

ArcGIS Online at National Grid: Integrated Mapping Applications Portal

NEURISA Lightning Talk
November 14, 2013
Jeff Pires, GISP



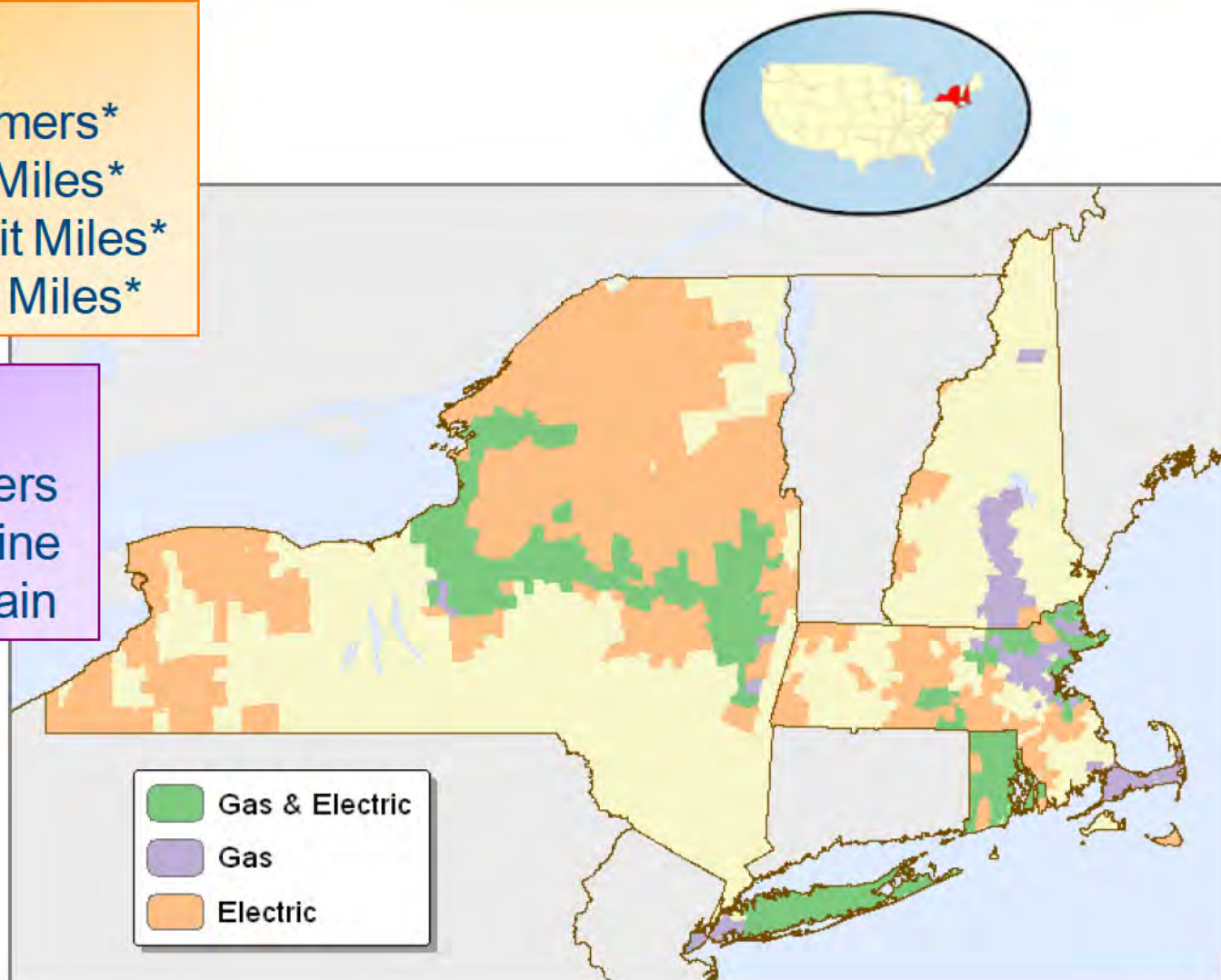
National Grid Overview

Electric

3.4 million Customers*
9,000 Tx Circuit Miles*
5,000 SubTx Circuit Miles*
69,000 Dx Feeder Miles*

Gas

3.4 million Customers
500 miles Tx Pipeline
36,000 miles Dx Main



**Upstate NY &
New England*

2011 – Hurricane Irene

STORM RESPONSE

HURRICANE IRENE

RHODE ISLAND CUSTOMERS WITHOUT POWER



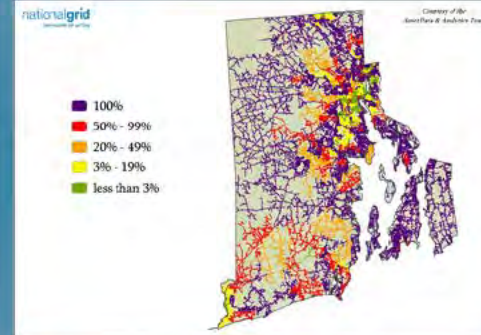
318,000 TOTAL CUSTOMERS INTERRUPTED

286,000 PEAK CUSTOMERS INTERRUPTED

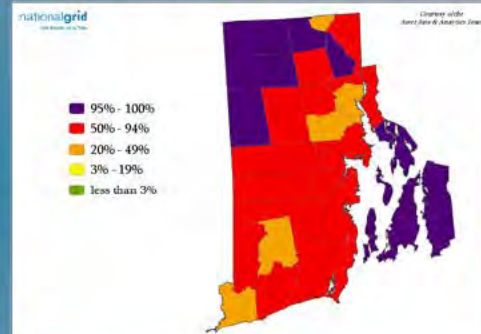
115,000 TROUBLE CALLS

16,250 POWERON OUTAGE ORDERS

8,000 POWERON IN-SERVICE ORDERS



PERCENTAGE OF CUSTOMERS INTERRUPTED BY FEEDER
AUGUST 28, 2011 - SEPTEMBER 3, 2011



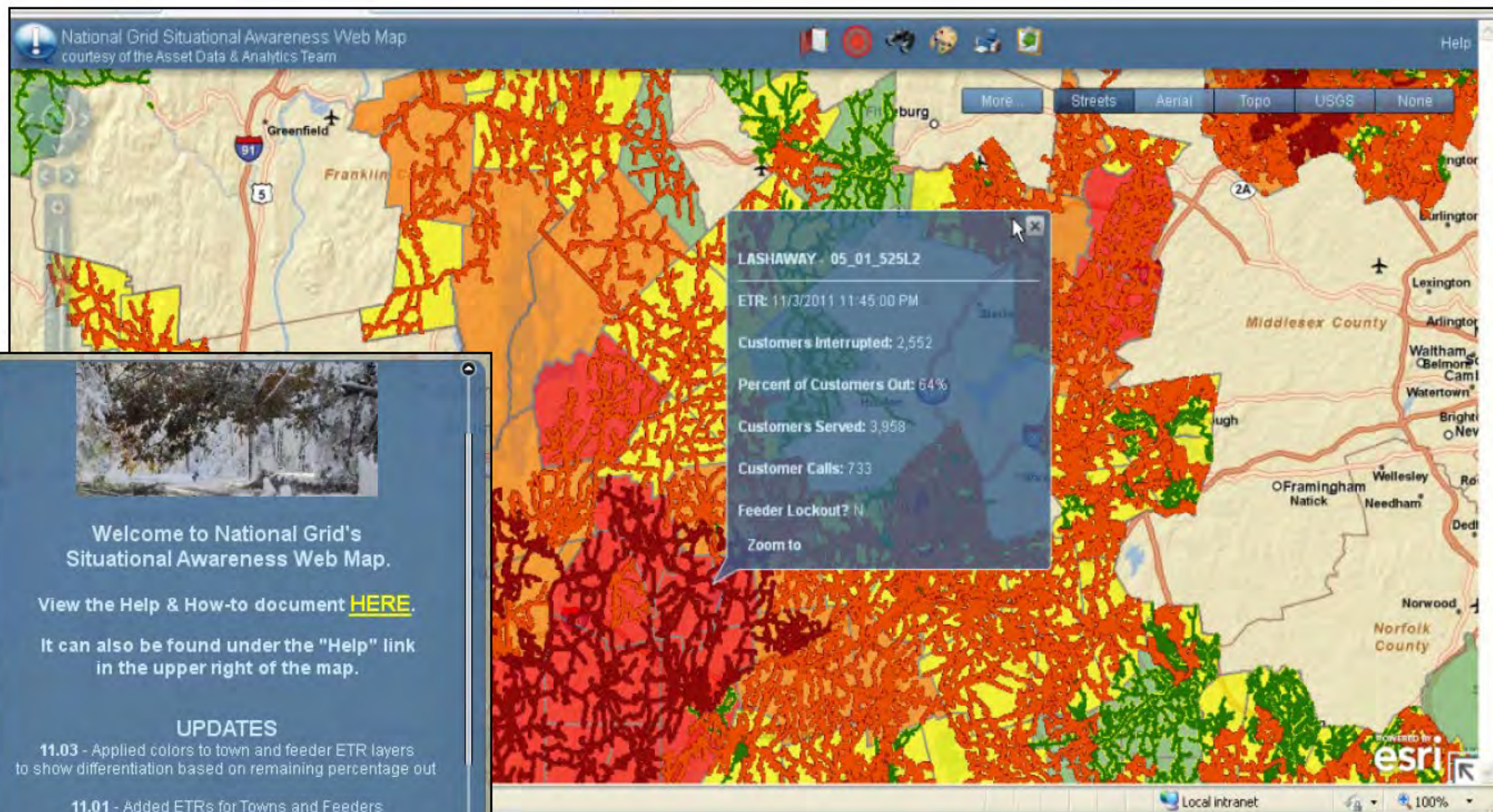
PERCENTAGE OF CUSTOMERS INTERRUPTED BY TOWN
AUGUST 28, 2011 - SEPTEMBER 3, 2011

**FOR INTERNAL USE ONLY
PRIVILEGED AND CONFIDENTIAL**

nationalgrid

Courtesy of Jay Emery & Jeff Pires, Asset Data and Analytics Team

SnowTober 2011



Near Real-Time Data



Python

```
#grab the csv from the ICOE share
try:
    TruckReader = csv.reader(open(r"D:\NR
except:
    print "Expected csv file in _incoming
    sys.exit() ## this will terminate the

Truck = TruckReader.next()
truck_lst = []

for Truck in TruckReader:

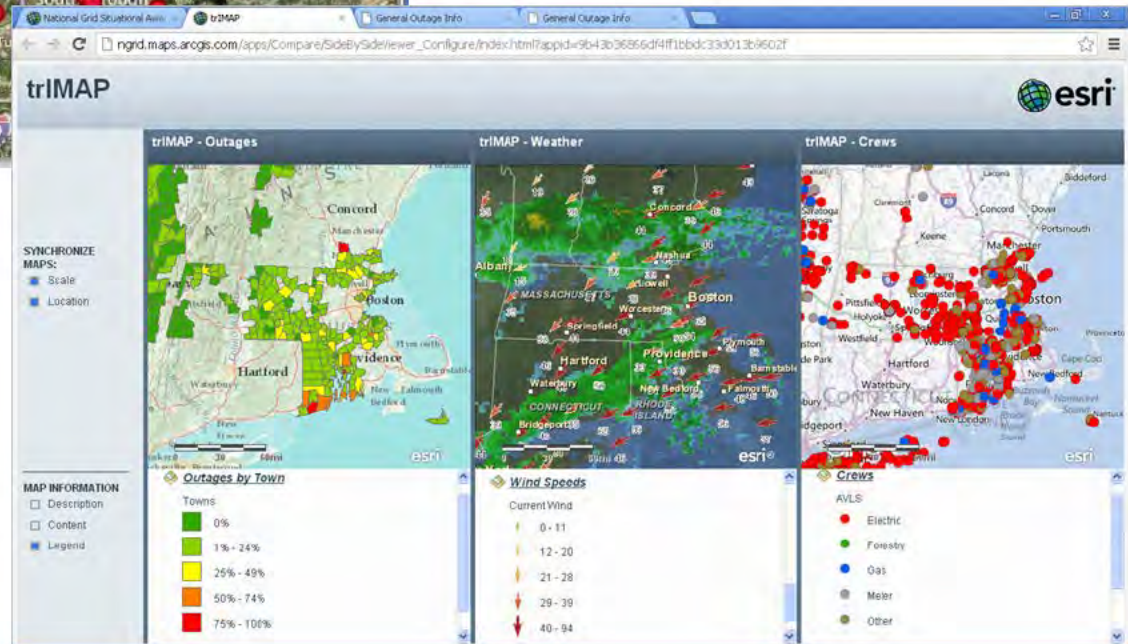
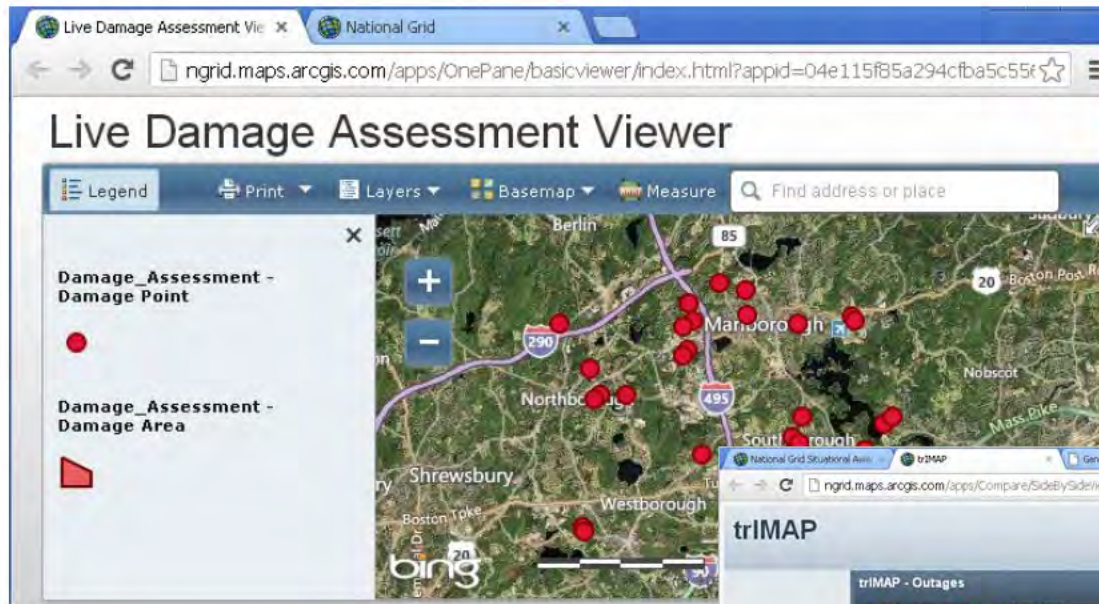
    # retrieve records from list ...
    VehicleName = Truck[0]
    VehicleGroupName = Truck[1]
    VehicleMake = Truck[2]
    VehicleModel = Truck[3]
    UnitLocationDate = Truck[4]
    ESTTIME = Truck[5]
    Latitude = Truck[6]
    Longitude = Truck[7]
    Velocity = Truck[8]

    # put records in truck list...
    truck_lst.append([VehicleName, Vehicl
```


ArcGIS Online



2012 – SuperStorm Sandy



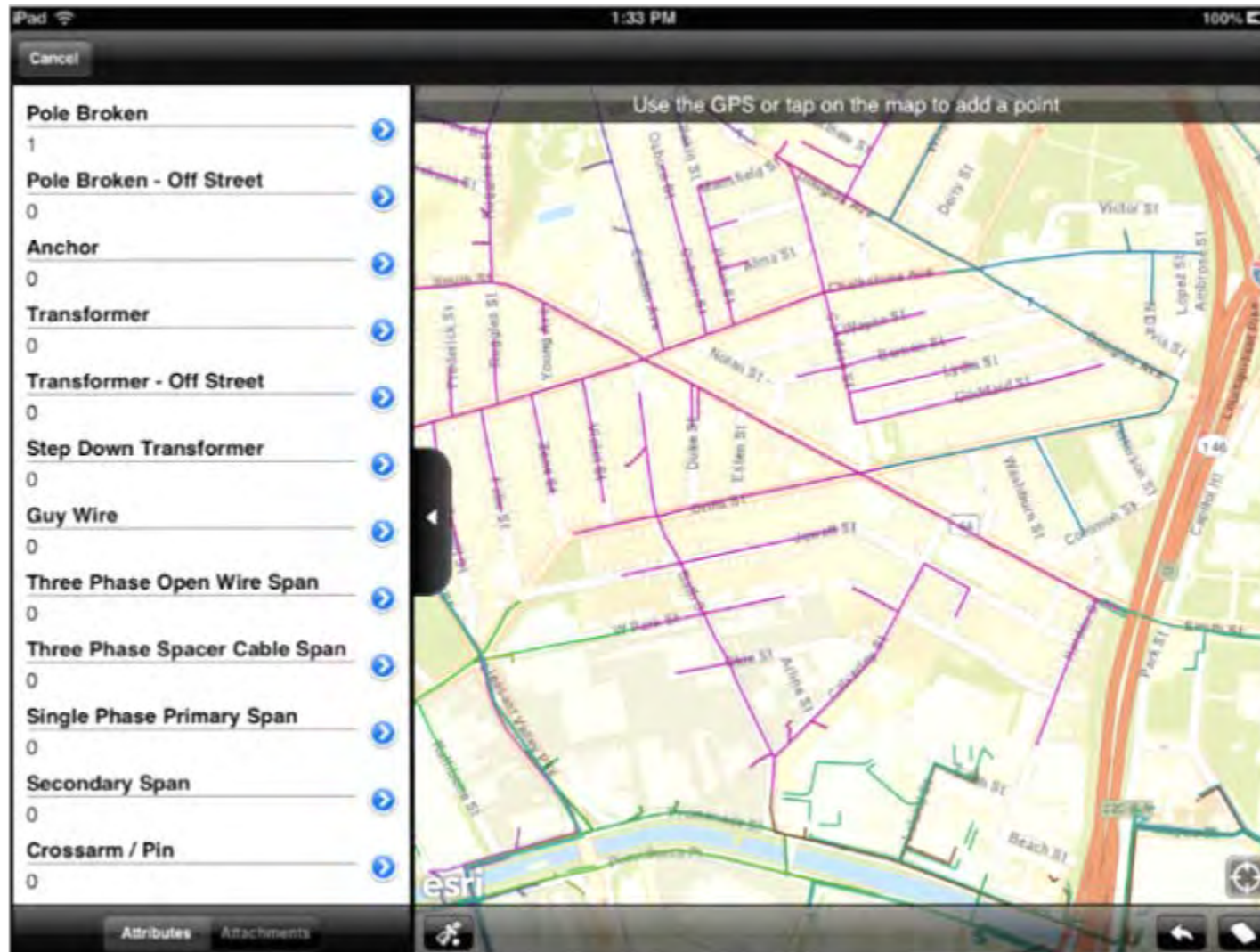
Traditional Damage Assessment



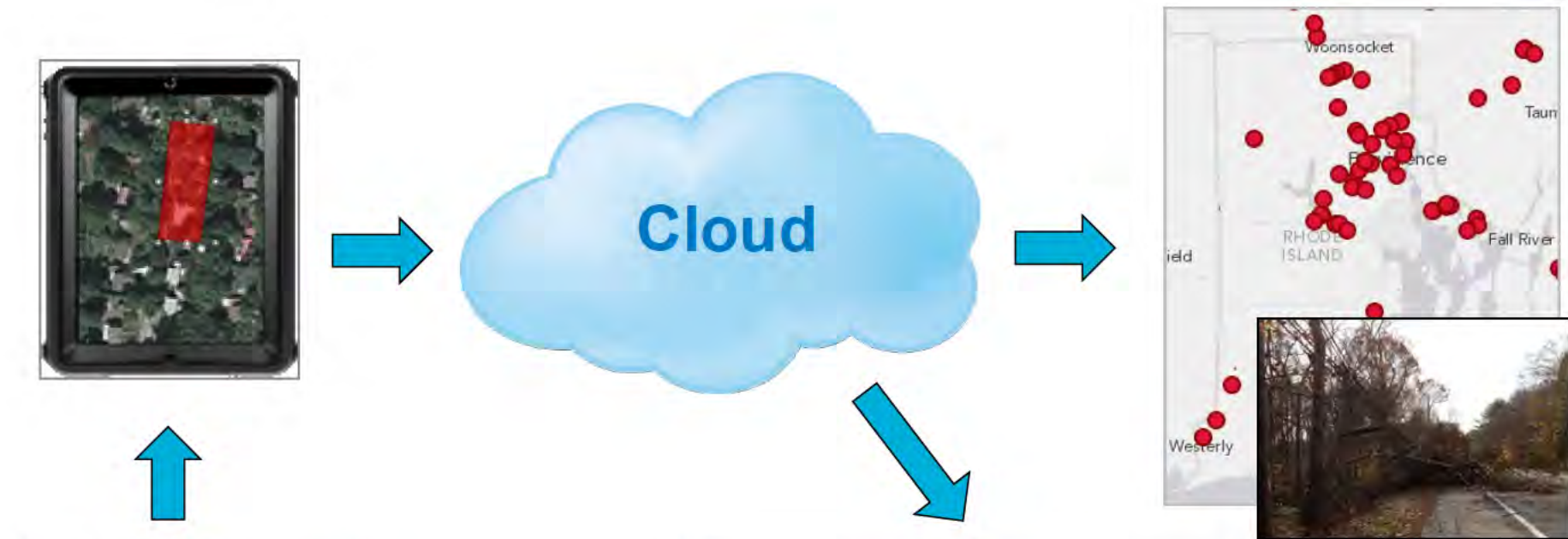
nationalgrid														STORM DAMAGE ASSESSMENT PATROL		Revised 3/15/2012								
STATION / FEEDER:														ROAD/STREET:										
DATE / TIME SURVEYED:														SURVEYOR:										
Item	Pole Broken	Pole Broken - off street	Anchor	Transformer	Transformer - off street	Step Down Transformer	Guy Wire	3 Ph Open Wire Pri Span	3 Ph Spacer Cable Pri Span	1 Ph Primary Span	Secondary Span	Crossarm / Pin	Cutout / Disconnect	Recloser / Airbreak	Regulator	Capacitor	Streetlight	Floodlight	Service	Limbs on Wires	Tree Crew Needed (>6" Diameter)	DESCRIPTION OF DAMAGE	T.D. LINE	POLE #
1																								
2																								
3																								
4																								



iPad Damage Assessment



Info & Images in Real Time

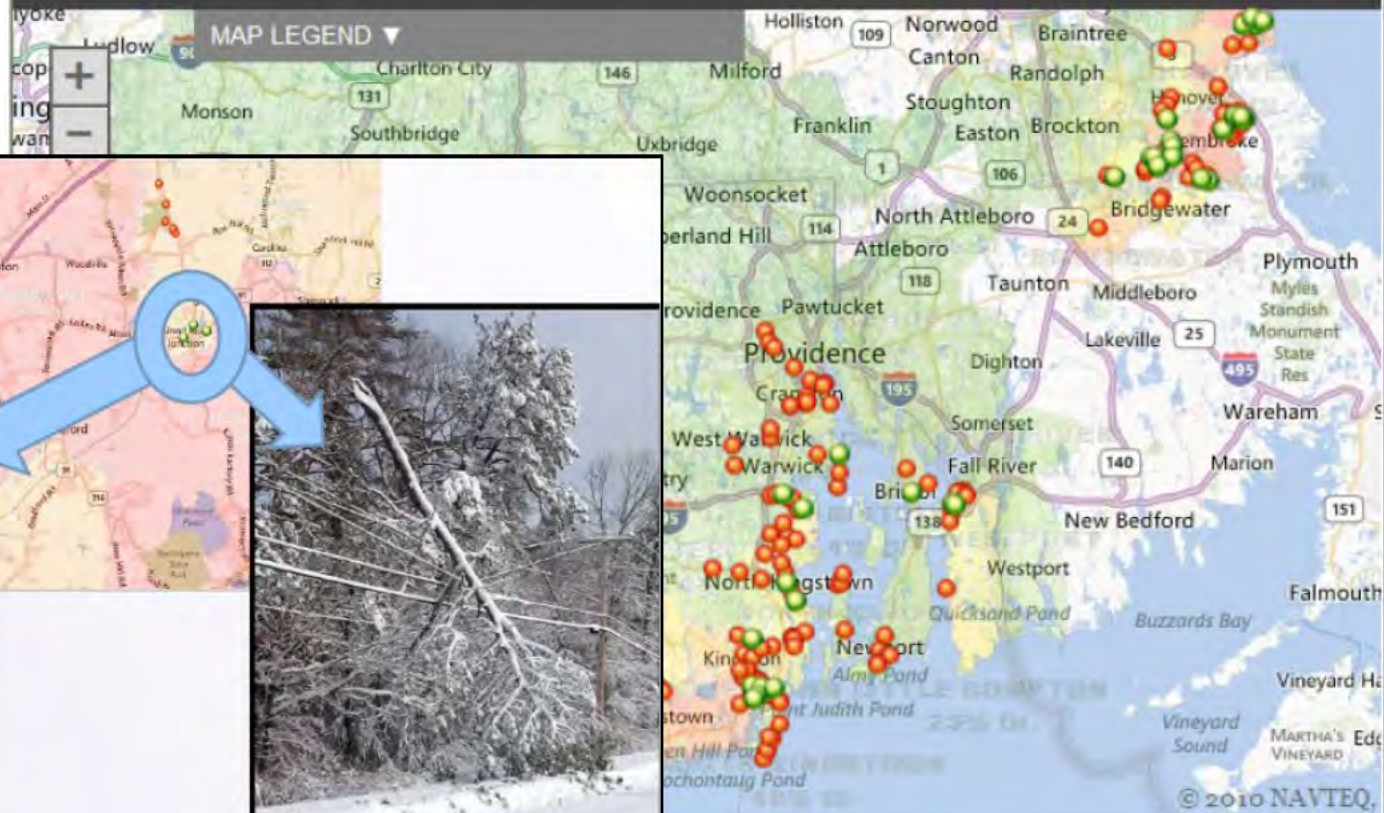


DESCRIPTION	Near Address	CIRCUIT
39 perennial dr reporting wire down. Wire is cable tv.	194 Lawnacre Drive, Cranston, RI 02920, USA	49_53_27F6
2 phases open down vine street looks like slap together	2 Vine Street, Johnston, RI 02919, USA	49_53_38F4
2 phases open feeding down Newman ave	223 Greenville Avenue, Johnston, RI 02919, USA	49_53_69F1
2 phases open down day street	1-5 Day Street, Johnston, RI 02919, USA	49_53_69F1
SUB TRANS ELMWOOD 2213 Three phase wires down inside complex	1536 Elmwood Avenue, Cranston, RI 02910, USA	49_53_73J3
Two fuses open looks like spans slap together nothing down	1370-1398 Elmwood Avenue, Cranston, RI 02910, USA	49_53_73J3
Feeder 53-27F6	270-310 Melrose Street, Providence, RI 02907, USA	49_53_76F2
Sub transmission two phases down 2213 Elmwood called into Mike in	42-60 Fenner Street, Cranston, RI 02910, USA	49_53_7F1
Single phase tap off pole #12 watch hill rd. 15k fuse.	75-77 Watch Hill Road, Westerly, RI 02891, USA	49_56_16F1
P52 100k open single phase tap	3 Avondale Road, Westerly, RI 02891, USA	49_56_16F1
Pole 3 open cutout	6 India Point, Westerly, RI 02891, USA	49_56_16F1
Open likely due to two phases down 7 poles into shore rd.	159 Watch Hill Road, Westerly, RI 02891, USA	49_56_16F1
2 phases down tree on wire. Corner of damato rd. and shore rd.	10 Shore Road, Westerly, RI 02891, USA	49_56_16F1
Pole 145 one conductor primary off do crossarm pin	101-109 Atlantic Avenue, Westerly, RI 02891, USA	49_56_16F1
3 open cutouts. Pole 142	103 Atlantic Avenue, Westerly, RI 02891, USA	49_56_16F1
Pole 19 two open cutouts	22-26 Crandall Avenue, Westerly, RI 02891, USA	49_56_16F1
Recloser open and 3 cutouts. 631090 & 631091. Pole 66	121 Watch Hill Road, Westerly, RI 02891, USA	49_56_16F1

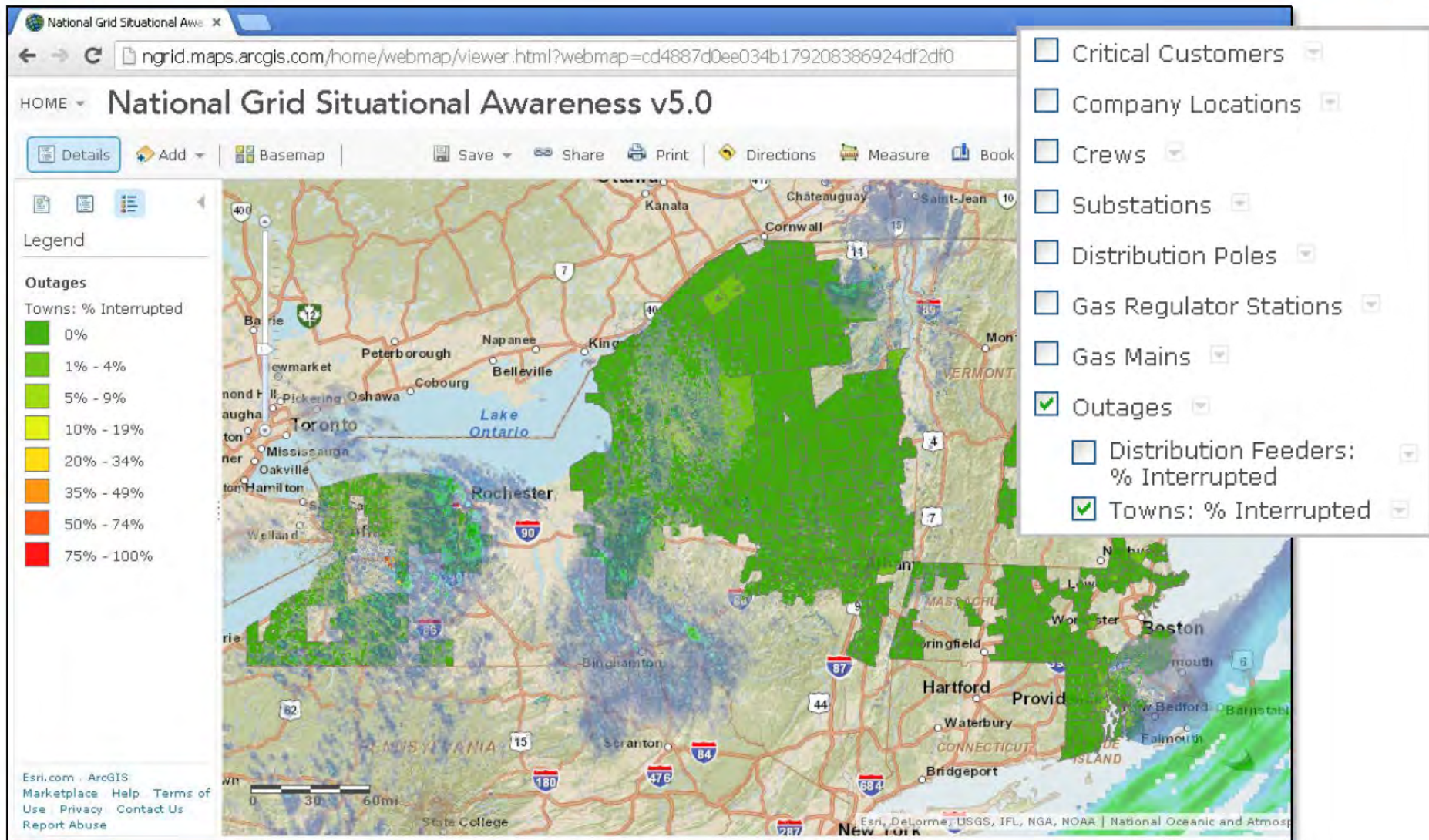
Feb 2013 - Winter Storm "Nemo"

Damage Assessment Viewer

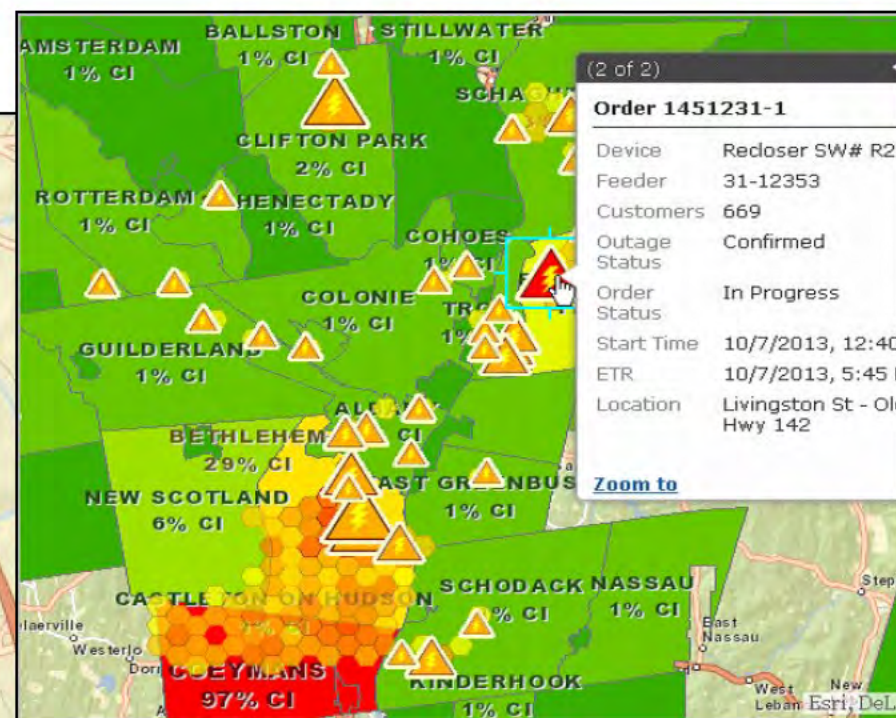
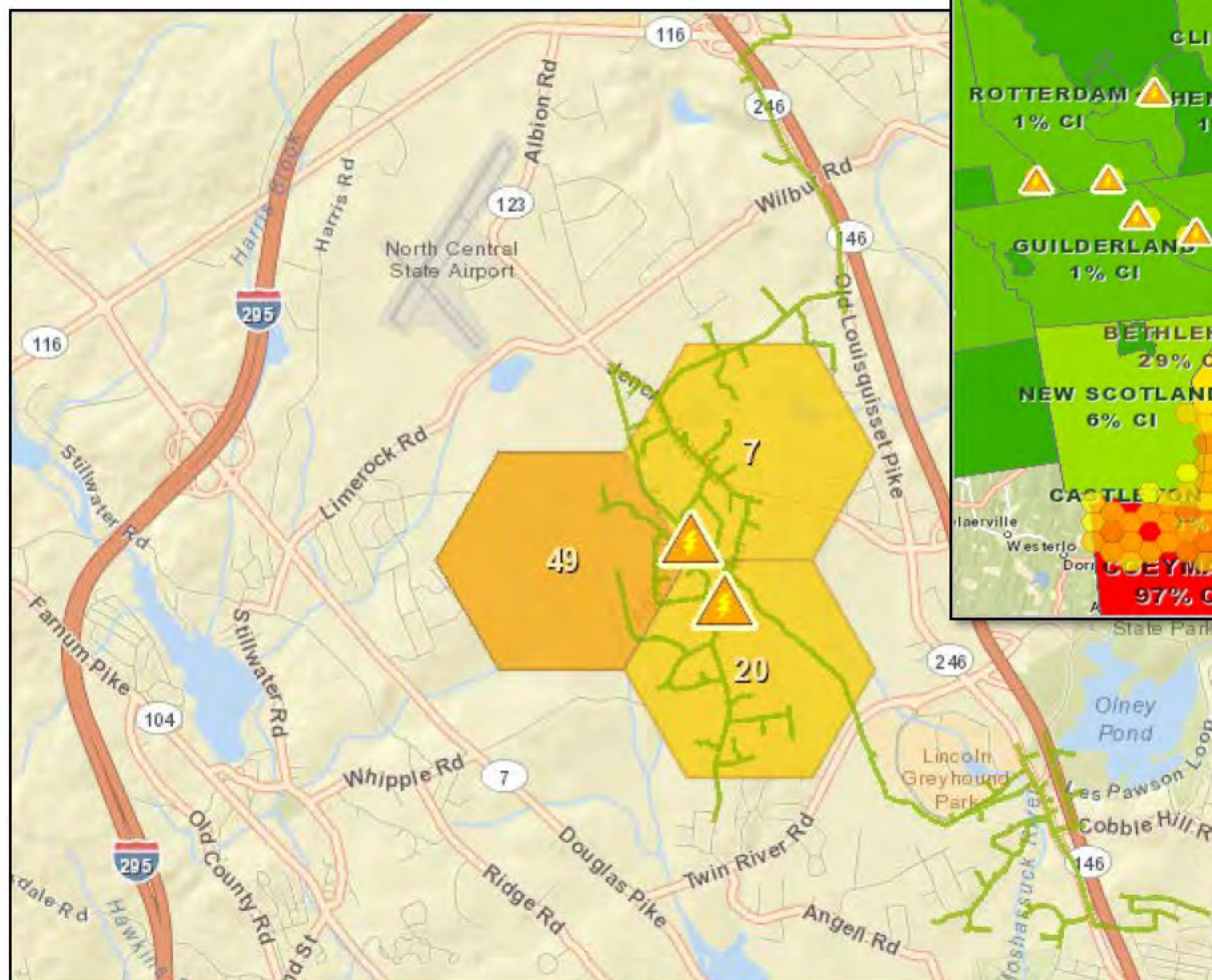
Winter Storm Nemo



SA – Internal Data



Outage Rendering



SA – External Sources

HOME ▾

National Grid Situational Awareness v5.0

Details

Add ▾

Basemap

Save ▾

Share

Print

Directions

Measure

(1 of 2)

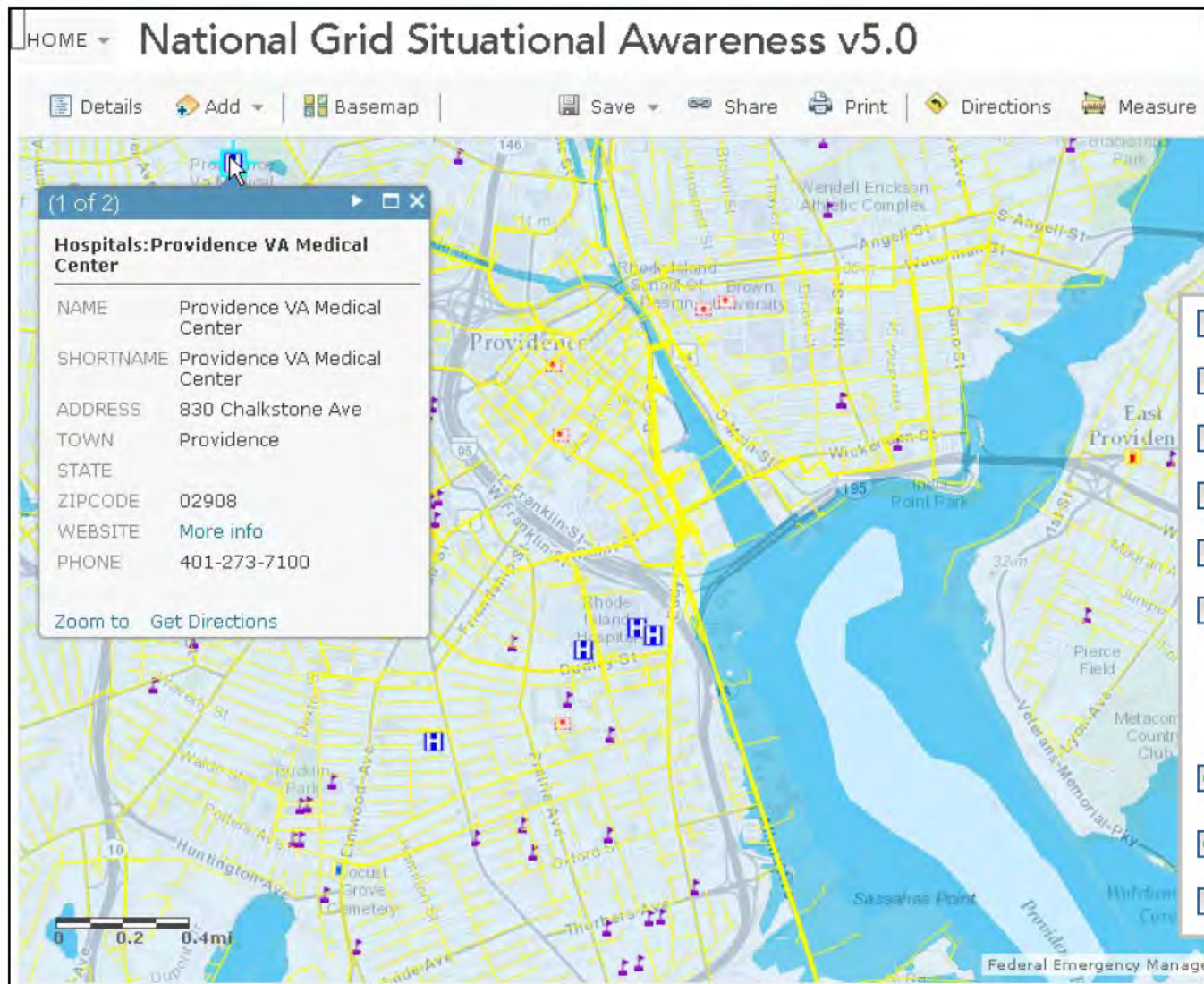
Hospitals: Providence VA Medical Center

NAME	Providence VA Medical Center
SHORTNAME	Providence VA Medical Center
ADDRESS	830 Chalkstone Ave
TOWN	Providence
STATE	
ZIPCODE	02908
WEBSITE	More info
PHONE	401-273-7100

Zoom to

Get Directions

☐ Weather Webcams ▾
 ☐ Radar 1 (NEXRAD) ▾
 ☐ Radar 2 (RIDGE) ▾
 ☐ Wind Speed Forecasts ▾
 ☐ NWS Weather Stations ▾
 ☐ Watches & Alerts ▾
 ☒ Watches/Warnings ▾
 ☒ Advisories/Alerts ▾
 ☒ Hospitals, Schools & Gas Stations
 ☒ FEMA 100yr Flood Zones ▾
 ☐ USA Soils Flooding Frequency



Organic Growth



Distribution Asset Management



Feeder Load 2012



Distribution Feeder Loads – 2012 & Projections

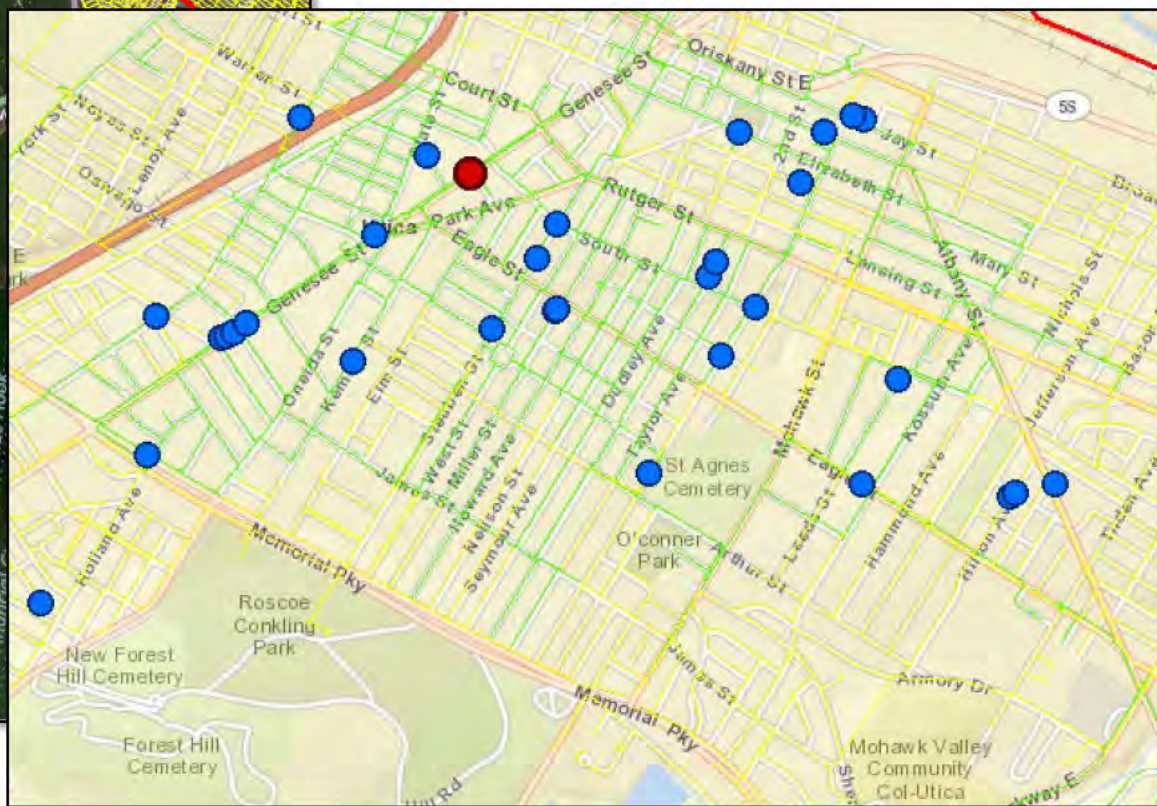
Map Images by [jeff.pires](#)

Source: [Map Service](#)

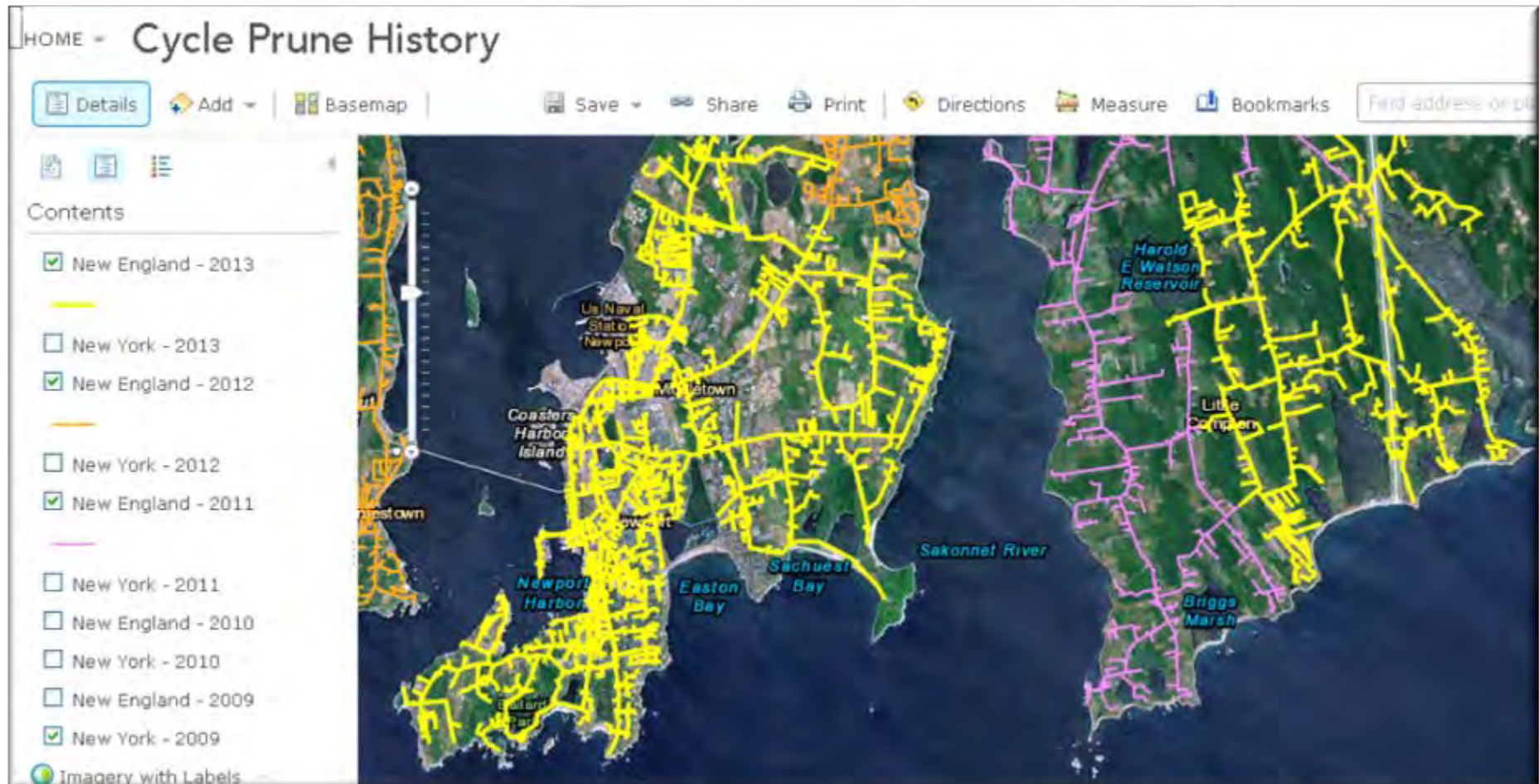
Last Modified: March 14, 2013

☆☆☆☆☆ (0 ratings, 159 views)

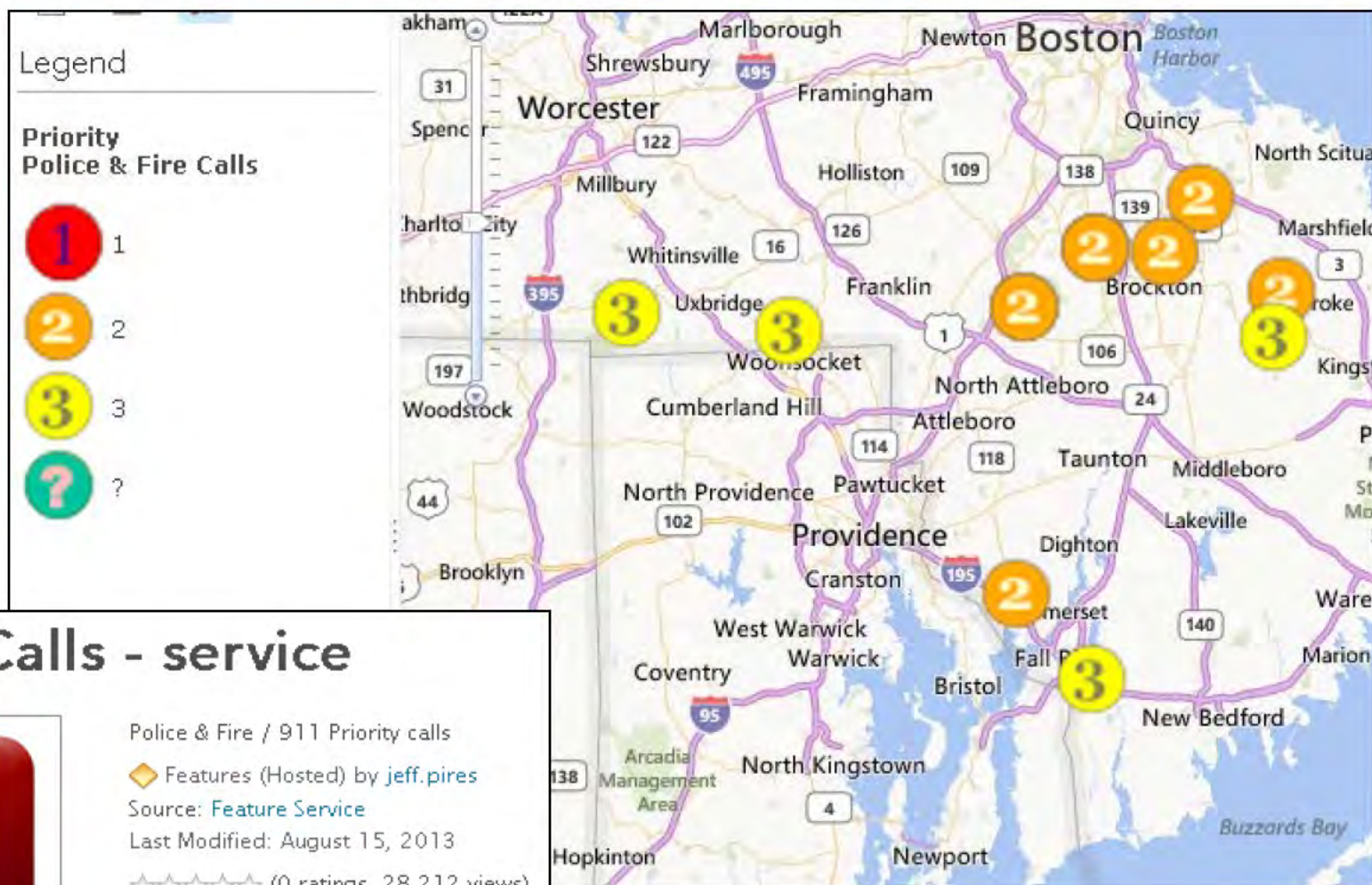
Gas



Vegetation Management



Priority Calls Pilot



Priority Calls - service



Police & Fire / 911 Priority calls

◆ Features (Hosted) by [jeff.pires](#)

Source: [Feature Service](#)

Last Modified: August 15, 2013

☆☆☆☆☆ (0 ratings, 28,212 views)



NEURISA Lightning Talk
November 14, 2013
Jeff Pires, GISP

Jeff.Pires@nationalgrid.com