committee
October 27, 1993

Mr. Chairman, I applaud and appreciate your hearings on the Midwest Floods of 1993 and your determination to ensure an effective federal response to the nation's second-costliest natural disaster ever.

I also want to thank your subcommittee for authorizing a preliminary flood study for the St. Louis vicinity, which has provided us critical help in beginning a long and difficult rebuilding process. I am grateful for your help.

This summer's record floods produced an agonizing, months-long ordeal, and the litany of hardship and suffering needs little repetition here. Many people are now struggling bravely to mend their lives, even as the threat of new flooding remains.

In Missouri, 13,000 homes were flooded. I would like to share with you some stories that reflect the uncertainty that many flood victims must live with while local governments put their buyout programs together:

In one case, a disabled teamster on a fixed income lives with his eight year old son. The flood water rose to just two feet below the ceiling of their home. With his modest savings, he purchased a small camper from a local charity. But as winter approaches they have had to take temporary shelter at a hotel serving flood victims who cannot afford any other shelter.

An elderly woman on a fixed income of \$342 a month lost her home and all of her personal property in the flood. She would like to buy a small home for herself but can't because she still owes \$29,000 on the current mortgage.

The father of a low-income family has health problems which have kept him from working over the past year. Although their home was covered by flood insurance it was not enough to pay even the outstanding mortgage. Replacement housing is out of the question until they know whether they will be part of a buyout.

As national media attention has subsided, the need to assist in the rebuilding is greater than ever. Today, unnecessary rules and limits threaten to bog down our relief efforts and keep these people out in the cold. We need swift action to get Midwestern relief back on track.

First we need **more program flexibility**. Thousands of flood victims still face an agonizing, frustrating uncertainty about where and how they can rebuild. Local governments

are struggling to understand their options and how they can use federal assistance.

Second, we need a comprehensive flood plan that reduces loss of life and damage from future floods.

STRENGTHEN THE IMMEDIATE FEDERAL RESPONSE

The top priority is to cut through the red tape and provide cost-effective, sensible policies that meet the needs of the flood victims. Giving communities -- and the Federal agencies charged with administering the programs -- greater flexibility will facilitate the rebuilding process.

Floodplain regulations require expensive floodproofing for those whose homes suffered more than 50% damage. Many people simply want to get out of the flood plains and get a new start. Communities are struggling to cobble together resources to offer buyouts. Unfortunately, FEMA funds available for hazard mitigation are limited to only 10% of the funds expended for public assistance or about \$4.8 million in Missouri.

The dollar figure for homes destroyed in Missouri, in contrast, now stands at \$268 million. These numbers clearly underscore the need for flexibility. If there is any one thing this committee could do to help flood victims, it would be to remove or substantially increase this limit.

Legislation introduced by Harold Volkmer, H.R. 3012, which I have co-sponsored, helps to achieve this. H.R. 3012 also increases the Federal share for hazard mitigation assistance under section 404 of the Stafford Act from 50 to 75 percent.

To give you one example of the need, look at Lemay, Missouri. Lemay is a small community in St. Louis County that was hit hard by the flood. A total of 142 homes were flood-damaged. Of those, 116 received more than 50 percent damage. Sixty-eight homes were insured, a higher-than-average 48 percent. The remaining 74 homes are of high priority for the County's buyout program. To prevent further losses from the next flood, a reasonable buyout program will cost the County over \$1 million. Lemay represents less than 14 percent of all damage in the County.

Enacting the Volkmer legislation will help people regain certainty in their lives -- and begin a final recovery. Moreover, mitigation makes sense: it will reduce taxpayers' exposure to future disasters.

A second needed change is in the treatment of the Uniform Relocation Act for voluntary buyouts.

The Uniform Relocation Act -- which exists to provide fair compensation to individuals whose property is condemned for roadway and other construction -- may present

a burden to communities seeking to use Community Development Block Grant and FEMA funds for voluntary buyout programs. Local governments, which are struggling to maximize their resources for buyouts, have expressed concern that courts might apply URA to their voluntary buyout offers, dramatically increasing their costs and providing compensation beyond what would be paid to those who purchased flood insurance.

The vast weight of opinion is that the URA does not apply to voluntary flood buyouts. But we need to eliminate any uncertainty in order to speed up the process.

There is a December 1, 1993, deadline in my district for communities to submit their buyout proposals to the State of Missouri. This deadline was already extended once because FEMA was unable to provide lists to the communities identifying those properties which were covered by flood insurance. Further delay is not acceptable.

We've sought regulatory clarification for three months. Nothing has happened. As a result I am urging legislative language to remedy this problem. The uncertainty of federal regulations should not be a partner with the flood waters in victimizing those who have already lost their homes and whose future remains in a state of suspended animation.

We simply need to clarify that the local government use of federal funds for voluntary buyout offers in flood-ravaged areas -- where there is no condemnation -- does not trigger an act intended to protect those facing the exercise of eminent domain.

ENACT A LONG-TERM STRATEGY

We also need a long-term strategy to prevent future losses, not only by building levees, but by moving vulnerable homes out of floodplains, where this is most cost effective.

Floodplain management will require a coordinated strategy by the federal government. House Banking, for example, is working to reform the federal flood insurance program. Its reforms, which I support, will require broader coverage, thereby increasing the program's actuarial soundness. The reforms also establish a small fund for long-term mitigation, floodproofing and buyouts. Because at least 9 million homes lie in floodplains, however, this mitigation program by itself is not adequate.

Other federal agencies need to work toward this same goal. The importance of agencies like the Corps of Engineers is paramount. Having worked on flood issues for over a decade, I would suggest two basic points.

First, we need a comprehensive strategy to substitute for what has been the piece-by-piece building of our levee system in the Upper Mississippi.

The river is a single system. Actions in one place to keep water out mean that the pressure elsewhere along the system increases, often with adverse effects on other

communities. An anecdotal review suggests that since the early 1950s, when levees were built nearby along the Mississippi River, the frequency of major flooding at Ste. Genevieve - which is not protected by an urban levee -- has increased substantially.

Congressman Durbin has introduced legislation, which I have co-sponsored, providing for a long-term comprehensive study of the Upper Mississippi River Basin. This study should consider how to most effectively protect both cities and farms. It should also provide for the protection of historic towns, such as Ste. Genevieve, which has been identified by the National Trust for Historic Preservation as one of the nation's most endangered landmarks.

Second, federal agencies must consider a wider array of flood-mitigation strategies. We must rebuild levees. But we must also think more creatively. Three years ago, at the direction of this committee, the Corps of Engineers performed a flood control study for the City of Festus, Missouri, which has suffered repeated flooding. The Corps determined that there was no viable project. The Corps considered only levees, not alternatives like buyouts.

In my view, the Corps should give full consideration to non-structural alternatives, including relocation. Significantly, the Volkmer legislation, by providing a 25-75 match comparable to that required for new levees, will help level the playing field between structural and nonstructural alternatives and promote objectiveness in the selection of flood control strategies.

Mr. Chairman, this concludes my testimony. I would be happy to answer any questions you may have.

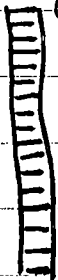
MIDWEST FLOOD RESPONSE
10/6/93

NAMZ

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EXECUTIVE ORDER
93-40

WHEREAS, I have declared a flood emergency pursuant to my authority under Chapter 44, RSMo; and

WHEREAS, it is essential that state policy be directed to minimize the risk of future devastation; and

WHEREAS, proper management of areas in the flood plain, including development, rebuilding, and other post-flood projects, require proper attention to sound long-range policy;

NOW, THEREFORE, I, Mel Carnahan, Governor of the State of Missouri, by virtue of the authority vested in me by the Constitution and laws of the State of Missouri, do hereby establish the Task Force on Flood Plain Management. The task force shall be composed of two members of the House of Representatives, who shall be appointed by the Speaker of the House; two members of the Missouri Senate, who shall be appointed by the President Pro Tempore of the Senate; and the directors (or their designees) of the Departments of Agriculture, Natural Resources, Conservation, Highways and Transportation, Economic Development, Public Safety, the Office of Administration, and four persons designated by the Governor; the executive director of the Missouri Housing and Development Commission or his designee; the state Treasurer or his designee; one representative of the Missouri Municipal League; and one representative of the Missouri Association of Counties.

The task force members shall be designated within ten days of this order.

The Governor shall designate one of the members of the task force to serve as chair.

The task force shall review and make recommendations to the Governor, the General Assembly, and agencies of state government, as appropriate, on the following matters:

1. The building, rebuilding or relocation of levees.
2. State highway and road projects in flood plains.
3. Expenditures of public funds for projects in flood plains which require state action or approval.

The task force will review plans by the United States Army Corps of Engineers for the construction or reconstruction of levees in order to develop the state's position on such projects.

The task force will mediate any issues that arise between and among different agencies of state government and recommend resolution of such issues to the Governor. The task force will also make recommendations on the state's role in implementing federal flood insurance programs.

The task force will make recommendations to the Governor regarding proposed legislation and long-term policy regarding development of housing and other private and public structures in flood plain areas.

The chair of the task force will advise representatives of the United States Army Corps of Engineers and the United States Department of Agriculture, Soil and Conservation Service, and the Federal Emergency Management Agency of its meetings and deliberations and invite the federal agencies to participate.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Missouri, in the City of Jefferson, on this 22nd day of October, 1993.


GOVERNOR

ATTEST:

SECRETARY OF STATE



United States
Department of
Agriculture

Soil
Conservation
Service

Columbia,
Missouri



Impacts of the 1993 Flood on Missouri's Agricultural Land

October 1993

Recipe for a Disaster

Columbia, Missouri receives an average of 36.07 inches of precipitation each year. Because of heavy rains during the summer of 1993, nearly 55 inches of rain were recorded by the National Weather Service as of October 1. Other parts of the state received even more rain. And, the wet scenario was the same in nine other states to the north, whose water flows through Missouri. The result: the most devastating flood in history.

Areas of Impact

Extensive flood damages occurred to agricultural land along Missouri's two largest rivers - the Missouri and the Mississippi - as well as in the floodplains of the Grand, Chariton and Thompson rivers.

SCS estimates these floodplains contain 34 percent of Missouri's 15 million acres of cropland. The Federal Emergency Management Agency reports that 480 communities with populations less than 10,000 participate in the National Flood Insurance Program.

Extent of the Damage

- According to the State Emergency Management Agency, about 3.1 million acres of Missouri land flooded.
- The Food and Agricultural Policy Research Institute estimates crop losses on this land at \$247 million. It also estimates over \$500 million reduction to Missouri's economy and the loss of 7,000 jobs. The Institute also estimates 14 percent of Missouri's corn and 11 percent of its soybean production was destroyed.
- The Soil Conservation Service estimates:
 - 25 percent of existing wetlands were damaged or destroyed by sediment. Some have been completely filled, and others have been reduced in size. SCS estimates that up to 50,000 acres of Missouri land will be eligible for the Emergency Wetlands Reserve Program.
 - Scour damages occurred on about 20 percent of the flooded cropland, and devastating damage at major levee breaks occurred all along the Missouri and Mississippi rivers. Some scour holes exceed 50 feet deep and cover more than 50 acres.
 - 1,700 miles of drainage ditches were filled with sediment or debris.

Missouri River Floodplain Damage

All along the Missouri River floodplain, sand deposits have stripped soil of its fertility. Reclaiming cropland will not be easy. The following figures are estimates from an SCS study of cropland in floodplains adjoining the Missouri River, within Missouri's borders:

- 455,000 acres (60 percent of the cropland in the Missouri River floodplain) were damaged by sand deposits and scouring. The sand deposits total more than 546 million cubic yards;
- 237,000 acres (52 percent of the damaged acreage in the floodplain) are covered with up to six inches of sand;
- 77,500 acres (17 percent of the damaged acreage) are covered with six to 24 inches of sand;
- 59,000 acres (13 percent of the damaged acreage) are covered with more than 24 inches of sand;
- 81,500 acres (18 percent of the damaged acreage) have been damaged by scouring.

The Cost of Recovery

- Reclaiming this damaged cropland will not be cheap. The Soil Conservation Service estimates that it will cost:
 - Over \$500 million to reclaim cropland by incorporating or removing sand deposits in the Missouri River floodplain alone. ✓
 - \$190 per acre to restore fertility to flood-damaged cropland.
 - \$5.6 million to repair levee breaks on upstream tributary river systems and to secondary levees along the Missouri and Mississippi rivers. This estimate does not include the costs to repair main levee breaks along the Missouri or Mississippi rivers.
 - \$10.8 million to remove sediment and debris from ditches.
- The Food and Agricultural Policy Research Institute also estimates that units of government in the Missouri River floodplain will have tax revenues decreased. This decrease is estimated to be \$2.4 million annually for every \$100 reduction in the assessed value of agricultural land if it is not restored for production.



United States
Department of
Agriculture

Soil
Conservation
Service



University
Extension
University of Missouri
Lincoln University

Reclaiming Cropland

Bringing Flood-Damaged Cropland Back Into Production

The Problem With Sand

The Midwest flooding during the summer of 1993 was a historic event of enormous proportions.

Many refer to it as a "geologic event" because of the vast alterations it made to the landscape, particularly in the floodplains of the Mississippi and Missouri rivers.

Because of the duration, velocity and extent of floodwaters, millions of tons of sand were deposited throughout the floodplains. These sand deposits range in depth from two inches to more than eight feet. Sand deposits - especially when they are deeper than four inches - greatly decrease the productivity of soils in floodplains, which are among the most highly productive crop producing soils in the Midwest.

Sand does not have the capabilities to hold enough water to produce crops. For this bottomland soil to once again have adequate water holding capacity, farmers need to either remove the sand or spread it over other areas and mix the sand with the more productive soils beneath it.

Assessing The Situation

Farmers impacted by sand deposits on their bottomland crop fields need first to determine how much sand has been deposited. This will include location, depth, and total amount of coverage. In addition, farmers need to determine what type of soil underlies their sand deposits.

To determine what type of soils are underneath the sand, landowners can use soil surveys. Published soil surveys are available from the USDA Soil Conservation Service or the University of Missouri Extension Service. In many cases, an on-site investigation will be necessary. This can best be determined by consulting the local office of the Soil Conservation Service.

Once a basic determination has been made, and a map is developed to pinpoint problems, farmers have several options depending upon the sand depth, the soils underneath it, and the money available to bring soils back into agricultural production.

Alternatives To Increase Productivity

- For fields where sand was deposited uniformly from one to six inches deep, conventional tillage with twisted chisel or moldboard plows should incorporate sand to improve productivity. This will vary according to pre-flood conditions.
- For uniform or scattered sand deposits deeper than six inches, deep tillage may be necessary using specialized equipment. Plows reaching depths up to five feet are available for rent or purchase. University of Missouri Extension has a list of dealers in Missouri from which the plows can be leased or purchased.

The table on the back of this sheet explains the relationship between soils, tillage and incorporation of sand to restore crop production in bottomland fields.

Deposits greater than six inches often can be spread to areas where deposits are less than six inches.

Stockpiling, spreading or removal of sand are additional options.

Costs

Cost may play an important role in the decisions farmers make. One acre covered with one foot of sand contains about 1,600 cubic yards of sand. The cost of moving that much sand from one acre would be about \$3,200 (\$2 per yard).

If removal, spreading or deep tillage is too expensive, farmers may decide to abandon fields.

Plants For Sandy Soils

For abandoned fields, some grass species can keep the soil from blowing and creating a wind erosion problem in adjacent fields.

Canada Wild Rye, Little Bluestem, Redtop, Side Oats-Grass, Indian Grass and Annual Lespedeza are possible plant species to use as cover crops to stabilize extreme sand conditions.

Different situations may require other plants or grasses. The Soil Conservation Service or University Extension can provide assistance in this area.

The University of Missouri suggests a soil test to determine fertility before planting.

All USDA programs are available without regard to race, color, religion, sex, age, marital status, handicap or national origin.

September 1993

How to Incorporate Sand to Restore Bottomlands to Crop Production

Soil Beneath the Sand	Sand Depth (Inches)									Recommended Tillage Depth (Inches)
	2" sand deposit	4" sand deposit	6" sand deposit	12" sand deposit	18" sand deposit	24" sand deposit	30" sand deposit	36" sand deposit	40" sand deposit	
Silt Loam	3	6	8	17	25	33	42	50	56	
Very Fine Sandy Loam	3	6	9	18	28	37	46	55	61	
Loam										
Silty Clay Loam										
Sandy Clay Loam	4	7	11	22	33	44	55	66	74	
Fine Sandy Loam										
Clay Loam										
Sandy Clay	4	8	12	25	37	50	62	74	82	
Silty Clay										
Clay										
Sandy Loam	6	12	19	37	56	74	93	112	124	
Loamy Very Fine Sand	Tillage will not improve the ability of these soils to hold water.									
Loamy Fine Sand										
Loamy Sand										
Fine Sand										
Sand										

ORGANIZATION OF LONG RANGE FLOOD RECOVERY

We are currently operating with 10 task forces. Each task force is responsible for some aspect of the flood recovery effort. Conversations with various agencies involved in the task forces and staff inside the WH have lead me to propose collapsing the 10 to 5 task forces. Three of these would be substantive, policy development focused. Two would be overarching, communications and congressional relations. The following is proposed for discussion purposes.

FLOOD PLAIN MANAGEMENT--- Chairs T.J. Glauthier(OMB), Katie McGinty(OEP), Jim Lyons(USDA).

Including the following current task forces: Levee Reconstruction, Wetlands and Flood Plain Management

COMMUNITY RECONSTRUCTION--- Chairs Christopher Edley,(OMB) Andrew Cuomo(HUD), Bob Nash(AG).

Including the following current task forces: Housing, Community Facilities, Transportation, Bridges and Roads, Commerce, Business Development, etc.

ENVIRONMENTAL AND HEALTH SAFETY---Chairs Frank Young(HHS) and Sylvia Lawrence(EPA).

Including the following current task forces: Water Supply, Treatment and Waste, Environmental, Health and Medical, Education/Social Services.

COMMUNICATIONS COORDINATION--- Morrie Goodman(FEMA) and Lisa Mortman(WH).

CONGRESSIONAL COORDINATION--- Barbara Chow(WH) and Martha Braddock(FEMA).

AGENDA

- 0 Reduction of task forces
- 0 Update on town meetings
- 0 Levee reconstruction memo



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 of
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.

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET

ROUTE SLIP

TO <u>Brian Burke</u>	Take necessary action ☐
	Approval or signature ☐
	Comment ☐
	Prepare reply ☐
	Discuss with me ☐
	For your information ☐
	See remarks below ☐
FROM <u>Levi Heyland</u>	DATE <u>10/14/93</u>

REMARKS

As per our conversation



Federal Emergency Management Agency
Disaster Field Office
4080 Wedgeway Court
Earth City, Missouri 63045



Declaration: FEMA-995-DR-MO

September 25, 1993

Dear Interagency Hazard Mitigation Team Member:

Re: Draft Interagency Hazard Mitigation Team Report

Enclosed is the DRAFT Interagency Hazard Mitigation Team (IHMT) Report developed from the Team meeting held in Jefferson City on September 14, 1993 at the National Guard Headquarters. The issues, background and recommendations in this draft also incorporate the ideas developed at the June IHMT. The final report will serve as guidance for the update of the State Hazard Mitigation (409) Plan.

Please review the enclosed draft and fax or telephone your comments/edits and additional background information to us by Monday, October 4 at (314) 770-6657 (fax) or (314) 770-0149 (phone). We would like to finalize the report, decide on layout and format, and publish it as quickly as possible. Also check the IHMT list at the back of the report for proper spelling of your name, correct address, telephone and fax numbers.

We will be advising you about the follow-up meeting of the IHMT scheduled for October 19th. There are a few options we are considering, so we will be in touch with you later about those arrangements.

Thank you for your input at the team meeting(s) and for your continued participation on the Team.

Sincerely,

John Carleton
FEMA-995 Hazard Mitigation Officer

Interagency Hazard Mitigation Team Report

**for the Flood of '93
State of Missouri**

**FEMA-989, declared May 11, 1993
and
FEMA-995, declared July 9, 1993**

FEMA-989: Counties of Jefferson, Lincoln, Marion, Pike, St. Charles, Ste. Genevieve, and St. Louis.

FEMA-995: 85 counties & 3 cities: Adair, Andrew, Atchison, Audrain, Barry, Barton, Bates, Benton, Boone, Buchanan, Caldwell, Callaway, Camden, Cape Girardeau, Carroll, Cass, Chariton, Clark, Clay, Clinton, Cole, Cooper, Crawford, Daviess, Dekalb, Franklin, Gasconade, Gentry, Grundy, Harrison, Henry, Hickory, Holt, Howard, Jackson, Jasper, Jefferson, Johnson, Knox, Lafayette, Lewis, Lincoln, Linn, Livingston, Macon, Maries, Marion, McDonald, Mercer, Miller, Mississippi, Moniteau, Monroe, Montgomery, Morgan, New Madrid, Newton, Nodaway, Osage, Pemiscot, Perry, Pettis, Pike, Platte, Pulaski, Putnam, Ralls, Randolph, Ray, St. Charles, St. Clair, St. Francois, St. Louis, Ste. Genevieve, Saline, Schuyler, Scotland, Scott, Shelby, Stoddard, Stone, Sullivan, Warren, Wayne, Worth, and the Cities of Jefferson City, Kansas City, and St. Louis.

Report Date: October, 1993

TABLE OF CONTENTS
[TO BE ADDED]

EXECUTIVE SUMMARY
[TO BE ADDED]

INTRODUCTION

Disaster Declaration

During 1993, the State of Missouri has endured an ongoing flood that has produced floods of record breaking levels and duration.

On May 11, 1993, President Clinton declared parts of Missouri to be a major disaster area as a result of severe flooding damage. The disaster declaration was for individual assistance only, and covered seven counties: Jefferson, Lincoln, Marion, Pike, St. Charles, Ste. Genevieve, and St. Louis.

On July 9, 1993, as a result of further flooding, President Clinton declared 5 counties to be major disaster areas, eligible for individual assistance. On July 10, 54 counties and 1 city were added for individual assistance. With further additions, a total of 85 counties and 1 city have been declared for individual assistance, including 71 counties and 3 cities that were also declared eligible for public assistance: Adair, Andrew, Atchison, Audrain, Barry, Barton, Bates, Benton, Boone, Buchanan, Caldwell, Callaway, Camden, Cape Girardeau, Carroll, Cass, Chariton, Clark, Clay, Clinton, Cole, Cooper, Crawford, Daviess, Dekalb, Franklin, Gasconade, Gentry, Grundy, Harrison, Henry, Hickory, Holt, Howard, Jackson, Jasper, Jefferson, Johnson, Knox, Lafayette, Lewis, Lincoln, Linn, Livingston, Macon, Maries, Marion, McDonald, Mercer, Miller, Mississippi, Moniteau, Monroe, Montgomery, Morgan, New Madrid, Newton, Nodaway, Osage, Pemiscot, Perry, Pettis, Pike, Platte, Pulaski, Putnam, Ralls, Randolph, Ray, St. Charles, St. Clair, St. Francois, St. Louis, Ste. Genevieve, Saline, Schuyler, Scotland, Scott, Shelby, Stoddard, Stone, Sullivan, Warren, Wayne, Worth, and the Cities of Jefferson City, Kansas City, and St. Louis. Maps showing the FEMA-989 and FEMA-995 declared counties are provided as Figures 1 and 2.

Origin and Purpose of this Report

When the severity of an emergency exceeds the response capabilities of a state, the Governor can request the President of the United States to declare the event a "major disaster." Upon declaration, sections of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended, also known as the Stafford Act) take effect, and provide the framework for the implementation of federal disaster assistance programs.

Section 409 of the Stafford Act requires state governments to plan and implement hazard mitigation measures to reduce damage and suffering from future disasters. Regulations implementing the Stafford Act (44 CFR, Part 206) call for the formation of an Interagency

Hazard Mitigation Team (Team) following each flood disaster, comprised of representatives from federal, state and local agencies. The Team's primary function is to identify practical measures that can be taken to reduce vulnerability to similar disasters in the future.

In response to the May 11 declaration, staff from FEMA and the Missouri State Emergency Management Agency (SEMA) convened a meeting of the Team on June 24, 1993. Due to the ongoing and worsening flooding throughout the summer, the first report remained in draft stage. A hazard mitigation issues paper was developed by FEMA hazard mitigation staff in August, building on the problems and recommendations identified in June, and identifying three major topic areas: levees, recovery/rebuilding, and hazardous materials. The paper was distributed for review by the Team.

On September 14, a second meeting of the Team was held to discuss the paper and to identify additional issues raised by the continuing flooding and new disaster declaration of July 9. During the course of the meeting, Team members concluded that a state floodplain management program was essential in order to prioritize and implement any other hazard mitigation recommendations.

The eight recommendations in the Hazard Mitigation Recommendations Section of this report combine the problems and recommendations identified at both Team meetings. They offer strategies that can be pursued to develop legal tools, supporting research, and public education to influence private and public actions in the floodplain.

The final section covers issues raised in the Team meetings that either did not result in specific recommendations, were not fully discussed by the entire team, or which ranged beyond the primary hazard mitigation focus of the report.

This report transmits the Team's recommendations to the Regional Director of the Federal Emergency Management Agency, the Governor of Missouri, federal, state and local agencies, and other interested parties. A list of Team members, including all those who attended meetings or commented on the report, is provided in Appendix F.

State Hazard Mitigation Plan

The Stafford Act requires States to update their State Hazard Mitigation Plan within 180 days following each disaster declaration. This report is intended to assist the State of Missouri with this process. A meeting of the Team to continue work on the Plan is scheduled for October 19, 1993.

FEMA will monitor implementation of the State's Hazard Mitigation Plan. Progress by the State in implementing its Hazard Mitigation Plan may be considered by the federal government when determining the extent and availability of federal assistance for future disasters.

Hazard Mitigation Grant Program

One source of funding to implement hazard mitigation recommendations is the Hazard Mitigation Grant Program (HMGP), authorized by Section 404 of the Stafford Act. The purpose of the HMGP is to provide up to 50% funding for cost effective projects that will substantially reduce the risk of future damage or loss from natural disasters.

The program is available after a Presidential declaration of a major disaster requiring public assistance (Section 406 of the Stafford Act). The grant funds shall not exceed 10% of the estimated federal spending on permanent restorative work on public facilities following the disaster. As of this writing, the estimated federal share available for Missouri is \$9 million.

Eligible applicants include state agencies, Indian tribes, local governments, and certain private non-profit organizations which provide essential government services. The State of Missouri has announced a November 1, 1993 deadline for the receipt of HMGP applications. Any questions regarding Missouri's HMGP should be directed to: Dale Schmutzler, State Hazard Mitigation Officer, State Emergency Management Agency, P.O. Box 116, Jefferson City, MO, 65102, (314) 526-9579.

DESCRIPTION OF THE DISASTER

Although this report focuses on Missouri, the great flood of 1993 caused widespread losses and resulted in federal disaster declarations in eight other states: Illinois, Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin.

This section includes some of the significant effects of the 1993 floods in Missouri, but cannot be a comprehensive record of this epic event. Special thanks are due to the *St. Louis Post-Dispatch*, whose reports provided important background for this section.

The Disaster Area

The State of Missouri has a population of about 5 million people and encompasses 45 million acres (70,000 sq. miles). In non-flooding times, this area includes about 480,000 acres (750 sq. miles) of inland waterways. In 1993, the USDA estimated total agricultural land area at 29 million acres, of which about 17 million acres were planted with crops.

Missouri contains two great river systems: the Missouri and the upper Mississippi. Within the State, the Missouri River meanders 535 miles from the State's Nebraska/Iowa border until it joins the Mississippi River in St. Louis. The Mississippi River winds just under 500 miles in Missouri from the Illinois/Iowa border in the north to the Tennessee/Arkansas border in the south. The rivers have numerous significant tributaries which contributed to this year's flooding.

Missouri's Flood of 1993

The flooding of 1993 along the Missouri and upper Mississippi river basins resulted from nearly constant above-average rainfall from November, 1992, through July, 1993. River levels began rising above flood stage in Missouri in April, 1993. Record high flood stages occurred during the ensuing months. At the time of this writing (September, 1993), many areas along the Mississippi River in Missouri remain above flood stage. A summary of record river levels is provided in Table 1.

**Table 1. Record High Water Stages in Missouri
During the 1993 Flood (in feet)**

Mississippi River	1993 High Water Level	Previous Record	Flood Stage
Hannibal	32	29	16
St. Louis	49	43	30
Cape Girardeau	48	46	32
Missouri River			
St. Joseph	33	27	17
Kansas City	49	46	32
Jefferson City	39	34	23
Hermann	36	36	21
St. Charles	39	37	25
Source: U.S. Army Corps of Engineers, 8/31/93			

The U.S. Geological Survey (USGS) issued a report *Flood Discharges in the Upper Mississippi River Basin 1993* [Appendix B], which includes information on the magnitude and frequency of peak discharges. Figure 4 on page 6 of the report shows the large number of streamflow-gaging stations with recurrence intervals that are greater than the 100-year-flood.

Summary of Damages

According to State officials, the total damages estimate for the state of Missouri is \$4 billion, which includes public and private damages, insured and uninsured. About half this figure is agricultural loss.

As of this writing, at least 28 deaths in Missouri have been attributed to the flood, including thirteen people killed in car accidents, four boys and two adults killed when waters rose as they were exploring a cave, two people electrocuted, one person killed as her home was swept away, and nine others drowned while walking, bicycling or boating.

As of September 21, 1993, the Federal Emergency Management Agency (FEMA) estimates total damages to public facilities at \$125,000,000 (not including most damage to levees). A breakdown of this estimate by category is shown in Table 2.

Table 2. FEMA Public Assistance Damage Estimates (as of Sep. 21, 1993)	
A. Debris Removal	\$ 10,000,000
B. Protective Measures	\$ 25,000,000
C. Roads & Bridges	\$ 48,000,000
D. Water Control Facilities	\$ 2,000,000
E. Public Buildings	\$ 15,000,000
F. Public Utilities	\$ 20,000,000
G. Other	\$ 5,000,000
TOTAL:	\$125,000,000

As of August 18th, the US Department of Agriculture estimated that the flood had inundated about 2 million acres of cropland, representing about 10% of the State's planted acreage. Banks and channels of many rivers were severely eroded, and sediment was deposited over large areas of the Mississippi River Basin floodplain.

The extent and duration of the flooding caused numerous levees to fail. As of September 21, the US Army Corps of Engineers estimates that 840 of the more than 1300 public and private levees in Missouri were damaged by the flood.

Seventy-five drinking water systems were affected during the July and August flooding. Eight of the nine water plants flooded had complete water outages for a period of time. A partial water outage due to broken supply lines or portions of service areas inundated was experienced by ten supplies. The City of St. Joseph water treatment plant was flooded out for seven days, leaving 96,000 people without water. Twenty-nine boil water notices due to actual or suspected system contamination were issued, and boil orders continue in some communities to date. At the peak of the flooding 95 wastewater treatment systems were flooded or threatened.

Numerous highways, county and city roads, and wooden bridges were flooded or rendered inaccessible by flooding. Flooding created large holes in gravel roads, washed out culverts, and cracked some concrete bridges and low water spans. Other bridges collapsed. [What about federal highways?]

The prolonged flooding led to the closing of the Mississippi River to barge traffic from St. Louis, north. The *St. Louis Post-Dispatch* reported estimates that 2,000 grain barges were stranded by the river closing, along with hundreds of other barges carrying coal, liquid fuel, chemicals and other products.

DRAFT, September 25, 1993

Industrial and agricultural areas were inundated, which caused concern about the transport and fate of industrial chemicals, sewage effluent, and agricultural chemicals in the floodwaters. On September 15th, the U.S. Environmental Protection Agency reported that they had recovered 247 large storage tanks, 1178 smaller tanks, 3740 drums (over 15 gallons), and 5731 smaller containers that were displaced by the flood in Missouri. On July 30, floodwaters caused leaks in Phillips 66 liquid propane tanks storage facility near the mouth of River Des Peres in St. Louis. Fearing the possibility of an explosion, authorities evacuated over 10,000 people from the area.

Recovery Assistance Programs

As flooding displaced people from their homes in May, the American Red Cross activated their Mass Care feeding program and set up two shelters. The ARC housed 32 people in their temporary facilities and served more than 30,621 meals. There were 109 families placed into hotels/motels and 59 into monthly rentals. Following the July 9 declaration, the ARC mass shelters housed 5,201 individuals, placed 1,449 families into motels/hotels and 2076 into monthly rentals. There were 1,166,166 meals served.

Immediately following the federal disaster declarations, telephone hotlines enabled residents to obtain information about assistance programs. Following the May 11 declaration, ??? Disaster Application Centers (DACs) opened in the seven declared counties. After the July 9 declaration, 33 DACs opened in locations throughout Missouri. This number includes two mobile DACs that revisited areas throughout the State.

As of September 16, 1993, approximately 30,000 individuals and families had registered by telephone or at DAC locations to request disaster assistance. More than \$25 million had been disbursed to homeowners by the Disaster Housing Program to perform emergency repairs on their residences or to assist displaced families with temporary housing. Nearly \$6 million had been approved by the Individual and Family Grant Program to help meet immediate needs of victims. More than \$93 million in low-interest loans had been approved by the Small Business Administration to cover disaster-related losses to homeowners and businesses.

FLOODING AND FLOODPLAIN MANAGEMENT IN MISSOURI

Missouri has received eight presidential flood disaster declarations in the last 20 years [1973, 1979, 1982, 1984, 1986, 1990, May 1993 and June 1993]. The state has also experienced floods which have not warranted a presidential disaster declaration, such as those which occurred in 1983, 1985, and the spring of 1986. Although the level and extent of damages vary, damages reoccur at frequent intervals to cities, towns and rural residents located within the floodplain. A list of the declared counties since 1984 is provided in Appendix A.

Local Land Use Regulations and Participation in the National Flood Insurance Program

As of March 8, 1993, the Missouri Association of Counties estimated that of the 114 counties in Missouri, 10 have planning and 27 have planning and zoning authority. First and second class counties can issue building permits without planning and zoning authority, but third class counties cannot. Chapter 89, Municipal Planning and Zoning, gives all cities and villages planning and zoning authority and the right to issue building permits. Among Missouri's municipal jurisdictions, most larger jurisdictions exert zoning authority, but many smaller ones do not.

Missouri's 1982 Executive Order 82-19 designates the Director of the Missouri Department of Natural Resources to be the State Coordinator for the National Flood Insurance Program (NFIP). It also assigns the responsibility to design and oversee all State construction planned in floodplains to the Office of Administration, Division of Design and Construction. This Executive Order provides the minimum framework required to allow the State to participate in the NFIP.

Local jurisdictions may exercise discretion as to whether they wish to participate in the NFIP. Sixty-five of the 114 counties in Missouri participate in the NFIP. All of the counties along the Mississippi and Missouri Rivers participate, incorporating the bulk of the land area, floodplain and population of Missouri. In 1993 alone, four new counties joined the program before the major flooding occurred. However, Missouri has 544 communities: 108 are either sanctioned, suspended, or non-participants in the NFIP.

Even in jurisdictions that participate in the NFIP, only approximately 9% of the 169,000 structures in the floodplain have NFIP policies in force. Although flood insurance is required on structures backed by federally-backed mortgages, many lending institutions have not fulfilled their responsibility to enforce the insurance requirement. A recent FEMA/FIA-sponsored study of 2,000 SBA applications submitted from the multistate 1993 Midwest flooding produced the following information:

1. Of those individuals who have applied for assistance, some 40% were not in the 100-year floodplain
2. Of the remaining 60%, only about half those people carried a mortgage
3. Even if there were 100% lender compliance with the mandatory purchase requirement on federally backed mortgages, only about half the mortgages issued would require purchase of flood insurance.

Officials representing FEMA/FIA recognize the need for increased marketing of flood insurance and compliance required for purchase of flood policies for people who obtain federally regulated and insured mortgages. Proposed legislation before Congress would tighten procedures to ensure that lenders enforce mandatory flood insurance purchase provisions.

Removing Repetitively Flooded Residences

Some houses damaged in these floods have been repeatedly flooded in the past. Among the limited percentage of structures that have flood insurance, the NFIP has identified 2,518 insured properties in 29 jurisdictions that have had two or more flood loss claims since 1978. A breakdown is provided in Appendix E.

Each flooding event leads to distress and costs for residents, as well as potential response and recovery expenses and lost tax revenues for local, state and federal governments. Many flood victims and their communities have recently expressed interest in acquiring repeatedly flooded properties and converting them to permanent open space uses.

Many federal programs are available to assist local communities in putting together acquisition programs. These include:

1. NFIP Section 1362
2. FEMA Hazard Mitigation Grant Program
3. Community Development Block Grant
4. Small Business Administration loans

FEMA sponsored 14 "Relocate, Rebuild & Buyout" workshops for local government officials during the first two weeks in September, 1993. These workshops advised officials about their responsibilities in federally assisted buyouts, and specific steps to begin the application process.

National efforts are underway to provide further help to jurisdictions to plan and carry out buyouts of floodplain properties. Proposed legislation before Congress would increase the assistance available for buyouts, providing the following:

1. Planning grants to help communities deal with repetitive loss properties
2. Grants for removal of properties from the floodplain
3. Additional insurance coverage to include mitigation, which could cover elevation or relocation

Ongoing NFIP enforcement activities

As part of continuing efforts to assess local enforcement of the NFIP, FEMA Region VII and the State of Missouri conduct "community assistance visits" (CAVs). Visits are planned over the next year to monitor local compliance with NFIP standards during rebuilding after the ongoing flooding. FEMA Region VII NFIP staff are also planning to conduct a CAV to state agencies for the purpose of determining State compliance with NFIP regulations.

HAZARD MITIGATION RECOMMENDATIONS

The recommendations included in this section offer strategies that can be pursued to develop legal tools, supporting research, and public education to influence private and public actions in the floodplain.

These recommendations have been developed from discussions held by the Team in June and September, 1993. Additional concerns raised by the Team are discussed in the next section of this report.

The agenda for the September 14 Team meeting was organized around three topical areas: Flood Control Infrastructure, Residential Structures and Hazardous Materials. A recurring theme of both the June and September Team meetings was the absence of effective floodplain management by the State and local communities. This issue was perceived to have an impact on each of the other problem areas under discussion. Team members at the September 14 meeting concluded that a state floodplain management strategy was essential in order to prioritize and implement any other hazard mitigation recommendations. The recommendations have been organized to reflect that focus.

ISSUE: Statewide Floodplain Management

Background: Many local jurisdictions do not participate in the National Flood Insurance Program (NFIP) and have no floodplain management guidelines. Other local jurisdictions and state agencies have floodplain management regulations on the books but lack staff to enforce them. Only one jurisdiction in Missouri, the City of Arnold, participates in the NFIP's Community Rating System (CRS). The CRS encourages communities to exceed minimum NFIP management guidelines and thereby obtain lower flood insurance rates for their residents. Most of the Team agreed on the need for the State to establish a strong floodplain management policy that would set baseline floodplain management standards for all jurisdictions in Missouri, encourage jurisdictions to participate in the CRS, and assist jurisdictions with floodplain management enforcement.

Missouri's Executive Order 82-19 was issued in 1982 to provide a framework for the creation of floodplain management policy, but has yet to be enforced. The State Hazard Mitigation Team, convened in response to the federal disaster declarations, provides a forum for recommending changes in state floodplain management policy and enforcement mechanisms.

Recommendation 1. Strengthen state floodplain management guidelines and implementation practices. This should follow two tracks:

- 1A. Review, update, and rewrite the Governor's Executive Order 82-19, which provides a framework for the creation and enforcement of a State Floodplain Management Plan. [Note: This recommendation was also included in the Team Report following the 1986 flood disaster declaration].

- 1B. Develop draft floodplain management legislation. This process will start by exploring options presented in the Model State Legislation for floodplain management, including basic regulations, statutes, innovative techniques, etc., developed by the Association of State Floodplain Managers.

Lead Agency: Missouri Department of Natural Resources

Support Agencies: FEMA, the State Emergency Management Agency, other State Hazard Mitigation Team participants, the State Legislature and the Office of the Governor.

Funding: 1A) FEMA Community Assistance Program/State Support Services Element, 1B) FEMA Hazard Mitigation Assistance Funding. [Any state funding??]

Schedule: Prepare draft legislation for introduction in the 1994 legislative session.

ISSUE: Defining Market Value

Background: Under NFIP regulations, when a building is "substantially improved," the building's lowest floor must be elevated to or above the 100-year "base flood elevation" in the repair process. "Substantial improvement" is defined by regulations as "any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the 'start of construction' of the improvement. This term includes structures which have incurred 'substantial damage,' regardless of the value of or actual cost of repair work performed." Different areas of the country have used different ways to estimate the market value, including variations on pre-flood assessed values and replacement cost.

FEMA has decided not to dictate specific guidelines on this issue. A September 3, 1993 FEMA policy statement allows communities to choose their own methods for calculating "market value," unless State regulations mandate one method.

In Missouri, the assessed value is often considerably less than the replacement cost of structures. Using replacement cost as the basis for determining "market value" would cause many fewer damaged structures to trigger elevation requirements of the NFIP than using most variations on pre-flood assessed values.

There is no Missouri state law establishing a method for communities to determine "market value." Accordingly, each local jurisdiction has been forced to make a difficult decision as to which method to use. This has made the rebuilding process more complex for residents who must wait for their communities to reach a decision on whether they must elevate or not. A state law establishing a set method for determining "market value" would make it easier to train local jurisdictions in the process of enforcing NFIP regulations during rebuilding, which would result in greater enforcement and compliance with those regulations.

Recommendation 2. Create a State "market value" definition. The State of Missouri should establish by State law how local jurisdictions should define "market value" of structures for the purpose of compliance with NFIP regulations.

ISSUE: Tracking Floodplain Uses

Background: Many local jurisdictions do not keep track of the use and development of land in the floodplain. Such data would be useful for providing data on the history of flood damage on each parcel, which could help set priorities for flood hazard mitigation planning at a local level, including acquisition programs.

The problem of enforcing use restrictions in the floodplains is also present in state and federal lands. For example, the U.S. Army Corps of Engineers allowed structures to remain on leased land in designated floodplains on condition that the structures would not be used as primary residences and that leaseholders acknowledged that flooding could occur and that they would not be eligible for compensation for flood losses. Despite these explicit lease restrictions, many such properties were used as primary residences, resulting in major losses to families when flooding occurred. Besides raising questions about eligibility for disaster assistance, this illustrates that any future program to acquire properties in the floodplain and deed land to open space uses must include monitoring to ensure that use restrictions are observed.

St. Charles County has begun implementing administrative procedures to track building permits and elevation certificates within its "density floodway."

Recommendation 3. Improve floodplain use tracking systems. The State should provide assistance to counties and cities to develop or improve their floodplain use tracking systems. Each lot in the floodplain should have a county file that keeps track of permits and certificates relating to it. Such tracking systems should also be maintained for State and federal lands.

Lead Agency: Missouri Office of Administration/Department of Natural Resources (???)

Support Agency: State Legislature

Schedule: FY 1994

Funding: Legislative appropriation

ISSUE: NFIP Training

Background: Enforcement of NFIP floodplain management regulations that will prevent future flood losses requires knowledgeable local enforcement officials. The Missouri Department of Natural Resources (DNR) sponsors workshops on the NFIP for local officials three to four times per year. Following the flood crests in August, FEMA and DNR mounted a special outreach program to explain and answer questions on NFIP regulations.

Despite these efforts, a large number of communities lack staff who have been trained in NFIP compliance procedures. In some cases, there was confusion about the respective roles played by local officials to determine substantial damage, and loss verifiers from disaster assistance programs and insurers.

Team members were concerned that flood victims who receive loans, grants and insurance settlements to repair flood damage may begin rebuilding without obtaining information on potential elevation and other code requirements. Some members suggested that all repair settlements be withheld until building permits are issued, but others felt this would create unacceptable delays in the delivery of insurance settlements and disaster relief. Team members agreed that the ultimate objective should be to improve code enforcement capabilities at the local level.

Expanded NFIP training efforts could also help communities participate in optional NFIP programs, such as the Community Rating System (CRS) and the Section 1362 buyout program. As noted in Recommendation #1, the CRS system provides incentives to communities to adopt more than the minimum floodplain management requirements of the NFIP. Through Section 1362 of the NFIP, FEMA can purchase previously flood-damaged property and provide property owners the opportunity to relocate in areas not prone to flooding. To be eligible the property owner must have a flood insurance policy in force when the damage occurs and meet one of three other program criteria. In addition, the community must agree to accept title to the property and manage it for open space. Property owners are offered a settlement based on pre-flood fair market value less the amount of the claim settlement.

One way to expand the reach of FEMA and DNR training efforts is to develop videotapes and other training materials on the NFIP for year-round training and for distribution to community officials immediately following a major flood.

Recommendation 4. Expand NFIP education efforts. FEMA and the State of Missouri should increase ongoing NFIP education efforts for local floodplain management officials. FEMA and the State should evaluate existing training materials and consider developing new videotapes and publications that could be disseminated to local officials to refresh or strengthen their knowledge of NFIP compliance procedures.

Lead Agencies: FEMA/DNR

Funding: May be eligible for partial funding from FEMA's Hazard Mitigation Grant Program or Disaster Preparedness Improvement Grant Program

Schedule: Begin as soon as possible

ISSUE: Hydrology Maps

Background: In view of the major flooding that has occurred on both the Mississippi and Missouri Rivers, it is important to evaluate both the existing hydrology and profiles for these rivers. [Need more background information to tie into the recommendation, which was made at the June Team meeting.]

Recommendation 5. Remap Mississippi/Missouri River hydrology. The FEMA Federal Insurance Administration (FEMA/FIA), in conjunction with the US Army Corps of Engineers (USACE), should review existing studies of the Mississippi and Missouri Rivers with respect to the stages which have occurred and update published reports if necessary.

Lead Agency: FEMA/FIA, USACE???
Support Agency: Missouri DNR???
Funding: Existing budgets???
Schedule: 1994???

ISSUE: Defining Floodways

Background: The existing uncoordinated levee system does not provide for adequate floodways. The political and economic realities that dictate emergency repair of existing levees often preclude alternative strategies that might allow for increases in floodway capacity. Such strategies might include set-back levees, purchase of flood easements, etc. Any new planning effort could build on the 1950s-era "Pick Sloan" floodway plan for the Missouri River, which authorized a 5,000 ft. flow-way from Kansas City, Missouri to St. Louis. [Jerry Brabander, more specifics???].

Recommendation 6. Develop long-term floodway plan. The Missouri Department of Natural Resources (DNR) should develop a long-term floodway plan for the Mississippi and Missouri Rivers that would study ways to modify the current levee system and increase floodway capacity, thereby reducing flood damages. This should be coordinated with multi-state watershed planning efforts.

Lead Agency: Missouri DNR
Support Agency: USACE
Funding: USACE Section 22
Schedule: To be determined

ISSUE: Defining Flood Risk Behind Levees

Background: Under current regulations, communities that build levees to federal standards to protect an "A-zone" floodplain may petition the FIA to redesignate the area as no longer constituting an "A-zone." As a result, people obtaining federally-backed loans for development behind the levee are no longer required to carry flood insurance. In addition, removing the A-zone designation from areas behind levees may provide a false impression to people that there is no longer any risk of flooding.

As became painfully clear during this flood, even levees designed to federal standards do not offer a 100% guarantee of protection against flooding. Maintaining a special A-zone designation behind levees would be one vehicle for informing people of the residual risk of construction behind levees. In addition, the insurance coverage that would be purchased due to the A-zone designation would help limit economic distress and disaster aid requirements when levee breaks occur in the future.

Recommendation 7. Create special A-zone designation behind levees. The Flood Insurance Administration (FIA) should create a special A-zone designation for floodplains protected by

DRAFT, September 25, 1993

levees meeting federal standards. This A-levee designation would probably have lower premiums than regular A-zones (reflecting lower actuarial risks), but would still carry a mandatory purchase requirement for properties with federally-backed mortgages.

Lead Agency: FEMA/FIA

Funding: Existing budgets

Schedule: Ongoing???

ISSUE: Hazardous Materials

Background: Hazardous materials are stored in floodplains without adequate containment for preventing them from being released during floods. One notable case occurred on the River Des Peres in St. Louis, where flooding caused propane tanks at the Phillips Petroleum facility to dislodge from their base and start leaking. The risk of explosion caused authorities to evacuate more than 10,000 people immediately. Fortunately, no explosions occurred.

According to the St. Louis Fire Chief, if five-30,000 gallon propane tanks had broken loose and released their contents, a propane cloud 3,000 feet in diameter and 12 feet thick would have formed. Since propane vapor is heavier than air, it would have traveled along the ground, like a fog bank, until it reached an ignition site. Additionally, if five tanks had exploded, they would have destroyed walls and roofs up to one mile and caused window damage up to two miles. An initial explosion would have had a disastrous effect on the remaining 46 propane tanks.

The U.S. Environmental Protection Agency (USEPA) reports that as of September 15th, they had recovered 247 large storage tanks, 1178 smaller tanks, 3740 drums (over 15 gallons), and 5731 smaller containers that were displaced by the flood in Missouri.

Numerous straps securing chemical and gas storage tanks were apparently broken by the power of the flood. Some facilities managed to prevent tanks from breaking away by emptying residual product and refilling the tanks with water to eliminate buoyancy during the flood.

Concerns have also been expressed that hazardous materials stored in flooded residences may cause contamination problems.

Recommendation 8. Enforce hazardous materials containment/relocation standards. Develop a program at the local and State level to enforce secondary containment standards for storage of hazardous materials or to relocate hazardous materials located in the floodplain. Use the information on hazardous materials storage compiled by the US EPA Protection Agency under the provisions of SARA Title III (Community Right-to-Know) to publish inventories of hazardous materials stored in flood hazard zones, and prioritize inspections.

Lead Agency: Missouri DNR

Support Agencies: Local Fire Districts, Local Emergency Planning Commissions, USEPA, SEMA

Funding: To be determined

Schedule: Begin as soon as possible in industrialized areas

OTHER ISSUES

This section includes issues raised in Team meetings that either did not result in specific recommendations, were not fully discussed by the entire team, or ranged beyond the primary hazard mitigation focus of this report.

National Weather Service Weather Wire: National Weather Service representatives recommended that more agencies should subscribe to their "weather wire," which automatically distributes current weather information. During the 1993 flooding event, weather service staff found themselves having to fax daily weather information separately to FEMA/Kansas City, SEMA, the FAA and others because those offices did not subscribe to the National Weather Service Weather Wire. Lease of equipment for this service is \$130/month.

NFIP commercial flood insurance limits: The Federal Insurance Administration (FIA) limits commercial coverage to a maximum of \$250,000 for buildings and \$300,000 for contents. Businesses traditionally purchase excess line coverage from private insurers to meet their additional needs. Currently, the insurance industry has limited the availability of supplemental coverage, or restricted their coverage to policies with large deductibles, considerably in excess of the NFIP coverage. The result is that business and industry have suffered major uninsured losses. The Team discussed recommending that the FIA raise the NFIP commercial coverage limits. Since the Team meeting, a bill has been introduced in the Missouri Legislature for the State to create a commercial flood insurance pool to cover the gap between maximum NFIP coverage and the common private insurance deductible of \$1 million. Some Team members were concerned that expanding publicly provided or mandated commercial coverage beyond current limits could result in further incentives for unwise commercial development in floodplains, unless the coverage were contingent upon floodplain management regulation.

Damp grain: Damp grain salvaged from the flood may be contaminated with mold and aflatoxin. Some team members were concerned that this grain could have been sold for animal feed, and possibly end up in the milk supply. There has not been sufficient testing to determine how serious a problem this has been during this flood event. Grain contaminated with aflatoxin may be distilled into alcoholic beverages or alcohol gasoline additives. However, the residue from such processes may remain contaminated with aflatoxin and should not be used for animal feed. The State Department of Health is considering a study to determine the extent of aflatoxin contamination in damp grain.

List of Appendices

Appendix A: Missouri Disaster Declarations Since 1984

Appendix B: *Flood Discharges in the Upper Mississippi River Basin 1993*, U.S. Geological Survey Circular 1120-A

Appendix C: "The River Floodway Concept," U.S. Fish & Wildlife Service.

Appendix D: Missouri Communities Sanctioned or Not Participating in the National Flood Insurance Program, as of September 8, 1993.

Appendix E: List of NFIP repetitive losses, by jurisdiction

Appendix F: FEMA-989 and FEMA-995 Interagency Hazard Mitigation Team Participants

APPENDIX A
Missouri Disaster Declarations Since 1984

July 1993 Flood Declaration (FEMA-995)

85 counties & 3 cities: Adair, Andrew, Atchison, Audrain, Barry, Barton, Bates, Benton, Boone, Buchanan, Caldwell, Callaway, Camden, Cape Girardeau, Carroll, Cass, Chariton, Clark, Clay, Clinton, Cole, Cooper, Crawford, Daviess, DeKalb, Franklin, Gasconade, Gentry, Grundy, Harrison, Henry, Hickory, Holt, Howard, Jackson, Jasper, Jefferson, Johnson, Knox, Lafayette, Lewis, Lincoln, Linn, Livingston, Macon, Maries, Marion, McDonald, Mercer, Miller, Mississippi, Moniteau, Monroe, Montgomery, Morgan, New Madrid, Newton, Nodaway, Osage, Pemiscot, Perry, Pettis, Pike, Platte, Pulaski, Putnam, Ralls, Randolph, Ray, St. Charles, St. Clair, St. Francois, St. Louis, Ste. Genevieve, Saline, Schuyler, Scotland, Scott, Shelby, Stoddard, Stone, Sullivan, Warren, Wayne, Worth, and the Cities of Jefferson City, Kansas City, and St. Louis.

May 1993 Flood Declaration (FEMA-989)

7 counties: Jefferson, Lincoln, Marion, Pike, St. Charles, Ste. Genevieve, St. Louis

May 1990 Flood Declaration (FEMA-867)

1 county: Jackson County

October 1986 Flood Declaration (FEMA-779)

29 counties: Bates, Benton, Boone, Callaway, Cass, Clark, Cole, Cooper, Franklin, Gasconade, Henry, Howard, Johnson, Lewis McDonald, Miller, Moniteau, Montgomery, Morgan, Osage, Pettis, Ralls, St. Charles, St. Clair, St. Louis, Saline, Scotland, Shelby, Vernon, Warren.

June 1984 Flood Declaration (FEMA-713)

12 counties: Andrew, Atchison, Buchanan, Caldwell, Clinton, DeKalb, Gentry, Holt, Knox, Platte, Worth

[INSERT FIGURES]

APPENDIX F

FEMA-989 and FEMA-995 Interagency Hazard Mitigation Team

(Note: Combined list of people who participated one or both of the Team meetings in St. Louis on June 24, 1993 and in Jefferson City on September 14, 1993, or who provided comments on the draft report)

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IHMT REPORT EDITORS
Angela Kucherenko, Leo Levenson,
Diana McClure

October 6, 1993

→ To- Will Stelle- 360 Old Executive Building- White House
Jon Kuslar- Ex. Dir. Asn. of State Wetland Managers
Larry Larson- Ex. Dir. Asn. of State Floodplain Managers

Gentlemen:

The two days of meetings on post flood recovery and restoration of Mississippi Basin Floodplains, at St. Louis, were very interesting to this old hunter, fisherman and river rat. I learned a lot listening to the many views expressed. There are several things which must be done and the sooner the better.

1. To establish credibility, "the floodplain", which everyone talked about, but no one identified, must be identified with an honest, specific number, where this "floodplain" begins. On whatever river or streams, in whatever section of the country you are it must be positively identified.

So when Government agencies or any other organization refers to the "floodplain", in any terms or numbers they must be indexed to the correct "floodplain" number, in the proper, truthful perspective.

The present use and reference to "floodplain" by FEMA and the Corps of Engineers are false, distorted, and fraudulent, and would not be tolerated by private industry. Why should we taxpayers?

2. In order to increase the safety factor for cities, industries, and hundreds of thousands of people and reduce the probability of more and excessive "Manufactured Flooding by the Corps of Engineers" along the Mississippi River, it will be necessary to increase the carrying capacity of the Upper Mississippi River.

The most practical way of doing this is building new levees approximately one (1) mile back on each side of the river or two (2) miles back where the river is against the bluff (Re-Quincy, Il.-Hannibal, Mo.-etc.) or use a logical, common sense combination of the two.

The levees would not have to be as high as present levees. The present levees to be opened at the upper and lower ends to an approximate stage of twenty (20) feet (at Quincy, for example). Gated at the lower end to empty when the river recedes.

Spillways rocked to retard washing and river to be free flowing during high water stages (over 20 feet) this would flood out no cities, towns or factories and allow river transportation to continue, (Quincy lock goes out of service at stage 21.9 feet).

This business of the Corps causing the flooding of towns, cities and businesses, while protecting dirt-farm land is no longer acceptable or economically feasible and should not be tolerated at the taxpayers expense.

3. Where levees are built to elevations that will cause flooding and damages to cities, factories and businesses, etc, that were built prior to the levees being raised, districts should be required to carry liability insurance to compensate for these caused damages.

The entire country, especially the Mississippi Basin would benefit by these three suggestions being adopted and put into effect, especially #1.

Allie J. Lymenstull
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217-222-2444

Allie J. Lymenstull

c.c. Senator Paul Simon
c.c. Congressman Lane Evans
c.c. Congressman Dick Durbin
c.c. To Some Participants in the Floodplain Seminar

Copy to Will Stells for President Clinton

October 6, 1993

District Engineer Rock Island Corps of Engineers.
Director of FEMA, Washington, D.C.

Re. 1993 Mississippi River Flood

Gentlemen,

I would appreciate a copy of the cost sheets on each drainage district in the Rock Island district. This to include not only levee repair but all costs spent "fighting the flood"- fixing the roads, pump stations, sand bagging, additional costs of setting up extra offices and all expenses connected with them, Corps personnel salaries and fringes, etc, for each drainage district.

FEMA funds spent for each district, FEMA personnel and their costs, per diem, etc.

To put it plainly, every taxpayer dollar spent, I want you to show where it went, with the same accuracy I must use in filling out my 1040 tax form.

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Allie J. Lymerstull

c.c. Senator Paul Simon
c.c. Congress Lane Evans

→ c.c. President Bill Clinton

October 22, 1993

MEMORANDUM FOR: BRIAN BURKE
KATHI WAY

FROM: SARAH HABERMAN

SUBJECT: OVERLAP BETWEEN SAST AND THE INTERAGENCY
FLOODPLAIN MANAGEMENT COMMITTEE

Brian asked me to review the proposals for the formation of the Scientific Assessment Strategy Team (SAST) and the Interagency Floodplain Management Committee for possibilities of overlap between the two entities. The greatest potential for overlap lies between SAST and the River Management Subcommittee in the area of alternative flood control approaches. Both groups will focus on identifying areas which should be included into existing conservation programs such as wetlands. The language in the two proposals about this subject is very similar. Additionally, SAST will address issues related to river basin management, ecosystem management and flood control. The River Management Subcommittee will also focus on the hydrology of the river, ecosystems and overall flood control. In general, the language describing the goal of SAST mirrors the description of the River Management Subcommittee. Though the Interagency plan does specifically say that SAST will provide assistance as needed, the statement does not reflect strongly enough the close correlation between the goals of the two groups. There should be an emphasis on that correlation with a stipulation that the two groups will work closely so as to avoid needlessly duplicating materials.

★ Brian - here are my notes on the mtg. I will be in
on Friday.

THE WHITE HOUSE
WASHINGTON

Memorandum To: Morgan Rees COE
Hugh Wright COE
Shannon Conniff EPA
Russ Earnest DOI
Brian Burke DPC
Bruce Long OMB
Larry Zensinger FEMA
Tom Wehri SCS

FR: Will Stelle

RE: Meeting to Complete Proposal for Long-Term
Floodplain Review

DATE: October 19, 1993

I would like to meet with you tomorrow, Wednesday October 20th from 2 pm to 5 pm at 722 Jackson Place (CEQ) to complete the drafting of a proposal for a long-term floodplain analysis. The topic of undertaking such a review has been the frequent topic of the Interagency Levee Working Group, but we have yet to complete a workable proposal for the Interagency Group to review and approve.

The purpose of tomorrow's meeting is to complete the drafting of a work plan for the review, after which we will plan to distribute it to the broader Working Group for further action.

Attached is a rough current draft of the workplan, from which we will proceed tomorrow.

Many thanks for your cooperation. Please call me at 456-6224 if you have any questions.

✓ Goal: present a revised
★ package next wed.

Will is going to rewrite &
give you the revisions
tomorrow.

specificity & mechanics
timing
part. by interested groups
staffing & budgeting

**A Review of Floodplain Management
in the Upper Mississippi River Basin**

(October 17, 1993)

neutralize #1
 need to re-assess

I. Introduction

The Floods of 1993 have ^Svividly demonstrated the significant need for major improvements in our approach to floodplain management and response. We are spending enormous sums annually on floodplain management, risk reduction, disaster response and payments for flood losses, and yet people, property, businesses and the environment continue to suffer repeated losses.

too loaded

The subject of floodplain management is enormously complex, involving a broad array of Federal, state and local programs and responsibilities. Any effort to fashion an improved long-term approach must account for and reflect this complexity: a Federal perspective alone is not adequate.

We therefore propose to undertake a review of existing programs and policies affecting activities in the floodplain for the purposes of developing a set of recommendations for improvements. The review should provide significant and sustained opportunities for state, local and nongovernmental interests to provide information and perspectives on the issues under review. Agriculture, the transportation industry, the environmental community and many other groups have significant interests that must be heard if the review is to succeed. The review should also build upon existing studies and report. Much work, many studies and great expertise already exist on the subject of floodplain management, and this past work should serve as the starting point for our current effort.

II. Purposes and Goals

The purpose of the review is to develop a set of recommendations on changes to Federal programs and practices with the following objectives:

- o Reduce risks to life, property and the environment from flooding;
- o Reduce the likelihood of flooding through improved flood controls and watershed management;
- o Restore the natural and beneficial functions and values of the greater Mississippi River ecosystem;
- o Eliminate or modify existing programs or incentives that work at cross-purposes to or do not adequately support those objectives;
- o Enhance intergovernmental coordination; and
- o Save money and other resources, both public and private.

risk of flooding vs. damage from social obj - need balance @
 Diff in kind

Balance of following objectives

III. Geographic Scope

The geographic scope of the study would be those areas affected by or contributing to flooding along the Upper

\$2 million in bill currently in Cong.
 1 mill - data collection

Mississippi River basin including the lower Missouri River and tributaries. *will have national implications*

IV. Procedure *regional input + analytical steps delineated above*

1. INTERAGENCY FLOODPLAIN MANAGEMENT COMMITTEE. The White House and the Office of Management and Budget (OMB) will establish and oversee an Interagency Floodplain Management Committee that will undertake the review. The Committee will be comprised of several "core" Federal agencies with major program responsibilities in floodplain management and the environment (COE, USDA, FEMA, DOI, EPA) with other agencies participating on an as-needed basis (DOT, HUD, SBA, etc.).

The Committee will establish two subcommittees to develop the necessary information and draft findings and recommendations in the following two areas. The Committee will review the work of the two subcommittees and compile its final findings and recommendations in a report to the President. It may also prescribe whatever longer term studies or activities ~~that~~ may be required. *OK*

2. FLOOD DAMAGE SUSCEPTIBILITY SUBCOMMITTEE. The Flood Damage Susceptibility Subcommittee would be chaired by FEMA, with USDA as a co-chair. It would focus on strategies and incentives affecting land use within the floodplain and susceptibility to flood damage and disruption. It would address such issues as:

- o Federal programs directly affecting development *land use reg.* activities within the floodplain (building codes, infrastructure financing or construction, etc);
- o enhanced internalization of flood control and response costs;
- o Federal incentives affecting development in the floodplain (flood insurance; crop insurance; other); and *disaster incentives, tax policy*
- o Federal programs that would minimize risk of damage from flooding (facilities siting, flood proofing, flood insurance, etc.). *includes more than flooding e. navigation*

3. RIVER MANAGEMENT SUBCOMMITTEE. The River Management Subcommittee would be chaired by the COE, with DOI as the cochair. It will focus on strategies to improve the management of the hydrology of the river basin to improve overall floodplain management. It would address such issues as:

- o the improved use of a mix of flood control and flood management options (levees, flood storage, improved watershed management, etc.)
- o the restoration of watersheds and important ecosystems; and
- o the identification of high value areas for inclusion into existing conservation programs (wetlands reserve, greenways, etc.) *(SAST) (too)*

* Need for lessons b/t a sub-C's

* Need for *spec.* action agenda's - what exactly should the sub-C's

do? Approach should be bottom-up: ex: identify constituent groups + needs
different *IDEAS* {relevant prgrms - existing + hypotheticals
analyze costs + benefits, have public

The Subcommittees should review all existing reports and information on the subject, and identify the significant technical information needs. The Scientific Assessment Team and the Economic Team should provide support to each Subcommittee on an as-needed basis. The Subcommittees should then prepare draft findings and recommendations, together with the necessary supporting information, and submit them to the full Committee for its consideration and review.

V. State and Local Roles

The states, local governmental representatives and various interest groups would be invited to provide information and recommendations to the Committee. The Upper Mississippi River Basin Association would serve as an important conduit for coordinating state input. Nongovernmental organizations such as the National Association of Conservation Districts, the Association of State Floodplain Managers and representatives of the environmental community would also be invited to offer their observations.

VI. Timing

The Committee and Subcommittees should be formally constituted and staffed promptly. After an initial issues identification period, workshops could proceed in the region through the end of the year and into early 1994. Draft reports from each Subcommittee would be due to the Committee by March 1st, with a final report to the President by April 1st.

KEY ISSUES

A. Staffing. (PLEASE AMEND AS NECESSARY)

i. The Committee should have five full-time staff detailed to it from participating agencies (COE, EPA, FEMA, DOI, USDA) one of whom shall be designated as the Executive Director. Two support staff will also be necessary.

ii. The staff should serve the full Committee and its subcommittees to ensure a well coordinated overall effort.

iii. The staff should be located in one location. We would propose using the available space at Jackson Place, opposite the White House.

B. Budgets. (PLEASE SUGGEST A BUDGET)

- i. office space, equipment, supplies
- ii. extensive regional workshops (at least 12)
- iii. travel
- iv. publications and communications
- v. consultants
- vi. other

C. FACA. The FACA issue is important for two reasons. If we elect not to form an Advisory Committee for FACA purposes, it

Mechanics: regional public input. How? Committee members meet w/ regional constituent & opinion leaders. - meet in the region
* need structure: set of issues we want their ideas on

Spend time w/ good programs * too, not just those with ineffective programs

will need some sort of public component too

might replace with regional roles

how to incorporate diverse groups w/ diverse interests

workshop model w/ neutral facilitators to get input from all participants

3 m top: Minneapolis (Just suggestions)
St. Louis
Des Moines

★

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will sharply define the non-Federal roles in the effort because it will limit any "participant" to Federal employees. Non-Federal entities may observe the proceedings and serve as sources of information, but they cannot participate in the formulation of any policy or recommendations. If we elect to form a FACA advisory committee, we minimize legal risks of a challenge to the endeavor but we will also require that certain procedural requirements under FACA be honored (selection of members, public notice of meetings, open meetings, the requirements for a charter, etc. Formalizing the process as would be required under FACA would increase the costs in terms of time and money.

Recommendation: To ensure a simplified approach that reflect's the President's observation that there are too many commissions, we recommend no formal commission. We will be consulting regularly with FACA experts to ensure that constraints on non-Federal participation are honored throughout -- and in particular in crafting a high profile role for the region in the workshops,

D. COMMUNICATIONS. All public communications efforts will be coordinated by the WH press operation, using the individual public affairs capabilities of the individual agencies and departments. A public affairs person within the WH and each agency will be designated to design and implement the communications strategy.

E. TECHNICAL ASSISTANCE. The Scientific Assessment Team (under OSTP/DOI) and the Economic Team (under OMB) will be available to provide technical support to the Committee on an as-needed basis. (CAN ADD ADDITION MATERIAL FROM EPA 10/1 draft)

F. SCHEDULE. PLEASE DEVISE A SCHEDULE FOR A REPORT TO THE PRESIDENT BY APRIL 1st.

G. NEPA. We recommend that this effort not be undertaken as a programmatic EIS because of the additional complexities involved in complying with the substantive and procedural requirements of NEPA and the CEQ regulations.

---DRAFT---
October 20, 1993

TO:

_____, Army Corps of Engineers
_____, Department of Agriculture
_____, Environmental Protection Agency
_____, Federal Emergency Management Agency

FROM:

John H. Gibbons, Assistant to the President for Science & Technology

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

Katie McGinty, Director, White House Office of Environmental Policy

SUBJECT: Directive on the Establishment of a Scientific Assessment and Strategy Team in
Response to Flooding in the Mississippi River Basin

The purpose of this directive is to establish an interagency Scientific Assessment and Strategy Team (SAST) responsible for providing scientific advice and assistance to officials responsible for making decisions with respect to flood recovery in the upper Mississippi River basin. The team will develop and provide information to support the decision-making process regarding both nonstructural and structural approaches to flood control.

A key responsibility of the SAST will be to organize the information in existing databases and develop new databases to aid in the near-term decision-making process. Specifically, the team shall identify broad areas that, from a scientific perspective, are most suitable for alternative flood control approaches including wetland restoration. The information developed by the team will be made available to policy-makers and the Disaster Field Offices to aid in making flood recovery decisions. We anticipate that this information will be helpful to states and communities, as well as federal agencies, in making decisions with respect to flood recovery and the longer-term protection and cost-effective use of resources in the Mississippi River basin.

This effort will be chaired by the White House Office of Science and Technology Policy (OSTP) and the Department of the Interior (DOI) and located at the U.S. Geological Survey facility in Sioux Falls, South Dakota. The team shall be directed by a scientist or engineer selected by OSTP and DOI in consultation with us. It shall be comprised of scientists and engineers with a broad range of expertise related to river basin management, flood control, ecosystem management, and economic development. At a minimum, the following departments and agencies will be represented on the team: Department of Agriculture, Army Corps of Engineers, Federal Emergency Management Agency, Department of the Interior, and the Environmental Protection Agency. We ask that each of these agencies nominate individuals to serve on the SAST.

There are
additional
agencies to
include

We expect that the team will communicate regularly with individuals directly involved with flood recovery operations in the Midwest. In addition, the team should take advantage of the expertise already available and organized within federal agencies including the Federal Geographic Data Committee and the Federal Coordinating Council on Science, Engineering, and Technology.

Resources to support this effort will be provided through existing agency budgets supplemented by funds dedicated to flood recovery.

We ask that the team develop a set of preliminary maps indicating potential locations for alternative approaches to flood control, based on criteria to be defined at a later date, no later than November 23, and provide a final set of maps and a report describing the status of the data collection effort and possible future mapping activities no later than December 17.



United States Department of the Interior

GEOLOGICAL SURVEY

RESTON, VA 22092



OCT 15 1993

NOTE FROM THE CHIEF HYDROLOGIST, U.S. GEOLOGICAL SURVEY

We are pleased to provide you the first three reports in a series by the U.S. Geological Survey on the record flooding that occurred this summer in the Upper Mississippi River drainage basin. Other reports in the series will address aspects of the flooding related to duration and volumes of streamflow, sediment loads, scour at bridges, geomorphic changes, and effects of flooding on reservoirs and on water quality.

Please feel free to contact me at (703) 648-5215 for additional information on this report or other information on the flooding that occurred in the Upper Mississippi River Basin.

Philip Cohen

3 Enclosures

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O C C U R R E N C E
AND
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OF
A G R I C U L T U R A L
C H E M I C A L S



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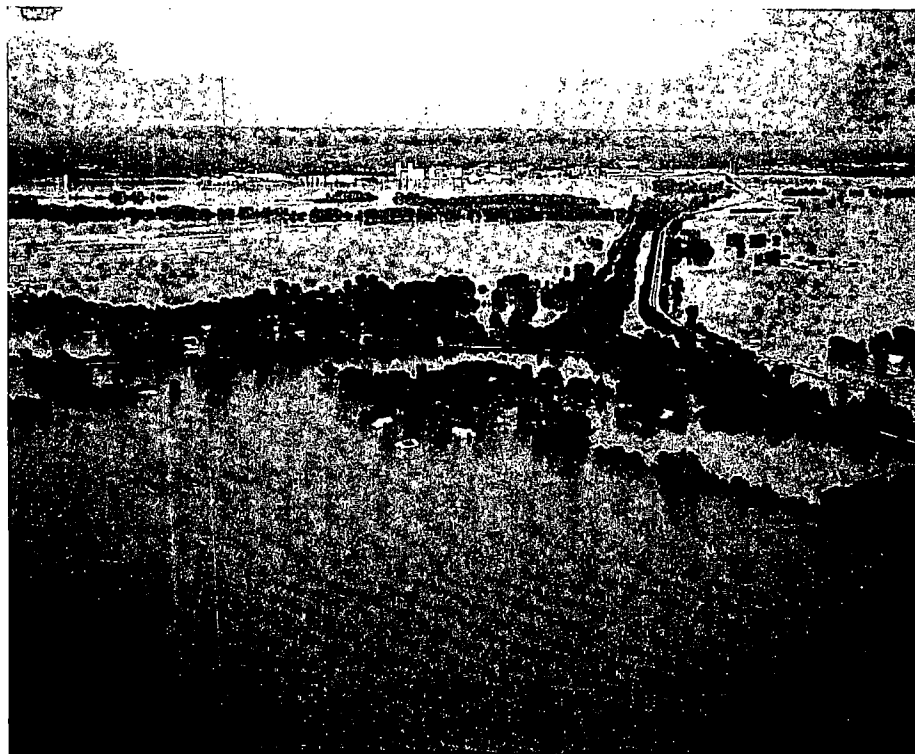
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PRECIPITATION



IN THE
UPPER MISSISSIPPI
RIVER BASIN
JANUARY 1 THROUGH JULY 31
1 . 9 . 9 . 3

U.S. GEOLOGICAL SURVEY CIRCULAR 1120-B

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F L O O D D I S C H A R G E S



IN THE
UPPER MISSISSIPPI
RIVER BASIN

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