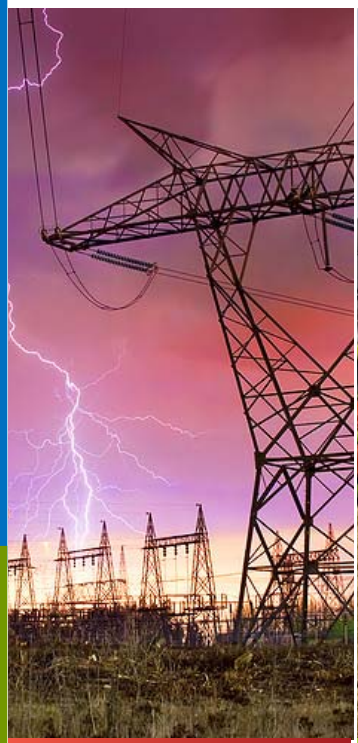
It Starts with Weather



Matt Gaffner

Meteorologist
Weather Solutions Expert – GIS

It Starts with Weather

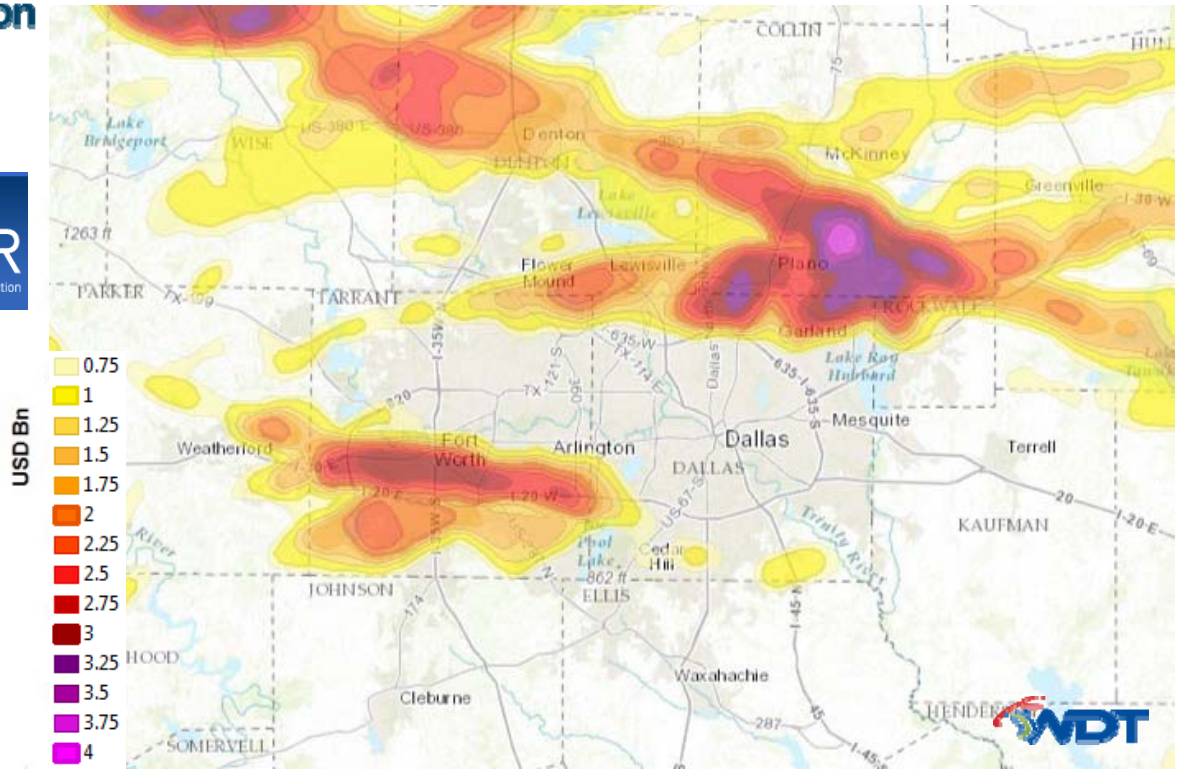
- FiveThirtyEight found that 4 out of 5 people check the weather forecast at least daily
- Mobile devices are the most used source for finding weather data
- Many people check more often
- Lots of people check it before they get out of bed

FiveThirtyEight

METHOD	PERCENTAGE
Phone's default weather app	23.2%
Local TV news	20.6
A specific website or app	19.1
The Weather Channel	15.2
Internet search	14.2
Newspaper	3.5
Radio weather	3.4
Newsletter	0.9

How important is weather?

- It's so important that IBM bought The Weather Company
- Over last 20 years, 90% of global disasters have been weather related
- Texas alone is approaching $6B in insured losses in 2016 YTD
- Liability!



ME1

Weather/GIS Industries Have Advanced Tremendously

- Better sensor networks and higher resolution data
- The 3-day forecast today is as good as the 2-day forecast a decade ago
- Ubiquitous mobile devices and “Follow Me” technology
- Big Data solutions
- Cheap & fast computers, communications

ACCESSIBLITY (in real-time)!

The core components which make up an SOA implementation

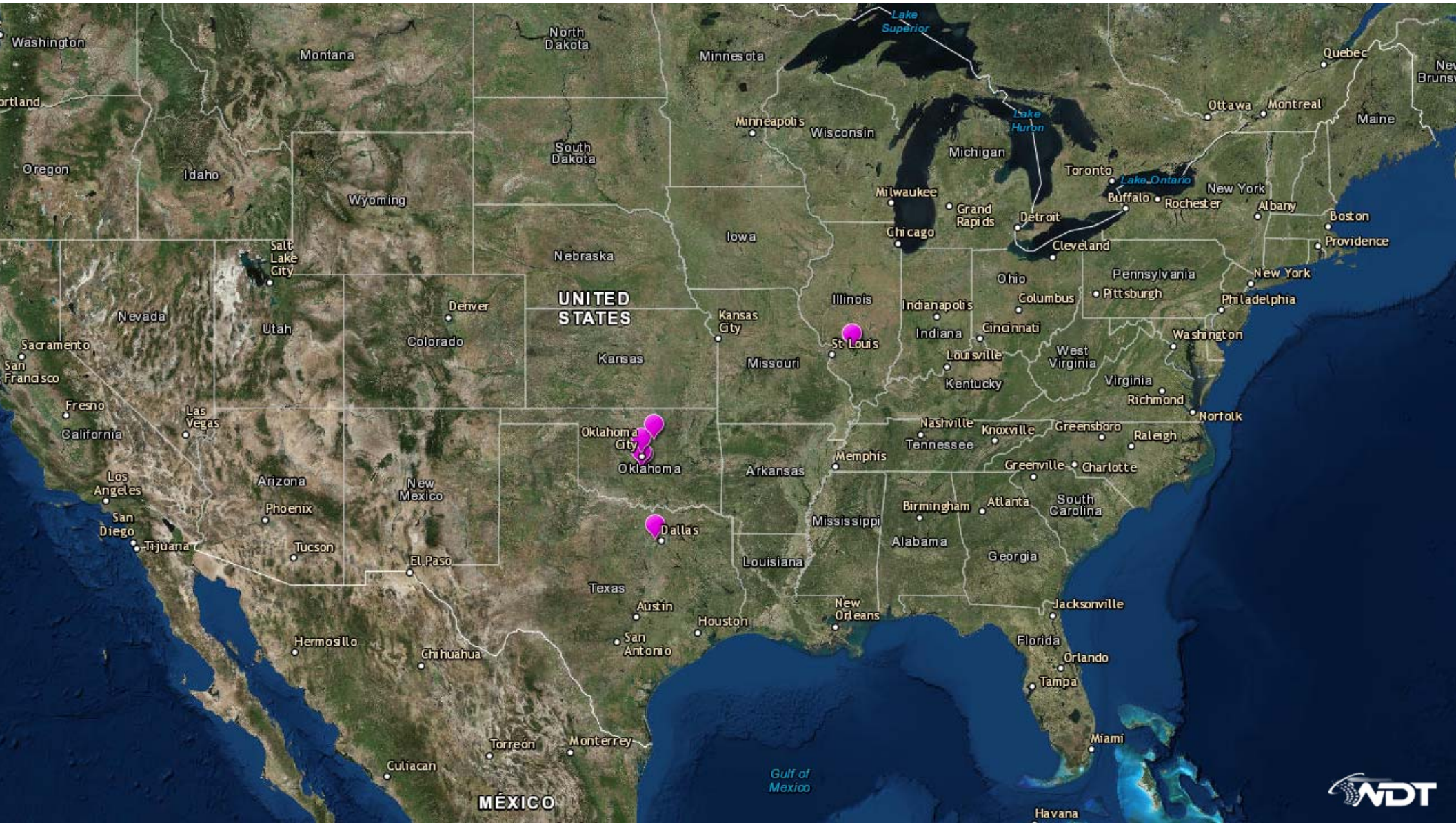
Slide 4

ME1 Can we add a graphic or a few graphics to depict some of these bullets?
Mike Eilts, 5/17/2016

ArcGIS Online Architecture for Developers

Start Simple

- Dashboard maps and apps
  - Situational Awareness
- Open source data
  - NOAA has makes many datasets available online
- Add data via REST endpoints to ArcGIS for Desktop and ArcGIS Online
  - Easy to integrate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Idaho
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Boston
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Chicago
Cleveland
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Indianapolis
Illinois
Nevada
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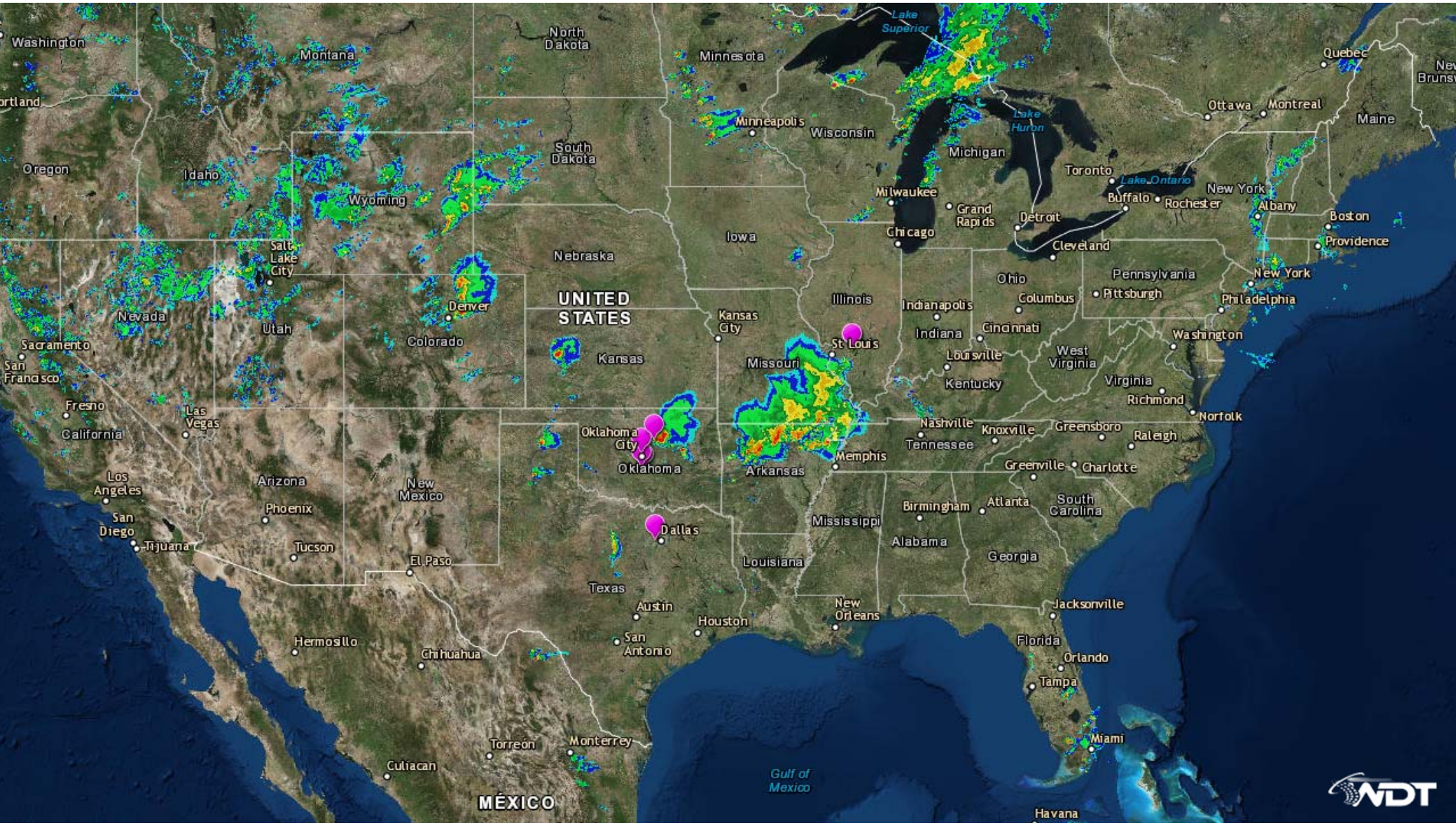
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Missouri
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West Virginia
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Virginia
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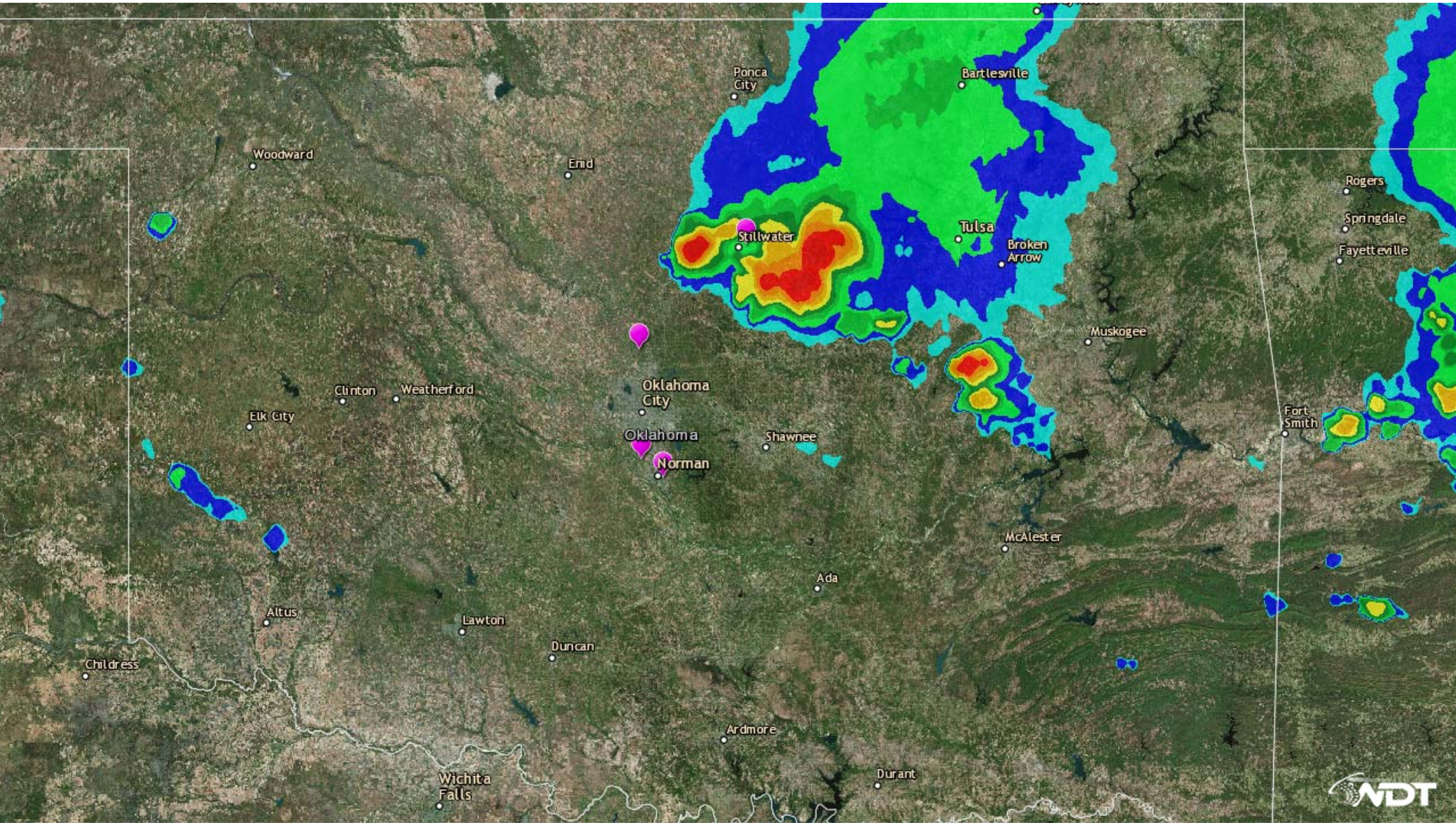
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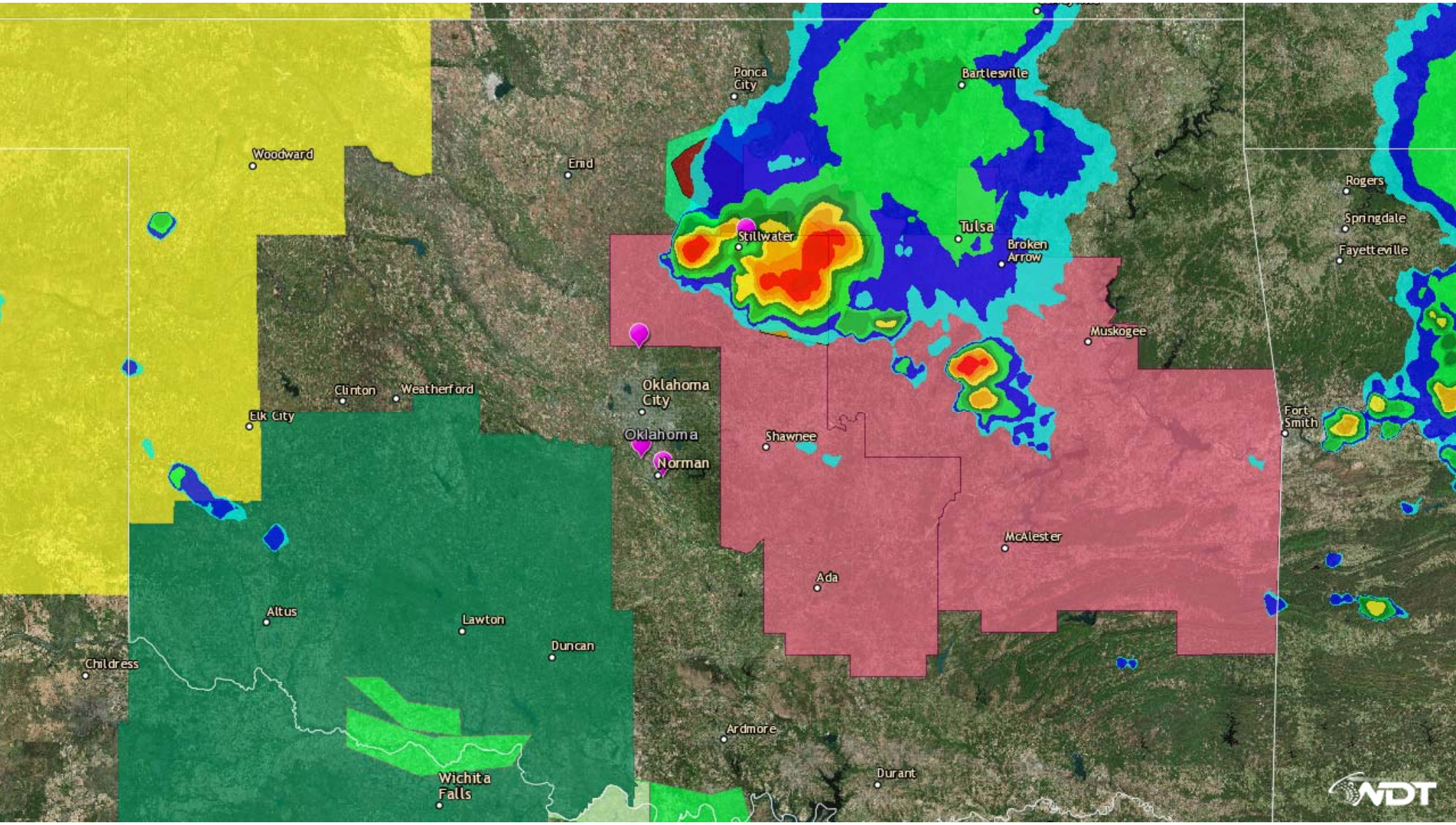
Durant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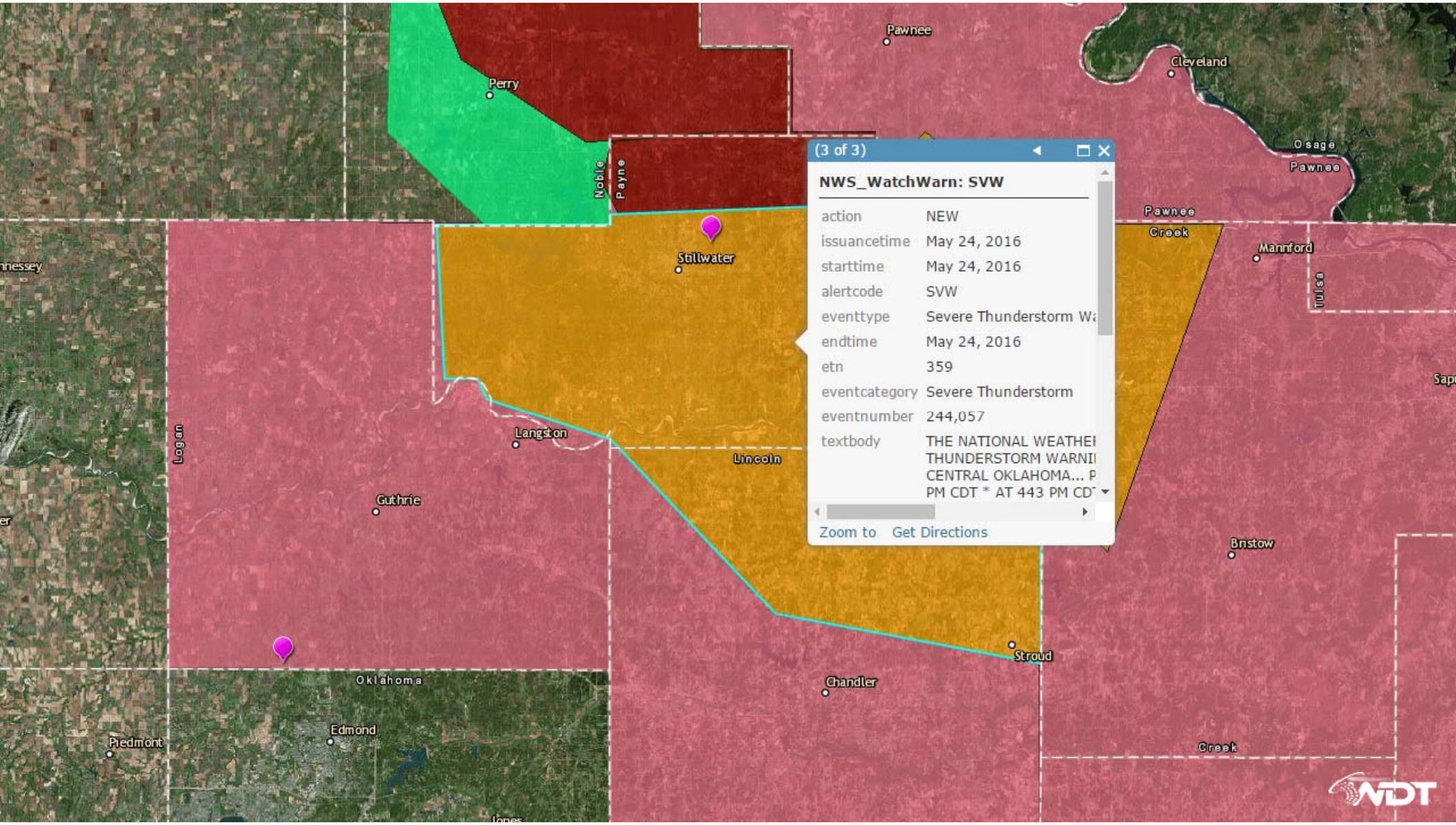
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starttime May 24, 2016
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eventtype Severe Thunderstorm Wa
endtime May 24, 2016
etn 359
eventcategory Severe Thunderstorm
eventnumber 244,057
textbody THE NATIONAL WEATHE
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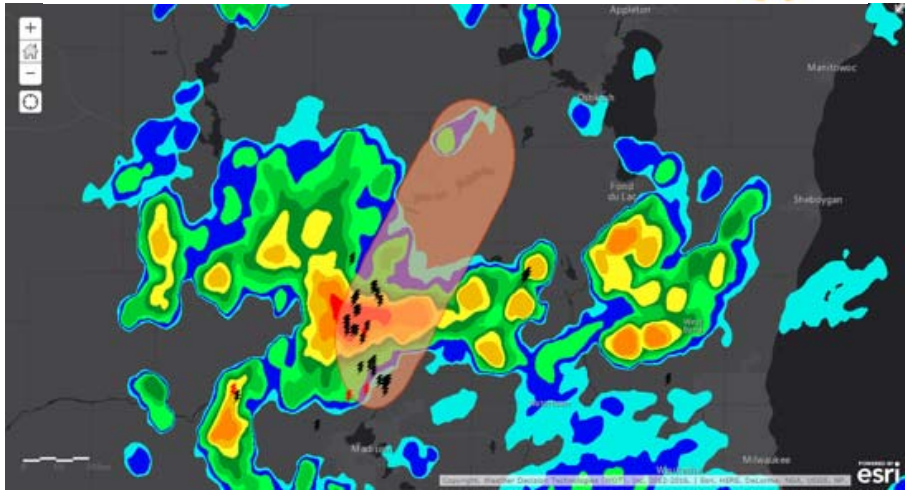
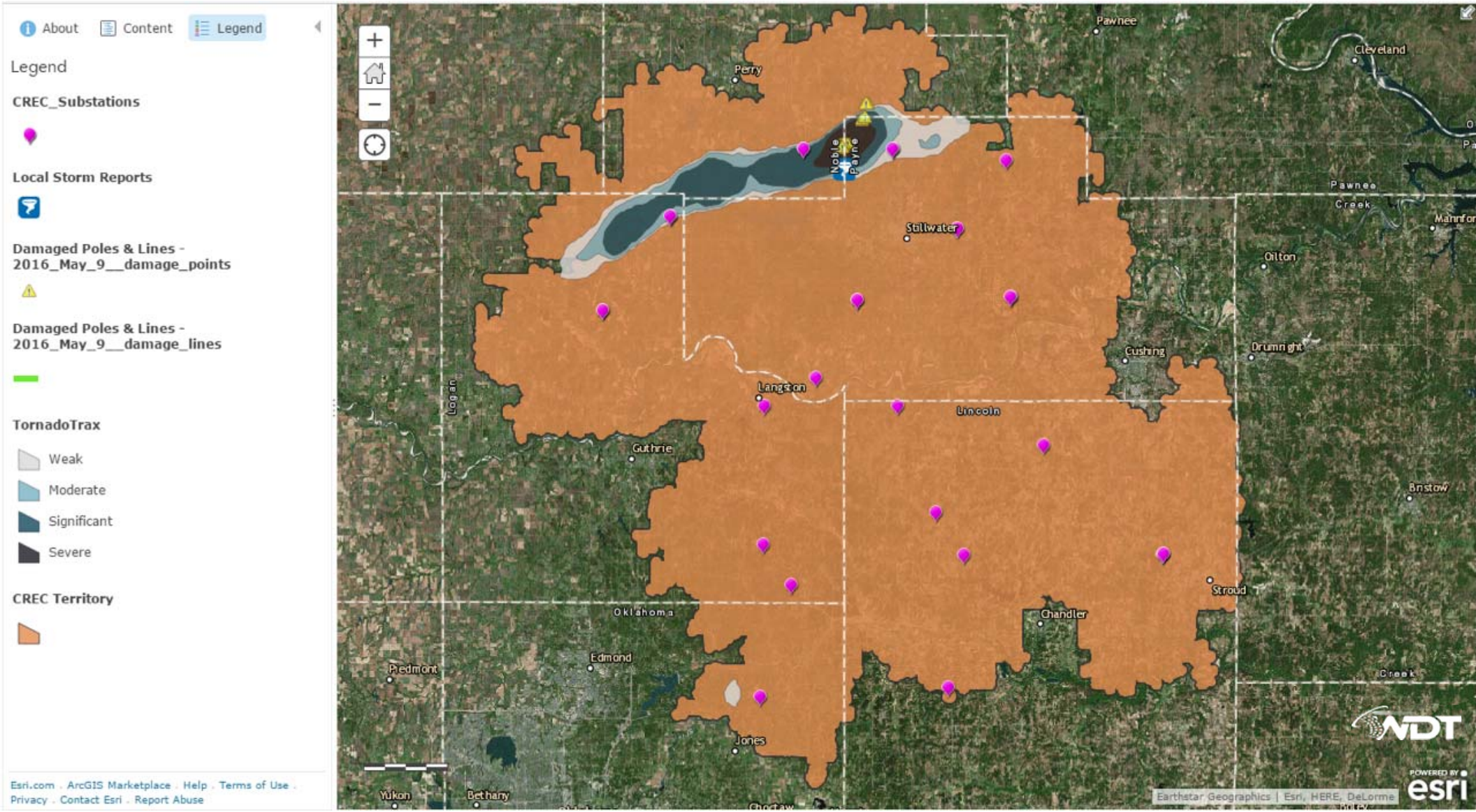
PM CDT * AT 443 PM CD
Zoom to
Get Directions

Intermediate Analysis

- Web App Builder and App Studio
- Seek out proprietary data sets to help answer specific business questions
- Share information, maps, and apps across your enterprise using Story Maps

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Local Storm Reports
Damaged Poles & Lines - 2016_May_9__damage_points
Damaged Poles & Lines - 2016_May_9__damage_lines
TornadoTrax
Weak
Moderate
Significant
Severe
CREC Territory
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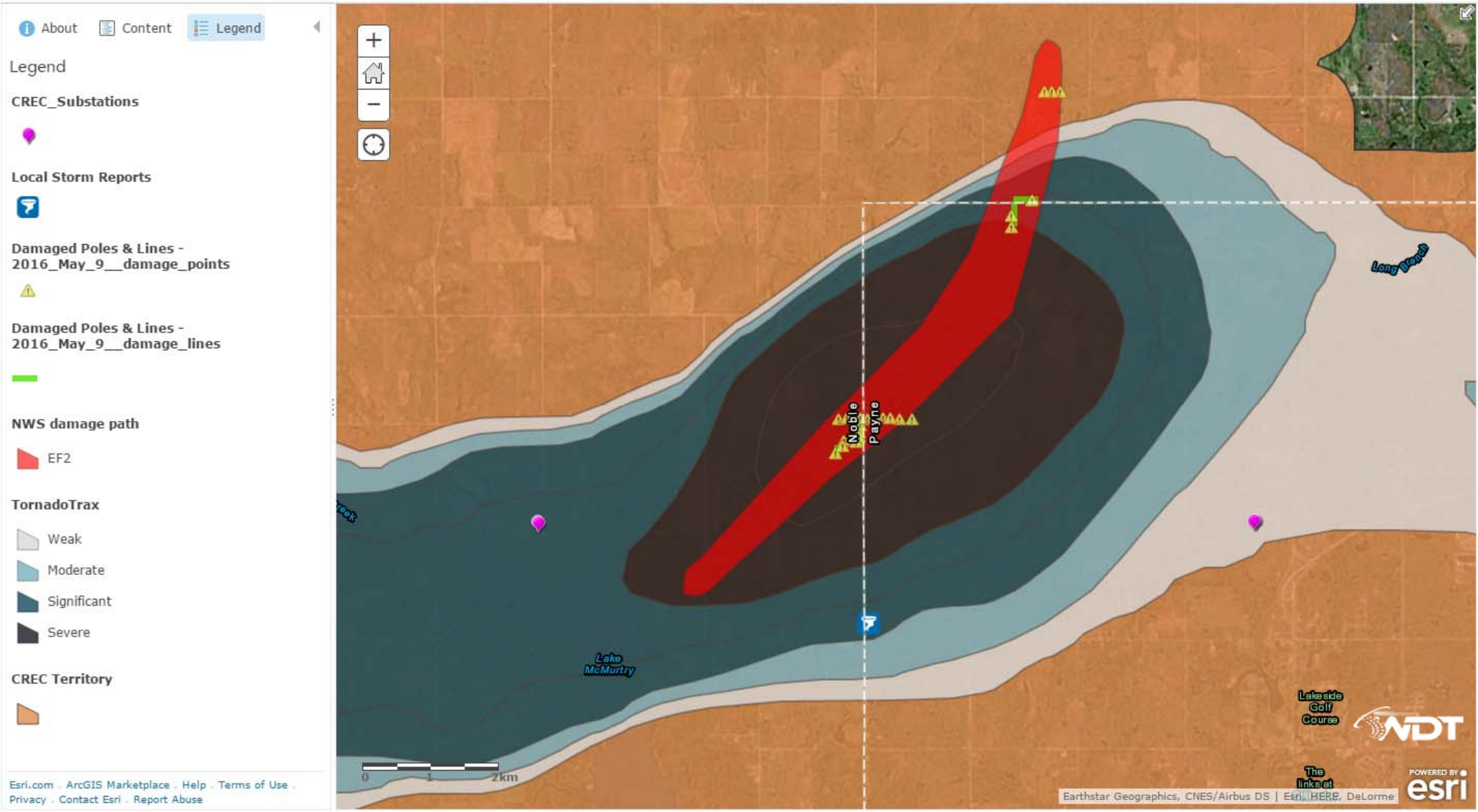
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NWS damage path
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Earthstar Geographics, CNES/Airbus DS | Esri, HERE, DeLorme
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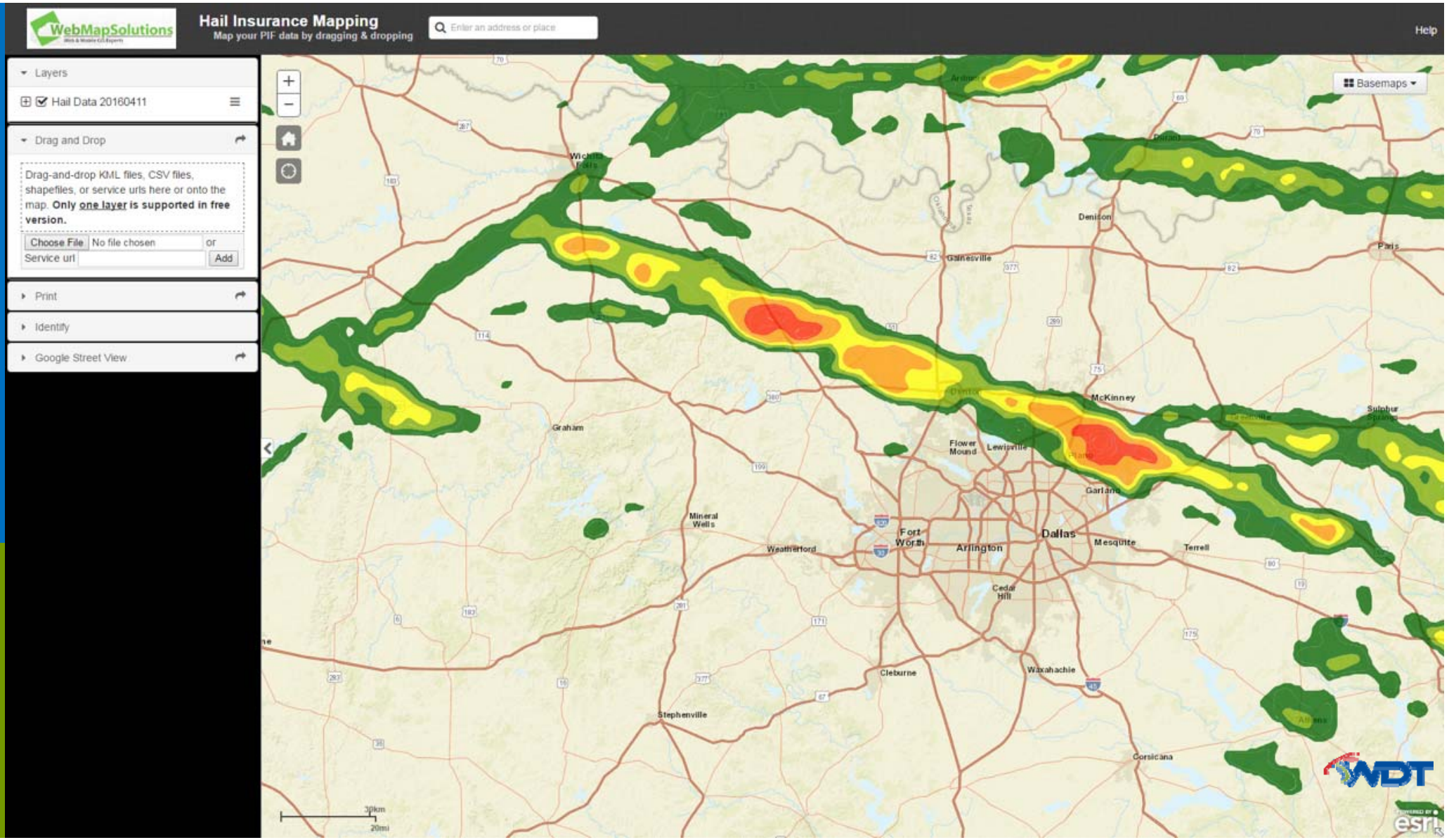
Purpose Built Apps

- Create geo-processes
  - Intersect assets
- ArcGIS API for JavaScript
- Simplify repeated workflow
- Build and utilize widgets
- Make data and analytics more accessible!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Hail Insurance Mapping
Map your PIF data by dragging & dropping
Enter an address or place
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Drag and Drop
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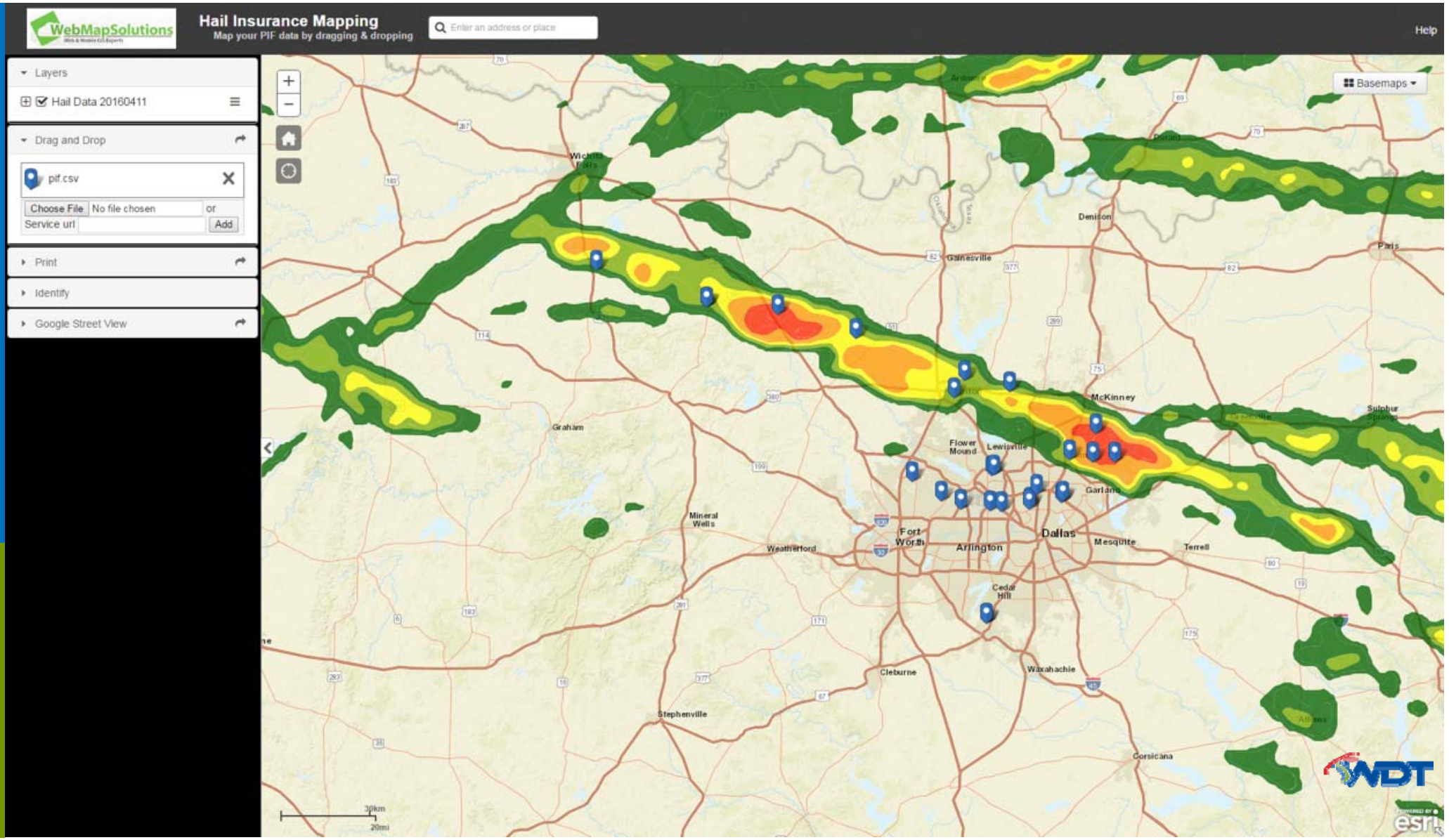
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Zip	Lat	Long	Roof Area	Age	Condition	Type	Insured amount	**Hail Size**
76201	33.207357	-97.11906	2500	11	Fair	Laminated 2 ply asphalt	$100,000	**0.00**
75002	33.095195	-96.60067	2800	6	Good	Laminated 2 ply asphalt	$168,325	**0.00**
75019	32.967171	-96.98245	2400	6	Good	Standard 3 tab asphalt	$643,235	**2.25**
75038	32.858906	-96.98746	44658	15	Fair	Painted structural metal panel	$1,001,357	**2.50**
75062	32.512537	-97.00194		12	Good	Metal Shake Panel	$957,234	**0.00**
75038	32.512693	-97.0001		15	Good	Concrete tile, profile	$852,354	**0.75**
75238	32.884937	-96.72502		9	Good	Laminated 2 ply asphalt	$465,321	**2.00**
75238	32.88773	-96.71983	6100	12	Good	Laminated 2 ply asphalt	$221,129	**0.00**
75220	32.870883	-96.84125		9	Good	Standard 3 tab asphalt	$283,384	**0.75**
75019	32.968735	-96.97226	2500	12	Good	Standard 3 tab asphalt	$354,284	**0.00**
75062	32.856518	-96.94492	6100	3		Impact resistant stone-coated metal panels	$197,235	**1.00**
76039	32.863475	-97.09344		6	Good	Impact resistant 3 ply asphalt	$798,359	**0.00**
75220	32.863855	-96.84507	3754	6	Excellent	Impact resistant 3-ply asphalt	$1,128,238	**0.00**
75165	32.909167	-96.81694	25000	15	Good	Flat Tile	$352,254	**1.50**
76210	33.260196	-97.07972		9	Good	Laminated 2 ply asphalt	$156,235	**2.75**
76034	32.889199	-97.16713	3000	9	Good	Laminated 2 ply asphalt	$135,268	**1.00**
76244	32.947672	-97.27354		3	Excellent	Laminated 2 ply asphalt	$685,238	**0.00**
75074	33.015481	-96.69646	5000	15	Fair	Cedar Shake	$438,351	**3.00**
75098	33.009524	-96.53139	77300	15	Good	Modified Bitumen	$385,235	**0.00**
75094	33.009341	-96.61119	83700	14	Fair	Modified Bitumen	$482,987	**2.50**
76227	33.224195	-96.91687		15	Fair	Modified Bitumen	$325,358	**1.75**
76234	33.387689	-97.4781	15400	10	Poor	Coated Modified Bitumen	$378,263	**1.25**
76431	33.596177,	-98.43047	56000	6	Excellent	Single Ply	$145,253	**3.00**
76230	33.483903	-98.02584		15	Fair	Modified Bitumen	$199,268	**0.00**
76230	33.483903	-98.02584		12	Good	Built up Roof (BUR)	$183,238	**0.00**
76228	33.461789	-97.76521		3	Excellent	Modified Bitumen	$2,824,053	**1.75**

Key Takeaways

1

No One is Immune!

2

The Time to Plan is NOT During an Event

WIND

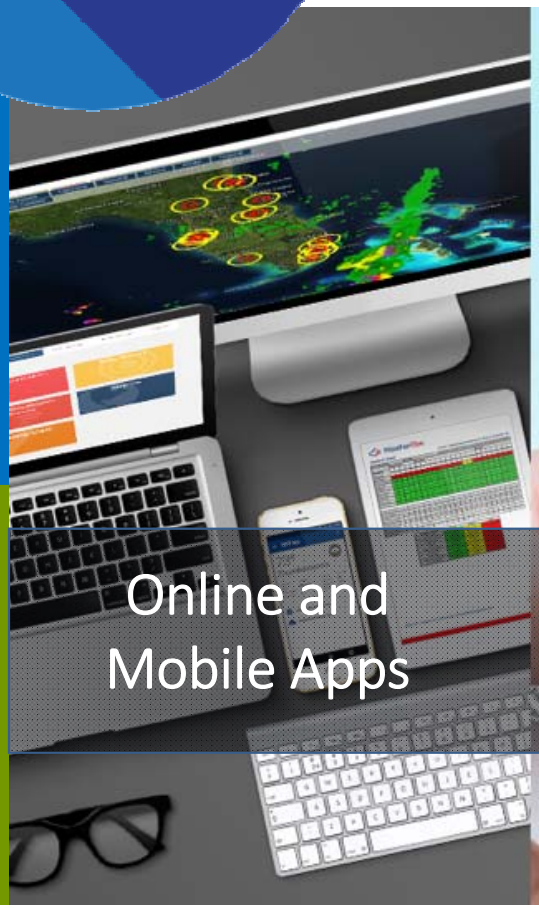
TORNADOES

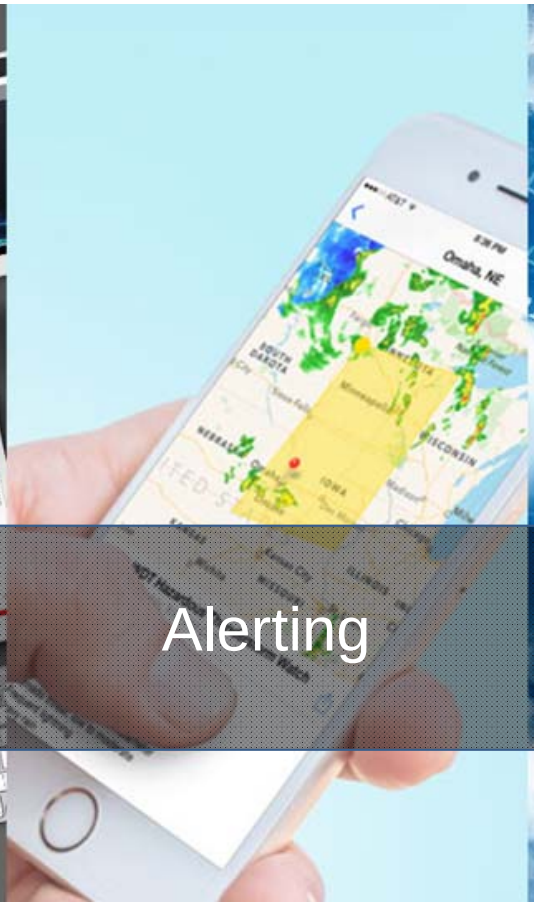
HAIL

LIGHTNING

3

There are Experts – Use Them!





Get in Touch

WDTinc.com

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Weather Solutions Expert - GIS
mgaffner@wdtinc.com