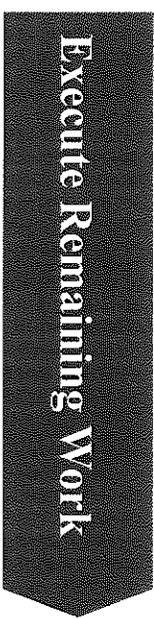
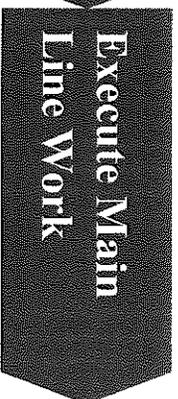
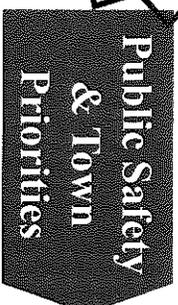
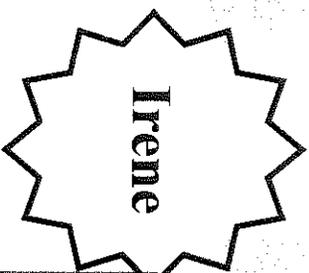
The logo for UIL Holdings Corporation, consisting of the letters 'UIL' in a bold, sans-serif font. The letter 'U' is stylized with a white arrow pointing to the right, integrated into its top curve.

UIL HOLDINGS CORPORATION



*Connecticut Legislature
Tropical Storm Irene Hearing
September 19, 2011*

- I. Restoration & Communication Processes
 - A. Pre-Event Planning
 - B. Severity of Irene
 - C. Damage to the Electric System
 - 1. Damage Across UI's Electric System
 - 2. Example - Damage Across One of Our Towns
 - 3. Examples – Damage on One Circuit in One Town
 - 4. Examples – Specific Locations
 - D. Primary & Secondary Assessment
 - E. Coordinate the Work, Ensure Safety
- II. Communications – Irene Performance, Future Objective
- III. Best Practices, Plan for the Future
- IV. Results and Lessons Learned



Prior Week Su, 8/28 M T W Th F Sa Su

Preparations, e.g.:

- Model predictions
- Mutual assistance coordination
- Communications to government leaders
- Notify towns – 4-7d outages likely

Damage Assessment: ~ 9500 locations

Work: ~ 10,000 locations to sequence & execute work

Communications included: resources deployed, restoration glide path, locations of work, restoration times

Assessment and execution good, but ...

Recognize customer / stakeholder desire for more information faster.

We began planning many days before the storm ... here are some examples:

Operations

Day Mon 8/22 Tue 8/23 Wed 8/24 Thu 8/25 Fri 8/26 Sat 8/27 Sun 8/28

State/Local Agencies Notified UI Storm Center Open Impact & Damage Prediction Developed	NEMMAG Call No Crews Available NEMMAG Call Acquire KCP&L Line Crews And Lewis Line Clearance Crews	UI Staffs State EOC Storm Preparation Complete	Storm Center Fully Staffed
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8/25: Towns Notif. to Plan for 4-7 Day Outages

8/25-26 UI News
 Release: Storm & Outage
 8/25-26 UI Conducts radio/Print/TV interviews

8/27: Outbound Calling for Medical Hardship Customers

8/25: Muni. Liaison at EOC
 Pre-Storm Prep Meetings

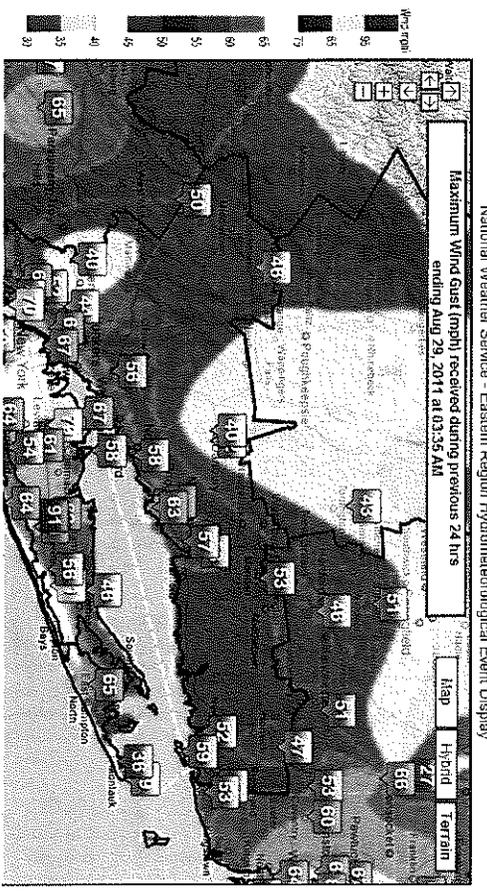
8/25: Town Notif. of UI Conting. Plans

8/25- Safety training for fire departments

Communications

Irene was an extreme event ...

Wind Gust Map with Point Data



Storm Severity:

- 3-6" of rain
- Wind gusts > 60 mph (2 am to 2pm Su.)
- Tidal Flooding

Communications During the Event:

- Storm updates every few hours to Selectman/Mayors/Legislators and EOC Directors. The Company began using social media to disseminate information.

Multiple news releases per day:

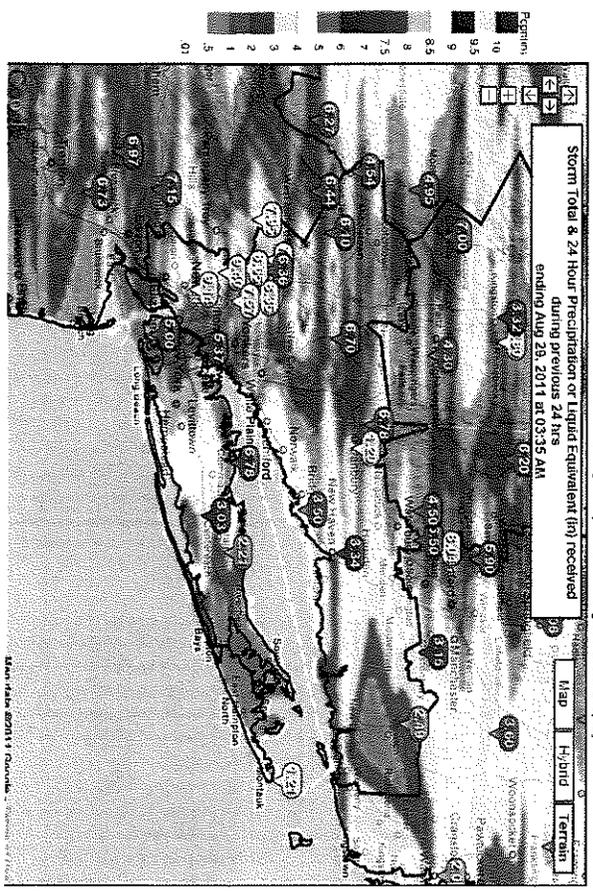
- Status of electric system
- Updates on restoration progress and goals.

UI personnel gave 106 separate

interviews with electronic, print, radio and television outlets – local, regional and national.

Rainfall Map

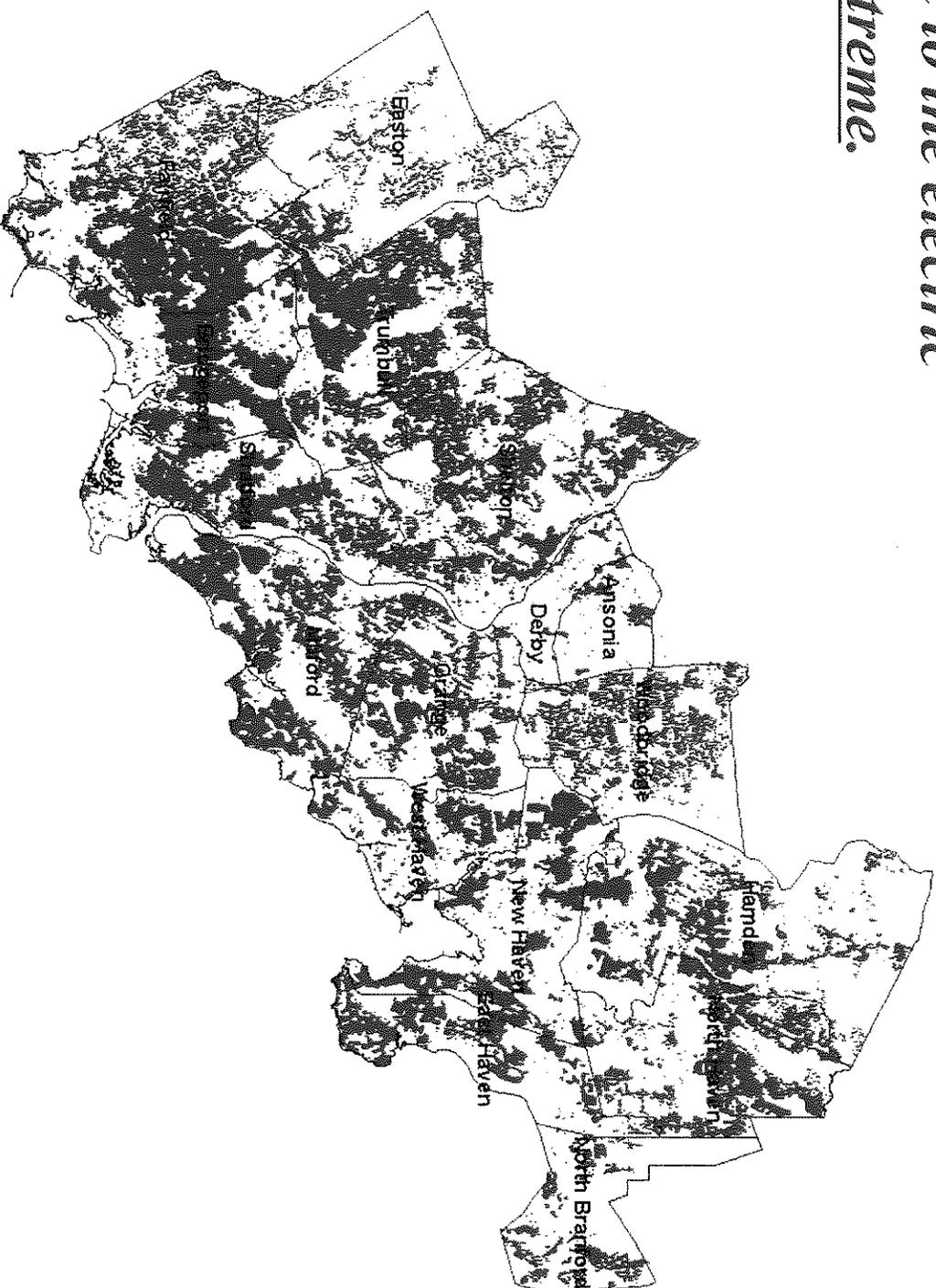
National Weather Service - Eastern Region Hydrometeorological Event Display



... and the damage to the electric system was also extreme.

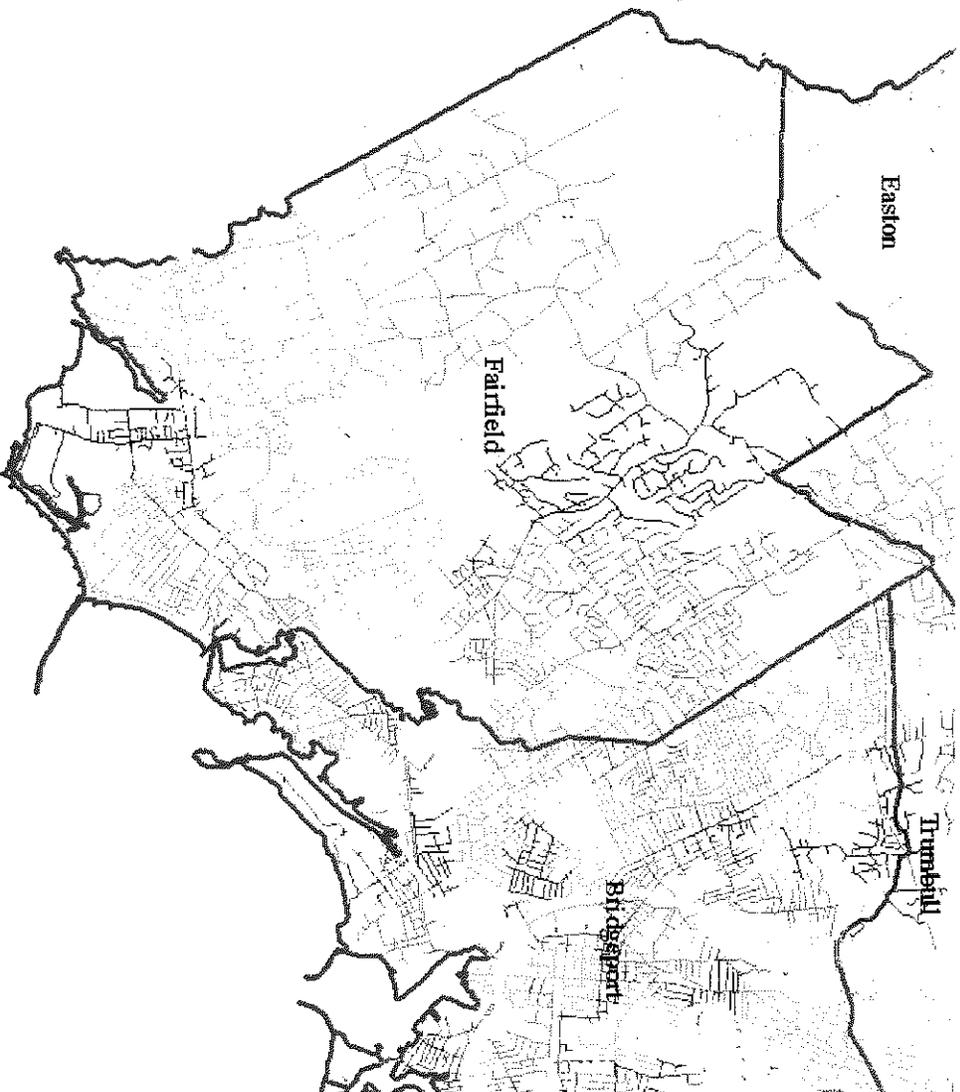
Damage:

- 263 circuits w/ outages
- 10,300 locations worked by crews
- 9,700 locations visited to assess damage
- 158,000 peak customers out



UI's Distribution System Outages*
(UI's System: 443 circuits, 3,275 miles of O/H lines)

* Total outages shown – includes all over duration of storm and recovery/restoration period.



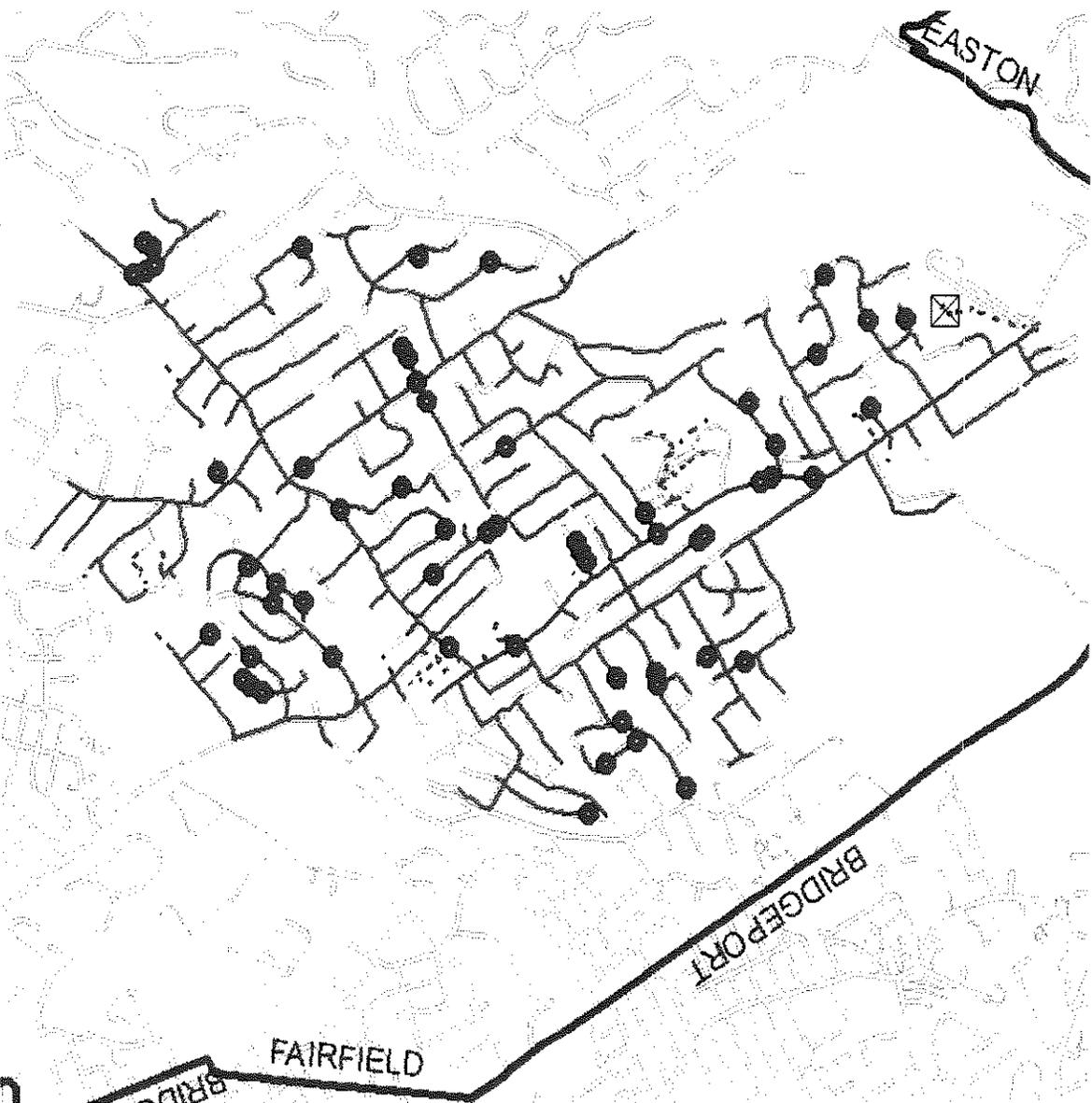
Damage in Fairfield:

- 570 interrupting devices reported open (circuit breakers, fuses, transformers)
- Each may have required 1 or more work locations to resolve.

UI's Distribution System in Fairfield

(Fairfield is served by numerous circuits - see colors above)

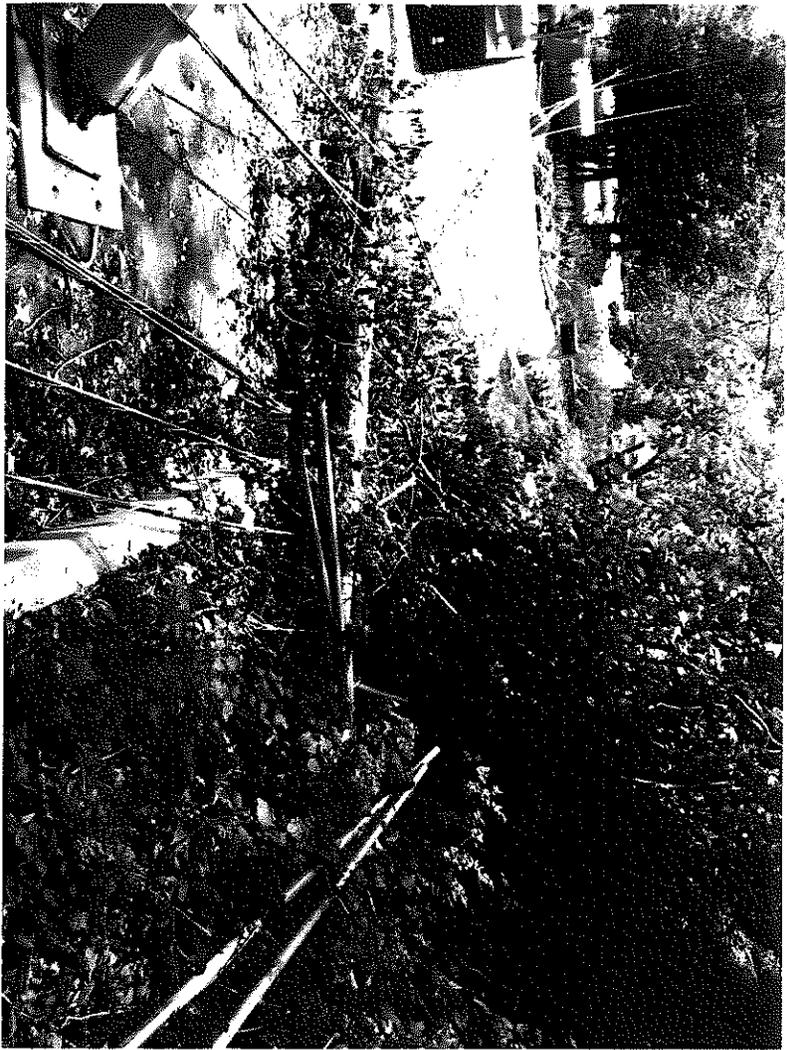
Damage – One Circuit, in One Town



Damage On One Circuit:

- In Eastern
Fairfield
- Circuit 2686
- 70 Isolating
devices reported
open
- 113 work
locations

Damage – Single Locations

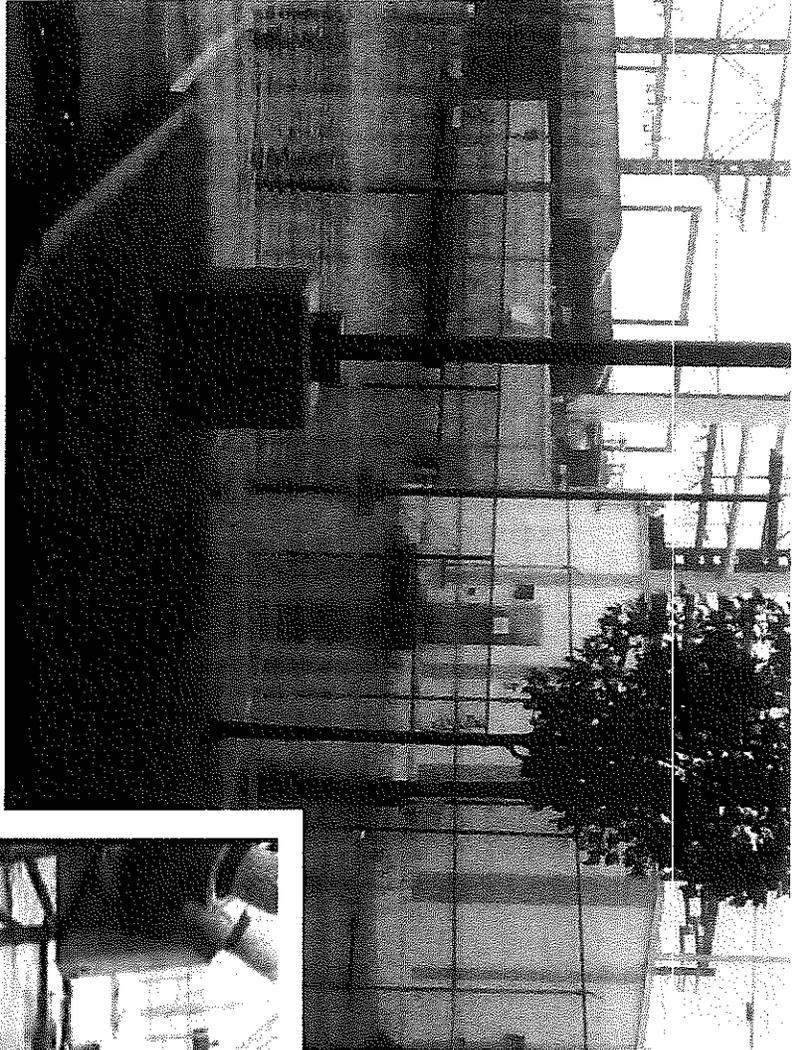


- Example:**
- Ferncliff Rd., Fairfield, CT
 - Pole down
 - Electric wires down
 - Phone/Com wires down
 - UG service to house damaged

Example:

- Catamount Rd., Fairfield, CT
- In addition to the damage ...
- Note how completely the tree canopy blankets the area.

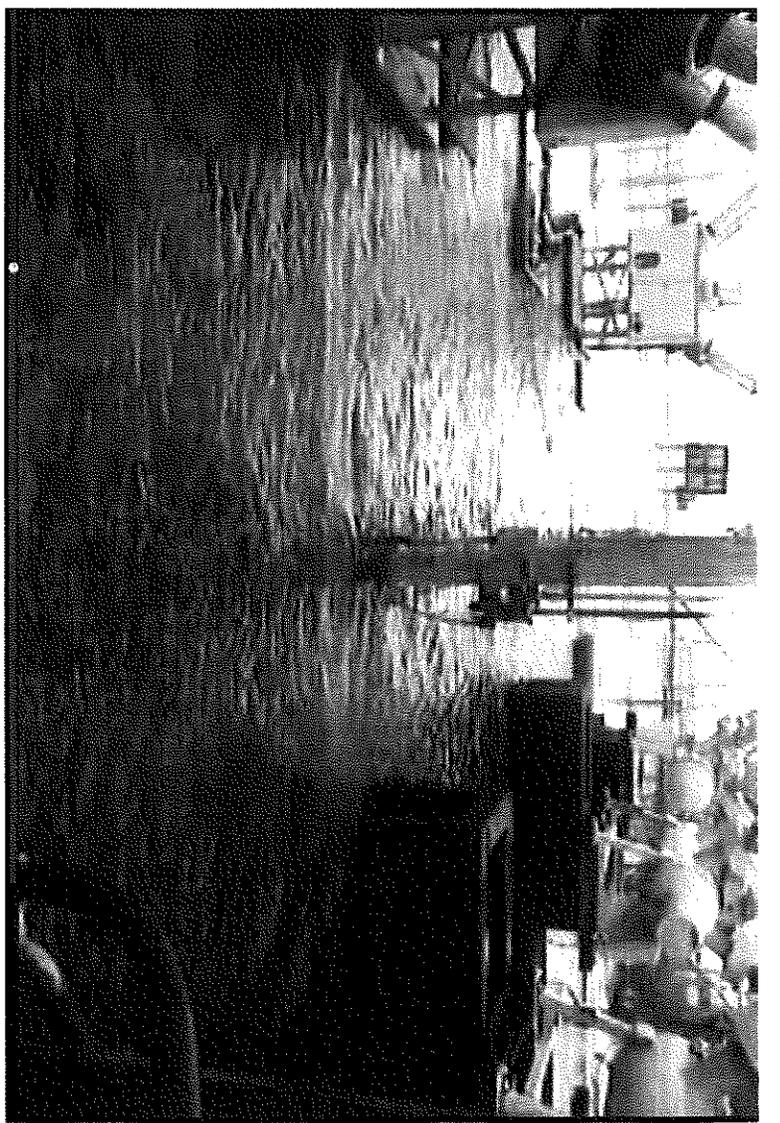




- Substations affect large numbers of customers
- Permanent damage limited, but ...
- Impractical to work in station during the event (if that had been necessary)

Examples:

- Peak of storm roughly coincidental with high tide.
- Extensive flooding at two substation properties
- One of two flooded substations taken off line as a precautionary measure.
- Put back in service quickly



Assessment is critical ... and was performed exceptionally quickly ...

Public Safety, Town Priorities

Restoration, main line work

Restoration, branch line work

Sun.
8/28

Mon.
8/29

Tues.
8/30

Wed.
8/31

Th.
9/1

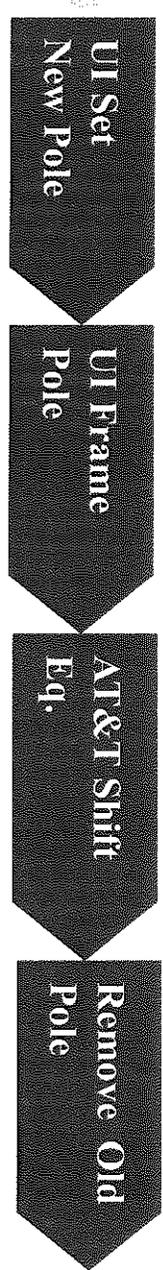
... It must be complete to:

- *Identify quantity, location, nature of work*
- *Assign resources efficiently*
- *Provide information, predict restoration times*

Much of the work required extensive coordination both within the company and among companies

Approximately 9,700 locations were investigated by damage assessment crews

Example - Replace Broken Pole:



Example - Wires Down/Make Safe:

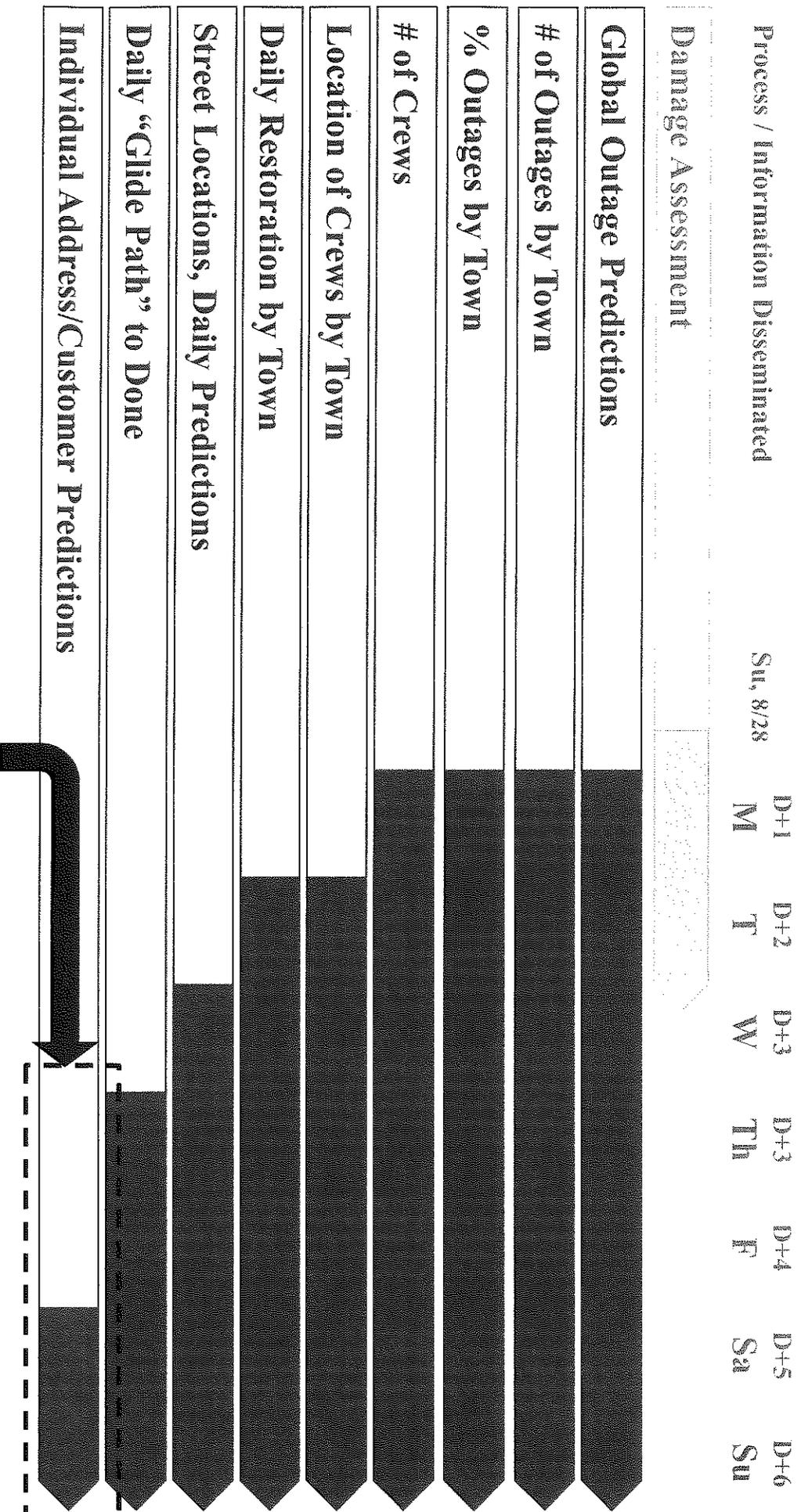


Safety is job-one – until we can fix it, we need to protect the public, and we cannot sacrifice safety for speed.

- 1115 workers safety trained during the event.
- 39,000 restoration crew hours of work without a lost-time accident.

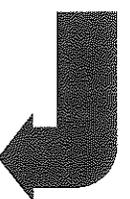
Approximately 10,300 locations were visited by overhead line crews, line clearance crews, and service crews

The ultimate objective: provide accurate status & predictions earlier ... both to government leaders and individuals.



Customers & government leaders want this to commence sooner, and our customers want us to advise them "we know you're out" so they're not wondering.

Ultimate Objectives: (1) restore faster, (2) preserve current level of safety, (3) provide earlier, accurate status & predictions to individual customers & government leaders.

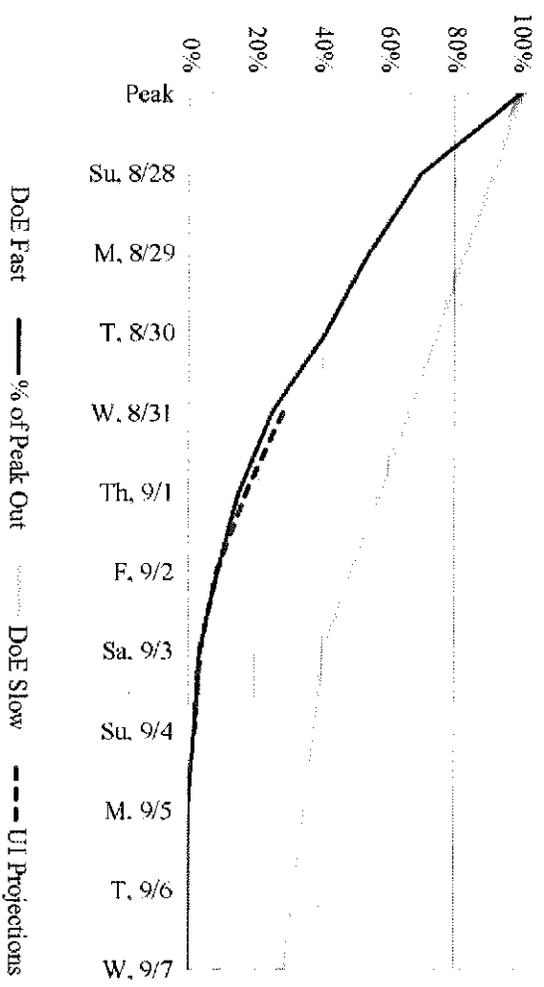


	March 2010 Storm	Irene (Today)	Short Term (<1 yrs)	Ult. Goal (1-3 yrs)
Best Practices (examples)				
Incident Command Structure*	✓	✓	✓	✓
Pessimistic Storm Damage Predictions*	✓	✓	✓	✓
State & Municipal Communication Plan*	✓	✓	✓	✓
Rapid Determination of Global Restoration Times*	✓	✓	✓	✓
Optimal Restoration Strategy	✓	✓	✓	✓
Consistent & Correct Communications*	✓	✓	✓	✓
Enabling Technologies (examples)				
OMS & Call Center Upgrade & Integration	✓	✓	✓	✓
Mobility in Trucks	✓	✓	✓	✓
Extend Two-Way Meter Deployment	✓	✓	✓	✓
External Outage Reporting Tools	✓	✓	✓	✓
Technology Enabled Damage Assessment	✓	✓	✓	✓

*Included Recommendations from October 2010 Jacobs Report to DPUC

Communications expectations are rising – we'll respond.

Outages, % of Peak



Lessons Learned

- As well as we did, restoration could be shorter if damage can be reduced ...
 - *More aggressive tree management*
- We didn't always meet the information-expectations of our customers and government leaders ...
 - *Need to further develop and add methods & processes for conveying useful information.*

Lessons Learned, Continued

- Event revealed some technology-related weaknesses.
- We need to continue to improve communication & coordination with towns, especially during the early stages of the event.

Plan, Next Steps

- Conduct customer survey(s)
- Meet with each of our towns/cities
- Complete our after action assessment
- Accelerate UI's technology implementation plans (see slide 14).
 - During future event(s), at completion of the assessment phase, accelerate conversion of results/data to useful information and disseminate more rapidly.