

Country Roads & City Streets

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DISASTER PLANNING & THE ROLE OF RURAL COMMUNITIES

By: Brad DiCola

As Hurricane Katrina recently displayed, our nation faces great threats from natural disasters, in addition to terrorist attacks. As this article is being written, critics are pointing blame in all directions for the mismanagement of this natural catastrophe, citing poor execution of established plans on all levels – local, state, and federal. While investigations will help establish shortcomings in the planning and response, the Hurricane Katrina situation has helped establish important points that must be considered for future disaster planning.

DISASTER PLANNING

Communication

The importance of communication to the process can not be underestimated. Communication is vital to the multi-agency coordination needed on these types of projects. Both local and state agencies need to have a complete understanding of their roles and responsibilities. Alternative plans in the event of a communication breakdown should be in place.

Planning

The ability to create a plan and then implement that plan mitigates some of the negative effects of situations such as these. All local roadway agencies should have a clear understanding of the city or county

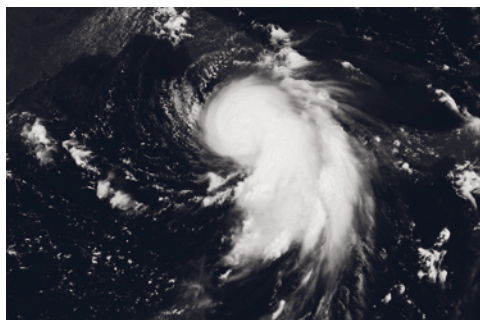
emergency plans and policies that impact them. If your agency does not have a plan, it is important to begin developing one.

Infrastructure Investment

We again realize the importance of investment in our infrastructure and how vital it is in preventing and responding to disasters. As is being demonstrated in New Orleans, the levees that broke were aging and in need of repair, while a major deterrent to the rescue effort was the subsequent washout of Interstate 10 in New Orleans.

Leadership

Establishing leadership and a chain of command creates a certain order to the rescue effort and provides some stabilization amidst the chaos. These command channels must be kept in mind when developing and implementing your plan.



Hurricane Katrina regional imagery, 2005.08.26
Photo from NOAA website.



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Country Roads and City Streets is a quarterly publication of the West Virginia Local Technical Assistance Program (WV LTAP). The purpose of this newsletter is to provide information that is beneficial to highway construction and maintenance personnel.

The material and opinions contained in this newsletter are those of the West Virginia Local Technical Assistance Program, and do not necessarily reflect the views of the Federal Highway Administration or the WV Department of Transportation. Material contained in *Country Roads and City Streets* is a combination of original and borrowed material. Every effort has been made to ensure the integrity and accuracy of this material. However, the West Virginia LTAP does not assume responsibility for any incorrect material.



ROLE OF RURAL COMMUNITIES

Though it has garnered less attention, an equally important part of the security solution is the role of rural communities in the response to attacks and disasters. For instance, the threat of the use of crop dusters to spread biological agents presents a potential danger to those living in rural communities. Dams and other major public works facilities located in rural, outer-lying areas are susceptible to attack, as well. These facilities present the danger of large areas of influence through flooding or nuclear/chemical dissemination. In the case of natural disasters, any area can be impacted. Natural disasters can strike anywhere, and the leveling of small towns along the Gulf Coast shows the force that natural disasters pack and the resulting devastation. Effective planning can help alleviate dangers, as well as provide for an appropriate response, in the event of a natural disaster or attack.

Rural areas close to established population bases must be prepared for a possible influx of residents seeking to escape the area directly damaged. These rural communities must also be prepared to mobilize local skilled personnel to assist in the recovery effort at the area affected. For example, while West Virginia may not be considered a major target for a terrorist attack, should the Washington D.C./Baltimore corridor be attacked, large scale evacuations would need to take place. Many of these “displaced persons” would funnel into the state along major traffic routes, in addition to local and rural routes and roadways. Appropriate traffic management should be in place to handle the mass influx.

During the planning process, several questions should be asked, such as *What roadways should these travelers be encouraged to use? Would variable message boards be used? What would be the impact on travelers trying to use two-lane state routes or rural roads when evacuating? Would the appropriate*

personnel be prepared to treat victims, as well as being able to mobilize the evacuated citizens to areas where they can receive basic needs and perform essential communication? These are just some of the many questions that need to be asked and answered.

VULNERABILITY ASSESSMENT

An important part of disaster planning is conducting a vulnerability assessment. According to the National Emergency Response and Rescue Training Center at Texas A&M, there are seven factors to assess vulnerability.

1. Level of Visibility
2. Criticality of potential target site to jurisdiction
3. Impact outside of the jurisdiction
4. Potential Threat Element (PTE) access to target
5. Potential target threat of hazard
6. Target site population capacity
7. Potential for mass casualties

After determining an asset’s vulnerability in the event of a natural disaster or terrorist attack, effective planning can then begin. It is important to work together with a variety of professionals, including safety personnel, public works employees, engineers, security planners, and law enforcement – just to name a few of the many groups you should work with – in developing an accurate vulnerability assessment tool. When planning for a response to the after-effects of an attack, the capacity of local infrastructure should be determined.

Once a vulnerability assessment has been conducted and a plan is developed, it is then advisable to conduct a drill or simulation as this offers the opportunity to test for errors and glitches and make corrections prior to an actual implementation. Adjustments made during the test period can prove invaluable in the event of an actual emergency situation. So, whether you are a major city or a rural community, disaster planning is essential.

DISASTER PLANNING AND SECURITY WEBSITES

By: Emily Walters

Below are just a few internet resources we have summarized regarding disaster planning and homeland security. We encourage you to take a minute to visit these sites and learn as much as possible about things you can do to help keep you, your family, coworkers or employees as safe as possible in the event of an emergency.

WV Division of Homeland Security and Emergency Management

www.wvs.state.wv.us/dhsem

The West Virginia Division of Homeland Security and Emergency Management website contains several good materials regarding emergency planning. A *WV Get Ready* booklet is accessible to download and describes plans of action that should be taken in the event of an emergency and several disaster preparation suggestions. This booklet also includes both personal and business related emergency supply check lists. Additionally, this website includes a posting of the *West Virginia Emergency Operations Plan*, which presents an overview of the state's response organization and emergency policies.

The American Public Works Association

www.apwa.net

The American Public Works Association website offers a free multimedia CD-ROM toolkit about how local government managers and public directors can minimize environment liability, increase efficiency, and improve financial health. The APWA website also contains a downloadable brief concerning *Public Works and Terrorism Response*. This brief describes the actions of the Public Works personnel in New York after the 9/11 attack, among other topics discussed.

Ready.gov

www.Ready.gov

Ready.gov is an extremely useful website, using a common sense framework that is designed to help US citizens learn more about emergency preparedness. As is stated on the website, *One of the primary mandates of the U.S. Department of Homeland Security is to educate the public, on a continuing basis, about how to be prepared in case of a national emergency – including a possible terrorist attack.* The website offers both business and homefront plans of action. For example, in case of a homeland security problem that entails employees having to evacuate the building, set up an out of town phone number where employees can leave messages saying they are okay.

Transportation Research Board (TRB)

www.trb.org

The TRB website contains a wealth of information regarding transportation research, reports, publications, and practical solutions to problems facing transportation agencies. Numerous links to information from partnering agencies is available. One of the items we encourage you to check out is the NCHRP Report 525 series on Surface Transportation Security. This is an excellent resource, including six separate reports in this particular series.

- *Responding to Threats: A Field Personnel Manual*
- *Information Sharing and Analysis Centers: Overview and Supporting Software Features*
- *Incorporating Security into the Transportation Planning Process*
- *A Self-Study Course on Terrorism-Related Risk Management of Highway Infrastructure*
- *Guidance for Transportation Agencies on Managing Sensitive Information*
- *Guide for Emergency Transportation Operations*

CENTER STAFF & CONTACT INFORMATION

WV LTAP

West Virginia University

PO Box 6103

Rm. 651 and 653-B

Morgantown, WV 26506-6103

Phone: (304) 293-3031 x 2612

Fax: (304) 293-7109

Staff

Dr. Ronald Eck, P.E.

Director

(304) 293-3031 x 2627

ronald.eck@mail.wvu.edu

Michael Blankenship, P.E.

Program Manager

(304) 293-3031 x 2629

michael.blankenship@mail.wvu.edu

Kim Carr

Program Coordinator

(304) 293-3031 x 2612

kim.carr@mail.wvu.edu

Brad DiCola

Technical Assistant

(304) 293-3031 x 2662

bradley.dicola@mail.wvu.edu

Emily Walters

Public Relations Intern

(304) 293-3031 x 2662

Sherry Williams

Program Assistant

(304) 293-3031 ext. 2662

Sandy Wotring

Administrative Assistant

(304) 293-3031 ext. 2630

Bill Wyant

Senior Volunteer

wwyant@hsc.wvu.edu

EMERGENCY SUPPLIES TO HAVE ON HAND

Water, food, and clean air are the essential items for survival. Each family or individual's kit should be customized to meet specific needs, such as medications and infant formula. It should also be customized to include important family documents.

Emergency Supplies:

Recommended Supplies to Include in a Basic Kit:

- Water, one gallon of water per person per day, for drinking and sanitation
- Non-perishable food, at least a three-day supply
- Battery-powered radio and extra batteries
- Flashlight and extra batteries
- First Aid kit
- Whistle to signal for help
- Dust mask or cotton t-shirt, to help filter the air
- Moist towelettes for sanitation
- Wrench or pliers to turn off utilities

Clothing and Bedding:

If you live in a cold weather climate, you must think about warmth. It is possible that the power will be out and you will not have heat. Rethink your clothing and bedding supplies to account for growing children and other family changes.

One complete change of warm clothing and shoes per person, including:

- A jacket or coat
- Long pants
- A long-sleeved shirt
- Sturdy shoes
- A hat and gloves
- A sleeping bag or warm blanket for each person

Important Family Documents:

Keep copies of important family records such as insurance policies, identification and bank account records in a waterproof, portable container.

Other items to consider adding to your Supply Kit:

- Emergency reference material such as a first aid book or a copy of this page
- Rain gear
- Mess kits, paper cups, plates and plastic utensils
- Cash or traveler's checks, change
- Paper towels
- Fire Extinguisher
- Tent
- Compass
- Matches in a waterproof container
- Signal flare
- Paper, pencil
- Medicine dropper
- Feminine supplies
- Personal hygiene items
- Disinfectant
- Household chlorine bleach

You can use bleach as a disinfectant (diluted nine parts water to one part bleach), or in an emergency you can also use it to purify water. Use 16 drops of regular household liquid bleach per gallon of water. Do not use scented, color safe or bleaches with added cleaners.

Information obtained from: www.ready.gov/supply_checklists.html

BACKHOE OPERATOR TRAINING A SUCCESS!

By: *Kim Carr*



John Hartman (standing) and Bill Knight (inside the cab) complete their pre-trip inspections.

What do you get when you take eighteen guys braving the elements for two-day stints in the hot sun, testing stabilizer skills on a hillside, digging trenches in the middle of an old rocky landfill, and top it off with five backhoes just waiting to be driven? The answer is an exciting week of backhoe operator training!

During the week of August 8 – 12 eighteen local roadway maintenance employees had the opportunity to attend a combination classroom and hands-on backhoe operator training course. Both novice and experienced backhoe operators, or as the field guys say, “hoe operators” were in attendance. Experience ranged from years of backhoe operation to one attendee who had only spent twenty minutes prior to this training on a backhoe. A few of the attendees were mainly responsible for the maintenance of their agency’s backhoes and attending this course helped them gain more insight into the machinery. Gary Gregg, mechanic for the City of Morgantown said, *“I was probably a little bit nervous but I liked the training and the helpful hints. It was fun, and I now have a better understanding of the machine’s mechanical workings.”*

The course was set up so that all participants attended the in-class training on Monday and either the Tuesday/Wednesday or Thursday/Friday hands-on training. Covered topics included operational procedures, safety items, and equipment inventories and checklists. The attendees were able to practice in a controlled setting digging a trench, proper use of equipment stabilizers, backfill, and much more, all under the watchful eye and guidance of N. Dee Hadfield, course instructor. Dee is an experienced heavy equipment operator and is a trainer for the Utah LTAP. His knowledge about backhoes and the advice he provided to the attendees was amazing.

During this training, I had the opportunity to interact and observe the attendees, and it was very exciting seeing them progress and hone their operator skills. In speaking with Bill Knight from the City of Philippi Water Department, he expressed to me that he was excited to learn new techniques on backfill ditch digging. Bill also went on to say that he learned about some components on the hoe that he didn’t even know existed. *“I learned a lot, including how to conduct a pre-trip inspection.”* Bill had just started running the backhoe for his department on a regular basis in July, so this training was opportune for both him and the Philippi Water Department.



Dee Hadfield explains a backfilling and leveling technique.

The West Virginia LTAP Center is a part of the nationwide Local Technical Assistance Program (LTAP), which is funded by the Federal Highway Administration. The Center also receives funding from the West Virginia Department of Transportation.

Mission:

The mission of the West Virginia LTAP is to foster a safe and efficient transportation system. The LTAP Center’s mandate is to improve the transportation system by improving the professional skills of those involved in highway design, construction, and maintenance, and to act as a resource for them by keeping up-to-date training libraries and constantly seeking/developing new technologies.

Overall Goal:

The Center’s overall goal is to improve the transportation system by focusing on professional training, technical assistance, and information dissemination.

To achieve this goal, the WV LTAP does the following:

- Provides on-site training and demonstrations
- Publishes a quarterly newsletter
- Maintains a video, CD-Rom, and publications library
- Provides technical assistance via mail, telephone, fax, email, or site visits.

WV LTAP ADVISORY BOARD

Robert Amtower
WVDOT
Burlington, WV

Kevin Burgess
FHWA
Charleston, WV

Michael DeMary
Stormwater Manager
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Bob Gordon
Region 9 Planning and
Development Council
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Public Works
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Kathy Holtsclaw
WVDOT
Charleston, WV

Terry Hough
City Engineer &
Public Works Director
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Jack Justice
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Charleston, WV

Gary Lanham
WVDOT
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Marvin Murphy
WVDOT
Charleston, WV

Pat Parsons
Asphalt Pavement Assoc.
of West Virginia
Charleston, WV

Buddy Shreve
Public Works Director
Philippi, WV

Donald Williams
WVDOT
Clarksburg, WV

Gary Winter
WV Governor's Highway
Safety Program
Charleston, WV



Course participants attended a full-day in-class training session prior to participating in the field training.

Local public works agencies do not have as many opportunities as state or private agencies in getting affordable training on heavy equipment. Often, operators learn their skills by working on a farm, through trial and error, and some on-the-job training. Based on feedback we received from participants and the supervisors of many of these attendees, this training appears to have helped fill a training void.

Without the help of several individuals and agencies working together the WV LTAP would not have been able to offer this training. A heartfelt thank you to:



Richard Vandevender, from the City of Elkins, begins digging his trench.



Roy Johnson, City of Morgantown, practices piling the dirt evenly along his trench.

Mike DeMary from the City of Fairmont and WV LTAP Advisory Board member for helping us with site location and set-up, providing a backhoe from the Fairmont Street Department, and actively participating in the training; Gary Lanham, Thomas Strader and Timothy Ferrell from the WV Division of Highways for their support and positive instruction and comments; the WVU Mechanical Engineering Department, for the use of their 10 x 10 portable canopy, which provided a shady spot and some reprieve from the hot sun; the Middleton Community Building and Jody Morrison for opening up this facility for our use; Dee Hadfield for providing quality instruction and feedback; and finally the CAT, One Call Rental in Shinnston, WV, for loaning us two backhoes, discounting the cost of two additional backhoes for this training, and even delivering them to the site. To anyone we may have missed, thank you for all of your help, and I'm sure we'll be calling on you again.



Donnie Morgan, from the City of Fairmont, practices using the stabilizers on a slope.



Attendees worked together in groups, conducting pre-trip equipment inspections.

UPCOMING ROADS SCHOLAR COURSES SCHEDULED FOR DECEMBER

Are you a local or state roadway employee only a few classes away from being a Roads Scholar Graduate? If so, we encourage you to sign up for our December Roads Scholar Course offerings, being held in Clarksburg, WV, at the WV DOH D-4 Headquarters Conference Room. These courses are being offered free of charge; however, pre-registration is required. Because space is limited, please contact us prior to the course if you will be unable to attend so we can accommodate others. To register please email Kim at kim.carr@mail.wvu.edu or call 304-293-3031 x 2612.

MONDAY, DECEMBER 12, 2005

8:30 AM - 11:30 AM

Asphalt Roads: Common Maintenance Problems - 3 hrs.

Review of the causes of potholes, rutting, corrugations, alligator cracking, etc. and the correct repair procedures. This session will cover proper repair methods, materials, and equipment that should be used in making lasting repairs.

12:30 PM - 3:30 PM

Work Zone Traffic Control - 3 hrs.

Knowledge of the work zone is essential for all transportation employees. This workshop will review standards, traffic control devices, parts of a work zone, typical applications, and flagging operations. Additionally, this workshop incorporates a “hands-on” game board exercise, allowing you to put your knowledge to the test!

TUESDAY, DECEMBER 13, 2005

8:30 AM - 3:30 PM

Drainage: The Key to Roads That Last - 6 hrs.

This workshop reviews problems caused by improper drainage and some of the ways to solve these problems. Types of drainage structures, their uses, material considerations, and pipe sizing will also be discussed.

WEDNESDAY, DECEMBER 14, 2005

8:30 AM - 3:30 PM

Risk Management/Tort Liability - 6 hrs.

Does the thought of a lawsuit make you cringe? Then this course is for you! Participants of this workshop will develop an understanding and assessment of their major liability exposures. Ideas on ways to begin a risk management program will be presented. These ideas will cover preventing or reducing risks before accidents can occur in such areas as complaint reporting, signs, and work zone traffic control.

THURSDAY, DECEMBER 15, 2005

8:30 AM - 11:30 AM

Winter Maintenance - 3 hrs.

The quality of your winter maintenance affects everyone in your community. This workshop will help you review methods of snow and ice control, including plowing procedures, salt usage and storage, chemicals and abrasives, anti-icing, and snow fencing. Additionally, the area of public relations will be addressed. By having media contacts and keeping the public informed, your job can be done quicker and more efficiently.

12:30 PM - 3:30 PM

Equipment Operation and Worker Safety - 3 hrs.

State and municipal road workers must operate a wide range of on- and off-road equipment in a wide variety of hazardous situations. This workshop stresses key training points for the safe and effective operation of typical equipment — dump trucks, loaders, graders, etc. Safe work procedures for lifting, handling hazardous materials, and other topics of this nature will also be covered.

SAFETY CIRCUIT RIDER UPDATE



Shoulder conditions such as this shoulder washout are typical safety concerns being found.

Two more WVDOH districts have been visited as part of the WV Safety Circuit Rider Program. On September 15 and 16, Mike and Brad went to District 6 in the Northern Panhandle and spent two days driving and videotaping previously selected routes. Working with Kirt Donley, traffic engineering technician for District 6, Mike and Brad were able to take a more detailed look at certain trouble spots that Kirt had identified through his daily work in the district. Bill Wyant, senior volunteer for the WV LTAP, was able to participate in the second day of visits. On September 29 and 30, Mike and Brad made another visit, this time to District 7. While working with Ismail Latif, the District 7 traffic engineer, the staff again videotaped and drove selected routes, while making detailed investigations of the high-crash areas.

The last district to be visited will be District 5 in the Eastern Panhandle, with seventeen routes identified for investigation in this district. Mike will be traveling to the Eastern Panhandle to work with their traffic engineering staff from Oct. 17-20. At the completion of the visits, a report will be compiled detailing the findings and recommendations for each district.

West Virginia Local Technical Assistance Program
West Virginia University
College of Engineering and Mineral Resources
Department of Civil and Environmental Engineering
PO Box 6103
Morgantown, WV 26506-6103

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*Please see page 3
for complete contact
information.*

