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Emergency Relief for Disaster-Damaged Roads and Public Transportation Systems

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SUMMARY

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Emergency Relief for Disaster-Damaged Roads and Public Transportation Systems

The U.S. Department of Transportation (DOT) provides federal assistance for disaster-damaged roads and public transportation systems through two programs: the Emergency Relief Program (ER) administered by the Federal Highway Administration (FHWA) and the Public Transportation Emergency Relief Program administered by the Federal Transit Administration (FTA). These programs are funded mainly by appropriations that have varied considerably from year to year. Over time the amounts are substantial. Since 2012, the Highway ER Program has received $5.4 billion; FTA's ER program has received $10.7 billion, all but $330 million of which was in response to Hurricane Sandy.

Roads and bridges that are federal-aid highways or are public-use roads on federal lands are eligible for assistance under FHWA's ER Program. Following natural disasters (such as Hurricanes Harvey, Irma, and Maria in 2017, which damaged highways in Florida, Texas, Puerto Rico, and the U.S. Virgin Islands), or catastrophic failures (such as the 2013 collapse of the Skagit River Bridge in Washington State), ER funds are made available for both emergency repairs and restoration of eligible facilities to conditions comparable to those before the disaster.

Although emergency relief for highways is a federal program, the decision to seek ER funding is made by a state government or by a federal land management agency. Local governments are not eligible to apply. The program is funded by a permanent annual authorization of $100 million from the Highway Trust Fund (HTF) along with general fund appropriations provided by Congress on a "such sums as necessary" basis. Appropriated ER funds have averaged roughly $730 million annually since FY2009. FHWA pays 100% of the cost of emergency repairs done to minimize the extent of damage, to protect remaining facilities, and to restore essential traffic during or immediately after a disaster. Emergency repairs must be completed within 180 days of the disaster event. Permanent repairs go beyond the restoration of essential traffic and are intended to restore damaged bridges and roads to conditions and capabilities comparable to those before the event. The federal share for permanent repairs is generally 80% for non-Interstate roads and 90% for Interstate Highways.

All ER funding is distributed through state departments of transportation or federal land management agencies such as the National Park Service. Certain "quick release" funds are allocated to help with initial emergency repair costs and may be released prior to completion of detailed damage inspections and cost estimates. Other allocations to the states follow a more deliberate process of completing detailed damage reports, developing cost estimates, and processing competitive bids.

Unlike the long-standing ER program in highways, the Public Transportation ER Program dates to 2012. The Public Transportation ER program provides federal funding on a reimbursement basis to public transportation agencies, states, and other government authorities for damage to public transportation facilities or operations as a result of a natural disaster or other emergency and to protect assets from future damage. The Public Transportation ER program provides federal support for both capital and operating expenses. Unlike the FHWA's ER program, FTA's ER program does not have a permanent annual authorization. All funds are authorized on a "such sums as necessary" basis and are available only pursuant to an appropriation from the general fund of the U.S. Treasury. In the absence of an appropriation, transit agencies must rely on funds from the Federal Emergency Management Agency (FEMA). Since its creation in 2012, there have been two appropriations to the Public Transportation ER program. More than $10 billion was appropriated in 2013 to respond to Hurricane Sandy and $330 million was appropriated in 2018 to respond to Hurricanes Harvey, Irma, and Maria.

Two recurring issues drawing congressional attention are funding levels and funding of activities that go beyond restoring transportation facilities to predisaster conditions, such as making damaged highways more resilient to natural disasters. FTA's ER program has fewer limits and more flexibility than the emergency relief programs administered by FEMA and FHWA; thus it too faces questions about expenditures that go beyond repairing damage from a disaster. The lack of a permanent annual authorization for FTA means FTA cannot provide funding immediately after a disaster or emergency, and transit agencies must rely on FEMA for a quick response.

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Introduction

Disaster-damaged roads and public transportation systems are eligible for federal assistance under two U.S. Department of Transportation (DOT) programs, the Emergency Relief (ER) Program administered by the Federal Highway Administration (FHWA) and the Public Transportation ER Program administered by the Federal Transit Administration (FTA). The two programs have different histories and legal and regulatory authorities, but they share a similar intent and face some of the same issues. For example, there are concerns with both programs about the extent to which federally funded activities should go beyond restoring infrastructure to predisaster conditions, including so-called resilience projects.

This report begins by discussing FHWA assistance for the repair and reconstruction of highways and bridges damaged by disasters (such as the 2017 Hurricanes Harvey, Irma, and Maria) or catastrophic failures (such as the collapse of the Skagit River Bridge in Washington State in 2013). This includes information on the use of ER funds on disaster-damaged federally owned public-use roadways, such as National Park Service roads and U.S. Forest Service roads, under an affiliated program, the Emergency Relief for Federally Owned Roads Program. This is followed by a discussion of FTA's assistance program, established in 2012, which has provided assistance to public transportation systems on two occasions, once after Hurricane Sandy in 2012 and again after the 2017 hurricanes.

FHWA's Emergency Relief (ER) Program

For over 80 years, federal aid has been available for the emergency repair and restoration of disaster-damaged roads. The first legislation authorizing such use of federal funds was the Hayden-Cartwright Act of 1934 (48 Stat. 993). 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 repairing disaster-damaged roads.

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.[1] From 1956 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 primarily by taxes paid by highway users, mainly on gasoline and diesel fuel. Starting in 1979, the ER program was funded 100% from the HTF. In 1998 Congress made the annual $100 million HTF authorization permanent. However, beginning in 2005, while Congress continued the $100 million permanent authorization from the HTF, it authorized supplemental appropriations from the general fund.[2] On December 4, 2015, the ER program was reauthorized through FY2020 in the Fixing America's Surface Transportation Act (FAST Act; P.L. 114-94).[3]

ER funds may be used for the repair and reconstruction of federal-aid highways and roads on federally owned lands 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

[1] The program is codified at 23 U.S.C. §125.

[2] Beginning with the December 30, 2005, enactment of the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006 (P.L. 109-148), ER supplemental appropriations have been drawn from the general fund.

[3] CRS Report R44388, *Surface Transportation Funding and Programs Under the Fixing America's Surface Transportation Act (FAST Act; P.L. 114-94)*, coordinated by Robert S. Kirk.

landslide; or (2) a catastrophic failure from any external cause (for example, the collapse of a bridge that is struck by a barge).[4] Historically, however, the vast majority of ER funds have gone for repair and reconstruction following natural disasters.

As is true with most other FHWA programs, the ER program is administered through state departments of transportation in close coordination with FHWA's division offices in each state.[5] The decision to seek financial assistance under the program is made by state departments of transportation, not by the federal government. Local officials who wish to seek ER funding must do so through their state departments of transportation; they do not deal directly with FHWA. As state departments of transportation normally deal with FHWA division office staff on many matters, they typically have working relationships that facilitate a quick coordinated response to disasters.

Public Use Roads on Federal Lands

For roads and bridges on federally owned lands, ER assistance is managed via a related program, called Emergency Relief for Federally Owned Roads. This program addresses disaster damage to facilities such as National Park Service roads, U.S. Forest Service roads, and tribal transportation facilities.[6] FHWA dispenses these funds through the various federal land management agencies, not the states.[7] Aid is restricted to facilities that are open to the general public for use with a standard passenger vehicle. FHWA pays 100% of the cost of approved repairs, but the program is designed to pay for unusually heavy expenses and to supplement the agencies' repair programs, not to cover all repair costs. Tribal, state, and other government entities that have the authority to repair or reconstruct eligible facilities must apply through a federal land management agency.[8] The program is managed by FHWA's Office of Federal Lands Highways.

ER Funding

The ER program has a permanent annual authorization of $100 million in contract authority to be derived from the HTF. These funds are not subject to the annual obligation limitation placed on most highway funding by appropriators, which generally means the entire $100 million is available each year, although the funding could be subject to sequester.[9] Because the costs of road

[4] Federal Highway Administration, *Emergency Relief Manual (Federal-Aid Highways*, Washington, DC, May 31, 2013, pp. 1-67, https://www.fhwa.dot.gov/reports/erm/er.pdf.

[5] CRS Report R44332, *Federal-Aid Highway Program (FAHP): In Brief*, by Robert S. Kirk.

[6] Federal Highway Administration, *Emergency Relief for Federally Owned Roads (ERFO): Web Site*, https://flh.fhwa.dot.gov/programs/erfo/.

[7] The main land management agencies are the Interior Department's Bureau of Land Management, the National Park Service, the Fish and Wildlife Service, and the Department of Agriculture's Forest Service. Some ER-eligible roads also serve military installations and U.S. Army Corp of Engineers and Department of Energy facilities. See FHWA, *Transportation Serving Federal and Tribal Lands*, https://www.fhwa.dot.gov/policy/2015cpr/pdfs/chap12.pdf.

[8] Federal Highway Administration, *Emergency Relief for Federally Owned Roads: Disaster Assistance Manual*, FHWA-FLH-15-001, Washington, DC, October 2014, pp. 1-109, https://flh.fhwa.dot.gov/programs/erfo/documents/erfo-2015.pdf.

[9] ER funds were subject to the FY2013 sequester under the Balanced Budget and Emergency Deficit Control Act, as amended. The sequester amount for the $100 million of contract authority was $5.1 million, and the sequester amount for the $2.022 billion of supplementary funds provided in the Disaster Relief Appropriations Act of 2013 (P.L. 113-2) was $101.1 million. See https://www.fhwa.dot.gov/legsregs/directives/notices/n4510762.cfm. Sequester amounts for the annually authorized $100 in contract authority since FY2013 are as follows: FY2014, $7.2 million; FY2015, $7.3 million; FY2016, $6.8 million; FY2017, $6.9 million; and FY2018, $6.6 million.

repair and reconstruction following disasters typically exceeds the $100 million annual authorization, the FAST Act authorizes the appropriation of additional funds on a "such sums as may be necessary" basis, generally accomplished in either annual or emergency supplemental appropriations legislation.[10] For a listing of ER appropriations since 1998, see the **Appendix**. These funds are available until expended.

As is true with other FHWA programs, ER is a reimbursable program. A state receives payment only after making repairs and submitting vouchers to FHWA for reimbursement of the federal share. However, once the state's eligibility for ER funds has been confirmed by FHWA, it can incur obligations knowing that it will receive reimbursement.

The ER funding structure of having a modest annual authorization supplemented by appropriations addressed the fact that small disaster events occur every year but large disasters do not. However, the $100 million annual authorization has not changed since 1972. To equal the current purchasing power of $100 million in FY1972 would require an authorization in the neighborhood of $500 million to $600 million.[11] Because the value of the $100 million permanent authorization has diminished over time, the program has become increasingly dependent on supplemental appropriations. Over the last 10 fiscal years, $7.3 billion in supplemental appropriations have been provided in six appropriations acts. Roughly 12% of the total amount made available was provided by the permanent annual authorization; the other 88% was provided in appropriations acts. Consequently, an issue for Congress in the upcoming reauthorization of the FAST Act, which expires in FY2020, is whether to raise the permanent annual authorization to account for its loss of value since 1972 or to continue to rely heavily on supplemental appropriations to fund emergency repairs to highways.

The Federal Share

Emergency repairs to restore essential travel, minimize the extent of damage, or protect remaining facilities, if accomplished within 180 days after the disaster, may be reimbursed with a 100% federal share. Permanent repair projects, such as rebuilding a bridge or a segment of damaged road, 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, including Federal Lands Access Program facilities,[12] the share would be 80%. If the total expenses a state incurs to deal with disaster-damaged roads in a fiscal year exceed the state's total federal-aid highway formula funds for that year, the share becomes "up to 90%" for any federal-aid road. The requirement that the state provide a share of the funding for permanent repairs applies whether or not the repairs are completed during the first 180 days after the disaster.

Congress has on occasion authorized FHWA to pay 100% of ER program expenses for repair and reconstruction projects related to particular disasters. Legislation for that purpose was enacted following the 2005 Gulf Coast hurricanes and the collapse of the I-35W Bridge in Minneapolis in

[10] The extensive damage caused by Hurricane Katrina in 2005 raised doubts whether emergency supplemental ER expenditures could be drawn from the highway account of the HTF without constraining the ability of the HTF to fully fund other authorized surface transportation programs. For that reason, supplemental ER appropriations have come from the general fund since December 2005.

[11] The amount varies depending on the deflator used: using the GDP deflator calculates to $474 million; the Consumer Price Index calculates to $606 million.

[12] Federal Lands Access Program is for roads that are located on or adjacent to, or that provide access to, federal lands. The funds are allocated to the states using a formula based on mileage, number of bridges, land area, and visitation. See https://www.fhwa.dot.gov/fastact/factsheets/fedlandsaccessfs.cfm.

2007. More recently, a provision in the Bipartisan Budget Act of 2018 (P.L. 115-123) provided for a 100% federal share for damage caused by Hurricanes Irma and Maria in Puerto Rico in 2017.

Eligibility and Program Operation[13]

The ER program divides all repair work into two categories: emergency repairs and permanent repairs. Only repairs on federal-aid highways or federally owned roads and bridges that have suffered damage during a declared disaster or catastrophic failure are eligible for ER assistance.[14] The intent of ER assistance is to restore highway facilities to conditions comparable to those before the disaster, not to increase capacity or fix non-disaster-related deficiencies. However, current law broadly defines "comparable facility" as one that "meets the current geometric and construction standards required for the types and volume of traffic that the facility will carry over its design life." Thus, for example, ER funds could be used to rebuild an older disaster-damaged road or bridge that had narrow lanes with wider lanes that meet current FHWA guidelines.

FHWA's ER handbook also directs that "design and construction of repairs should consider the long-term resilience of the facility." FHWA defines resilience as the "capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment."

In regard to bridges, ER funds are not to be used if the construction phase of a replacement structure has already been included in the state's approved transportation improvement program at the time of the disaster or if the bridge had been permanently closed to vehicular traffic prior to the disaster.

Contracts supported by ER funding must meet all conditions required by 23 C.F.R. Part 633A, which regulates highway contracts involving federal funding. All contractors receiving ER funds must pay prevailing wages as required under the Davis-Bacon Act.[15] ER-funded contracts must abide by Disadvantaged Business Enterprises requirements, Americans With Disability Act requirements, "Buy America" regulations, and prohibitions against the use of convict labor (23 U.S.C. §114).[16]

Repair projects funded under the ER program are subject to the requirements of the National Environmental Policy Act (NEPA) of 1969. The impact, however, is generally limited because work funded by the ER program generally must occur within the federal-aid highway right-of-way. This means that emergency repairs are normally classified as categorical exclusions under 23 C.F.R. Section 771.117 (c)(9), as are projects to permanently restore an existing facility "in

[13] Federal Highway Administration, *Emergency Relief Manual (Federal-Aid Highways)*, Washington, DC, May 31, 2013, pp. 1-67, https://www.fhwa.dot.gov/reports/erm/er.pdf.

[14] A governor may issue a formal proclamation of the occurrence of a disaster. A presidential declaration or the governor's request for this declaration can serve the same purpose. The state files a letter of intent to apply for ER funding with the FHWA division office within the state. The FHWA division administrator may then concur that a disaster occurred and substantial damage has occurred to federal-aid highway system roads, 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. See http://www.fhwa.dot.gov/reports/erm/er.pdf, pp. 30-31. FHWA (via the director of each Federal Lands Highway Division) determines whether a disaster has occurred in regard to Emergency Relief for Federally Owned Roads, although this is not necessary when there has been a presidential declaration of a major disaster.

[15] The Davis-Bacon requirements can be suspended by executive order (ref. 40 U.S.C. §276a-5). President George W. Bush did this in response to Hurricane Katrina. He reimposed the requirements on November 8, 2005.

[16] A state may request a waiver of the Buy America requirements from FHWA based on a public interest rationale under 23 C.F.R. §635.4109(c)(1)(i).

kind" to its predisaster condition. "Betterments" (e.g., added protective features, added lanes, added access control) may, in some cases, require NEPA review.

States must apply and provide a comprehensive list of all eligible project sites and repair costs within two years of the disaster or catastrophic event.

Emergency Repairs

State and local transportation agencies can begin emergency repairs during or 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."[17] 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. To be eligible for a 100% federal share, emergency repair work must be completed within 180 days of the disaster, although FHWA may extend this time period if there is a delay in access to the damaged areas, for example due to flooding. Examples of emergency repairs are regrading roads, 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. Debris removal is generally the responsibility of the Federal Emergency Management Agency (FEMA).[18] Debris removal from tribal transportation facilities, federal land transportation facilities, and on other federally owned roads open to public travel is eligible for funding under the Emergency Relief for Federally Owned Roads program. The emergency repair provisions in the ER program are designed to permit work to start immediately, ahead of a finding of eligibility and programming of a project. In some instances, state departments of transportation have been able to let initial ER-funded contracts on the day of a disaster event.[19]

Permanent Repairs

Permanent repairs go beyond the restoration of essential traffic and are intended to restore damaged bridges and roads to conditions and capabilities comparable to those before the event.[20] Generally, where the damaged parts of the road can be repaired without replacement or reconstruction, this is done. Current law includes a limitation that the total cost of an ER project cannot exceed the cost of repair or reconstruction of a comparable facility.

ER funds may be used for temporary or permanent repair of a repairable bridge or tunnel. 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 to accommodate traffic volume projected over its design life. In some cases betterments 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.

Permanent repair and reconstruction contracts not classified as emergency repairs must meet competitive bidding requirements. A number of techniques are available to accelerate projects,

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[17] Federal Highway Administration, *Emergency Relief Manual (Federal-Aid Highways).*

[18] The 2012 authorization act, Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141), restricted debris removal under ER to events not declared a major disaster by the President or declared a major disaster but where debris removal is not eligible under the Stafford Act.

[19] This occurred following the 1994 Northridge earthquake in California. See *Effects of Catastrophic Events on Transportation System Management and Operations* (Washington, DC: FHWA, 2004), pp. 37-45.

[20] Federal Highway Administration, *Emergency Relief Manual (Federal-Aid Highways).*

including design-build contracting, abbreviated plans, shortened advertisement periods for bids, and cost-plus-time (A+B) bidding[21] that includes monetary incentive/disincentive clauses designed to encourage contractors to complete projects ahead of time. For example, the contract for the replacement of the I-35W Bridge in Minneapolis, which collapsed in August 2007, used incentives for early completion. The new bridge was built in 11 months and was completed three months ahead of schedule.[22]

ER Funding Distribution and Management

Because the program is funded primarily through supplemental appropriations the amounts available for distribution can vary greatly from year to year. The amount available at any one time, however, is limited. FHWA manages the distribution of these limited funds through a process of allocations and withdrawals as well as procedures to manage funding shortfalls.

There are two processes used to apply for ER funds following a disaster: quick release and the standard method. Allocations for quick-release funding often occur individually, whereas standard allocations are periodically distributed to all eligible states nationwide at one time.

"Quick Release" ER Allocations

The FHWA *Emergency Relief Manual* describes the "quick release" method for developing and processing a state request for ER funding as a method that

> provides limited, initial ER funds for large disasters quickly. Quick Release applications are processed based on preliminary assessment of damage and a damage survey typically does not accompany the application. Quick release funds are intended as a "down payment" to immediately provide funds for emergency operations until the standard application may be submitted and approved.[23]

A total of $140 million of quick-release funding has been allocated for road damage from Hurricanes Harvey, Irma, and Maria,; see **Table 1**. Other examples of quick-release allocations include the $1 million Wisconsin received on July 2, 2018; the $2 million Michigan received on July 3, 2018; and the $3 million Kentucky received, on July 16, 2018, all for repairs to flood-damaged roads.

FHWA holds some funding in reserve to assure that there will always be funds available for quick-release needs. The amount reserved is at the discretion of the FHWA Administrator with the concurrence of the Secretary of Transportation.

Nationwide ER Allocations

The standard application method is more deliberate, requiring site inspections and a damage survey summary report be submitted to the division office. This process is mostly used for permanent repairs. The standard allocations address both recent and backlogged project needs from past disasters. Money is usually allocated twice each fiscal year. In FY2018, FHWA released

[21] 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.

[22] Minnesota Department of Transportation, *Interstate 35W Bridge in Minneapolis*, http://www.dot.state.mn.us/i35wbridge/index.html.

[23] Federal Highway Administration, Office of Infrastructure, *Emergency Relief Manual*, May 31, 2013, pp. 30, 33-34, http://www.fhwa.dot.gov/reports/erm/er.pdf.

two nationwide allocations of ER funds totaling $1.35 billion, in addition to $226 million for disaster-damaged roads on federal lands.[24] Allocations to repair damage from the 2017 hurricanes appear in **Table 1**.

2017 Hurricanes: Harvey, Irma, and Maria

In the wake of the 2017 hurricanes, the Bipartisan Budget Act of 2018 provided a supplemental appropriation of $1.4 billion for the ER program. The language providing additional appropriations did not specify which disasters the funds were to be used for. The act did include a special provision raising the federal share to 100% for ER funds made available to Puerto Rico to respond to damage cause by Hurricanes Irma and Maria. **Table 1** presents the allocations of ER funding attributable to these disaster events through June 8, 2018.

Table 1. Hurricane Harvey, Irma and Maria Allocations by State

(through June 8, 2018)

State	Disaster Event	Date Range	Quick Release Allocations ($)	Allocation ($)	Total Allocated ($)
Texas	Hurricane Harvey	8/29/2017-4/13/2018	25,000,000	76,450,000	101,450,000
Florida	Hurricane Irma	9/11/2017-4/13/2018	25,000,000	97,406,595	122,406,595
Puerto Rico	Hurricanes Irma & Maria	9/14/2017-4/13/2018	77,500,000	74,750,000	152,250,000
Virgin Islands	Hurricanes Irma & Maria	9/13/2017-6/8/2018	12,900,000	15,000,000	27,900,000
Total			**140,400,000**	**263,606,595**	**404,006,595**

Source: Federal Highway Administration. Includes withdrawals of $1.6 million on November 22, 2017, and $7 million on June 8, 2018, of Virgin Islands' allocations. Further requests for allocations are likely to occur. Figures include allocations for Emergency Relief for Federally Owned Roads.

Funds Management

Once funding is allocated for a disaster event, FHWA can enter into project agreements and incur obligations (which legally commit the federal government to pay the federal share). If funds are unavailable, the request is added to a list of nationwide unfunded requests.[25]

Typically, requests for allocations exceed the available ER funding. For example, as of August 12, 2018, FHWA had an unallocated balance of $831 million available to respond to unfunded requests of $2.5 billion. Because FHWA may not commit to funding beyond its authorized and appropriated amounts, FHWA adjusts the distribution of funds to stay within the program's means.

When the unallocated balance is insufficient to cover the reserved quick release funds and the upcoming biannual nationwide distribution, the distributions are provided on a proportional basis. Each state's allocation would be computed based on a ratio of total available funding to total

[24] Federal Highway Administration, *Emergency Relief Program*, Policy and Guidance, Washington, DC, April 17, 2018, https://www.fhwa.dot.gov/programadmin/erelief.cfm.

[25] The unfunded request list includes state and federal land management agency estimates for both recent disaster events and older disasters as well as for projects that were funded using state funds and are awaiting reimbursement.

needs. FHWA cannot make the allocations whole unless Congress makes additional ER funding available. FHWA also has the option of skipping or delaying a standard nationwide distribution, allowing time for its funds to be replenished via the annual $100 million authorization or further supplemental appropriations.

During a funding shortfall, ER projects can be funded using state's regular formula funds under the Federal-Aid Highway Program. That funding would then be reimbursed when and if ER funds become available. This, however, could lead to delays in the funding of other planned projects as the state awaits reimbursement from ER funds.

FHWA reviews the unobligated and unexpended balances of funds that have been allocated on a monthly basis and coordinates the withdrawal of excess ER funds. Withdrawn funds are then available for reallocation. The agency also tracks recovery of insurance proceeds every six months. These proceeds are then available for allocation.[26]

Program Oversight Issues

Government Accountability Office (GAO) reports in 2007 and 2011 expressed concern about the financial sustainability of the ER program. Both reports found that the scope of the ER program had expanded beyond its original goal of restoring damaged facilities to predisaster conditions, described as "mission creep." The reports also raised questions about FHWA's ability to recapture unused funds that it had allocated to states.[27]

More recently, a 2012 GAO report found that FHWA officials in some states were reluctant to recoup funds from inactive ER highway projects over concerns about "harming their partnership with the state." In addition, "FHWA has shown a lack of independence in decisions, putting its partners' interests above federal interests," GAO said.[28] A broader issue, which may influence the states' reluctance to agree with the withdrawal of unused allocations, is the "available until expended" nature of the ER funding. Federal-Aid Highway formula funds are generally available for obligation for only four years. This difference could encourage some states to commit their limited matching state funds to non-ER projects first for fear of having their Federal-Aid Highway funding expire. For states with constrained transportation budgets, delaying ER-funded projects could make sense from a budgetary perspective. Congress could consider placing a time limit on the availability of ER funds for obligation to encourage states to prioritize the obligation of funds to ER projects.[29]

Since the release of the reports, legal and procedural changes have mitigated some of GAO's concerns. FHWA has updated the *Emergency Relief Manual* to clarify eligibility and procedural issues. States' applications for ER funding must now include a comprehensive list of all eligible

[26] Federal Highway Administration, *Emergency Relief Program Responsibilities*, FHWA Order 5182.1, Washington, DC, February 22, 2016, p. 9, https://www.fhwa.dot.gov/legsregs/directives/orders/51821.cfm.

[27] Government Accountability Office (GAO), *Highway Emergency Relief: Reexamination Needed to Address Fiscal Imbalance and Long-term Sustainability*, GAO-07-245, February 23, 2007, http://www.gao.gov/products/GAO-07-245; Government Accountability Office, *Highway Emergency Relief: Strengthened Oversight of Project Eligibility Decisions Needed*, GAO-12-45, November 2011, pp. 1-56, http://www.gao.gov/products/GAO-12-45.

[28] GAO, *Highway Infrastructure: Federal-State Partnership Produces Benefits and Poses Oversight Risks*, GAO-12-474, April 2012, pp. 21-22, 27-28, http://www.gao.gov/products/GAO-12-474.

[29] Limiting the availability of ER funds to a specific number of years is not a new concept. See U.S. Congress, House Committee on Public Works, *Emergency Highway Relief*, Report to accompany H.R. 6790, 89th Cong., 1st sess., July 7, 1965, H. Rept. 89-596 (Washington: GPO, 1965), p. 7. The report recommended an availability of three years. The provision was not included in the legislation as passed (P.L. 80-41).

project sites and repair costs by not later than two years after the event. The definition of "comparable facility" has broadened and clarified the non-betterment repairs that are eligible for ER funding. In 2016, FHWA issued an order, "Emergency Relief Program Responsibilities," providing procedures for administration of the ER program, to further "strengthen the administration and oversight of the ER program to ensure the effective use of limited ER funding for eligible projects."[30] The effectiveness of these changes could be of congressional oversight interest.

ER Resilience Policy Issues

The resilience of U.S. highway infrastructure has been a growing issue both within the context of broad concerns about the impacts of climate change as well as regional concerns such as fears of an earthquake generating a tsunami in the Cascadia subduction zone, off the Pacific Northwest coast.[31] The existing ER program is primarily a reactive program. Resilience measures on damaged facilities are eligible for ER funding if they are consistent with current standards and are not considered betterments or intended to save the program money in the long run.[32] The ER Manual states that "while ER funds are primarily provided for repair activities following a disaster; design and construction of repairs should consider the long term resilience of the facility."

The current program does not allow expenditure of emergency relief funds to improve the resilience of facilities not damaged by a natural disaster or catastrophic event. States may, however, also use their regularly apportioned federal-aid highway funds for resilience projects on undamaged facilities or to upgrade projects that do not meet the ER program economic justification criteria.

If it wished, Congress could also encourage attention to surface transportation infrastructure resilience in a number of ways, including the following:

- Retaining the current programmatic structure, but broadening "betterment" eligibilities to allow for more funding for resilience measures than allowed under current law, perhaps by considering benefits other than direct savings to the ER program. Congress could provide additional funds through the appropriations process to facilitate increased resilience measures following disasters.
- Expanding the resilience mission and funding of the two existing ER programs. The mission could, for example, be expanded to more fully cover climate change risk to undamaged surface transportation infrastructure. The additional amounts could be made available in annual or supplemental appropriations bills as needed. This could, however, increase demands for ER funds and again raise concerns about "mission creep."
- Creating a stand-alone program dedicated to preventive retrofitting or rebuilding of at-risk road and transit infrastructure. The program could be authorized permanently or as part of the normal surface transportation authorization of funds

[30] Federal Highway Administration, "Emergency Relief Program Responsibilities," FHWA Order 5182.1, February 22, 2016, https://www.fhwa.dot.gov/legsregs/directives/orders/51821.cfm.

[31] State of Oregon, Office of Emergency Management, *State of Oregon Cascadia Subduction Zone Catastrophic Earthquake and Tsunami Operations Plan*, September 2012, http://www.oregon.gov/OMD/OEM/Pages/plans_train/CSZ.aspx.

[32] CRS In Focus IF10728, *After the Storm: Highway Reconstruction and Resilience*, by Robert S. Kirk.

from the HTF. This could, however, widen the existing gap between HTF revenues and outlays.

- Encouraging the states to use their federal formula funds for resilience efforts by providing an increased federal share for resilience projects.

DOT Inspector General Report

In January 2018, the Department of Transportation Office of Inspector General (IG) released a review of FHWA's "guidance and processes for incorporating resilience improvement into emergency relief projects to rebuild damaged highway infrastructure."[33] The report found that FHWA's ER program guidance did not define "resilience improvement" or inform states how to incorporate resilience improvements into ER-funded projects. The report also found that FHWA had no process to track efforts by state transportation departments to include resilience improvements in their ER-funded projects.[34] The IG recommended that FHWA

1. revise the ER Manual to include a definition of "resilience improvement" and to identify procedures states should use to incorporate resilience into ER projects;
2. develop best practices for improving the resilience of ER projects and share them with the Division Offices and the state departments of transportation; and
3. develop and implement a process to track the consideration of resilience improvements for ER projects and their costs.

FHWA concurred with recommendations 1 and 2. With respect to recommendation 3, FHWA agreed to track the consideration of resilience improvements but argued against a requirement that resilience costs be tracked, given that such improvements might be incorporated as part of a project's design and construction standards, making resilience improvement costs hard to separate out. Implementation of the recommendations could be of oversight interest to Congress.

Public Transportation Emergency Relief Program

The Public Transportation Emergency Relief Program (49 U.S.C. §5324; 49 C.F.R. §602), established in Section 20017 of the Moving Ahead for Progress in the 21st Century (MAP-21; P.L. 112-141), is administered by the Federal Transit Administration (FTA) and is similar in intent to FHWA's ER program. FTA's program provides federal funding on a reimbursement basis to states, territories, local government authorities, Indian tribes, and public transportation agencies for damage to public transportation facilities or operations as a result of a natural disaster or other emergency and to protect assets from future damage.[35] In the past, funding for these purposes was provided by FEMA or through appropriations administered by FTA following a specific disaster. For example, in response to the September 11, 2001, terrorist attacks, which caused severe

[33] U.S. Department of Transportation Inspector General, FHWA Lacks Detailed Guidance on Infrastructure Resilience for Emergency Relief Project and a Process to Track Related Improvements, January 10, 2018, pp. 1-20, https://www.oig.dot.gov/sites/default/files/FHWA%20ER%20Resilience%20Final%20Report%5E1-10-18.pdf.

[34] The IG concluded that the ER Manual definition of resilience was stricter than the definition in FHWA's subsequent policy directive on resilience; see FHWA, *Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, FHWA Order 520, December 15, 2014, https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm.

[35] Federal Transit Administration (FTA), Emergency Relief Manual: A Reference Manual for States & Transit Agencies on Response and Recovery from Declared Disasters and FTA's Emergency Relief Program (49 U.S.C. 5324), https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Emergency_Relief_Manual_and_Guide_-_Sept_2015.pdf.

damage to rapid transit lines in New York City, about $4.7 billion was provided in emergency supplemental appropriations for transit, some of which was administered by FTA.[36]

The Public Transportation ER program provides federal support for both capital and operating expenses. Capital expenses include projects for repairing and replacing transit facilities that have been damaged, as well as projects to protect facilities from future damage, known as resilience projects. Sometimes a capital project can involve both damage restoration and resilience elements. Operating expenses include evacuation activities, rescue operations, and temporary transit service before, during, or after an emergency event. Operating costs are eligible for reimbursement for one year beginning on the date a disaster is declared, although the Secretary of Transportation may extend that period to two years after determining a compelling need.[37]

Funding and Federal Share

Unlike the FHWA's ER program, FTA's ER program does not have a permanent annual authorization. All funds are authorized on a "such sums as necessary" basis and require an appropriation from the Treasury's general fund. The federal share for most capital and operating projects under the program is 80%, but the Secretary of Transportation may increase this share up to 100%. Emergency funding will not be provided when project costs are reimbursed by another federal agency, such as FEMA, have been funded through insurance proceeds, or are already funded in an existing FTA grant.

Since its enactment in 2012, there have been two appropriations to the Public Transportation ER program. Funds were appropriated as part of the Disaster Relief Appropriations Act (P.L. 113-2) in January 2013 in response to Hurricane Sandy, which struck the United States in October 2012. Funds were also appropriated as part of the Bipartisan Budget Act of 2018 (P.L. 115-123) in response to Hurricane Harvey, which struck the United States in August 2017, and Hurricanes Irma and Maria, which struck the United States in September 2017.[38]

Hurricane Sandy

Hurricane Sandy affected 12 states and the District of Columbia; New York and New Jersey, states with some of the largest public transportation systems in the country, were the hardest hit. The Disaster Relief Appropriations Act of 2013 provided $10.9 billion for FTA's Public Transportation ER Program for recovery, relief, and resilience projects and activities in areas impacted by Hurricane Sandy. Approximately $10.4 billion remained available after sequestration under the Budget Control Act of 2011 (P.L. 112-25), and $185 million was transferred from FTA to the Federal Railroad Administration. FTA allocated the remaining approximately $10.2 billion according to several funding categories:[39]

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[36] GAO, *September 11: Overview of Federal Disaster Assistance to the New York City Area*, October 2003, GAO-04-72.

[37] 49 U.S.C. §5324(b)(2).

[38] CRS Report R45264, *The National Hurricane Center and Forecasting Hurricanes: 2017 Overview and 2018 Outlook*, by Peter Folger.

[39] FTA, "Fourth Allocation of Public Transportation Emergency Relief Funds in Response to Hurricane Sandy," 81 *Federal Register* 43705-43707, July 5, 2016; See also FTA, "Notice of Funding Availability for Resilience Projects in Response to Hurricane Sandy," 78 *Federal Register* 78486-78493, December 26, 2013; FTA, "Notice of Availability of Emergency Relief Funds in Response to Hurricane Sandy," 78 *Federal Register* 8691-8697, February 6, 2013; "Second Allocation of Public Transportation Emergency Relief Funds in Response to Hurricane Sandy: Response, Recovery & Resiliency," 78 Federal Register 32296-32302, May 29, 2013 (see also correction of June 4, 2013, 33467-33468).

- $5.2 billion for response, recovery, and rebuilding costs incurred by affected agencies;
- $1.3 billion for locally prioritized resilience projects at designated transportation agencies in the New York metropolitan area;
- $3.6 billion for competitive resilience projects that will protect or otherwise increase the resilience of public transportation equipment and facilities to future hurricanes and storms in the areas affected by Hurricane Sandy;[40] and
- $76 million for oversight and administration.

According to FTA, approximately $7.1 billion of the Hurricane Sandy funding had been obligated by March 31, 2018.[41]

Hurricanes Harvey, Irma, and Maria

Congress appropriated $330 million for FTA's Public Transportation ER Program in response to Hurricanes Harvey, Irma, and Maria on February 9, 2018. Damage to transit systems associated with Hurricane Harvey was concentrated in Texas, particularly flooding in Houston, and the damage associated with Hurricane Irma was concentrated in Puerto Rico and Florida. Hurricane Maria's effects on transit systems were concentrated in Puerto Rico. On May 31, 2018, FTA announced its allocation of these funds by purpose and location (**Table 2**).[42]

[40] FTA, "Resilience Projects in Response to Hurricane Sandy," September 22, 2014, https://www.transit.dot.gov/funding/grant-programs/emergency-relief-program/resilience-projects-response-hurricane-sandy.

[41] FTA, "FTA Grants Awarded for Hurricane Sandy Recovery and Resiliency," https://www.transit.dot.gov/funding/grant-programs/emergency-relief-program/fta-grants-awarded-hurricane-sandy-recovery-and.

[42] FTA, "Allocation of Public Transportation Emergency Relief Funds in Response to Hurricanes Harvey, Irma, and Maria," 83 *Federal Register* 25104-25108, May 31, 2018,

Table 2. Hurricanes Harvey, Irma, and Maria Public Transportation ER Allocation by State/Territory

State/Territory	Response, Recovery, and Rebuilding	Resilience	Total
Florida	$16,163,000	$6,619,000	$22,782,000
Georgia	$187,000	—	$187,000
Puerto Rico	$197,789,000	$25,721,000	$223,510,000
Texas	$16,615,000	$6,713,000	$23,328,000
Virgin Islands	$1,554,000	$5,164,000	$6,718,000
Total	**$232,308,000**	**$44,217,000**	**$276,525,000**
Allocation for states and direct recipients without a direct allocation			$1,000,000
Unallocated			$50,000,000
Reserved for administrative expenses and program management oversight			$2,475,000
Total appropriation			**$330,000,000**

Source: Federal Transit Administration, "Allocation of Public Transportation Emergency Relief Funds in Response to Hurricanes Harvey, Irma, and Maria," 83 *Federal Register* 25104-25108, May 31, 2018.

Note: Unallocated is held in reserve for "latent damages, damages not assessed in smaller areas, cost increases, and additional Emergency Relief needs."

Program Issues

Because the Public Transportation ER program does not have a permanent annual authorization, FTA cannot provide funding immediately after a disaster or emergency. Transit agencies, therefore, typically rely on FEMA for funding their immediate needs. GAO observes that this could make it more difficult for some transit agencies to respond immediately after a disaster, and that the reliance on FEMA can cause transit agencies to be confused about which agency to approach for help if FTA funds do later become available. An existing memorandum of understanding between FEMA and FTA seeks to coordinate their roles and responsibilities, but FTA cannot define its role with certainty ahead of an appropriation. Consequently, as GAO has noted, "FTA and FEMA will have to determine their specific roles and responsibilities on a per-incident basis."[43]

Adding a quick-release mechanism to FTA's ER program, similar to that in FHWA's ER program, would allow FTA funds to be approved and distributed within a few days of a disaster. FHWA's ER program has an annual authorization of funds from the HTF, and FTA's program could similarly be authorized an amount from the mass transit account of the fund. Such an authorization, however, would place a new claim on resources of the HTF, adding to the current gap between revenues and outlays.[44]

[43] GAO, Emergency Transportation Relief: Agencies Could Improve Collaboration Begun during Hurricane Sandy Response, GAO-14-512, May 28, 2014, p. 29, https://www.gao.gov/assets/670/663627.pdf.

[44] CRS Report R44674, *Funding and Financing Highways and Public Transportation*, by Robert S. Kirk and William

GAO has observed that FTA's ER program has fewer limits and more flexibility than the emergency relief programs administered by FEMA and, to some extent, FHWA.[45] The FTA's ER program, for example, does not have a limit on the amount that can be spent on resilience projects, and it also allows damaged assets to be replaced with those that are improved or upgraded. As FTA notes, "it may not always be feasible or advisable to replace damaged assets with identical facilities, vehicles, or equipment. As a result, projects to repair, replace, or reconstruct assets may include improvements and upgrades as necessary to meet current safety and design standards."[46]

Although there may be advantages to including upgrades and resilience with Public Transportation ER funds, including these elements requires Congress to appropriate larger amounts than might otherwise be necessary. It could also be a way for transit agencies to fund betterments and new facilities that have little direct connection to the goals of repairing damages and making the transit systems resilient to future storm events. GAO found that some Hurricane Sandy funding awards were for projects that were probably outside the scope of the program. Consequently, GAO recommended a better alignment of program purposes with project evaluation and selection, and an examination of funded projects for duplication with other efforts to improve resilience.[47]

J. Mallett.

[45] Government Accountability Office, *Emergency Transportation Relief*, pp. 16-22.

[46] FTA, *Emergency Relief Manual*, p. 30.

[47] GAO, DOT Discretionary Grants: Problems with Hurricane Sandy Transit Grant Selection Process Highlight the Need for Additional Accountability, GAO-17-20, https://www.gao.gov/assets/690/681603.pdf.

Appendix. ER Program Appropriations

Table A-1. Appropriated Funds for the FHWA ER Program: 1998-2018

(excludes annual $100 million permanent authorization)

Public Law	Date Enacted	Title of Appropriations Act	Highway Trust Fund	General Fund
P.L. 105-174	May 1, 1998	1998 Supplemental Appropriations and Rescissions Act	$259,000,000	
P.L. 106-346	Oct. 23, 2000	Dept. of Transportation and Related Agencies Appropriations, 2001	$720,000,000	
P.L. 107-117	Jan. 10, 2002	Dept. of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002	$175,000,000	
P.L. 107-206	Aug. 2, 2002	2002 Supplemental Appropriations Act for Further Recovery from and Response to Terrorist Attacks on the United States	$265,000,000	
P.L. 108-324	Oct. 13, 2004	Military Construction Appropriations and Emergency Hurricane Supplemental Appropriations Act, 2005	$1,202,000,000	
P.L. 108-447	Dec. 8, 2004	Consolidated Appropriations Act, 2005	$741,000,000	
P.L. 109-148	Dec. 30, 2005	Dept. of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico and Pandemic Influenza Act, 2006		$2,750,000,000
P.L. 109-234	June 15, 2006	Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006		$702,362,500
P.L. 110-28	May 25, 2007	U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007		$871,022,000
P.L. 110-161	Dec. 26, 2007	Consolidated Appropriations Act, 2008		$195,000,000
P.L. 110-329	Sept. 30, 2008	Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009		$850,000,000
P.L. 112-55	Nov. 18, 2011	Consolidated and Further Continuing Appropriations Act, 2012		$1,622,000,000
P.L. 113-2	Jan. 29, 2013	Disaster Relief Appropriations Act of 2013		$1,920,900,000
P.L. 114-254	Dec. 10, 2016	Further Continuing and Security Assistance Appropriations Act, 2017		$1,004,017,000
P.L. 115-31	May 5, 2017	Consolidated Appropriations Act, 2017		$528,000,000
P.L. 115-123	Feb. 9, 2018	Bipartisan Budget Act of 2018		$1,374,000,000

Source: FHWA, Office of Program Administration.

Notes: P.L. 113-2 provided $2.022 billion. Amount shown reflects 5% rescission due to sequestration.

Table A-2. Appropriated Funds for the FTA ER Program: 2012-2018

Public Law	Date Enacted	Title of Appropriations Act	Highway Trust Fund	General Fund
P.L. 113-2	Jan. 29, 2013	Disaster Relief Appropriations Act of 2013		$10,355,000,000
P.L. 115-123	Feb. 9, 2018	Bipartisan Budget Act of 2018		$330,000,000

Source: P.L. 113-2, P.L. 115-123, and FTA.

Notes: P.L. 113-2 provided $10.9 billion. Amount shown reflects 5% rescission due to sequestration.

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