

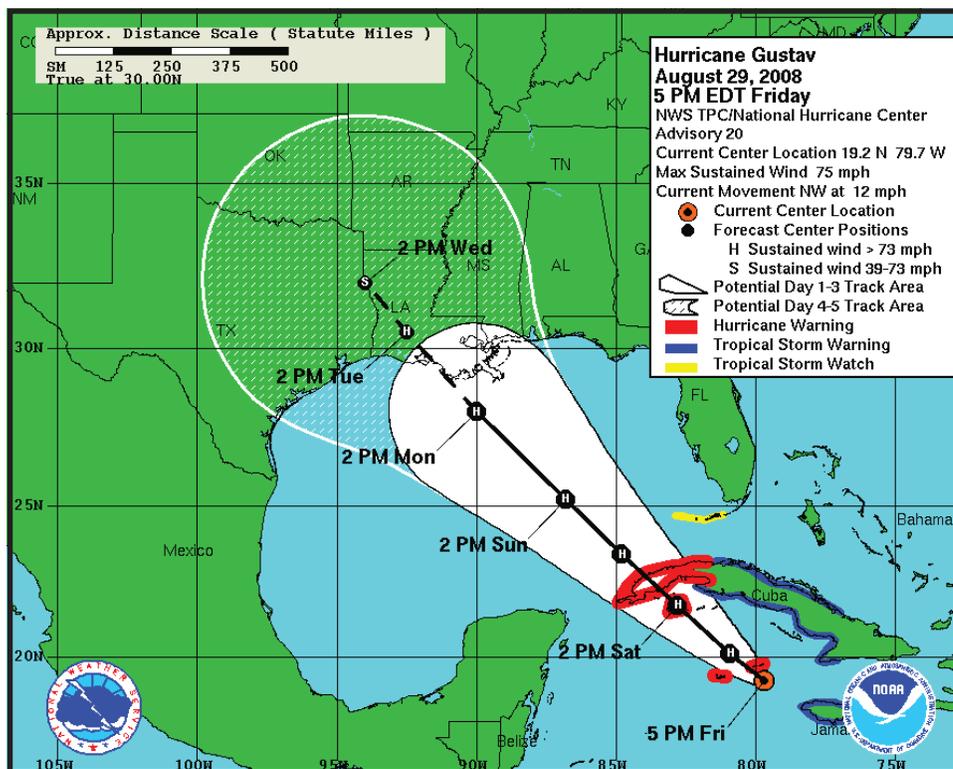
## MDOT Statewide TMC Passes First Major Test in Response to Hurricane Gustav

After only one week of “live” operations The Statewide Traffic Management Center (TMC) in Jackson was called upon to respond to emergency traffic conditions related to Hurricane Gustav’s impending beating to the Mississippi and Louisiana Gulf Coast.

This, the first major test for the TMC operations, is a true reflection of the dedication of the Mississippi Department of Transportation (MDOT) to enhance safety and mobility in the state and a testament to the value of the TMC to both Mississippians and travelers in the State.

The stories in this special edition of the MDOT ITS Newsletter describe in detail the lengths that MDOT went to to provide for full TMC operations, the hurdles that were faced, and the successes that were achieved during this time of uncertainty and crisis.

NOAA Track showing the projected path of Hurricane Gustav. This spurred the mandatory evacuations in Louisiana and Mississippi as well as the expansion of the MDOT TMC to 24 x 7 operations.



NOAA Track of Hurricane Gustav on Friday, August 29, 2008 as shown on Intellicast website

## The TMC: First Week of Live Operations – Then Gustav

The TMC began “live” operations Monday, August 25, 2008, operating between the hours of 6AM to 8PM Monday through Friday.

Starting on Monday, TMC staff worked according to their recently developed operational procedures: monitoring the traffic conditions on the Jackson Metro interstates and arterials via MDOT’s network of closed circuit television cameras (CCTVs), communicating with local traffic incident management partners to clear incidents efficiently, and disseminating traffic information to the public by placing real-time messages on 9 Dynamic Message Signs (DMS) in the Jackson Metro Area, updating the MSTraffic website with traffic alerts and sending the alerts to subscribers of the service offered on MSTraffic.com.

Overall, the first week of TMC operations was a great success. Operators at the TMC monitored roadways and responded to incidents accordingly and in a timely fashion. Traffic conditions during the first week were however lighter than normal, and after months of preparation and training for chaos and response under pressure the first week did not present a high volume of challenges to test and confirm the TMC’s operational readiness.

Then, on the afternoon of Friday, August 29th, with Hurricane Gustav’s projected track requiring evacuations in Louisiana and Mississippi, it became apparent that a major test had come and extended operations would be required. In response to this state of emergency, MDOT made the decision to expand TMC Operations to 24x7.

The TMC staff of 4 operators and the TMC Manager staggered their schedules with additional management support personnel to provide for the extended hours of operations. Prior to, during, and following the storm, the TMC staff worked around the clock to keep the evacuation traffic moving smoothly and travelers safe during this natural disaster.

# Emergency Operations and Hurricane Gustav – 24 x 7 Issues

There were two issues that needed to be addressed in order to provide 24x7 emergency operations: First, the staffing levels in place would only support 6AM to 8PM Monday through Friday operation; Second, the Statewide ITS Integrator contract for the staffing of the TMC did not allow for overtime.

Overcoming this hurdle, MDOT contract management and the Executive Director provided a letter authorizing the use of overtime for TMC staff during the declaration of a state of emergency, effectively clearing the way for the 24x7 operations. The use of overtime allowed for the operators to be staggered over 3 shifts during the 24-hour cycles.

In order to provide the appropriate staffing level for the 24x7 operation it was decided that management support and operational support would require a minimum of 2 individuals in the TMC at all times. With the TMC staff consisting of one TMC manager and 4 operators, the need for additional management support was readily apparent. To fill

this need the ITS Program Manager and additional staff from the Statewide ITS Integrator contract consultant team split time over the 24-hour cycles with the TMC Manager.

With the allotment of overtime and necessary staff in place, 24x7 emergency operations of the TMC were possible.

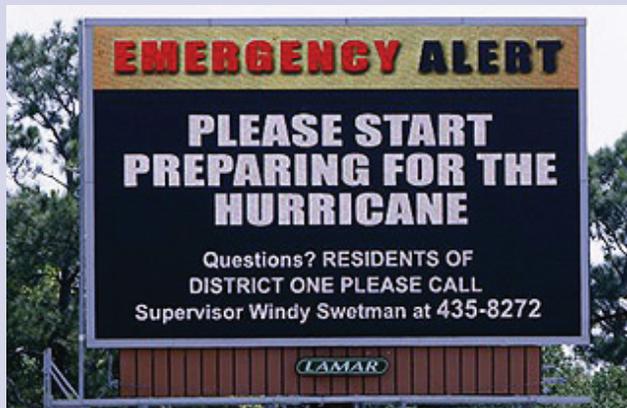
. . . and, at noon on Saturday, August 30th, simultaneous with the opening of the Call Center by the MDOT Outreach Division, the TMC – an infant in terms of operations experience, having overcome these obstacles, and committed to helping motorists and response personnel during the evacuation – went into it's first full 24x7 emergency operations.

## TMC Emergency Operations Coordination Activities

Prior to the start of 24x7 operations, the TMC began coordination efforts with numerous departments, agencies, and groups (the majority of whom were new to the recently-formed Traffic Incident Management Team) in preparation of the impending hurricane. The immediate necessity for around the clock emergency operations at the TMC effectively jump-started these lines of communications and partnerships – a vehicle that over time will prove it's value in effective TMC incident management and emergency operations.

Starting on Friday, August 28th, moments after it became apparent that emergency operations would be required the TMC began coordinating with a private roadside sign company, Lamar Advertising Company, in order to post evacuation information on Lamar signs along the Mississippi gulf coast and along evacuation routes where MDOT DMS were not available. Messages were placed on these large signs before the storm hit, during contraflow operations, and following the storm. All decisions regarding content and placement location was managed through the TMC.

**August 28, 2008:** An electronic billboard on Interstate 110 in D'Iberville, Mississippi, urges residents to be prepared for the possible arrival of Hurricane Gustav.  
Source: <http://www.foxnews.com/story/0,2933,413621,00.html>



TMC efforts were geared mostly toward emergency operations, evacuation, and contraflow efforts. Coordination with MDOT's Emergency Manager, Bob Chapman, and the Mississippi Emergency Management Agency (MEMA) was necessary in order to obtain and disseminate evacuation information and corresponding road & exit closures at times of contraflow on I-55 and I-59.

**Contraflow:** Contraflow began at 4:00 a.m. on Sunday and ended @ 5:00 (I-55) & 9:30 (I-59) Sunday night.

Source: Photo by email - massive numbers of citizens from Louisiana and coastal areas take advantage of contraflow evacuation routes on I-59 and I-55 Sunday, August 31.



TMC Staff were also in close communication with Traffic Engineering representatives at the State Emergency Operation Center (SEOC), gathering further information regarding the evacuation and contraflow status.

In addition to the coordination with MEMA and the SEOC in regards to contraflow and road closures, coordination with the MDOT Outreach Division, the Outreach Call Center, and specifically with Danada McMurtry, was also critical to the success of

(continued on page 3)

TMC Emergency Operations (continued from page 2)

the TMC operations during this event. This close communication allowed both groups to collaborate regularly in an effort to prioritize data and to ensure that information provided to the public was accurate and consistent.

The TMC also collected and provided information to Mississippi Highway Patrol through Delanie Stacy and the MDOT Law Enforcement group headed by Willie Huff. This communication allowed the MDOT Law Enforcement group to more effectively respond to motorist and the Highway Patrol needs regarding disabled vehicles, emergency fuel, and exit closures during contraflow.

In summary, the coordination efforts by the TMC operations staff and the effective use of ITS, aided in the safe, organized, and timely evacuation of the residents of the Gulf Coast during potentially life-threatening weather conditions. This coordination also allowed the evacuation and eventual return to be more informative to the evacuees, lessening chaotic situations and driver stress.

The TMC used its resources of CCTV and incident management partners and other contacts to collect information and then used these partners and contacts, DMS, MStraffic and GoMDOT websites, traffic alerts, public resources (radio and TV) and private roadside electronic sign companies to disseminate appropriate emergency information.

## MDOT DMS Usage Before, During, and After the Storm

Operations staff at TMC used the DMS before, during and after the storm to disseminate real-time travel information to evacuees and motorists regarding contraflow activities, information sources, and road closures.

The images below are screenshots of the software used by the TMC Operations staff to input DMS messages. The messages consist of two phases which allow TMC staff to maximize the amount of information provided to motorists.

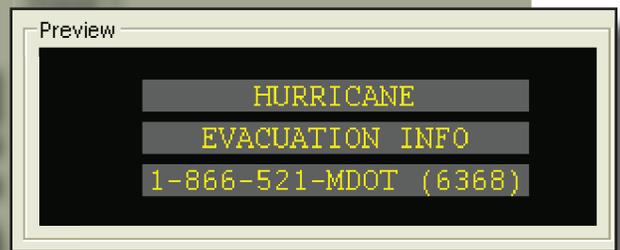
The message displayed on all DMS prior to the hurricane landfall provided an Evacuation Information phone number and the Public Radio broadcast station airing emergency information.

Beginning at 4AM on Sunday, August 31st, when contraflow in Mississippi began, all but the northbound DMS messages were changed to alert travelers that I-55 and I-59 were closed at the contraflow northern limits.

After Hurricane Gustav made landfall, the DMS alerted evacuees of lingering conditions and road closures due to flooding and debris as well as returning traffic conditions. The images below are pictures of the Jackson DMS Meadowbrook Sign Message after Hurricane Gustav.

BEFORE

PHASE 1



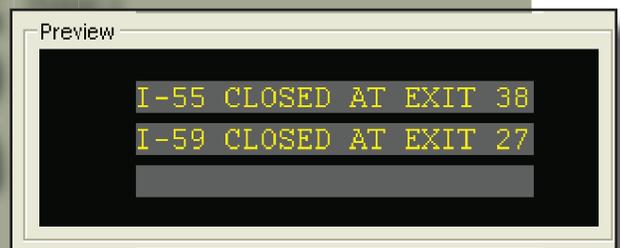
PHASE 2



PHASE 1



PHASE 2



PHASE 1



PHASE 2



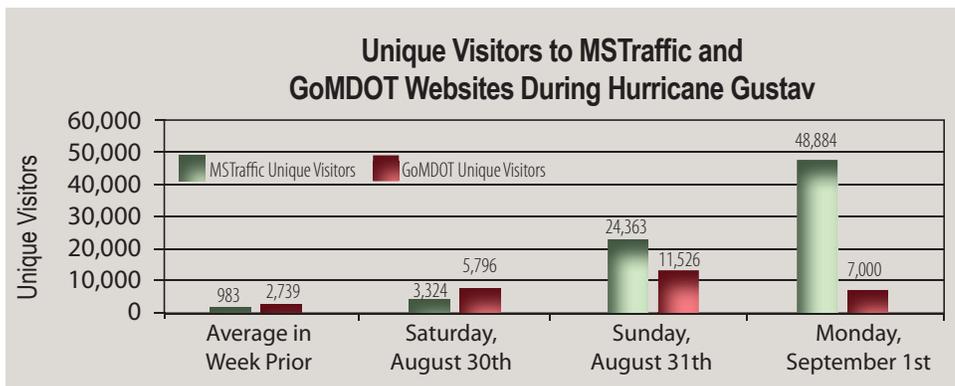
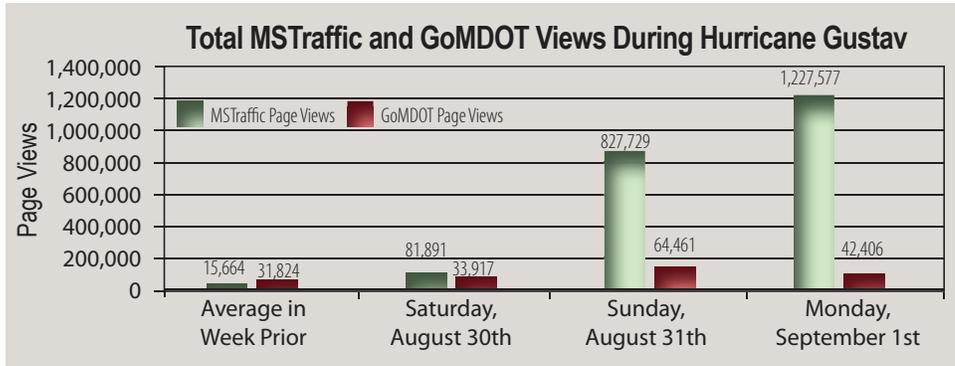
AFTER

# Website Usage and Incident Alerts

During the TMC Emergency Operations staff updated the MSTraffic website regularly with traffic information and sent out numerous e-mail alerts to subscribers to the traffic alerts service. During the 24x7 operations over 70 traffic alerts were sent out, and over 100 new motorists subscribed to receive these real-time alerts.

Equally as impressive as the alert service and information being provided by the TMC, was the public use of the MSTraffic and GoMDOT websites during the event. MDOT website usage hit an all-time high reaching it's maximum capacity several times.

The MDOT websites provided users with evacuation information as well as links to other emergency services and contact information. Below are graphs illustrating the bandwidth usage for the GoMDOT and MSTraffic websites, as well as the number of pages visited and unique visitors for the two sites during the hurricane activities.



The TMC sent out alerts like the one above to notify subscribers of road closures due to the evacuation.

Bandwidth usage in 5 minute increments starting at 5:30PM on Sunday 8/31/08.

