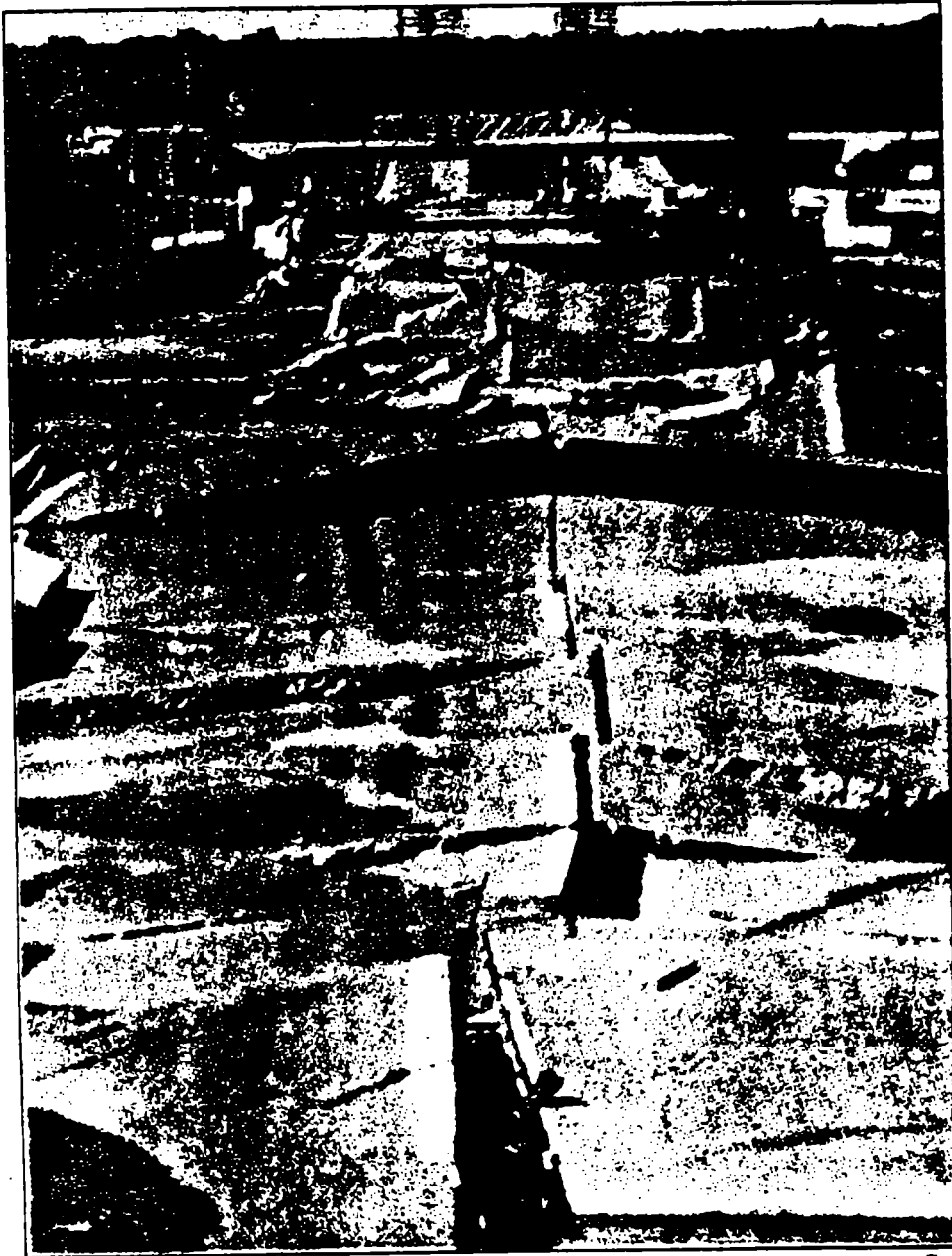


Transportation Roads and Bridges

Task Force Report



1993 Midwest Flood Recovery

August 31, 1993

TRANSPORTATION

ROADS

AND

BRIDGES

1993 MIDWEST FLOOD RECOVERY

TASK FORCE REPORT

August 31, 1993

From reports furnished by: Coast Guard, U.S. Army Corps of Engineers, Department of Agriculture- Forest Service, Department of Energy, Economic Development Administration, Federal Aviation Administration, Federal Emergency Management Agency, Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration, Maritime Administration, Research and Special Programs Administration, Small Business Administration

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**TRANSPORTATION, ROADS AND BRIDGES
1993 MIDWEST FLOOD RECOVERY
TASK FORCE REPORT**

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TRANSPORTATION, ROADS AND BRIDGES 1993 MIDWEST FLOOD RECOVERY TASK FORCE REPORT

1. Introduction; Task Force Charge

The Task Force on Transportation/Bridges and Roads is one of 12 Federal task forces that were established by Secretary of Agriculture Mike Espy to implement and coordinate the Federal response to the Midwest Flood. The primary charge of this task force is to facilitate Federal efforts to restore the transportation systems in the States affected by the flood. The task force may also address longer range issues.

The task force includes Federal agencies directly responsible for Transportation such as the U.S. Department of Transportation and its Modal Administrations and the U.S. Army Corps of Engineers, as well as other Federal Agencies directly impacted and responsible for providing funding to restore transportation services such as the Federal Emergency Management Agency, Small Business Administration, Economic Development Administration, U.S. Department of Energy and the U.S. Department of Agriculture. Chairperson for this task force is Mr. Rodney E. Slater, Federal Highway Administrator. A complete list of the task force members is included as an appendix to this report.

The primary focus of this report is the response to the immediate crisis. The report is organized to the maximum extent possible in a State-by-State format. Information is included on the Federal programs available, repair needs, and plans to complete the repairs for each mode of transportation as well as identification of potential problems which could impact the completion schedule. Unmet needs are also identified as well as an indication of longer range issues.

A caveat of the report is that the total extent of damage can not be determined until the flood waters recede. Most of the information presented in this report is based on preliminary damage assessments. More detailed damage assessments are currently underway and will continue until the flood water recedes allowing access to all damage sites.

Another caveat of the report is that any real estimate of damage to facilities owned by the private sector will not be known until grant applications are received and analyzed and until the owner's themselves determine whether it is cost effective to make such repairs (as opposed to, say, either operating the facility at a reduced intensity or upgrading the facility so repairs would not be needed).

A final caveat of the report is that damage estimates, quantitative or otherwise, depend on the time the estimate is made, the scope of the estimate, the definition of 'damage' and various other factors. Thus if information in the report contains estimates that appear to be somewhat contradictory, it may well be due to the time at which the estimate was made.

2. Programs Available

Highways

Federal Emergency Management Agency (FEMA) Programs

The Federal Emergency Management Agency (FEMA), under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), Public Law 93-288, as amended, grants supplemental assistance to State and local governments after a declaration of a major disaster or emergency by the President. Eligible applicants for this assistance include a State government, local governments and any political subdivision of the State, Indian tribes and Alaska Native Villages.

As soon as practicable after the declaration, the State, assisted by FEMA, conducts briefings for State, local and private nonprofit officials to inform them of the assistance available and how to apply for it. An intent to apply for assistance must be filed with the State within 30 days after the area is designated eligible for assistance. Following the briefings, a Federal/State/local team inspects every damaged publicly owned non Federal-aid highway facility and prepares a Damage Survey Report (DSR) for each location. Non federal-aid highways include local roads and rural minor collectors.

FEMA reviews and approves the DSRs and obligates the Federal share of the costs (not less than 75 percent) to the State. The State then subgrants funds to local applicants. For those projects whose total estimated cost is less than \$41,300, payment of the Federal share of the estimate is made upon approval of the project and no further accounting to FEMA is required. For projects costing \$41,300 or more, payment is made on the basis of

actual costs determined after the project is completed; interim payments may be made before completion as funds are needed. After FEMA obligates funds to the State, further management of the assistance, including disbursement to subgrantees is the responsibility of the State. FEMA will continue to monitor the recovery progress to ensure the timely delivery of eligible assistance and compliance with the law and regulations.

The supplemental appropriation for FEMA was \$1,735,000,000 with an additional \$265 million available if needed. This is intended for all disaster needs for State and local governments, certain private nonprofit facilities, and FEMA assistance available to individuals for housing and other essential needs. Funds in the President's Fund are not designated for a particular disaster but are available for all disasters declared by the President. Additional funds may be requested from Congress if the current appropriation is exhausted.

Federal Highway Administration (FHWA) Programs

Existing program legislation provides the Emergency Relief (ER) program for the repair or reconstruction of Federal-aid highways and roads on Federal lands which have suffered serious damage as the result of natural disasters or catastrophic failures. The ER program supplements the commitment of resources by States, their political subdivisions, or other Federal agencies to help pay for unusually heavy expenses resulting from extraordinary conditions.

The ER program covers Federal-aid highways, these being the more important State, county and city roads. Federal-aid highways amount to about a quarter of the overall highway mileage. Repair of those highways not designated Federal-aid routes or not on Federal lands is handled under FEMA's program.

The decision to seek ER financial assistance rests with the State. Local highway agencies do not deal with the FHWA directly but must make their application through the State. It is the State's option to determine whether it will seek ER funding for repair of either its own or local Federal-aid highways.

ER Process is outlined below:

1. Restore Essential Service - The State is empowered to immediately begin emergency repairs to restore essential traffic service and to prevent further damage to Federal-aid highway facilities. Properly documented costs will later be reimbursed once a positive finding is made (item 8 below).

2. Preliminary application - The State files a "letter of intent" seeking ER funds with the FHWA Division office. (This is usually done as soon as it is evident there is eligible damage -- it does not commit the State to any future course of action.)

3. Acknowledgement - The FHWA Division office acknowledges in writing the State's letter of intent.

4. Governor's Proclamation - This is a formal proclamation by the Governor of the existence of an emergency. (A Presidential Declaration will suffice if it has been made.)

5. Damage Assessments - The State, in cooperation with FHWA field staff and in coordination with local authorities, undertakes damage surveys. To expedite the delivery of ER funds to a State, the FHWA is willing to accept an ER application based on a partial survey of damaged sites.

6. State Request - The State submits in writing to the FHWA Division office its request for ER funding based on the damage assessments and cost estimates. This typically occurs 4 to 6 weeks after the disaster has occurred.

7. Field Report - The FHWA Division office prepares a field report based on its assessments and makes a recommendation on the provision of ER funding. This is forwarded to the FHWA Regional office. They in turn review the report and forward it to FHWA Headquarters with their recommendations.

8. Administrator's Finding - The FHWA Administrator makes the final decision on providing ER funding to a State. ER funds are allocated to the State to cover current fiscal year needs.

9. ER Projects - The FHWA Division office obligates ER funds for individual projects. These projects are in general advanced similar to regular Federal-aid projects. The States are reimbursed from the ER account for the Federal share of actual costs incurred.

The current unallocated balance in the ER account is \$31 million. The recently enacted special legislation covering Federal assistance to the Midwest provides \$100 million more immediately in ER funding with an additional \$75 million available if needed. Further, the ER program's annual authorization will provide another \$100 million in funding on October 1.

For the ER program, the Federal share of costs to restore essential traffic service and to prevent further damage to highway facilities incurred in the first 180 days after the occurrence of the disaster is 100 percent. The Federal share of other costs depends on the Federal-aid route that is damaged --

for Interstates the Federal share is 90 percent; for all other Federal-aid highways it is 80 percent.

Coast Guard Programs

The Coast Guard Bridge Administration Program regulates the construction and operation of bridges located across the navigable waters of the United States to ensure that bridges provide for the reasonable needs of marine transportation, including the needs of land traffic. Regulations are also enforced through civil and/or criminal penalties to ensure that bridges are constructed in accordance with approved plans, operated in accordance with approved operating regulations and maintained in a good operable condition to ensure safe and responsive operation. Program personnel have worked closely with navigation and land transportation interests and with bridge owners.

Department of Agriculture - Forest Service Programs

For the purpose of this report, the USDA - Forest Service is offering, in support of assistance needs on State, county, and private lands in the affected States, the Timber Bridge initiative. This program can assist in the repair or replacement of State, county and private wooden bridges used in normal business use, recreation, damage assessments, commerce, and long-term recovery project access.

Existing funds are adequate to cover the full range of long-term recovery needs on National Forest System lands. There is no current funding to provide assistance on State, county, and private lands. The Forest Service would need additional funding or special appropriation to provide assistance for the potential projects described above.

Small Business Administration (SBA) Programs

Highways are generally publicly owned, and governmental entities are not eligible for disaster assistance from the Small Business Administration (SBA). SBA knows of no privately owned highways in the flood area.

RAIL

Federal Emergency Management Agency (FEMA) Programs

Almost all railroad facilities are privately owned and not eligible for FEMA programs. Railroad crossings and other facilities that are eligible by virtue connection with a highway facility are included in the FEMA response to highway damage.

Federal Railroad Administration (FRA) Programs

Under FRA's Local Rail Freight Assistance (LRFA) Program, grant funding is available to States to rehabilitate light density rail freight lines under the following terms:

- o LRFA funding is only available to States. Each Governor designates one State agency to participate in the Program. The funding is provided under a grant agreement executed by FRA and the designated State agency.
- o The project work normally includes the replacement of crossties and rail.
- o No State may receive more than 15 percent and no project may receive more than 20 percent of the funding available.
- o A total of \$21 million in FY 1993 supplemental LRFA funding was included in a contingency appropriation to repair and rebuild railroad lines damaged as a result of the Midwest floods of 1993.
- o To expedite the funding, the following statutory requirements have been eliminated:
 - The requirement that the line carry more than 20 carloads per mile annually;
 - The requirement for a benefit-cost analysis with a benefit/cost ratio of greater than one; and
 - The requirement for a non-Federal match of 30 percent;
- o In lieu of completing a benefit-cost analysis and including flood-damaged lines in the State Rail Plan, States are being required to prioritize their emergency funding requests taking into consideration the financial needs of the railroads.

Small Business Administration (SBA) Programs

Railroads are generally privately owned-businesses. As such, they are eligible for Small Business Administration (SBA) physical disaster loans for uninsured property damage. Unlike other SBA programs, the physical disaster loan program is available to all businesses without size limitation. SBA disaster business loans are available up to \$1.5 million, and SBA has authority to waive that statutory maximum for businesses which are major sources of employment. Most disaster loans have an interest rate of 4% and may have terms up to 30 years, helping make the payments affordable. For businesses not needing Federal financial assistance to recover without hardship, the interest rate is 8% and the maximum term is 3 years. As this assistance is in the form of loans, borrowers must have repayment ability (ability to make loan payments from cash flow from operations).

Additionally, any railroads located within the declared flood area which qualify as small businesses are eligible for SBA economic injury disaster loans. For line-haul operating railroads, 1,500 employees or less is considered small by SBA regulations. In counties designated as labor surplus areas or redevelopment areas, this limit is increased by 25% to 1,875. Economic injury disaster loans are working capital loans to help a small business meet necessary obligations during the period adversely affected by a disaster. A business need not have sustained property damage to qualify for economic injury assistance; decreased revenues caused by a disaster and resulting in insufficient cash flow to meet all ongoing obligations is a common form of eligible economic injury.

Most disaster business loan applications are processed in 1 to 3 weeks from receipt by SBA. Timing of loan closing is determined by each borrower. Disbursement of loan funds is similar to a construction loan and is in increments as the borrower completes repairs. Duration of reconstruction projects varies widely as a function of the complexity of each project.

Available funds: Before the Midwest flooding, SBA had about \$600 million in disaster loan funds available, plus contingency funds. The emergency supplemental provided about \$300 million more, plus additional contingency funds. Through August 26, 1993, SBA has approved almost \$130 million to Midwest flood victims. As additional disaster loan applications are received, this will mount into the hundreds of millions of loan dollars.

Public Transit

Federal Emergency Management Agency (FEMA) Programs

FEMA's transit related emergency assistance program is similar to it's highway related emergency assistance program (see earlier section). In summary, the State applies for assistance based on damage survey reports but FEMA can not (by law) provide assistance that would be available under another agency's program.

Federal Transit Administration (FTA) Programs

The Federal Transit Administration (FTA) has no legislative authority to provide financial assistance to transit systems impacted by a natural and/or man-made catastrophic disaster.

FTA is reviewing UMTA/FTA Circular 9500.1, that provides guidelines for the issuance of Letters of No Prejudice (LONP). A LONP authorizes a transit system applicant to incur costs on a future project using non-Federal resources with the understanding that the costs incurred subsequent to the issuance of the LONP may be reimbursed as eligible expenses or eligible for credit toward non-Federal match should FTA approve the project at a later date.

Small Business Administration (SBA) Programs

Public transit systems are generally publicly owned, and government entities are not eligible for disaster assistance from the SBA. Any private transit companies affected would be eligible for the same assistance described for railroads.

Pipelines

Federal Emergency Management Agency (FEMA) Programs

Almost all pipeline facilities are privately owned and not eligible for FEMA programs.

Research and Special Programs Administration (RSPA)

The Research and Special Programs Administration's Office of Pipeline Safety (OPS) is the federal safety authority responsible for oversight of 1.7 million miles of hazardous liquid and natural gas pipelines. OPS implements its authority through five (5) regional offices and fifty (50) State pipeline safety compliance programs participating through OPS-administered grants.

The grant program permits OPS to reimburse a State for up to 50 percent of the State's compliance program expenses, subject to the availability of appropriated funds and the extent of the State's jurisdiction over pipeline facilities.

OPS does not have authority to provide emergency relief for the repair or reconstruction of pipelines which have suffered damage as the result of natural disasters. OPS will continue facilitating prompt and immediate response to safety issues, such as issuing safety advisory bulletins and waiving the pipeline safety regulations where appropriate. OPS issued an Advisory Bulletin July 29, 1993, advising pipeline companies of potential hazards and preventive actions to be considered regarding pipelines and flooding. OPS approved a waiver August 16, 1993, allowing Utility Consultants Inc. to expedite restoring natural gas service to the city of Hermann, Missouri.

Small Business Administration (SBA) Programs

Pipelines are commonly privately owned business property. As such, businesses owning and operating pipelines are eligible for the same SBA disaster loan assistance described for railroads. However, pipeline companies have rarely if ever applied for SBA disaster loan assistance. Most pipelines are owned by large corporations which typically use their own resources to fund repairs rather than seeking Federal aid in the form of SBA loans.

Air

Federal Emergency Management Agency (FEMA) Programs

FEMA's airport related emergency assistance program is similar to it's highway and transit related emergency assistance program (see earlier sections). In summary, the State applies for assistance based on damage survey reports. Only publicly owned airports are eligible for such assistance and only if assistance is not available from another Federal program.

Federal Aviation Administration (FAA) Programs

The Airport Improvement Program (AIP), while providing federal assistance for eligible airports in accomplishing eligible development, does not contain an Emergency Relief provision. Once the AIP-eligible development needs are identified at the flood-damaged airports, those airports will be required to file a Pre-application for Federal Assistance and compete for limited funds along with other airports. It does not allow for federal participation in maintenance and routine repair work required on the airport, except that some major reconstruction may be

eligible. The airports that are eligible under this program are those that are public-use, publicly owned and included in the FAA National Plan of Integrated Airport Systems. There are some privately owned, public-use airports that have been designated as reliever airports by the FAA, which also meet the eligibility requirements for the AIP.

As noted previously, (FEMA) may fund flood-damaged airports that are in an area declared a disaster. Their legislative requirements prohibit them from funding anything that is eligible under another federal program and only those airports that are publicly owned airports may be assisted. We anticipate that the necessary clean-up work and the restoration of buildings, which are not eligible under the AIP, will be funded by FEMA.

The individual State aviation departments provide funding to airports and often assist them in coming up with the non-federal share that is required under the AIP (10% match with 90% AIP) and FEMA (25% non-Federal, 75% FEMA).

FAA FACILITIES AND EQUIPMENT (F&E): Current plans are to use F&E funding to provide for all costs associated with flood-related damages. This includes monies for personnel (both travel and overtime), facility restoration, equipment replacement and contractual support in the restoration efforts.

AIR TRAFFIC: Emergency funding through F&E and/or Operations is being looked at, with supplemental appropriation where needed. The extent of the funds available is unknown.

Airports located in Iowa, Kansas and Nebraska are eligible for funding through the Central Region's Airport Improvement Program. Fiscal Year 93 funds for that program have been allocated with the exception of a minimal amount, which is being held to cover high bids on previously approved projects. Fiscal Year 93 will end September 30, 1993. Funds for Fiscal Year 94 will not become available until legislation is enacted extending the authorization or establishing new legislation. This will also require enactment of a new appropriation establishing funding at yet-to-be-determined levels.

Airports located in Missouri are eligible for funding through the Missouri State Block Program, administered by the Missouri Highway & Transportation Department. Two million dollars remain unobligated in their Fiscal Year 93 block grant. The State is in the process of requesting an increase from the FAA of \$1.5M to the '93 block grant to provide additional funding availability to flood-damaged airports. Based on the information available to date, we understand that the recently enacted special legislation covering Federal assistance to the Midwest did not specifically

identify funds for damaged airports.

The Minneapolis-St. Paul Metropolitan Airports Commission, owner and operator of the St. Paul Downtown (Holman Field) Airport, plans to use its own operating funds to make necessary repairs to areas damaged by flooding.

Small Business Administration (SBA) Programs

Airlines and associated airline services are generally private businesses, which are eligible applicants for SBA disaster loan assistance as described for railroads.

Water

Federal Emergency Management Agency (FEMA) Programs

FEMA's water transportation related emergency assistance program is similar to its other emergency assistance program (see earlier sections). In summary, the State applies for assistance based on damage survey reports. Only publicly owned facilities are eligible for such assistance and only if assistance is not available from another program. In general, barge operators and associated services are privately owned and not eligible for FEMA assistance.

U. S. Coast Guard Programs

The Coast Guard manages the National Maritime Short Range Aids to Navigation Program. The major recovery effort involved with this program is to facilitate commerce by ensuring sufficient navigational aids are in place and functional prior to reopening the navigable waters of the United States to waterborne transportation.

The Western Rivers (including the Mississippi, Illinois and Missouri) are a vital link in the nation's intermodal transportation network. Port facilities provide direct interface among maritime, railroads and highway transportation systems. The Coast Guard's Short Range Aids to Navigation (SRA) Program has the responsibility to establish, maintain, and operate the maritime navigation system within the navigable waters subject to the jurisdiction of the United States. The SRA system consists of a network of lights or other signals, displayed on fixed and floating structures for the promotion of safe and efficient waterborne transportation serving the needs of the Armed Forces and commercial and recreational craft of the United States. The

SRA program also disseminates information to mariners concerning the status of aids to navigation and navigation hazards.

A significant portion of the aids to navigation infrastructure on the Western Rivers has been damaged or destroyed as a result of the recent flooding. The existing program legislation provides for the reconstruction of the SRA system; however, the scope of the required restoration exceeds the Coast Guard's normal operating budget for the Western Rivers.

The emergency relief process works as follows:

1. Restore Essential Service - The local Coast Guard District is empowered to begin emergency repairs of the SRA system to restore essential maritime traffic service. Costs are properly documented to enable reimbursement.
2. Damage Assessments - Local Coast Guard program personnel assess SRA system damages. Cost estimates are communicated, internally within the Coast Guard.
3. The Coast Guard works with OST to establish the requested funding level that the Coast Guard requires for submission in an Emergency Supplemental Appropriations Bill.
4. The President recently signed an Emergency Supplemental Appropriations Act to pay the costs associated with Midwest flooding. The Coast Guard was provided with up to an additional \$10 million in its Operating Expenses Appropriation. These funds are available until 31 March, 1994.

The Coast Guard also manages the Bridge Administration. This program was described under Highways.

U.S. Army Corps of Engineers (USACE) Programs

The U.S. Army Corps of Engineers (USACE) has been managing efforts to address resumption of navigation on the Mississippi River following the Midwest floods of 1993.

There are no existing, USACE managed, inland waterway related programs which provide assistance to State and/or local governments. However, USACE does have the authority to maintain/repair Corps locks/dams and conduct dredging operations necessary to maintain the navigation channel under its Operation and Maintenance, General program.

River navigation is a shared responsibility between USACE and the U.S. Coast Guard. The Coast Guard is responsible for navigation safety and, therefore, has the final authority for opening the

river channel. To speed the process during the current situation and ensure a high level of safety, USACE, the Coast Guard and a River Industry Executive Task Force, developed a protocol to evaluate resumption of navigation. The protocol consists of levee inspections as the water recedes to specific levels and conducting test tows downstream and then upstream. When test tows demonstrate no wake damage to levees, the Coast Guard can open the appropriate river section. With the exception of a small area in Minnesota (River Mile 742.0 to River Mile 763.0), where dredging operations are being conducted, the Mississippi River is currently open. However, high water against levees is causing significant speed restrictions.

As indicated above, it is important to note that navigation should not be considered in isolation from the discussion of the repair/rehabilitation of levees. Numerous restrictions (no wake zones, etc.) have been and will continue to be placed on vessels navigating the river system in order to protect levees from further damage. USACE authorities/responsibilities in this regard are being considered by a separate task force. Input from that group should be considered when the final report on transportation is prepared.

As noted above, USACE activities related to dams/locks and dredging are funded by Operation and Maintenance, General (O&M Gen) funds. The supplemental appropriation, for emergency expenses resulting from the flood event, contained \$55 million for repair to USACE flood control facilities, including dams/locks and dredging.

Maritime Administration (MARAD) Programs

Title XI Vessel Financing: The Maritime Administration (MARAD) has a loan guarantee program which allows vessel operators to obtain financing of new or rebuilt vessels at more favorable terms than in the regular commercial market. Currently there are 1458 inland river vessels enrolled in the program.

Currently enrolled companies can request MARAD to defer upcoming Title XI principal payments for a certain period of time. Approvals in the past have been rare but when provided do improve their near-term cash flow. Also, MARAD has the authority under very stringent conditions to advance, or lend, Title XI companies the amounts necessary for the payment of Title XI principal, interest or other vessel-related expenses.

MARAD will consider applications for Title XI loan guarantees to finance replacement equipment or to reconstruct damaged equipment. Contacts with the operators and current damage assessments indicate there will be minimal, if any, need for the

building or rebuilding of barges due to the flooding situation.

The current available funds are \$48 million which can be leveraged into an actual building program of at least \$480 million by the industry.

Technical Damage Assessment: MARAD has a National Maritime Enhancement Institutes (NMEI) program with four universities. Memphis State University is designated as the Inland Waterways Studies Institute, together with the University of Tennessee and the University of Kentucky. The NMEI is available to assist in the resolution of port facility and access problems and/or damage at inland waterway ports. The Department of Civil Engineering at Memphis State is the lead for this group capability. \$75,000 of FY94 funding available for the NMEI program.

MARAD also has technical staff available to conduct damage assessment surveys in assistance to FEMA and EDA. MARAD has provided such services after other natural disasters affecting waterborne transportation.

Small Business Administration

Waterways affected by the Midwest flooding, particularly the upper Mississippi River, are important transportation routes. Freight moved by barge is a key element of the regional and national transportation network. Barge operators are generally privately owned-businesses. As such, they are eligible for Small Business Administration (SBA) physical disaster loans for uninsured property damage. Unlike other SBA programs, the physical disaster loan program is available to all businesses without size limitation. SBA disaster business loans are available up to \$1.5 million, and SBA has authority to waive that statutory maximum for businesses which are major sources of employment. Most disaster loans have an interest rate of 4% and may have terms up to 30 years, helping make the payments affordable. For businesses not needing Federal financial assistance to recover without hardship, the interest rate is 8% and the maximum term is 3 years. As this assistance is in the form of loans, borrowers must have repayment ability (ability to make loan payments from cash flow from operations).

Additionally, any barge operators located within the declared flood area which qualify as small businesses are eligible for SBA economic injury disaster loans. For barge operators and other firms engaged in water transportation of freight (SIC 4449), 500 employees or less is considered small by SBA regulations. In counties designated as labor surplus areas or redevelopment areas, this limit is increased by 25% to 50%. Economic injury disaster loans are working capital loans to help a small business

meet necessary obligations during the period adversely affected by a disaster. A business need not have sustained property damage to qualify for economic injury assistance; decreased revenues caused by a disaster and resulting in insufficient cash flow to meet all ongoing obligations is a common form of eligible economic injury. For barge operators located in the declared flood area who have been unable to use the rivers for a protracted period, the need for economic injury assistance is potentially large.

Most disaster business loan applications are processed in 1 to 3 weeks from receipt by SBA. Timing of loan closing is determined by each borrower. Disbursement of loan funds similar to a construction loan and is in increments as the borrower completes repairs. Duration of reconstruction projects varies widely as a function of the complexity of each project.

Available funds: Before the Midwest flooding, SBA had about \$600 million in disaster loan funds available, plus contingency funds. The emergency supplemental provided about \$300 million more, plus additional contingency funds. Through August 26, 1993, SBA has approved almost \$130 million to Midwest flood victims. As additional disaster loan applications are received, this will mount into the hundreds of millions of loan dollars.

Energy Related Transportation

Department of Energy (DOE) Programs

The Department of Energy's (DOE's) mission under the Federal Response Plan is to facilitate the restoration of energy systems in the area affected by the flood. DOE's short-term objectives are to monitor the effects of the flood on energy supply and delivery systems. The monitoring is accomplished by technical staff at Disaster Field Offices and in the Washington Headquarters. DOE's long-term objectives are to help energy suppliers obtain equipment, specialized labor, and transportation to repair or restore energy systems; recommend to the Federal Coordinating Officer priorities to aid restoration of damaged energy systems; and contribute DOE resources and funding to assist private citizens and businesses in the post-flood reconstruction effort.

The most plausible worst-case scenario involving energy would be if power plants that depend on coal or fuel oil deliveries cannot be resupplied because of continued disruptions to railroads and barge traffic, and a heat wave in other parts of the country drains electricity reserves that otherwise would be available for purchase by the affected utilities. This could cause brownouts

in some parts of the country. Assuming that power is being wheeled (exchanged) across the electric power grid as efficiently as possible, no Federal action would be necessary or appropriate. In an extreme emergency, the Federal Power Act could be invoked to order electric companies to generate additional power for sale and deliver power over the existing transmission system.

The Department of Energy does not have any program directly related to flood recovery. DOE does, however, have two programs indirectly related. The first is simply an ongoing monitoring of the delivery of energy supplies. The second is the Low Income Weatherization Assistance Program, which, to the extent that it reduces the demand for the delivery of energy supplies (e.g. with sufficient energy conservation, delivery schedules for energy to terminals could be more easily adjusted), facilitates the flood recovery.

General

Economic Development Administration (EDA) Programs

The EDA offers a variety of program tools to assist communities affected by flooding. The primary emphasis of EDA's programs will be to assist flood-impacted areas with the development and implementation of strategies that are needed for long-term economic recovery, including the construction of new and expanded infrastructure and development facilities required for the economic growth of the area. Eligible applicants include virtually any government agency or non profit organization. Assistance is available via planning grants, technical assistance grants, revolving loan grants, public works and development grants. Funds are available through normal operating procedures. Interested applicants should contact EDA's Economic Development Representative for the affected State, as listed in Appendix #2.

3. Repair Needs

Highways

Federal Emergency Management Agency (FEMA) Programs

ILLINOIS

In Illinois road damages, on non Federal aid roads, are currently estimated to total \$50 million with detailed project estimate

just starting to come in. There are two bridges across the Mississippi which are still closed.

IOWA

There are still some significant transportation problems in Iowa currently. A few major highways are, as of August 30, 1993 closed to traffic. Several county roads are closed because of damaged or destroyed bridges (about 25 destroyed) and washed-out culverts. The approaches to some of the bridges were washed out. Detours are not very long. Most of the water has receded from the roads. The current estimate to repair damaged non Federal aid roads is \$12 million (which will most likely increase). Approximately \$2.1 million have been obligated. It will take up to 3 years to complete all road repairs.

KANSAS

In Kansas, there are no major disruptions caused by damages to transportation facilities. There are five State highways still closed either by water over the road or damaged bridges. Current estimate of damages to non Federal-aid roads is \$10 million, reported by 216 applicants. The process of estimating individual projects is just getting underway. Repairs will be started immediately and most will be complete within one year.

MINNESOTA

There are no roads currently under water, but there were a few bridges where scouring and erosion occurred near the approaches. None of the bridges were destroyed. There are virtually no problems with any transportation. The minimal number of detours that do exist are not significantly greater than the original routes. The current estimate of damages to non Federal aid roads is \$6 million and \$700,000 of that has been obligated. It will take up to two years to complete the work.

MISSOURI

There are 349 applicants reporting damages to non Federal aid roads and bridges. The total estimate for highway facilities is currently \$58 million. Detailed estimates for each project are just starting as some areas just emerged from the floodwater, and at least one county has 25 percent of its area underwater.

NEBRASKA

There were 20 to 30 non Federal aid bridges destroyed by the floods in the declared counties. Another 10 bridges were damaged but none of the bridge problems have impeded traffic patterns

significantly. The detours required until these bridges can be repaired are not excessive. The current estimate of damage to non Federal aid roads and bridges is \$3.4 million, \$51,000 of that has been obligated. It will take up to two years to complete repairs.

NORTH DAKOTA

North Dakota is not experiencing any serious transportation problems. There was only one bridge that was damaged by the floods. The most significant problem that they are experiencing is that farmers cannot get to their fields since their roads are still partially inundated. They had inquired about raising the grades of the roads but that would not be eligible for FEMA assistance. Current estimates indicate \$7 million of damage to non Federal aid roads. It will take up to 2 years to complete the repairs.

SOUTH DAKOTA

In South Dakota, there are some rural roads (maybe one per county) still cut off to vehicles. These roads are typically used by farmers to get their produce to market. Therefore, the damage to these roads do not pose an emergency threat to life or improved property. No major highways are experiencing any trouble. There were about 140 bridges either damaged or destroyed throughout the declared counties. There is one damaged bridge that was slated for replacement. FEMA will give the applicant the amount of funds required to repair the bridge and the applicant can build a new structure. Current estimates indicate \$7 million of damage to non Federal aid roads, \$634,000 of which has already been obligated. It will take up to 2 years to complete the repairs.

WISCONSIN

There were very minor wash outs around bridge approaches but the detours required to get around them are minimal and are not much further than the original routes. These wash outs are confined to agricultural areas and do not pose an emergency threat. The current estimate of non Federal aid road damage is \$10 million, \$6.3 million of that has been obligated. It will take up to two years to complete to complete repairs.

SCHOOL TRANSPORTATION

There is minimal impact on school transportation routes in the nine disaster affected States. North Dakota is reporting that 37

counties have serious damage to their bus routes. Nebraska also reports that bus route detours may increase transportation costs in some areas.

Federal Highway Administration (FHWA) Programs

All States have begun to make their damage surveys for Federal-aid highways. Because of the high water which still restricts access to some sites coupled with the large number of sites to be visited, it is expected that it will take the States several weeks to complete a full inventory of the damage to Federal-aid highways.

All nine States have indicated their intent to seek Emergency Relief (ER) funding. The following summarizes the status by State.

ILLINOIS

It is anticipated that in September the State will submit an ER application based on a partial survey of damage. No statewide projection of damage to Federal-aid highways is available yet. Mississippi River bridges at Quincy, Hannibal and Chester remain closed as well as a portion of the Central Illinois Expressway (U.S. 36/336).

IOWA

An ER application was submitted covering \$18.5 million in damage to Federal-aid highways. On August 23 an initial allocation of \$5 million in ER funding was approved to cover obligation needs in FY 1993. Fifteen sites along State routes and about a dozen sites on Federal-aid county routes are closed due to high water.

KANSAS

An ER application was submitted based on a partial survey of damage sites. An initial allocation of \$11 million in ER funds was approved August 11. The State has projected that total ER eligible costs may approach \$20 million although FHWA has not verified this figure. Six State routes remain closed including a 5-mile stretch of I-635 at the Missouri River in Kansas City.

MINNESOTA

An ER application has been submitted to the FHWA division office covering damage in 36 counties; however, the State has requested that the division office hold the application as the State wants

to include 16 additional counties. Estimated damage to Federal-aid highways is approximately \$10 million. All Federal-aid routes in the State are open.

MISSOURI

An ER application was submitted based on a partial survey of damage sites. An initial allocation of \$28.5 million in ER funds was approved August 13. The State has projected that overall damage to Federal-aid highways could be as high as \$145 million; however, based on early field reviews the FHWA division office feels that the total will be considerably less. Approximately 70 roads and bridges are closed including four bridges over the Missouri River and three over the Mississippi River. There may be some impact on school bus service because of the closed bridges on the Missouri River at Lexington and Glasgow. The governor may call for a special session of the State legislators to consider a proposal to start collecting a previously approved increase in the State gas tax this year instead of waiting until 1994 and 1996 as originally called for.

NEBRASKA

An ER application has been submitted and the FHWA division office is completing its field report. Total ER damage is estimated by the State at \$3.7 million. All State routes are open except for Nebraska Route 8 at the Big Nemaha River east of Dubois where two bridges were washed out. In addition the Missouri River bridge on U.S. 159 at Rulo is open to local traffic only.

NORTH DAKOTA

An ER application has not been submitted yet. Damage surveys should be completed by August 27. The preliminary estimate of damage to Federal-aid highways is that it will be less than \$1 million. All State routes are open except for ND 18 at Goose River south of Hatton.

SOUTH DAKOTA

An ER application has been submitted and the FHWA division office is completing its field report. The State has estimated ER damage at \$2.6 million. All Federal-aid routes in the State are presently open.

WISCONSIN

An ER application is expected to be submitted soon. Total ER costs are estimated to be in the \$3 -4 million range. All State routes are open with only one county Federal-aid route reported

as being closed.

FEDERAL LANDS

Early indications are that there has been little damage to public roads on Federal lands. Damage estimates to date for these roads is less than \$1 million.

Coast Guard Programs

With respect to navigability of rivers, no remaining needs for repair exist. Bridges are now in an operable condition and can open for the passage of marine transportation once river flood conditions are at safe levels.

Department of Agriculture - Forest Service Programs

Repair needs on Forest Service managed lands are minimal and will be completed within existing funding limitations. Repair needs related to technical assistance programs (timber bridge initiative, etc) noted above cannot be identified until assessments are completed and assistance is requested and funded. All affected States are included. In summary, repair needs are expected to be minimal.

Small Business Administration (SBA) Programs

There are no known repair needs to privately owned highways or bridges.

RAIL

Federal Emergency Management Agency (FEMA) Programs

FEMA does not provide assistance to privately owned railroads and has no information on repair needs to eligible publicly owned railroad facilities at this time.

ILLINOIS - No damage reports but damage not expected to be major.

IOWA - All railroad systems now operational.

KANSAS - No damage reports but damage not expected to be major.

MINNESOTA - All railroad systems now operational.

MISSOURI - No damage reports but damage may be extensive (included in highway estimate of repair needs).

NEBRASKA - All railroad systems now operational.

NORTH DAKOTA - All railroad systems now operational.

SOUTH DAKOTA - All railroad systems now operational.

WISCONSIN - All railroad systems remained operational throughout flood.

Federal Railroad Administration (FRA) Programs

Some routes that are normally double track are operating as single tracks. The quantity of repair needs are not known nor are schedules for repair.

Small Business Administration (SBA) Programs

SBA does not calculate or repair needs until individual loan applications are received. Through August 26, 1993, one railroad has filed a disaster loan applications with SBA. Several Class II and III railroads and one Class I railroad had contacted SBA for preliminary information.

Public Transit

Federal Emergency Management Agency (FEMA) Programs.

FEMA has only limited information on repair needs to eligible public transit facilities at this time.

ILLINOIS - No damage reports but damage not expected to be major.

IOWA - All public transit systems now operational.

KANSAS - No public transit systems were affected by flood.

MINNESOTA - No public transit systems were affected by flood.

MISSOURI - Three public transit systems report damage but the extent of the damage is unknown.

NEBRASKA - No public transit systems were affected by flood.

NORTH DAKOTA - No public transit systems were affected by flood.
 SOUTH DAKOTA - No public transit systems were affected by flood.
 WISCONSIN - No public transit systems were affected by flood.

Federal Transit Administration (FTA) Programs

At this time the FTA has not received an estimate of repair needs. Based on contacts with agencies (transit and other), such needs are expected to be below \$10 million.

Small Business Administration (SBA) Programs

At this time the SBA has not received any reports of damage to any private transit systems. No such reports are expected.

Pipelines

Federal Emergency Management Agency (FEMA) Programs.

FEMA has no reports of eligible facilities that were damaged in the flood and does not expect to receive any applications with respect to pipelines.

Research and Special Programs Administration (RSPA) Programs

Natural gas distribution companies providing service to communities in the flood area have generally anticipated the problems associated with flooding, shut off services, and secured their equipment as flood waters rose.

Pipeline companies supplying petroleum products and transporting natural gas have not been significantly affected by the flood. OPS is aware of six (6) pipeline failures: two (2) product lines in the Big Sioux River between Iowa and South Dakota; two (2) natural gas lines in Missouri; one (1) anhydrous ammonia line in Nebraska; and one (1) abandoned line filled with nitrogen in Missouri. The primary concern for pipelines traversing the flood region, is removal of soil from around the pipelines, leaving them exposed. To alleviate stresses and possible damage to exposed pipe by external loading and floating debris, protective soil or other suitable materials must be restored around pipelines.

Many pipeline facilities remain submerged and repair estimates will not be available until flood waters have subsided and damage assessments completed. Some examples of projected cost in the flood region are:

- o \$8-10 million dollars for Panhandle Eastern Pipe Line Company to stabilize pipelines, repair damaged roads, and replace damaged pipe and facilities near Booneville, Missouri.
- o \$4 million dollars for restoring the Missouri natural gas distribution systems affected by the flooding; estimates include repair of service meters and regulator stations, replacement of river crossings, and restoring service to customers.
- o \$1 million dollars for Amoco Pipeline Company to provide support to pipelines, replace a creek crossing, and provide for future contractor inspections for pipelines in Chariton County, Missouri.
- o \$1.4 million dollars for Amoco Pipeline Company to replace a river crossing and install a new section of pipeline near Hawarden, Iowa.
- o \$0.5 million dollars for restoring Illinois natural gas distribution systems affected by the flooding; estimates are for repairing and servicing meter and regulator stations.

Small Business Administration (SBA) Programs

SBA has not received any applications from pipeline companies and, based on experience with other disasters, does not expect to receive any such applications.

Air

Federal Emergency Management Agency (FEMA) Programs

FEMA has reports of four potentially eligible airports damaged in Kansas and two in Illinois but damage was minor and all are now open. Missouri may eventually report damage but has not yet done so. FEMA does not expect many applications with respect to airports (because of the extent of the normal FAA grants program) and if any are received, they are not expected to be major.

Federal Aviation Administration (FAA) Programs

ILLINOIS - AIRPORTS: Two general aviation airfields in Illinois were closed due to flooding. These airports, Havana Regional and Tri-County are now open. Damage was minimal. Neither airport is in the Airport Improvement Program.

FAA FACILITIES AND EQUIPMENT: No FAA facilities in Illinois are out of service.

IOWA - AIRPORTS: Twelve airports have reported damages related to the flooding. The one privately owned airport (Amana) remains closed and may not reopen due to the estimated \$160,000 cost of cleanup and repairs. It is ineligible for both FEMA and AIP funding. No costs are available on the remaining eleven airports, which are all open at this time.

FAA FACILITIES AND EQUIPMENT: 32 facilities requiring road and plot restoration after heavy rains and flooding. The Des Moines area lost municipal water services and commercial power from July 11th through July 25, affecting the Des Moines Control Tower and Airway Facilities offices.

KANSAS - AIRPORTS: Four airports were reported damaged due to the flood. One, Sherman Army Airfield, Leavenworth, Kansas, is a military airport not eligible for AIP funding. Another, Wamego, Kansas, is not included in the National Plan of Integrated Airports System and is, therefore, not eligible for AIP funding. Minimal damage has been identified at that location. No cost estimates are available on the remaining two airports, which have reopened.

FAA FACILITIES AND EQUIPMENT: 36 facilities requiring road and plot restoration after heavy rains and flooding. One facility, ICT ASR, damaged by level 6 thunderstorm, required building and equipment repairs.

MINNESOTA - AIRPORTS: St. Paul Downtown Holman Field, St. Paul, Minnesota had most operational surfaces under several feet of water. This airport is in the Airport Improvement Program, and damage was relatively minor. Flooding damage consisted of two 2'-4' diameter holes in paved taxiway surfaces where it appears some drainage structures may have collapsed. Cost to repair the two holes should be less than \$25,000.

FAA FACILITIES AND EQUIPMENT: The middle marker at St. Paul Downtown Holman Field has been returned to service. No FAA facilities in Minnesota are currently out of service.

MISSOURI - AIRPORTS: Fifteen airports have reported flood damage, with ten remaining closed to date. With the exception of

one, all were under 10-20 feet of water for a period of several weeks. Two of the closed airports are Part 139 airports (Jefferson City Memorial and Spirit of St. Louis). Jefferson City is optimistic that a portion of the airport will be reopened by the middle of this week. The Spirit of St. Louis Airport has estimated that it will be open for VFR operations by the end of September. Kansas City Downtown Airport experienced some indication of undermining as indicated by the collapsing of areas of parking apron and perimeter road, but they are now open. The State has estimated the need for approximately \$10M for AIP eligible items. These estimates are admittedly broad at this time. The affects of this much water on airport pavement for long periods is unknown and may not be apparent for some time after the freeze-thaw cycle of winter and spring seasons.

FAA FACILITIES AND EQUIPMENT: 44 facilities requiring road and plot restoration after heavy rains and flooding. Seventeen facility buildings damaged from flood waters; two FAA control towers closed at St. Joseph, MO, and Chesterfield, MO; the automated flight service station (AFSS) at Chesterfield, MO, was also closed due to flooding. The AFSS and 7 other facilities had flood waters damage the installed equipment. Some test equipment, records, and personal property was also damaged beyond repair.

AIR TRAFFIC: Travel for dislocated employees from the St. Louis Automated Flight Service Station (AFSS): (65 employees X 180 days each X \$85 per day).
Total = \$994,500.

Travel for administrative and technical support: (700 travel days @ \$100 per day = \$70,000) Transportation = \$17,000. Total = \$87,000.

Permanent Change of Station for 3 employees at \$26,200 each:
Total = \$78,600

Replacement of accountable property: Total = \$61,700

Replacement of administrative furniture, supplies, administrative equipment and items not covered elsewhere: Total = \$50,000.

NEBRASKA - AIRPORTS: Eppley Airfield, Omaha, Nebraska was the only airport reporting flood damage. Failures to the drainage system resulting from the heavy flood waters resulted in approximately \$250,000 of damage. It is anticipated that the FY93 grant issued to Eppley will be amended to add the necessary drainage system improvements and provide the required funding.

FAA FACILITIES AND EQUIPMENT: 11 facilities requiring road and plot restoration after heavy rains and flooding. CAT II ILS at Omaha was out of service due to flooding of middle marker and outer marker facilities.

NORTH DAKOTA - AIRPORTS: Two general aviation airfields in North Dakota were closed due to flooding. These two airfields, Glen Ullin Municipal and West Fargo, are now open. Neither airfield is in the Airport Improvement Program.

FAA FACILITIES AND EQUIPMENT: No FAA facilities in North Dakota are out of service.

SOUTH DAKOTA - No damage.

WISCONSIN - AIRPORTS: Wisconsin suffered minimum damage. Only two airport outages were reported. Tri-County Regional Airport located at Lone Rock, and Funk Farms Airport in Luxemburg are now open.

FAA FACILITIES AND EQUIPMENT: No FAA facilities in Wisconsin are out of service.

Small Business Administration (SBA) Programs

SBA is unaware of reports of flood damage to property of airlines. Airline service businesses near the Spirit of St. Louis Airport near Chesterfield, Missouri may have suffered both physical loss and economic injury. The extent of such damage is not known at this time but given the nature of the businesses, repair needs are probably not extensive.

Water

Federal Emergency Management Agency (FEMA) Programs

Facilities at three port authorities in Missouri are known to have suffered damage but the extent of the damage is unknown. Otherwise, there are no reports of damage to public port facilities.

Coast Guard Programs

Damage to the hardware and system components of the Short Range Aids to Navigation Systems (SRA) was extensive but repair is ongoing and much of it has been completed.

United States Army Corps of Engineers (USACE) Programs

A total of over two dozen dams/locks, on the Upper Mississippi River, will be inspected to determine the extent of damage and the impact of that damage on navigation. While high water continues to restrict the damage assessment, USACE anticipates that most facilities in the affected areas will have suffered at least minor damage. As this damage is identified, personnel in the appropriate USACE district offices will utilize their USACE chain of command to request funds as necessary.

While dredging for levee repair is anticipated, requirements associated with dredging for navigation are still being assessed. The only current requirement to dredge for navigation is a small area in Minnesota and is underway. As water levels continue to recede, additional dredging requirements may be identified. USACE has some dredging equipment. However it is primarily deep draft equipment and not appropriate for this type effort. The one shallow draft USACE dredge available is currently doing some of Minnesota work mentioned above. Sufficient commercial dredges should be available to meet any future requirements.

Maritime Administration (MARAD) Programs

Although MARAD does not have State specific funds or programs, MARAD does maintain contact with the waterborne commerce facilities and operators along the river system. The majority of the terminal facilities along the inland waterway systems are private facilities. The primary damages are from mud and debris left on docks and around terminal warehouses. There are some storage facilities which will have to be replaced along with machinery and access facilities.

MARAD has advised private and public facilities to work through their local State officials to obtain SBA and FEMA funding respectively since MARAD can not provide any direct compensation. We also have advised both terminal and vessel operators of the programs of the Small Business Administration regarding Physical Damage Assistance loans and Economic Injury Disaster loans.

Small Business Administration (SBA) Programs

SBA does not calculate damage or repair needs until individual loan applications are received. Through August 23, 1993, no barge operators have filed disaster loan applications with SBA.

Energy Related Transportation

Department of Energy (DOE) Programs

COAL via RAILROAD - Most coal delivered to power plants in the flooded areas are delivered by barge because of the location of coal handling facilities. Some extensive rerouting and delayed routing of East-West coal haul railroad shipments did occur during the peak of the flood. However, normal routing of coal haul shipments has resumed.

COAL via BARGE - Shipments have been hampered by the cessation of barge traffic on the Mississippi above Cairo, Illinois and the re-routing of many trains due to flooded tracks. Normal coal movements by barge from coal mines in Kentucky and Illinois to power plants along the Mississippi, Missouri and tributary rivers have been delayed by the flood.

The effect of the resumption of coal traffic will depend on the water levels and to the extent that the River Industry Executive Task Force (US Coast Guard, US Army Corps of Engineers, tow companies, and State and local governments) allow tows and barges back on the rivers. The re-opening of many locks will also depend on the need to dredge channels and docks. The normal summer coal inventory build has not occurred this year, causing concern about the adequacy of coal supplies at power plants heading into colder weather.

PETROLEUM via PIPELINES - In general, major petroleum facilities (not including retail gasoline service stations) have not encountered serious damage. There are only four refineries in the flood area. All refineries receive crude oil via pipeline. There are numerous crude oil and product pipelines that run through the flood area.

While several pipelines have been exposed by the water which caused temporary reductions in throughput, the only pipeline rupture occurred on a small six-inch diameter propane line operated by Williams Pipe Line Company. The pipeline flow was shut off with no adverse supply impact, and will be quickly repaired as flood waters recede. However, for all petroleum

facilities, it should be emphasized that accurate damage assessments can not be made until flood waters recede sufficiently to allow for inspection.

PETROLEUM via BARGE - Refinery operations, to date, have not been severely affected by the cessation of barge traffic which normally transports chemicals and asphalt. There are numerous product distribution terminals in the flood area. In many instances, barge docks and associated infrastructure are under water and inoperable. There have been no reports of spills or damage to terminal tanks.

NATURAL GAS via PIPELINE - The major uses of natural gas in the flood areas are for residential and commercial space heating and for electric power generation. The summer months are low demand periods for natural gas as producers and distributors build up inventories for the winter heating season. Because many electric power plants have been burning natural gas instead of coal, demand for natural gas has been higher than normal this Summer.

Flood damage to the natural gas distribution system has been minimal. Several pipelines have been exposed by flood waters. One pipeline crossing the Missouri River at Jefferson City was damaged, but quickly repaired and back in service. Local distributing companies report service interruptions to residential customers have been limited to isolated occurrences.

PROPANE via PIPELINES - The summer months are periods of low demand for propane as a rural residential fuel and for crop drying. Bulk suppliers, wholesalers, and local retailers of propane usually begin to stock up in July and August for the coming heating season. In the Midwest, propane becomes a critical fuel in the late fall and winter due to the agricultural predominance of the region and the geographical proximity to key propane production and dispatch points.

The flooding in the eight State area (Minnesota, Wisconsin, Iowa, Missouri, Nebraska, Kansas, South Dakota, Illinois) this summer has had no significant affect on propane production or storage. Neither has there been an appreciable demand for propane other than normal residential needs for hot water. Retail dealers in the eight States will be faced with some uncertainties with respect to numbers of customers, particularly farms where propane tanks have washed away. In addition, many farms will not be ready for service until water recede. Those whose tanks are lost will need new installations.

Flood damage to the propane distribution infrastructure has been light. At one terminal in St. Louis rising backwater caused 51 30,000 gallon propane tanks to bob off their "saddles" in the water. This created a very dangerous situation. Evacuation of the area was completed and company and city officials worked for a week trying to control the situation and re-seat the tanks.

Crop drying demand for propane does not appear to be a significant issue in the Midwest for the fall. Last years record harvests stressed propane supply. This year, corn and soybean harvests are predicted to be low due to the loss of crops from the massive flooding.

To summarize the repair needs by State and mode:

<u>State</u>	<u>Highway</u>	<u>Rail</u>	<u>Public Transit</u>	<u>Pipeline</u>	<u>Air</u>	<u>Water</u>
Illinois	over \$100M	unk	unk	over \$500K	unk	unk
Iowa	over \$30M	unk	unk	over \$1M	over \$225K	unk
Kansas	over \$30M	unk	unk	little	over \$310K	unk
Minnesota	over \$15M	unk	unk	little	little	little
Missouri	over \$120M	unk	unk	over \$15M	over \$18M	unk
Nebraska	over \$8M	unk	unk	unk	over \$340K	little
North Dakota	over \$8M	unk	unk	unk	little	unk
South Dakota	over \$10M	unk	unk	unk	little	unk
Wisconsin	over \$15M	unk	unk	unk	little	unk

THESE ARE PRELIMINARY ESTIMATES ONLY

unk = unknown
M = million
K = thousand

To summarize the repair needs by program and mode:

	<u>Program</u>	<u>Current Estimate of Needs</u>
Highways	FEMA	about \$200,000,000*
	FHWA	about \$160,000,000*
	Coast Guard	none remaining
	Forest Service	minimal
	SBA	probably none
Rail	FEMA	included above
	FRA	unknown
	SBA	unknown
Public Transit	FEMA	unknown
	FTA	below \$10,000,000*
	SBA	probably none
Pipelines	FEMA	probably none
	RSPA	at least \$15,000,000*
	SBA	probably none
Air	FEMA	probably minimal
	FAA	at least \$19,000,000*
	SBA	unknown
Water	FEMA	unknown
	Coast Guard	within operating budget
	Corps of Eng	tens of \$millions
	SBA	unknown

* all estimates are, as of this time, very rough
only Agencies with funds available are included

4. Plans to Complete Repairs

Highways

Federal Emergency Management Agency (FEMA) Programs

<u>State</u>	<u>Work Underway</u>	<u>Estimated Completion</u>
ILLINOIS	No	Three years
IOWA	Yes	Three years
KANSAS	Yes	One year
MINNESOTA	Yes	Two years
MISSOURI	No	Three years
NEBRASKA	Yes	Two years
NORTH DAKOTA	No	Two years
SOUTH DAKOTA	No	Two years
WISCONSIN	Yes	Two years

Federal Highway Administration (FHWA) Programs

The Emergency Relief program, although Federally funded, is State administered and the State controls the implementation and scheduling of repair projects. The FHWA Division Administrator in each State is responsible to ensure these repair projects follow Federal requirements.

The following summarizes on-going repair activities by State:

ILLINOIS

The primary focus of current repair work is removing debris from roadways and from bridge openings. If the State continues to find no major structural damage as the water recedes, they anticipate much of their repair work will be completed by early next summer.

IOWA

The State is using expedited contracting procedures to begin contract work for major repair. The State expects to have the majority of the repair work completed this construction season.

KANSAS

Repair is underway on State highways in all areas of the State that have suffered flood damage. The State plans to complete repair work to most of its system this year although one or two projects may carry over into next year. Almost all of the repair work is being done with State forces. The counties have also begun repair work to Federal-aid highways under their jurisdiction and much of this repair should be completed this year. Some counties have lost smaller bridges which will likely be replaced by contracts let later this year or early next year after the work has been designed. This contractor work may take another construction season to complete.

MINNESOTA

The State has completed temporary repairs of washouts and slides. Several bridges were damaged but none lost and contracts have been let for needed bridge repairs. Most of the repair work will be completed this year although some, such as contractor repair of retaining walls, is expected to continue into next year.

MISSOURI

The State plans to complete all repair work this year except for roadway grade raises if approved and possibly repair of the Glasgow bridge.

NEBRASKA

The State plans to complete all repairs this year except for replacement of the Nebraska Route 8 bridges which will likely carry into next year's construction season.

NORTH DAKOTA

Emergency repairs are nearly complete except for some debris removal contracts. There are a number of small contracts still to be let and construction of two or three replacement bridges on county Federal-aid routes will not be completed until next year.

SOUTH DAKOTA

The bulk of the repair work will be done this construction season although a few contracts may extend into next year.

WISCONSIN

Repair work is on-going at all damage sites. Three or four sites will involve permanent repair work to be accomplished by contract. Plans for this work will be developed later this year and the work will likely be completed next year.

Coast Guard Programs

No remaining needs for repair exist.

Department of Agriculture - Forest Service Programs

Since no repair needs have been identified and any that are would be expected to be minimal, any repairs should be completed within a year.

Small Business Administration (SBA) Programs

Since no repair needs to privately owned highways have been identified and any that are would be expected to be minimal, any repairs should be completed within a year.

RAIL

Federal Emergency Management Agency (FEMA) Programs

Based on past experience, most repair work should be completed in one year.

Federal Railroad Administration (FRA) Programs

Based on past experience, most repair work should be completed in two years.

Small Business Administration (SBA) Programs

SBA does not monitor plans to complete repairs generally. When SBA approves specific disaster loans, the progress of construction or repairs is monitored to guide the disbursement of loan funds. Through August 26, 1993, SBA has received one application which is currently being processed. Several Class II and III railroads and one Class I railroad have contacted SBA for preliminary discussions.

Public Transit

Federal Emergency Management Agency (FEMA) Programs

Based on past experience, most repair work should be completed in one year.

Federal Transit Administration (FTA) Programs

Plans to complete repairs have not been developed since estimated damages and repair needs are not well known.

Small Business Administration (SBA) Programs

At this time no applications are expected. Therefore plans to complete repairs are not required.

Pipelines

Federal Emergency Management Agency (FEMA) Programs

At this time no applications are expected. Therefore plans to complete repairs are not required.

Research and Special Programs Administration (RSPA) Programs

The Office of Pipeline Safety (OPS) will continue to support State programs responsible for assuring the continued safe operation of pipeline systems subjected to flood hazards.

Pipeline operators are coordinating with emergency responders and using emergency contractors to assure safety and minimize the possibility of damage to the environment. Pipeline companies are using divers, where possible, to determine if their pipelines have incurred damage. Roads are being constructed to provide access for equipment needed to stabilize exposed pipeline sections. When flood waters subside to an acceptable level, crews will complete repairs on failed pipeline sections.

Small Business Administration (SBA) Programs

At this time no applications are expected. Therefore plans to complete repairs are not required.

Air

Federal Emergency Management Agency (FEMA) Programs

Based on past experience, most repair work should be completed in one year.

Federal Aviation Administration (FAA) Programs

Iowa

AIRPORTS: Affected airports are currently undergoing cleanup and evaluation to assess actual damages incurred. Electrical and lighting systems generally require repair and/or replacement, and there are plans at some airports to conduct further evaluations of possible substructure damage to the pavement and storm water drainage systems. Water pressure may have forced crack sealer up from joints in the pavement. Airports have been advised to file for FEMA assistance for work that is not eligible under the AIP.

FAA FACILITIES AND EQUIPMENT: Airway facilities current workforce has begun repairs to facilities and grounds which were damaged. A contractor has been identified and will start work the week of August 23 to make major repairs to facility roads and plots. All flood-related repairs and restoration are expected to be completed by October 30. It is estimated at this time that costs for restoration in Iowa will be approximately \$225K.

Kansas

AIRPORTS: There appears to be only minimal damage at the airports affected by flooding, with the possible exception of Sherman Army Air Field which is undergoing pavement analysis. The airports have been advised to file for FEMA assistance and to advise their State Aviation Department and the FAA of their funding needs.

FAA FACILITIES AND EQUIPMENT: Airway Facilities current workforce has begun repairs to facilities and grounds which were damaged. The ICT ASR facility was returned to service on July 24. No other facilities are out of service due to the flood/storms at this time. All flood-related repairs and restoration are expected to be completed by September 30. It is estimated at this time that costs for restoration in Kansas will be approximately \$310K.

Missouri

AIRPORTS: Airports have filed with FEMA and inspections are being conducted by FEMA, and the Airports Division, Safety & Certification Inspectors and Paving Engineer. The State Department of Aviation is working closely with the FAA in making eligibility determinations and in identifying the funding requirements for the flood impacted airports. Airports have been advised to notify both the FAA and the State of their needs. Major cleanup and renovation of the terminal building is underway at the Rosecrans Memorial Airport in St. Joseph, Missouri, which is being funded by FEMA.

FAA FACILITIES AND EQUIPMENT: Facilities in the State of Missouri were the hardest hit in Central Region. The following is a breakdown of status by major location within Missouri:

St. Joseph - The AF workforce has begun cleanup efforts on the St. Joseph airport. The air traffic control tower returned to service on August 24, 1993. A total of four facility buildings are targeted for replacement and efforts are underway to initiate a contract to start work the week of August 30. Once building replacements are completed, we will reinstall the equipment removed or in the case of the glide slope, replace with new equipment. All flood-related repairs and restoration are expected to be completed by December 31, 1993.

Kansas City - The AF workforce has begun cleanup and restoration efforts at the Kansas City Downtown Airport. All facilities removed in a preventative measure have been reinstalled and are in operation. The MALSR was damaged by flood waters and has been rebuilt and is back in service as of August 21. Some power and cable problems remain due to sink holes caused by the extreme water levels. All flood-related repairs and restoration are expected to be completed by September 30.

Jefferson City - The AF workforce has begun cleanup and restoration efforts on the airport at Jefferson City. A total of 6 facility buildings will require replacement, and efforts are underway to establish a contract to start work the week of September 6. Once the buildings are replaced, reinstallation of the existing electronic equipment will begin. Additionally, a contract is being initiated to complete extensive repairs to roads and plots in the Jefferson City area. All flood-related repairs and restoration are expected to be completed by March 30, 1994.

Chesterfield - The AF workforce has begun cleanup and restoration efforts at Spirit of St. Louis airport in Chesterfield. Primary concerns are the AFSS and the control tower. All equipment and property in the AFSS has been removed for cleaning and storage

with the exception of the controller consoles. The consoles will be cleaned and removed for refurbishment. Plans are being made to establish a temporary AFSS facility and a joint AT/AF effort is underway to determine the best course of action. A staff study is being completed this week to make recommendations as to disposition of the permanent AFSS issue. At the control tower, efforts are underway to re-establish commercial power and make repairs to the elevator, heating and air conditioning systems, stand-by engine generator and parking areas. We intend to have the tower available for service no later than September 6. Additionally, at least 7 buildings require replacement. A contract is being initiated to complete this work. Once the buildings are replaced, equipment will be reinstalled.

Various - The AF workforce has begun clean up and restoration efforts at other locations throughout Missouri. Eleven facilities require road and plot work, and efforts are underway to establish a contract to complete the more extensive reconstruction of roads and plots. All flood related repairs and restoration are expected to be completed by March 30, 1994.

It is estimated at this time that costs for restoration in Missouri, excluding the AFSS, will be approximately \$1.9M. Costs associated with the AFSS are currently estimated at \$16M. Further refinement of estimates for the AFSS restoration will be made as soon as possible.

AIR TRAFFIC: The TDY dislocation and support travel is occurring at this time. Dislocation travel will continue until a temporary facility is established. The support travel will continue until the permanent facility is completed. Permanent change of station travel will occur when approval is granted for any employee desiring to relocate. Replacement of property and equipment will begin when a firm time frame for the permanent facility is established. Much of the needed equipment will be used in the temporary facility.

Minnesota

AIRPORTS: The Minneapolis-St. Paul Metropolitan Airports Commission, owner and operator of St. Paul Downtown (Holman Field) Airport is using operational funds to effect need repairs of less than \$25,000. One of the holes in the taxiway has already been repaired and the other will be repaired as soon as the water table drops enough for the area to dry.

Nebraska

FAA FACILITIES AND EQUIPMENT: Airway Facilities current workforce has begun repairs to facilities and grounds which were damaged. The CAT II ILS at Omaha was returned to service on August 19. A contractor has been identified and will start work the week of August 23 to make major repairs to facility roads and plots. All flood-related repairs and restoration are expected to be completed by September 30. It is estimated at this time that costs for restoration in Nebraska will be approximately \$90K.

FAA Summary

In summary, much of the repair is ongoing and should be completed by Sept 30, 1993. Virtually all repair work should be completed in one year.

Small Business Administration (SBA) Programs

As noted previously, SBA does not monitor plans to complete repairs generally. When SBA approves specific disaster loans, the progress of construction or repairs is monitored to guide the disbursement of loan funds. Through August 23, 1993, SBA has neither received applications from nor approved loans to any airport related businesses.

Water

Federal Emergency Management Agency (FEMA) Programs

The extent of damage is as yet unknown thus no repair completion plans have been developed.

Coast Guard Programs

At this time, the Coast Guard estimates that the Short Range Aids to Navigation (SRA) system on the Mississippi River, north of Cairo, Illinois and on the Illinois River will be restored in early September 1993. Also, assuming favorable weather, the SRA system on the Missouri River will be restored in early October 1993.

U.S. Army Corps of Engineers (USACE) Programs

Based on past experience, most repair work should be completed in one year. However, locks and dams on the river system should all be operational as of the end of August 1993.

Maritime Administration (MARAD) Programs

Vessel operators have indicated very little damage to floating equipment. Repairs are being completed to most of this equipment currently. Terminal operators have begun the cleanup operations needed as waters have receded. Full damage cannot be assessed nor repairs completed until the rivers recede to normal levels. Repairs and cleanup are being handled by local and State forces. It is expected that repairs will be completed by year-end on most facilities, although a few may extend into the 1994 construction season.

State specific information will flow through State DOT reporting systems to FEMA and EDA.

Small Business Administration Programs

As noted previously, SBA does not monitor plans to complete repairs generally. When SBA approves specific disaster loans, the progress of construction or repairs is monitored to guide the disbursement of loan funds. Through August 23, 1993, SBA has neither received applications from nor approved loans to any barge or port operators or related businesses.

To summarize the plans to complete repair:

<u>Program</u>	<u>Status of Repairs</u>	
Highways	FEMA	up to three years
	FHWA	most within a year
	Coast Guard	none remaining
	Forest Service	minimal repairs
	SBA	minimal repairs
Rail	FEMA	most within one year
	FRA	most within two years
	SBA	unknown
Public Transit	FEMA	most within one year
	FTA	unknown
	SBA	no applicants expected
Pipelines	FEMA	no applicants expected
	RSPA	most within one year
	SBA	no applicants expected
Air	FEMA	most within one year
	FAA	most within six months
	SBA	unknown
Water	FEMA	unknown
	Coast Guard	most within two months
	Corps of Eng	most within one year
	MARAD	most within six months
	SBA	unknown

5. Potential Problems

Coast Guard

At this time, no problems implementing transportation related Coast Guard programs specific to the flood recovery are anticipated.

U.S. Army Corps of Engineers

At this time, no problems implementing transportation related U.S. Army Corps of Engineers programs specific to the flood recovery are anticipated.

Department of Agriculture - Forest Service

At this time, no obstacles to implementing programs on National Forest System lands have been identified. All technical assistance can be provided subject to funding being available.

Department of Energy

No widespread petroleum supply problems currently exist in the Midwest flood region. However, there have been numerous retail outlets flooded and the rate at which they return to service could result in temporary local distribution problems. In addition, the flood reduced diesel demand for agricultural and transportation uses, resulting in above normal inventories for high-sulfur diesel fuel which has created a potential problem for the Fall. Refiners and pipelines are currently in the process of switching inventories from high-sulfur diesel fuel (0.05% or greater) to low-sulfur diesel fuel (0.05% or less) by October 1 as required by the Clean Air Act Amendments of 1990. However, reduced demand for diesel fuel has greatly reduced the rate at which low sulfur diesel can replace existing inventories of high-sulfur diesel. The result is a lack of storage capacity for low-sulfur diesel and the dilemma of disposing of high-sulfur diesel in glutted market with depressed prices.

The relatively low coal inventory levels are cause for concern because utilities normally build up fuel inventories in the summer to sustain them throughout the winter when the rivers are closed. Numerous power plants receive coal by both railroad and barge, however, the coal handling facilities are usually at river's edge and currently are underwater. Summer months are the normal inventory build-up period. Many power plants are dual-fuel, that is they can burn coal or natural gas or oil. Because coal deliveries are limited, most of these plants are currently

burning natural gas. DOE has surveyed the major coal burning facilities along the rivers and determined that several plants that were idled due to high water are again in operation. Several power plants on the Mississippi River below St. Louis report that barge shipments began about August 20. Selected short haul barge shipments on the rivers north of St. Louis began about August 10.

In summary, the two potential problems are:

- a. dislocations due to new fuel specifications, and
- b. low coal inventories at some electric power plants.

Economic Development Administration

No obstacles to implement EDA's Programs have been identified at this time; however, it is anticipated that some flood affected communities may experience difficulty with regard to providing the non-Federal local share required for EDA's assistance. Also, the issue of communities desiring to rebuild facilities in the floodplain could significantly impact EDA's ability to provide assistance, depending upon the nature of the project for which such assistance is requested.

Federal Aviation Administration

AIRPORTS - Once the specific needs of the flood-damaged airports are identified, it will be extremely important to respond to those needs immediately. The AIP legislation will expire at the end of this Fiscal Year, September 30, 1993. We do not know when legislation for Fiscal Year 1994 will be enacted, and we are unsure as to what budgetary limitations might be placed on the AIP or its predecessor program and how that will affect the funding levels and the availability of funds for these airports.

The AIP legislation does not allow for completion of construction work prior to the issuance of a grant identifying the work to be accomplished. It also contains numerous procedural requirements that may result in obstacles to implementing programs and funding projects to meet the needs of the flood-impacted airports. Relief from the procedural requirements relative to procurement, Disadvantaged Business Enterprise (DBE) requirements, contract approvals, etc., and the establishment of a look-back provision allowing for the flood-damage related work to be done in advance of the issuance of a grant would prove beneficial in removing such obstacles.

AIRWAY FACILITIES - The most significant barrier to full facility restoration will be obtaining replacement equipment for systems damaged by flood waters. Central Region is currently working with other regions, the Logistics Center, and Headquarters program managers to identify resources and replacement equipment for facilities lost. ILS equipment lost includes one glide slope, two outer markers, one localizer power supply, one Tasker 500 RVR, one LOM, and one MALSR system.

The Automated Flight Service Station at Chesterfield, Missouri was under several feet of water, and most equipment in the building was damaged. Although the extent of damage is not known, the following actions have been taken to minimize further damage and assess repairs. A contract was established with Litton Industries to remove the Interfacility Communications Switching System (ICSS) equipment, clean, restore, and provide a working system back to the FAA. There is no estimate at this time as to when this equipment will be available. Local contracts were put in place to have the remaining electronic equipment removed, cleaned, and returned to FAA. This equipment will require an assessment as to the extent of damage and what repairs or replacement will be needed. Estimates may be available by the middle of September.

AIR TRAFFIC - Obstacles to implementing programs are unknown at this time. Costs associated with the dislocation of air traffic personnel are dependent on facility restoration, which is only in the planning stage at this point in time.

Federal Emergency Management Agency

At this time, no specific problems implementing transportation related Federal Emergency Management Agency programs specific to the flood recovery are anticipated.

Federal Highway Administration

Most emergency relief (ER) projects involve either emergency repairs to restore essential traffic or permanent repairs which restore a facility to predisaster conditions. These do not require extensive environmental analysis under FHWA regulations and the National Environmental Policy Act.

However, some ER projects necessarily involve a significant change to horizontal or vertical alignment. Such work sometime requires extensive environmental analysis and review. In such a situation implementation of repair work can be substantially delayed.

Federal Railroad Administration

At this time, no problems implementing transportation related Federal Railroad Administration programs specific to the flood recovery are anticipated.

Federal Transit Administration

At this time, no problems implementing transportation related Federal Transit Administration programs specific to the flood recovery are anticipated.

Maritime Administration

As of August 24, the entire inland waterway river system has been opened to barge traffic with severe restrictions on speed and tow size. Aids to navigation should be restored on the Mississippi by September 1 and on the Missouri by October 1. Erratic temporary closures of parts of the River System probably will continue for the next few weeks as mini-crests from new rains move down stream and as dredging of shoaling areas is required.

All of these freight logistics will place a heavy demand on all transportation modes throughout the Fall season even as they continue their flood recovery repairs. We would expect to see spot shortages of railroad cars and barges until year end.

A long term concern is the condition of, and repairs needed for, the levees. Because of the broken and saturated conditions of the levees, barge traffic will be operating under size and speed restrictions until the end of the normal navigation season (November 17) on the Upper Mississippi River. This consequent reduction in system capacity will add to the logistical strain.

Even with an extension of the season, navigation past December 1 probably would not be possible due to winter weather.

Restoring the levee system is expected to take months at best and, if interrupted by political considerations and environmental battles, could take years. There are 229 federally built and maintained levees; 268 privately built but meeting federal standards; and over 1,300 privately built not meeting federal standards. Under current law, only federally built and maintained levee have repairs paid 100 percent by the federal government. Privately-built/federal-standard levees can get 80 percent government money. Privately-built/non-standard levees are not eligible for government money. This latter group constitute the majority of levees which failed. If levees are not repaired before the normal Spring floods, there could be a repeat of the current situation.

Items which need to be accomplished are:

1. Extend the Upper Mississippi River navigation season as long as possible. Give industry as much advance notice of the final closing date for planning purposes. MARAD has already requested this action in a letter dated August 6.
2. Extend unemployment benefits in the affected areas. Due to normal seasonal closing and flood-related layoffs, many people will have exhausted normal benefits;
3. Provide tax relief to both corporations and individuals to extend tax filings and tax payments past normal deadlines.
4. Provide funding via loans and grants plus Corps of Engineers technical assistance to repair privately-built levees as quickly as possible.

Research and Special Programs Administration

At this time, no problems implementing transportation related Research and Special Programs Administration programs specific to the flood recovery are anticipated.

Small Business Administration

According to the Federal Railroad Administration (FRA/DOT), approximately 30 short-line or regional railroads (class II or III) sustained flood damages estimated to be about \$44 million or more.

The emergency supplemental for the Midwest floods provides \$21 million to FRA for "local rail freight assistance" in the form of grants to the States, which may in turn award grants directly to the railroads for damages in each State.

Such railroads are also eligible SBA disaster loan applicants. As none of these railroads appears to qualify as a major source of employment, the newly increased SBA disaster loan limit of \$1.5 million appears to apply. FRA indicates that at least some of these railroads have very weak cash flows, and may be unable to demonstrate repayment ability necessary for SBA to approve a loan.

On August 10, 1993, SBA and FRA established a coordinating process to avoid duplications of benefits and to facilitate understanding of potential SBA assistance by those making priority decisions for use of the FRA funds made available in the supplemental appropriation.

It is possible, perhaps likely, that some railroad needs will not be met through either FRA or SBA resources. The FRA funds are sufficient for less than 50% of the estimated damages, and some of the regional and short line railroads may not have sufficient cash flow to support an SBA loan for their uncompensated flood losses.

Failure of any of these railroads, or decisions not to rebuild any of these lines, will not adversely affect the national rail network, as alternate routes between major cities are readily available. However, for smaller communities served exclusively by these railroads, the need to reestablish this railroad service is crucial. Businesses dependent on railroad service cannot economically switch to alternate transportation modes. In many smaller communities, the businesses relying on railroad transportation are the keystones of the local economies. Dislocation of these primary businesses would adversely impact all businesses in these communities.

Accordingly, funding for rebuilding flood damaged railroad lines is pivotal for many communities on those lines.

6. Economic Effects of the Flood

Direct Short-Run Costs: Road damage and other damage to transportation facilities may exceed a half a billion dollars. Although preliminary estimates, these direct costs from the flood appear to be fairly substantial when compared to Hurricane Andrew, the nation's worst natural disaster in history, which inflicted nearly \$20 billion in direct total damages (transportation and otherwise) in Florida. The measurement of direct costs, while burdensome to those making the assessment, is fairly straightforward. These costs are comprised mainly of property loss by individuals and businesses, crop loss by farmers, loss of output by closed businesses, and damage to infrastructure such as roads and bridges.

Indirect Short-Run Costs: What is more difficult to measure are the indirect costs associated with the flood, such as the extra resources required to get goods to market and passengers to destinations because of damaged roads and bridges. Examples include businesses shipping goods on routes which require circuitous travel of 200 miles or more and requiring several extra hours of driving time as well as workers driving more miles and spending more time commuting to their workplaces. Natural disasters such as the Midwestern floods make apparent the vital relationship that transportation has with economic growth. Transportation plays a important role in the production of goods

and services whether in the delivery of intermediate goods to production plants or shipment of final goods to markets. There is a transportation component in the costs of all goods which, in the aggregate, ranges from 10 to 15 percent of the costs of the Nation's products. Highways serve an especially important role, since the highway system carries approximately 75 percent of the value of all goods and services produced by the U.S. economy. In the Midwestern floods, the closure of many roads and bridges has forced businesses to reroute shipments of goods and movement of passengers around impassable areas. While it is too early to develop accurate estimates of these indirect costs, they may end up comprising a substantial portion of the total costs. As a result of the floods, delays from the required rerouting of freight and passengers have been estimated in the range of 1-5 hours in general. The result has been an increased number of labor hours to ship goods to markets and move passengers to their workplaces. These delays have economic implications as they raise production costs and lower the productivity of labor.

Long-Run Costs: Although direct and indirect short-run costs of the flood have so far been substantial and are likely to increase as more data become available, prospects for long-run economic growth in the States affected by the floods appear good for several reasons:

- o Although soybean and corn crops were adversely affected by the floods, agriculture as a whole comprises roughly 5 percent of each State's Gross State Product (GSP). Therefore, while businesses associated with agriculture have experienced significant and immediate losses, the effect on the economy as a whole in these States in terms of output and income should be less severe.
- o Other industries, such as the transportation services industry, will experience higher costs due to rerouting from the closure of particular roads. The transportation services industry, comprised mainly of freight carriers, is characterized by a high degree of competition and low profit margins. Carriers required to reroute shipments of goods to less efficient routes may not be able to raise prices substantially to their consumers because of competition. Although there are many short-term impacts on carriers, we expect few to be rendered economically nonviable as a result of the flood.
- o Industries such as manufacturing, services, and government, which comprise on average about 50 percent of each of these States' GSP, are believed to have been spared significant direct losses from the floods. Additionally, industries affected directly by the flood will most likely undertake significant restructuring such as relocation of plants and replacement of equipment, which will allow these industries to

become more competitive, increase productivity, and raise output and incomes in the long-run.

- o Truck, railroad and barge transportation in the Midwest is returning at an accelerated pace as the waters continue to recede. Although detours and re-routings will continue to affect railroad and truck logistics for several months as roads, bridges and tracks are repaired, the international freight market has thus far been able to adjust its timing and exit points to compensate. The market has been helped by the fact that July and August are normally slow months.
- o After its normal summer holidays, Europe will re-open for business in the first ten days of September. Also, the heavy flows of imported Christmas goods from the Far East will start moving in September. The start of the Fall domestic produce season will add to the logistics demand. On the bulk commodities side, the expanded Russian grain program will be initiating movement by end-September in addition to the elevators needing to replenish normal inventories which have been depleted due to river closure. The continuing coal miners' strike is resulting in imports from Colombia being moved along the Gulf Intracoastal Waterway and the lower Mississippi River to replenish power plants and factories. When the strike is settled, domestic coal will need rapid movement to replenish utility and factory stockpiles in the Midwest as well as the movement to East Coast and Gulf ports for export. As the rivers open, there is pent-up demand for imported ores to move inland. Chemicals and resins which have been throttled at Gulf Coast refineries need to move to Midwest plants.
- o Lastly, while there are losses from the flood to individuals and particular industries such as agriculture, Federal-aid of roughly \$5 billion will act as a stimulus, spurring job and income growth for the region well in excess of the original Federal-aid funds. Job and income growth will be most significant in industries such as construction, finance, and services, who will hold a primary position in helping to rebuild the communities affected.

Summary: While there are substantial short-run losses, both direct and indirect, for Midwestern States, prospects for long-term recovery appear good. It must be noted that estimates on damage and effects are preliminary at this stage due to limited data. More accurate assessments on the short- and long-run economic effects can be made as more complete information becomes available.

7. Conclusion

Immediate Priority

Clearly, the 1993 Midwest Flood has inflicted great damage on the transportation facilities of the area. Although damage estimates are highly tentative at this time, especially estimates of damage to privately owned facilities, damages may well exceed half a billion dollars. Similarly, economic losses directly or indirectly related to the damage to the transportation facilities may be of a similar order of magnitude.

Those Federal agencies with funds available to assist in the repair of damage are already either using abbreviated processes for obligating such funds or are considering doing so. Similarly, Federal agencies with a mandate to monitor repair or recovery processes are actively involved. At this point, the highest overall priority is to finish the arduous task of making initial and detailed estimates of flood damage. Agencies are cooperating when called upon, in assisting sister agencies or potential damage repair grant recipients in this task. Expeditious completion of the process of application for such grants in order to move ahead with damage repairs is also a high priority.

Longer Term Issues

A variety of longer term issues require further review and analysis by other flood task forces and by other groups beyond the time frame of this task force, including:

1. There is a need to take a longer term perspective of the effects of the flood on the transportation system to determine what could be done to minimize the adverse effects on transportation during future natural disasters. In this regard, the mix and magnitude of the future Federal emergency relief funding programs needs to be re-examined.
2. Any new levee policies which may be developed to respond to the flood damage experienced in this disaster could have a significant effect on future transportation system requirements.
3. A redefinition of wetlands based on the flood could impact the construction of transportation facilities.

4. Major changes in regional land use policies could affect the need for and location of transportation facilities.
5. New regional economic development plans will influence the need for future transportation facilities.

It is important to note however, that the need for restoring the transportation facilities damaged by the flood should not be affected by these longer term issues. The facilities would need to be repaired even if longer term policies may affect future land uses.

APPENDIX #1

FLOOD RECOVERY TASK FORCE - CONTACTS

<u>ORGANIZATION</u>	<u>CONTACT</u>	<u>PHONE</u>	<u>FAX</u>
DOT	Michael Huerta	366-5781	366-7952
DOT	Susan Gaskins	366-8015	366-7952
DOT	Lindy Knapp	366-4713	
DOT	Richard Walsh	366-4416	366-3393
FHWA	Rodney Slater	366-0650	366-3244
FHWA	Tony Kane	366-0371	366-3713
FHWA	Kevin Heanue	366-2951	366-3713
FHWA	Dick Torbik	366-0233	366-3713
FHWA	Martin Weiss	366-5010	366-3713
FHWA	Bill Marley	366-5009	366-3713
FHWA	Tom Willett	366-4853	366-3713
FHWA	Jim Overton	366-0450	366-3713
FHWA	Susan Binder	366-9230	366-7696
COAST GUARD	Nick Mpras	267-0368	267-4046
MARAD	Tom Harrelson	366-5517	366-5522
MARAD	Tom Christensen	366-5900	488-0941
FRA	Bob Tarlton Jim Boone	366-0401	
FAA	Steve Horton Jack Mills	267-3523	267-5679
FTA	Ross Adams	366-0253	
RSPA	Zack Barrett	366-4572	
RSPA	John Porco	366-5270	
RSPA	Lee Scarbrough	366-4547	366-4547

FEMA	Paul Tertell	646-3935	646-3304
	James A. Walke	646-2751	646-3304
USDA	Mary Jo Lavin	205-1494	205-1272
USDA	Oleta Fitzgerald	720-6643	720-2530
USDA	Mike Derian	720-6643	720-8815
OMB	Dan Corbet	395-5708	395-4797
OMB	Roger Adkins	395-3100	395-4797
ARMY CORPS OF ENGINEERS	George Gilmore	504-5087	504-4150
SBA	Alfred Judd	205-6734	205-7728
EDA	Steven Watkins	482-6355	482-2741
EDA	David L. McIlwain	482-3081	482-0995
ENERGY	Finn Neilsen	586-4000	586-3859
ENERGY	David McColloch	586-4660	586-3859
WHITE HOUSE DOMESTIC POLICY	Mike Schmidt	456-7777	456-7028

APPENDIX #2

PRINCIPLE CONTACTS FOR DAY TO DAY MANAGEMENT OF EMERGENCY RESPONSE

FEDERAL AVIATION ADMINISTRATION

Tom Schneider 202-267-7775

FEDERAL EMERGENCY MANAGEMENT AGENCY

James A. Walke 202-267-7775

Federal Coordinating Officers

<u>State</u>	<u>Name</u>	<u>Phone</u>
Illinois	Walter Pierson	309-797-9887
Iowa	Richard Buck	319-322-6090/0284
Kansas	John McKay	913-274-3000
Minnesota	David A. Skarosi	507-532-6573/6571
Missouri	Warren Pugh	314-739-0934
Nebraska	Alex Burns	402-471-6060
North Dakota	Steve Olsen	701-250-4501
South Dakota	John Swanson	605-330-4321
Wisconsin	Phil Zaferopulos	715-831-6255

FEDERAL HIGHWAY ADMINISTRATION

<u>STATE</u>	<u>DIVISION ADMINISTRATOR</u>	<u>PHONE</u>
Illinois	L. P. Renz	217-492-4640
Iowa	H. A. Willard	515-223-1664
Kansas	R. J. Deatrick	913-267-7287
Minnesota	C. E. Foslien	612-290-3230
Missouri	G. J. Reihsen	314-636-7104
Nebraska	C. A. Culp	402-437-5521
North Dakota	G. A. Jensen	701-250-4345
South Dakota	D. F. Kamnikar	605-224-8033
Wisconsin	J. E. St. John	608-264-5395

FEDERAL RAILROAD ADMINISTRATION

JoAnne H. McGowan Chief, State Programs Division 202-366-1677

FEDERAL TRANSIT AUTHORITY

<u>STATE</u>	<u>EMERGENCY MANAGEMENT CONTACT</u>	<u>PHONE</u>
Iowa	Ms. Ellen M. Gordon, Director, Iowa Emergency Management Division	515-281-3231
	Mr. Will Zitterich, Emergency Coordinator for Iowa Department of Transportation	515-239-1396
Illinois	Mr. John R. Plunk, Acting Director, Illinois Emergency Management Agency	217-782-2700
Kansas	Gen. Dan Karr, Retired Deputy Director	913-266-1401
Minnesota	Mr. James D. Franklin, Director, Division of Emergency Services	612-296-2233
Missouri	Mr. Jerry Uhlmann, Director, State Emergency Management Agency	314-526-9779
	Mr. John Tandy, Deputy Director, State Emergency Management Agency	314-770-0016
Nebraska	Mr. Richard L. Semm, Assistant Director, Nebraska Civil Defense Agency	402-473-1410
North Dakota	Mr. Robert D. Affeldt, Director, North Dakota Division of Emergency	701-224-2113
South Dakota	Mr. Gary N. Whitney, Director, Division of Emergency Management	605-773-3231

MARITIME ADMINISTRATION

Tom Harrelson

202-366-5517

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

<u>STATE</u>	<u>STATE COORDINATOR</u>	<u>PHONE</u>
Illinois	Steve Smock	217-785-1165
Iowa	Donald J. Stursma	515-281-5546
Missouri	Robert R. Leonberger	314-751-3456
Minnesota	Walter Kelly	612-296-9636
Nebraska	Leonard Steiner	402-471-2027
Wisconsin	Tom Stemrich	608-266-8128
Arkansas	Myron E. Thompson	501-682-5705
Kentucky	E. Scott Smith	502-564-3940
Mississippi	Pete Eiland	601-961-5475
Tennessee	Glynn Blanton	615-741-2844
Louisiana	Joel Kohler	504-342-5585

SMALL BUSINESS ADMINISTRATION

<u>STATE</u>	<u>SBA COORDINATOR</u>	<u>PHONE</u>
Headquarters	Alfred Judd, Deputy Assistant Administrator for Disaster Assistance	202-205-6734
Illinois, Minnesota, Wisconsin	Charles Noble	404-347-3771
Iowa, Kansas, Missouri, Nebraska	Larry Bellah	817-885-7600
North Dakota, South Dakota	Bruce Hodgman	916-978-6200

UNITED STATES ARMY CORPS OF ENGINEERS

George Gilmore 202-504-5087

UNITED STATES COAST GUARD

Nick Mpras 202-267-0368

UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE

Mary Jo Lavin Daily Monitoring of Flood 202-205-0808
Activities

<u>STATE</u>	<u>COORDINATOR</u>	<u>PHONE</u>
Illinois	Rodney Sallee	618-253-7114
Iowa	LeRoy Johnson	612-649-5242
Kansas	Ray Aslin	913-537-7050
Minnesota	Mike Majeski	612-649-5240
Missouri	Eric Morse	314-341-7413
Nebraska	Mary Peterson	308-432-0300
North Dakota	Louis Odegarrd	701-250-4443
South Dakota	Robert Moltzen	605-673-2251
Wisconsin	Jack Troyer	715-762-2416

<u>STATE</u>	<u>TIMBER BRIDGE COORDINATOR</u>	<u>PHONE</u>
North Dakota	Vernon Meyer	406-329-3388
South Dakota	Robert Dettmann	303-236-7073
Minnesota	Stephen Bratkovich	612-649-5246

**UNITED STATES DEPARTMENT OF COMMERCE, ECONOMIC DEVELOPMENT
ADMINISTRATION**

<u>STATE</u>	<u>ECONOMIC DEVELOPMENT REPRESENTATIVE</u>	<u>PHONE</u>
Illinois, Minnesota, Wisconsin	Edward Jeep, Director	312-353-7706
Illinois	Alfred Casals, EDR	217-492-4224
Minnesota	John B. Arnold, EDR	218-720-5326
Wisconsin	Jack Price, EDR	715-834-4079

Iowa, Kansas, Missouri, Nebraska, S. Dakota	Steven R. Brennen, Director	303-844-4714
Iowa	Robert Cecil, EDR	515-284-4746
Kansas	John Zender, EDR	303-844-4902
Missouri	Forrest Koch, EDR	314-539-2321
Nebraska, S. Dakota	Warren Albertson, EDR	605-224-8280

UNITED STATES DEPARTMENT OF ENERGY

David McColloch	202-586-4660
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U.S. Department
of Transportation

**Federal Highway
Administration**

Memorandum

Subject: **INFORMATION:** Transmittal of the Task Force Report Date August 31, 1993

From: Federal Highway Administrator Reply to Attn. of: HEP-10

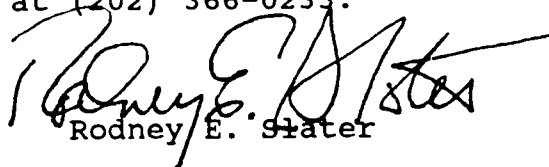
To: Members of the Flood Task Force on Transportation/Bridges and Roads

Attached is a copy of the Federal Recovery Task Force Report for Transportation/Bridges and Roads dated August 31, 1993. This report is the product of the collective efforts of all of the task force members.

I have transmitted the report to Ms. Oleta Garrett Fitzgerald, of the Department of Agriculture, by the deadline date of August 31. A copy of the transmittal letter is attached for your information.

Based on our review of the report, we feel that we have responded to the charge for the immediate priorities. We have identified some longer range issues that might be addressed by this or another task force. Any thoughts that you may have on future activities where this task force can be useful are welcome. Please contact Mr. Anthony R. Kane, Associate Administrator for Program Development, concerning your thoughts for future activities. Mr. Kane's telephone number is (202) 366-0371, and his FAX number is (202) 366-3713.

I would like to thank you again for your assistance. Without the excellent cooperation of each of you, we would not have been able to produce the report within the deadline. Should you have any questions on the future of the task force, please do not hesitate to contact me. If you have any questions on the report, please contact Mr. Richard Torbik at (202) 366-0233.


Rodney E. Slater

2 Attachments