

RESILIENCY IN THE STATE HIGHWAY PROGRAM

Resiliency in the State System

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- ▶ Disruptions to the transportation system due to extreme weather events have become a very real concern, threatening Wisconsin's transportation infrastructure. Recent flood events in Northern and Western Wisconsin have demonstrated the devastating impact such weather can have and the tremendous financial consequences these events impose

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What is Resiliency?

- ▶ Resilience can be defined as the ability of a system to **anticipate, prepare for, and adapt to changing conditions** and withstand, respond to, and recover rapidly from disruptions. As a concept, resiliency is rooted in ecological systems thinking, but has also been utilized in the field of disaster response and emergency management. Recently, the concept has been connected to asset management and risk management frameworks, where risk management helps systems prepare and plan for adverse events, and resilience management goes further by integrating the temporal capacity of a system to absorb and recover from adverse events, and then adapt.

WisDOT has focused on the reactive side of resiliency. The "withstand, respond to, and recover rapidly from disruptions".



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How do we respond

- ▶ WisDOT has made great strides in ETO (Emergency Transportation Operations)
 - ▶ incident scenario matrix
 - ▶ “Chain of Command” for any incident
 - ▶ Work with other agencies
 - ▶ Many other items

Funding

- ▶ We created an overview of Emergency Highway Aid Programs in Wisconsin
- ▶ In the next portion of my presentation:
 - ▶ overview document
 - ▶ Summary of the three main categories

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Overview of Emergency Highway Aid Programs in Wisconsin			Revised: 8/2017
CATEGORY	EMERGENCY RELIEF (ER)	PUBLIC ASSISTANCE (PA)	DISASTER DAMAGE AIDS (DDA)
(1) Administering Agencies	<ul style="list-style-type: none"> Federal Highway Administration (FHWA) WisDOT, DTSD, BHM (admin-lead), Regions (damage assessments, project set-up), DSM BBS (accounting), DTIM D3HP (programming) 	<ul style="list-style-type: none"> Federal Emergency Management Agency (FEMA) Wisconsin Emergency Management (WEM) (admin lead) WisDOT, DTSD, BHM (admin) and Regions (inspections) 	<ul style="list-style-type: none"> WisDOT, DTIM Bureau of Transit, Local Roads, Railroads and Harbors (admin-lead) WisDOT, DTSD, Regions (inspections, claim processing) and BHM (claim review)
(2) Coverage	Roadway or roadway structure damage on ALL Federal-aid highways (major collectors and above) resulting from a catastrophic failure or natural disaster. Besides physical damage, ER may include debris removal and emergency protective measures such as traffic control and detour signing.	Damage to any publicly owned or private non-profit facility. This includes damage to parks, schools, buildings, utilities, and roads/structures NOT on the Federal-aid system (minor collectors and below). PA also covers debris removal and emergency protective measures on ALL roads regardless of functional classification. This includes traffic control, detour signing, police/fire protection, pumping and sandbagging.	Damage caused by a disaster event to any highway that is not on the State Trunk Highway System.
(3) Activation & Eligibility	Governor's State of Emergency Declaration required. Presidential Disaster Declaration is not required. Minimum event damages of \$700,000 (Federal share) required to be eligible for ER. FHWA Washington HQ makes final decision on ER eligibility after state division office recommendation.	Presidential Disaster Declaration required for a county to become eligible for PA funds. A Governor's State of Emergency will precede the Presidential Declaration. Joint FEMA/WisDOT team determines eligibility on a site-by-site basis with Local representative concurrence.	A local government authority must submit a DDA petition to the local transportation Region office for damaged roads or structures under its jurisdiction. Region office makes the final decision on eligibility based upon interpretation of statute 88.34 .
(4) Payment Coverage	Emergency repairs: 100% if done within 180 days of the event, otherwise they are paid on prorated basis. May also include permanent restoration upon prior approval from FHWA. Permanent restoration projects: 90/10 (interstate) or 80/20 (non-interstate). Also includes, if necessary, preliminary engineering on those projects.	Cost-share arrangement where: <ul style="list-style-type: none"> FEMA pays 75% WEM pays 12.5% Applicant pays 12.5% 	<ol style="list-style-type: none"> For claims with final costs, applicant receives 75% of replacement costs plus 50% of improvement costs. For claims > \$15,000, applicant may accept payment equal to 75% of WisDOT's estimate for all repairs (replacement and improvement), which may include final costs if available. For claims submitted for damage by any governmental unit in response to the disaster, applicant receives 70% of replacement. If Federal-aid is granted for damage reimbursement, it shall be in lieu of aid otherwise available under DDAs.
(5) Time Limits	Emergency repairs are allowed up to 180 days of the event. After that, the work is considered permanent. Permanent restoration projects must be completed within 2 years of the event. The event duration is determined by FHWA.	Damage MUST have occurred within the incident (disaster) period as specified by FEMA and WEM. The incident period may cover one day or a series of days.	Petitions must be submitted within 60 days, and final costs submitted within 2 years of the disaster damage event. If federal disaster aid may be forthcoming, the deadline may be extended.
(6) Limitations	Damage must be at least \$5,000 per site (Federal share). Heavy maintenance activities (minor shoulder washouts, slides, etc.) are not eligible. Damage must be directly related to disaster. A permanent restoration project needs prior approval from FHWA before commencing unless it is more economical or practical to perform as a related part of emergency repairs.	The costs to repair a damaged site must be at least \$1,000. Reimbursement will be made to repair the facility to its pre-disaster condition. Additional improvements may be allowed under certain circumstances such as hazard mitigation or code requirements.	The road MUST have been closed OR rendered impassable due to the disaster damage or qualify for damages caused by any governmental unit in response to the event. Debris or water over a road does not automatically make a site eligible. Shoulder damage may not be eligible if non-FWD vehicles could still travel safely on the normal driving lanes. Heavy maintenance items (see FHWA column) are not eligible. Reimbursement will be made to repair a road to its pre-event condition. Improvements may also be done to prevent or minimize future damages to a site.
(7) Documentation	PHOTOGRAPHS of the damage are required. Each site should have: Location of, description of, and estimated cost to repair the damage (labor, equipment and materials). Final costs will be verified thru invoices and/or force account work. Permanent restoration projects require prior concept approval from FHWA.	FEMA and WisDOT inspectors prepare a Project Worksheet (PW) based on applicant cost records of the finished work (labor, equipment and materials), contract work, and rental invoices. Any remaining work will be estimated and a partial payment made. Final payment will be made when final costs are completed and submitted to WEM.	<ol style="list-style-type: none"> Petition forms (available from WisDOT) Site map and pictures Estimated or final costs for labor, equipment and materials, plus any force account or contractual work for each site. Invoices and/or electronic or hand-written records for applicable costs listed in 3.
(8) Contacts	Gina Nerhouse , FHWA, 808/829-7521 Mike Finkelsinger , WisDOT, 608/266-1620	Eric Leam , WEM, 608/242-3200 Mike Finkelsinger , WisDOT, 608/266-1620	Lorrie Olson , WisDOT, 608/266-0775 Mike Finkelsinger , WisDOT, 608/266-1620

Public Assistance (PA) - FEMA

Damage to any publicly owned or private non-profit facility. This includes damage to parks, schools, buildings, utilities, and roads/structures NOT on the Federal-aid system (minor collectors and below). PA also covers debris removal and emergency protective measures on ALL roads regardless of functional classification. This includes traffic control, detour signing, police/fire protection, pumping and sandbagging.

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Emergency Relief (ER) - FHWA

Roadway or roadway structure damage on **ALL** Federal-aid highways (major collectors and above) resulting from a catastrophic failure or natural disaster. Besides physical damage, ER also includes debris removal and emergency protective measures such as traffic control and detour signing.

Disaster Damage Aids (DDA) - WisDOT

Damage caused by a disaster event to any highway that is **NOT** on the State Trunk Highway System

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Need more information on
funding programs?

- ▶ <https://www.fhwa.dot.gov/reports/erm/er.pdf>

What about the proactive side of resiliency. The
"anticipate, prepare for, and adapt to changing
conditions."

Some of the things we are doing include:

- ▶ Located and mapped low chord and low point locations along all interstate highways, also mapping floodplain locations.
- ▶ Completed flood studies of the Portage area
- ▶ Completed flood studies of the Rock and Crawfish river basins
- ▶ Updating our rainfall data in the WisDOT FDM (Facilities Development Manual)

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Questions??

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