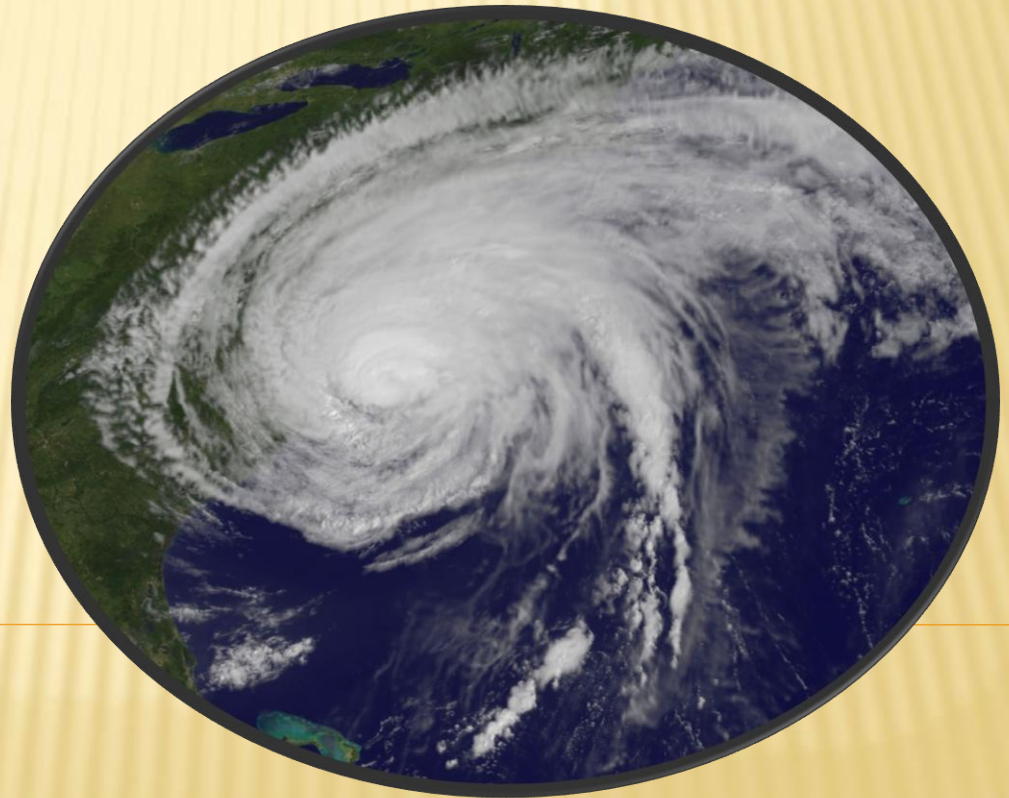


TROPICAL STORM IRENE

A Brief Summary and Discussion on Lessons Learned



EXPECTED IMPACT

- ✘ Originally forecasted to be a major event
 - + Expected landfall in New England as a strong Category 1 or weak Category 2 hurricane
 - + Expected to weaken into a tropical storm as it leaves New England by late Sunday night or early Monday morning.



ACTUAL IMPACT

- ✘ Storm-generated winds across Connecticut



ACTUAL IMPACT

- ✘ Storm-generated rainfall across Connecticut



DAMAGE SUMMARY

- ✘ Most wind damage was up the Connecticut River Valley
- ✘ Large fallen trees caused the greatest damage
- ✘ Trees and branches blocked streams which exacerbated flooding
- ✘ Power failures throughout the State



INTER-AGENCY DEBRIS MANAGEMENT TASK FORCE (IDMTF)

- ✘ Designed to be the lead for the collection and disposal of storm-generated debris.
- ✘ Utilized pre-positioned emergency contractors (Ashbritt and SAIC) to augment State forces.
- ✘ Served as a central hub to respond to local debris needs.
- ✘ Tasked to assist power companies clearing roads and easements for access to downed power lines.

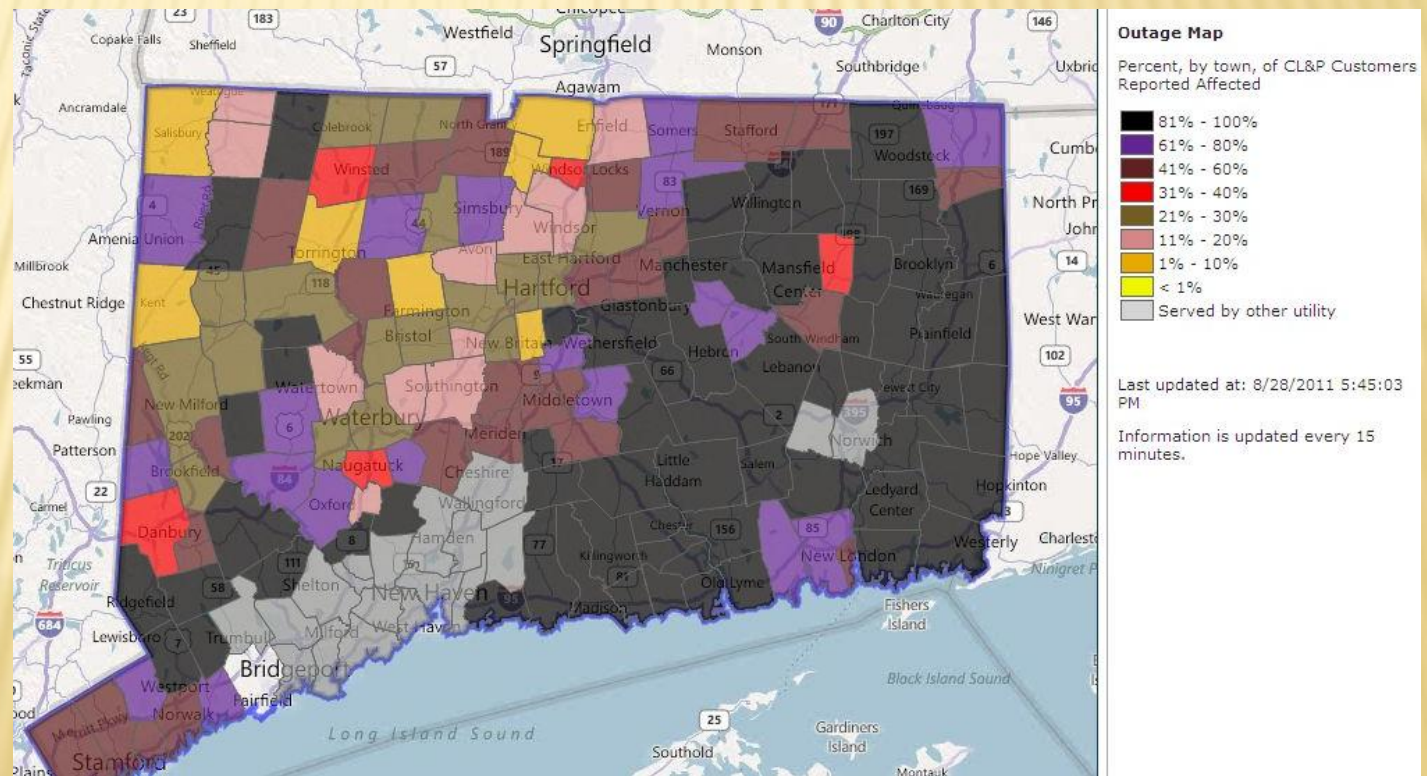
POST EVENT EMERGENCY PUSH PERIOD

- ✘ Defined as the first 70 working hours after an event to clear passages from roadways.
- ✘ Response efforts focused on removing large trees from roads.
- ✘ Locals had an immediate need for heavy machinery and requested assistance from the State.

POST EVENT EMERGENCY PUSH PERIOD

✘ Infrastructure damage

- + Cell towers began failing without battery backup
- + 600,000 + without power



POST EVENT EMERGENCY PUSH PERIOD

- ✘ Power companies responded with over 600 bucket trucks to repair downed wires.
- ✘ IDMTF deployed resources to assist power companies gain access to the impacted area.



POST EVENT EMERGENCY PUSH PERIOD

- ✘ IDMTF received 91 requests for assistance that were then allocated to the proper support group including:
 - + State DOT
 - + National Guard
 - + Ashbritt / SAIC
 - + Power Companies



DEBRIS COLLECTION AND DISPOSAL

- ✘ Once the Emergency Push phase of debris operations was completed, IDMTF began Debris Collection and Disposal operations.
- ✘ This included the period of time that debris was collected from state facilities and parks.
- ✘ FEMA requires that all collected debris is disposed at a properly permitted final disposal site.
- ✘ All vegetative debris was recycled at permitted facilities.
- ✘ Construction and demolition (C&D) debris was also brought to recycling facilities to be processed.

LESSONS LEARNED

- ✘ State of Connecticut is vulnerable to the effects of a catastrophic hurricane
 - + Power lines run through heavily wooded areas.
 - + Available disposal sites may become overwhelmed in a larger event.



LESSONS LEARNED

- ✘ Power outages throughout the state may extend for weeks if not months during a significant event.
- ✘ There is a need for planning and coordination between IDMTF, State DOT, National Guard and utilities.
- ✘ Finance and Administration needs integral involvement as debris removal costs may escalate into the hundreds of thousands per day.

LESSONS LEARNED

- ✘ Understanding what the market can absorb in a large debris-generating event.

After Hurricane Ike, the City of Houston was able to recycle 4,000,000 cy of vegetative debris. **THIS SATURATED THE MARKET.**

A similar storm like Ike impacting Connecticut will produce 4 times that amount of debris.

SUMMARY

- ✘ IDMTF helped the State resolve debris issues and address needs quickly.
- ✘ During a large event, political pressure to respond quickly will need to be balanced with the proper allocation of resources to the areas most in need.



SUMMARY

- ✘ A major event can cost the State billions of dollars just for debris removal and disposal.
- ✘ Power may not be available for weeks maybe months.
- ✘ Many local towns do not have the resources to clear critical roadways following an event and will need assistance from the State.