

CRS Report for Congress

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Repairing and Reconstructing Disaster-Damaged Roads and Bridges: The Role of Federal-Aid Highway Assistance

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Summary

When Hurricane Katrina swept across the Gulf of Mexico coast and into Louisiana, Mississippi, and Alabama, its winds, storm surge, and flooding did significant damage to the road and bridge infrastructure in the coastal areas of these states. Most of the major highways in the disaster area are part of the Federal-Aid highway system and are therefore eligible for assistance from the Department of Transportation (DOT) through the Emergency Relief Program (ER) of the Federal Highway Administration (FHWA). Within the context of Hurricane Katrina, Congress faces a number of options in regard to the ER program.

When Hurricane Katrina swept across the Gulf of Mexico coast and into Louisiana, Mississippi, and Alabama, its winds, storm surge, and flooding did significant damage to the road and bridge infrastructure in the coastal areas of these states. Route 90, for example, from east of Biloxi, Mississippi to Louisiana has suffered major damage and in some places has been completely washed out. Some sections of bridges on Interstate 10 were overwhelmed by a storm surge that was so high and powerful that it lifted up whole sections of bridge decking and tossed them into the water beyond. Storm debris littered many of the region's roads making them at least initially impassable and a significant portion of New Orleans' roads remained inaccessible, more than two weeks after the disaster, covered with fetid flood waters that may raise additional problems of disposing of contaminated road debris.

As of this writing, federal and state transportation officials have not yet completed their damage assessments but it is clear that restoring the road and bridge infrastructure will have a major role in restoring the hurricane impact area to normalcy. Most of the major highways in the disaster area are part of the Federal-Aid highway system and are therefore eligible for assistance from the DOT through the Emergency Relief Program (ER) of the Federal Highway Administration (FHWA). For roads that are not Federal-Aid highways, states may request reimbursement for emergency road repairs and debris removal from the Federal Emergency Management Agency (FEMA).

This report describes FHWA assistance for the repair and reconstruction of disaster damaged highways and bridges. It begins with a brief discussion of the legislative origins of federal assistance and describes the ER program in its current form. The report then discusses eligibility issues and program operation. Finally, the report discusses a number of issues, including funding, that may be of interest to Congress.

Background

For more than 70 years, federal aid for the emergency repair and restoration of disaster damaged roads has been available. The first legislation authorizing such use of federal funds was the Hayden-Cartwright Act of 1934 (P.L. 73-393). This act, however provided no separate funds and states subject to disasters had to divert their regularly apportioned federal highway funds from other uses to disaster repairs. The Federal-Aid Highway and Highway Revenue Act of 1956 (70 Stat 374 and 70 Stat 387) was the first act that authorized separate funds for the ER program (the program is codified 23 U.S.C. 125). From the passage of the 1956 Act through 1978, funding for the program was drawn 40% from the Treasury's general fund revenues and 60% from the highway trust fund (HTF). The HTF is supported by taxes paid by highway users. Since 1979 the program has been funded 100% from the HTF. Recently the ER program was authorized through 2009 in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU) (P.L. 109-59; 119 Stat 1144).

The FHWA's Emergency Relief (ER) Program¹

The ER program provides funds for the repair and reconstruction of roads on the federal-aid highway system that have suffered serious damage as a result of either 1) a natural disaster over a wide area, such as a flood, hurricane, tidal wave, earthquake, tornado, severe storm, or landslide; or 2) a catastrophic failure from any external cause (for example, the collapse of a bridge that is struck by a barge). Historically, however, the vast majority of ER funds have gone for natural disaster repair and reconstruction.

As is true with other FHWA programs, the ER program is administered through the state departments of transportation in close coordination with FHWA's division offices (there is one in every state). Most observers see this as a strength of the program in that FHWA staff at the state level have established and ongoing relationships with their state counterparts and this facilitates a quick coordinated response to disasters.

Funding. The ER program has an annual authorization of \$100 million in contract authority to be derived from the Highway Trust fund. These funds are not subject to the obligation limitation, which means the entire \$100 million is available each year. Because the costs of road repair and reconstruction in many disasters exceed the \$100 million annual authorization, SAFETEA-LU authorizes the appropriation of additional funds on a "such sums as may be necessary" basis. This is accomplished through emergency supplemental appropriations legislation.

¹ See U.S. Federal Highway Administration. *Emergency Relief Manual*. Washington, FHWA, 2003. 75 p. See also FHWA *A Guide to Federal-Aid Programs and Projects*, Washington, FHWA, 1999. p. 86-88.

Highway Trust Fund (HTF) Issues. Historically, in part because the highway trust fund maintained significant unexpended balances, HTF funds have been available for the emergency supplemental appropriations acts that funded ER needs above the \$100 million level. In recent years, the unexpended balances of the highway account of the HTF have been reduced while outstanding commitments against the account have grown.² In addition, recent higher gasoline and diesel prices may have had an as yet unknown constraining effect on the flow of fuel tax revenues that support the HTF.³ For these reasons, it is not clear whether the HTF can fund a large Katrina related supplemental appropriation without violating the fiduciary requirements of the “Byrd rule.”⁴ Also, using HTF funds for the Hurricane Katrina ER supplemental could constrain the ability of the HTF to fully fund the SAFETEA-LU authorized highway programs over the life of the authorization. The ER supplemental funding for Hurricane Katrina relief may, therefore, ultimately have to be drawn from the Treasury general fund.

The \$100 Million Per State Cap. The ER program limits the amount that FHWA may provide under the ER program to each state for each natural disaster or catastrophic failure to \$100 million.⁵ For large disasters whose costs exceed the \$100 million per state cap, Congress may pass legislation lifting or removing the cap. This is also done in emergency supplemental appropriations legislation. According to FHWA, the per state cap will, at least, have to be lifted for Louisiana and Mississippi.

The Federal Share. Emergency repairs to restore essential travel, minimize the extent of damage, or protect remaining facilities, if accomplished within the first 180 days after the disaster, may be reimbursed with a 100% federal share. Permanent repair projects are reimbursed at the same federal share that would normally apply to the federal-aid highway facility. For Interstate System highways the federal share would be 90% and for most other highways the share would be 80%. Permanent repairs done during the first 180 days are also reimbursed at the pro rata share that would normally apply to the facility. The share for disaster relief for roads on federal lands is 100%.

As is true with other FHWA programs, the ER is a reimbursable program. This means that a state can incur obligations, begin repairs and then submit vouchers to FHWA for reimbursement for the federal share of the project.

² From a high of \$22.6 billion in FY2000 the unexpended balance in the highway account had fallen to \$13 billion in FY2003. In FY2004 the balance rebounded slightly to 14.6 billion. See internet sites [<http://www.fhwa.dot.gov/policy/ohim/hs03/htm/balchrt.htm>] and [<http://www.publicdebt.treas.gov/dfi/dfi20x8102c.htm>]

³ Some states are reporting drops in their gas tax revenues. See *Gas Up, Tax Yields Down*. Washington Post, Sept. 2, 2005: A28.

⁴ The Byrd Rule or Byrd Test requires that the outstanding commitments against the highway account not exceed an amount equal to the current balance plus the estimated income for the next two years. If the test is not met, the rule requires an across the board cut in federal-aid-highway apportionments. See *Highway Trust Fund Primer* available at [<http://www.fhwa.dot.gov/policy/primer98.pdf>]

⁵ The total ER obligations for U.S. Territories (American Samoa, Commonwealth of Northern Mariana Islands, Guam, and the Virgin Islands) is limited to \$20 million in any year.

Eligibility and Program Operation. The ER program divides all repair work into two categories: emergency repairs and permanent repairs. Only repairs to roads and bridges on the federal-aid highway system that have suffered damage during a declared disaster or catastrophic failure are eligible for ER assistance.⁶ The intent of ER assistance is to repair and restore highway facilities to pre-disaster conditions and is not intended to fund new construction for increased capacity or improve highway facilities or fix non-disaster deficiencies. In general, work is confined to the right-of-way of the federal-aid highway facility.

Emergency Repairs. These are repairs made immediately following a disaster to meet the program goals to “restore essential traffic, to minimize the extent of damage, or to protect the remaining facilities.”⁷ State and local transportation agencies can begin these repairs immediately and prior approval from FHWA is not required. Once the FHWA Division Administrator finds that the disaster work is eligible, properly documented costs can be reimbursed retrospectively. Emergency repair work is to be accomplished within the first 180 days after the disaster and, as mentioned earlier, is reimbursed at a 100% federal share. Examples of emergency repairs are: debris removal, regrading, removal of landslides, construction of temporary road detours, erection of temporary detour bridges, and use of ferries as an interim substitute for highway or bridge service. Emergency repairs are meant to permit work to start immediately to restore essential traffic in the disaster area that cannot wait for a finding of eligibility and programming of a project. This part of the program is especially designed for speed. In the case of some disasters, state DOTs have been able to let ER funded debris removal and demolition contracts the same day of the disaster event.⁸

Permanent Repairs. These repairs go beyond the restoration of essential traffic and are intended to restore the damaged bridges and roads to pre-disaster conditions and capabilities. Where the damaged parts of the road can be repaired to pre-disaster conditions, without replacement or reconstruction, this is done. Where a road needs to be replaced, ER funding is limited to the costs of building a roadway designed to current standards and of comparable capacity. ER funds may be used for temporary or permanent repair of a repairable bridge but permanent repairs may not be funded if the bridge is scheduled for replacement. If a bridge is destroyed or repair is not feasible then ER funds may participate in building a new comparable bridge to current design standards and current-design year traffic volume if the bridge is not scheduled for replacement. In some cases “betterments” (added protective features, added lanes, added access control, etc.) may be eligible, but they must be shown to be economically justified based on a cost/benefit analysis of the future savings in recurring repair costs.

⁶ A Governor may declare an emergency proclamation and the FHWA Division Administrator may then concur that a disaster occurred and substantial damage has occurred to the Federal-Aid Highway system roads over a wide area or that the criteria for a catastrophic failure were met and that the damage is eligible under 23 U.S.C. 125. When the President has issued a major disaster declaration the Division Administrator’s concurrence is not necessary.

⁷ FHWA. *Emergency Relief Manual*.

⁸ A good example of this is the Northridge Earthquake. See National Transportation Systems Center. *Effects of Catastrophic Events on Transportation System Management and Operations: Final Report*. Washington, FHWA, 2004. p. 37-45.

Permanent repair and reconstruction contracts, not done as emergency repairs, must meet competitive bidding requirements. A number of techniques are available to accelerate projects, including design-build contracting, abbreviated plans, shortened advertisement period for bids, and the cost-plus-time (A+B) bidding⁹ that includes monetary incentive/disincentive clauses designed to encourage contractors to complete projects ahead of time. The repair contract for repair of the I-10 bridge in New Orleans that was awarded Friday September 9, 2005, includes a \$50,000 per day incentive for early completion. Similar incentive/disincentive contracts were used after the Northridge Earthquake and four of the five major projects, undertaken at that time were completed ahead of schedule.¹⁰

Contracts supported by ER funding must meet all contract provisions as required by 23 CFR Part 633A. Davis-Bacon wage rate requirements apply to all ER contracts (waived by Presidential action in this instance).¹¹ ER funded contracts must abide by Disadvantaged Business Enterprises (DBE) requirements, American With Disability Act (ADA) requirements, “buy America” regulations, and prohibitions against the use of convict labor (23 U.S.C. 114).¹²

Repair projects funded under the ER program are subject to the requirement of the National Environmental Policy Act (NEPA) of 1969. The impact of this requirement, however, is generally limited since emergency repairs are normally classified as categorical exclusions under 23 CFR 771.117 (c)(9) as are projects to permanently restore an existing facility “in-kind” to its pre-disaster condition. Betterments may, in some cases, require NEPA review.

Although, as of this writing, an official cost estimate for the repair of federal-aid highways damaged from Hurricane Katrina has not been released, DOT Secretary Norman Mineta has estimated publically that transportation repair costs will run upwards of \$1.3 billion in Louisiana and upwards of \$1.1 billion in Mississippi.¹³ Even if the estimates remain at these levels, it would still be more than twice the allocated amount of \$1.1 billion for Federal-Aid Highway repairs to damage done in 2004 by Hurricanes Charley, Frances, Ivan, Jean, and Tropical Storm Gaston, combined.¹⁴ In any case, Hurricane Katrina’s costs to repair Federal-Aid highways will clearly exceed both the ER program \$100 million annual funding and the \$100 million state cap for Louisiana and Mississippi.

⁹ Cost-plus-time bidding (A+B method) includes two components. The A component is the traditional bid for all work to be performed. The B component is a bid of the total number of calendar days required to complete the project. The contract includes a disincentive for overrunning the time bid and an incentive for earlier completion.

¹⁰ Ibid. p. 44.

¹¹ The Davis-Bacon requirements may not be waived by FHWA but can be suspended by executive order (ref. 40 U.S.C. 276a-5). President Bush did this in response to Katrina.

¹² A state may request a waiver of the buy America requirements from FHWA based on a public interest rationale under 23 CFR 635.4109(c)(1)(i).

¹³ *Transportation Repair Costs Expected to Exceed \$2 billion*. Wall Street Journal Online. Sept. 7, 2005. A significant amount of road infrastructure in New Orleans remains under water.

¹⁴ *Secretary Mineta Delivers Almost \$1 Billion in Hurricane Recovery Funds for Florida’s Roads and Bridges...* Washington, Dept. of Transportation, May 17, 2005. 2p.

Emergency Relief Program Issues for Congress

Within the context of the Katrina Disaster, Congress faces a number of options in regards to the ER program. Most of these might be addressed in a supplemental appropriations bill.

Even if Secretary Mineta's estimates are high, it is apparent that a supplemental appropriation will be proposed for the ER program. Until more detailed cost data are available, it is hard to know how much will be requested.¹⁵ It is also apparent that to provide Louisiana and Mississippi with needed repair funds, the \$100 million per state cap will likely have to be raised or waived.

In recent history, ER funding has been drawn from the Highway Trust Fund. It is not certain that the HTF can sustain both the funding recently authorized in SAFETEA-LU as well as a supplemental appropriation of \$2 billion or more for Hurricane Katrina. Because of amounts authorized in SAFETEA-LU and the possibility of reduced fuel tax revenues, Congress may be faced with using general fund revenues or finding offsetting program reductions elsewhere.

Congress may also examine extending the 100% federal share period for emergency repair costs beyond the 180 day limit. Another possible approach might be to keep the 180 day limit but expand the 100% share to cover all costs incurred (i.e. both emergency repairs and permanent repairs accomplished during the 180 days).

¹⁵ One of the ways that the Northridge Supplemental appropriation dealt with this uncertainty was to provide for a contingency fund for additional unforeseen costs (P.L. 103-211).