



MURRAY AND TRETTEL, INCORPORATED

December 31, 2011

ComEd
Lincoln Centre Two
Two Lincoln Centre
Oakbrook Terrace, Illinois 60181

Re: Detailed Report of Weather Events February 1st and 2nd, 2011

Introduction:

I, Thomas R. Piazza, Certified Consulting Meteorologist and President of Murray and Trettel, Inc. of Palatine, Illinois, have been asked by the Commonwealth Edison Company (“ComEd”), to provide a written report on the weather pattern and associated Blizzard Weather Event(s) that occurred during the period February 1st and 2nd, 2011 across ComEd’s service territory in Northern Illinois.

In the process of formulating my conclusions and opinions expressed in this report, I examined the weather data reports, images and maps, documents and other information and reports listed in Appendix A.

Executive Summary:

The intent of this report is to describe in a meteorological context the weather events, and their severity that occurred across ComEd’s service territory in Northern Illinois on February 1st and 2nd, 2011. This major snowstorm event was classified as a blizzard. A blizzard is defined as a storm in which the visibility is reduced to ¼ mile or less due to snow and/or blowing snow, the winds are 35 mph or higher (sustained or gusts) and these conditions last for approximately three (3) hours or longer.

This snowstorm was historic due to the record or near record amounts of snow that fell combined with damaging or near damaging winds. When considering the amount of snowfall, strength of the winds and the geographic area of coverage, this **Blizzard** event was one of the most powerful snowstorms to affect Northern Illinois in the past 125 years, bringing crippling whiteout conditions to many areas for a prolonged period of time.

O’Hare International Airport (“KORD”) recorded 20.2 inches of snow (see image 158 for snowfall amounts across Northern Illinois), making this the third greatest snowfall in Chicago history **dating back to 1886**. For Chicago it was the biggest snowstorm in the month of February. **Rockford International Airport in Rockford, Illinois (“KRFD”) recorded 14.3 inches** of snow, making it the fourth largest snowfall on record **since 1906** when official weather records began. It was also the greatest snowfall in the month of February.

Quad Cities International Airport (“KMLI”) in Moline, Illinois observed 16.7 inches of snow from the evening of February 1st to the morning of February 2nd, setting a new 24 hour snowfall record. **Records at KMLI date back to 1850.** The Moline three day total of 18.4 inches also tied the record for a single storm that was set back in January of 1979. **Mitchell International Airport in Milwaukee, WI (“KMKE”) recorded 16.0 inches of snow during the Blizzard.** The 16.0 inches fell between 6 pm on Tuesday, February 1st and noon on Wednesday, February 2nd. This total is tied for fourth for any 24 hour period. This Blizzard also caused record or near record snowfall in areas adjacent to the ComEd service territory that can be found in the Conclusion and Summary Section.

This snowstorm event caused the following severe weather and weather related events across ComEd’s service territory:

1. Damaging winds of 50 to 70 mph
2. Prolonged blizzard conditions causing whiteouts
3. Cloud to ground lightning
4. Record snowfall of 10 to 24 inches
5. Snow drifts 2 to 5 feet with a few drifts 10 feet and higher
6. Counties and municipalities declaring snow emergencies
7. Numerous roads closed due to whiteout conditions or heavy snow accumulations

The snowstorm began during the late morning hours on February 1st and continued through approximately 1200 hours on February 2nd. It affected all of ComEd’s service territory. The most intense part of the storm was between 1500 hours on February 1st and 0300 hours on February 2nd, when crippling whiteout or near whiteout weather conditions occurred over much of ComEd’s service territory. There were numerous 50 to 70 mph wind gusts during this period of time. After 0300 hours winds slowly subsided through the remainder of the morning and afternoon. There was a second period of heavy Lake Effect (“LE”) snow that caused whiteout or near whiteout conditions between 0600 hours and 0900 hours on February 2nd, from the Fox River Valley eastward.

Blizzard Event February 1 and 2, 2011:

Background and Supporting Information

- Radar images are from the National Weather Service (“NWS”) Doppler Radar Sites in Davenport, IA (“KDVN”) and Romeoville, IL (“KLOT”).
- Other supporting maps and images are from KLOT, KDVN, the Lincoln, IL (“ILX”) NWS Office and the Milwaukee, WI (“KMKX”) NWS Office.
- All wind speed reports that are indicated with a +, e.g., 70+ mph, are estimated wind speeds made by this author that are based upon the measured speeds with associated damage descriptions for that particular event, and the guidelines outlined in, A Recommendation for an Enhanced Fujita Scale.
- Lightning count information shown on the radar images represent the total number of lightning strokes in the previous thirty (30) minute timeframe, unless otherwise noted. E.g., on the image labeled

“approximately 2100 hours”, the lightning count is the total number of strokes from 2030 to 2159 hours inclusive.

- The outage and severe weather reports plotted on the radar images follow the same guideline as the lightning counts noted in the above paragraph.
- All times are Central Standard Time (“CST”) unless otherwise noted.
- The lack of surface reports and/or local storm reports over a particular area **does not imply** severe weather conditions were not occurring. ComEd’s service territory covers over 11,395 square miles while the NWS and Federal Aviation Administration (“FAA”) operate and maintain only nineteen (19) Surface Weather Stations in their service territory, which is one (1) weather observing station per 600 square miles of territory. In a storm such as this, conditions are more widespread and homogeneous when compared to a severe thunderstorm event. *Therefore, each reporting station would be more representative of weather conditions throughout a large area surrounding the observing site.*

Meteorological Situation

On Monday, January 31, 2011 a strong upper air disturbance was moving across the Southern Rockies and Northern Mexico associated with a 150-200 mph jet stream extending from the Baja Peninsula into Northeast Texas. This upper air disturbance was steering a surface low out of Mexico into Southwest Texas by late Monday evening. This upper air situation also allowed a strong southerly low level jet to develop ahead of it, from the Western Gulf of Mexico northward into Arkansas. This strong southerly low level jet consequently transported a deep layer of Gulf moisture to flow northward into the midsection of the country. This set the stage for a major precipitation event across the Central U.S.

While this was taking shape over the Southern U.S., farther north in Western Canada a major upper air ridge had developed over the Canadian Rockies. This upper air ridge allowed a massive arctic high pressure system to develop over Western Canada and move into Southern Manitoba, Southern Saskatchewan and Northeast Montana. This northern weather development was crucial in the development and outcome of the storm system developing over the Southern U.S. over the next 48 hours. It would create a major pressure differential in the lowest 10,000 feet of the atmosphere that would generate high winds over a large geographic area between the high pressure system and the intensifying storm system emerging out of Texas. This arctic high pressure system was also pushing extremely cold air southward into the Plains and Northern Midwest. Temperatures late Monday, January 31st, were near 20 below zero (Fahrenheit degrees) in Northern Montana and near 70 in Southeast Texas.

The intensifying low pressure system in Texas had moved to just west of Shreveport, Louisiana and the high pressure system had moved into Northeast Montana by Tuesday morning. The central pressure of the high pressure system was 1054 millibars (“mb”) and the low was 998 mb. This was a difference of 56 mb over a 1200 mile distance or .047 mb per mile. Heavy snow was spreading from Eastern Oklahoma northeastward into Missouri and West-Central Illinois. Due to the increasing pressure gradient, winds were increasing to the north and northwest of the low pressure system.

The low pressure system had moved northeastward into the southern tip of Illinois and deepened to 996 mb, while the high pressure system was at 1050 mb, which is a difference of 55 mb (see Image 1 below). This was over a distance of 900 miles or .06 mb per mile. This indicates that the pressure gradient had increased

significantly. Blizzard or near blizzard conditions were now occurring in Missouri, Iowa, Northern Illinois and Indiana, Southern Wisconsin, and the Southern Great Lakes.

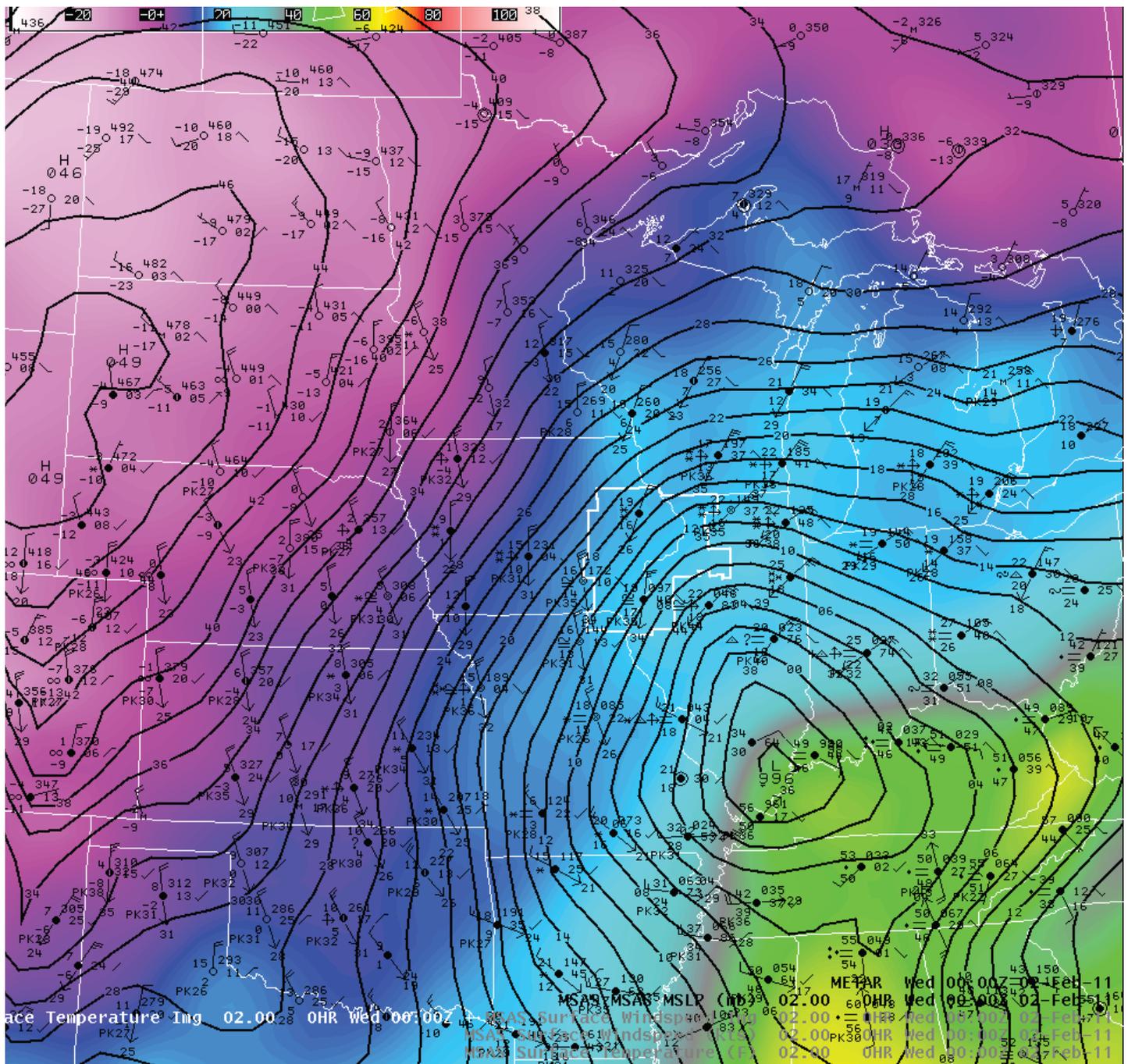


Image 1 Surface Weather Map 1800 hours on February 1, 2011
courtesy KDVN NWS office

Very strong low level winds had developed in the atmosphere from the surface up to 10,000 feet (see image 2 below). Combining this with the very tight surface pressure gradient set the stage for damaging winds to occur over a broad geographic area, including all of the ComEd service territory.

The storm system continued to move rapidly northeastward from Southern Illinois to Lake Erie by mid-morning Wednesday. As it moved along this track, the wind flow shifted slowly around to the north, causing a heavy band of LE snow to set up in Southeast Wisconsin and shift southward across Northeast Illinois.

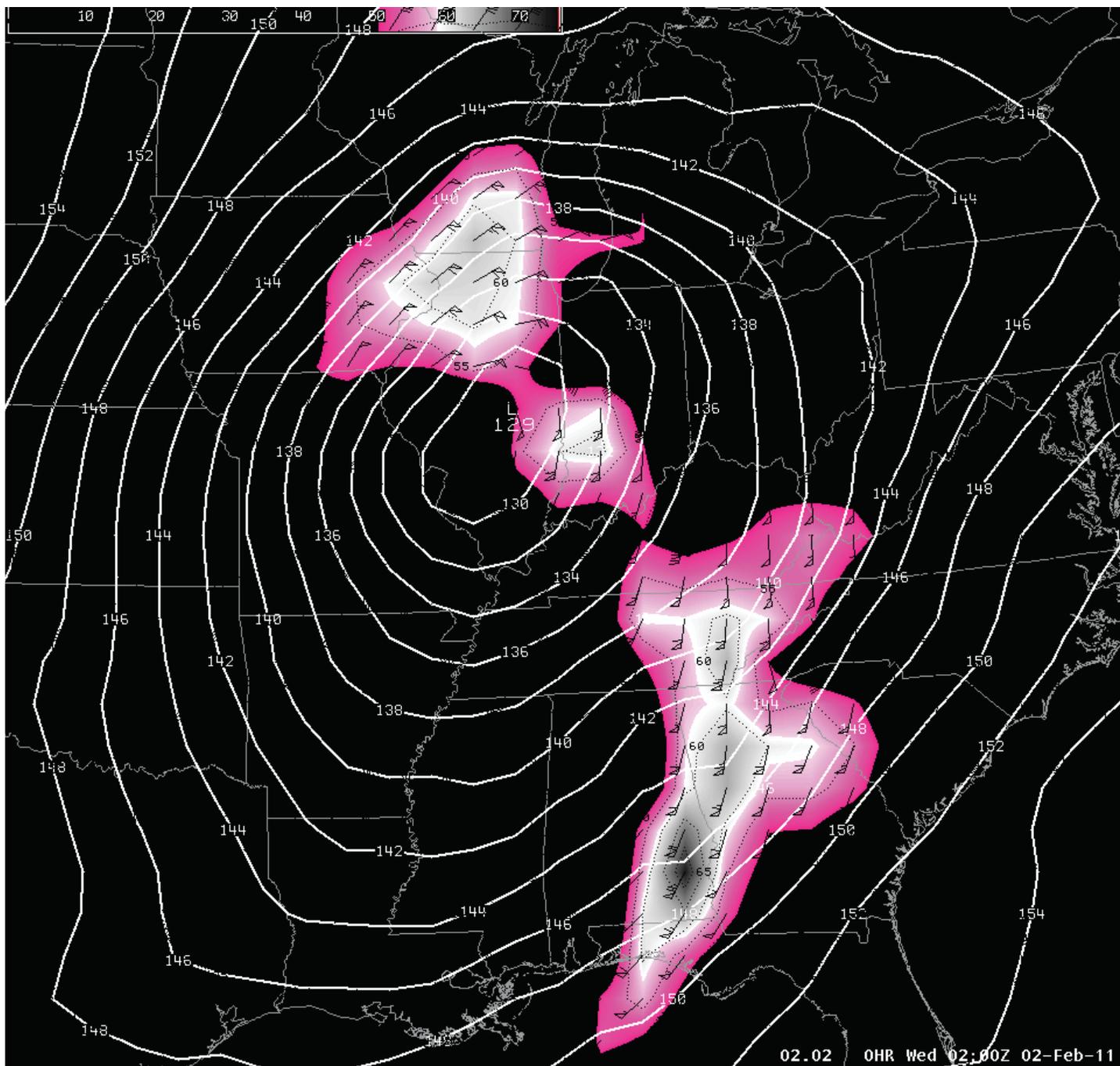


Image 2 850 mb (approximately 5000 feet) Weather Map 1800 hours on February 1, 2011
Winds are in knots
Courtesy KDVN NWS office

Chronology of events

Around 1100 hours on February 1, 2011, the intensifying storm system was centered in Southwest Arkansas and moving northeastward, while the arctic high was centered in Northeast Montana moving southeastward. Due to this scenario the pressure gradient was increasing and causing winds to increase across the ComEd service territory. Light LE snow was now falling across Lake, McHenry and Northern Cook counties, while the heavy band of snow associated with the storm was approaching from the south. The following radar images (Images 1-10) from KLOT and KDVN show the arrival of the snow from the south through 1500 hours.

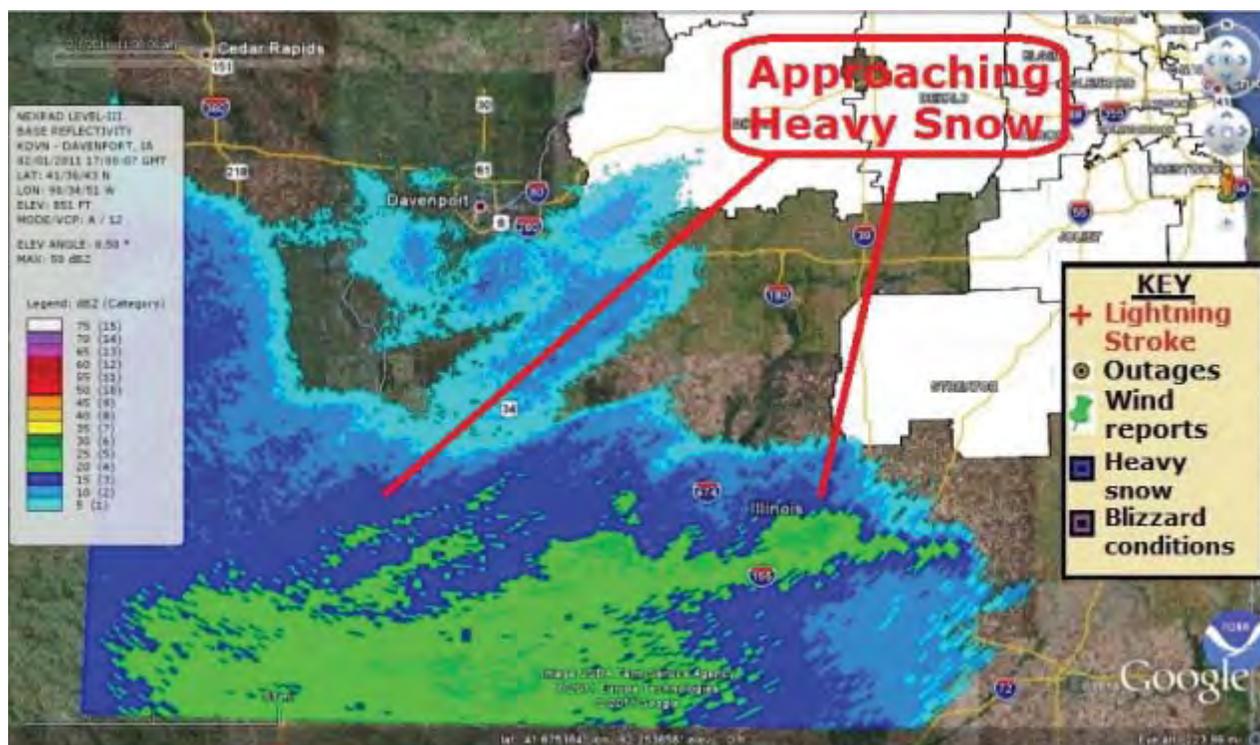


Image 3 KDVN NEXRAD Base Reflectivity Image on February 1, 2011 at 1100 hours

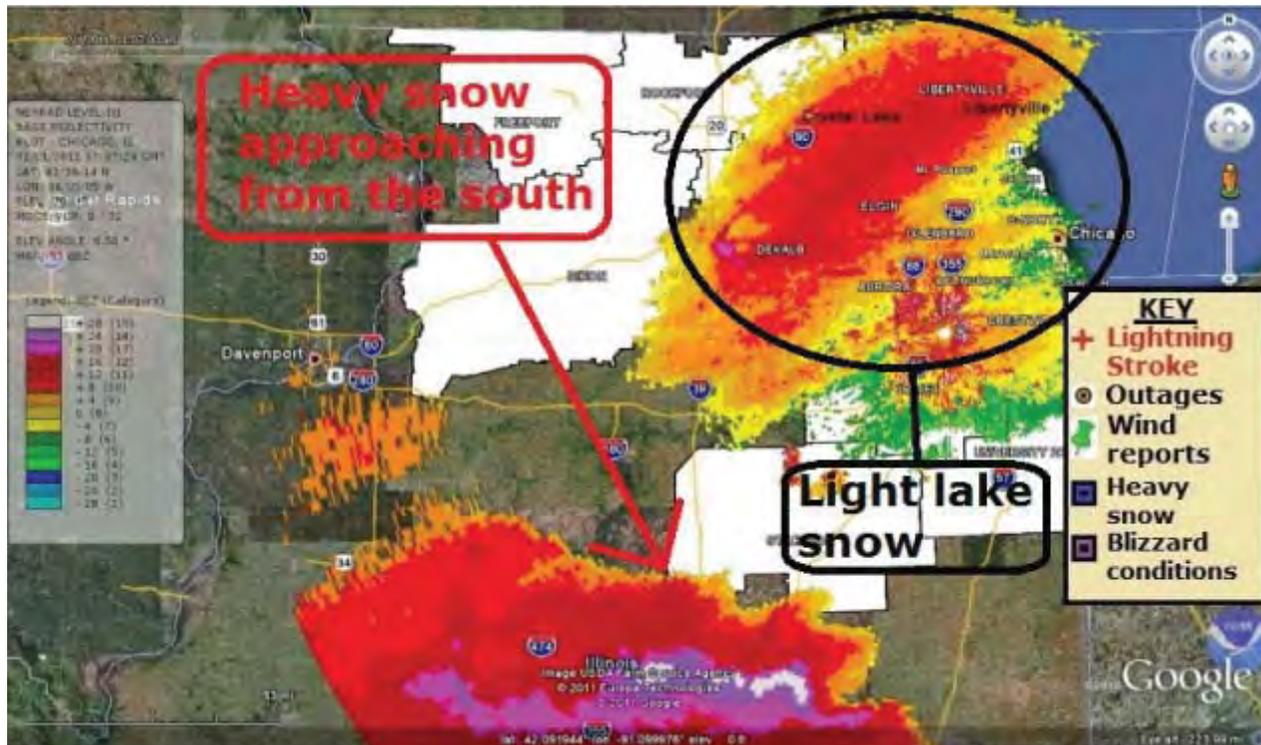


Image 4 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1100 hours

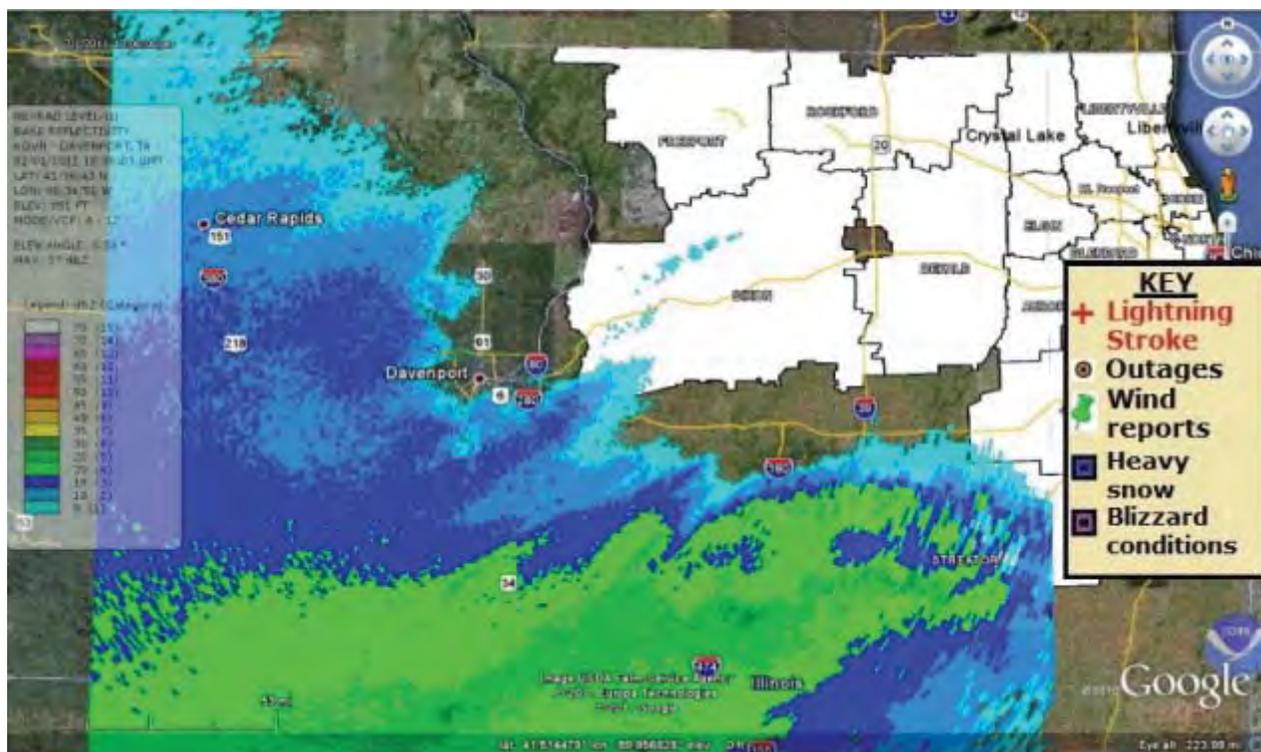


Image 5 KDVN NEXRAD Base Reflectivity Image on February 1, 2011 at 1200 hours

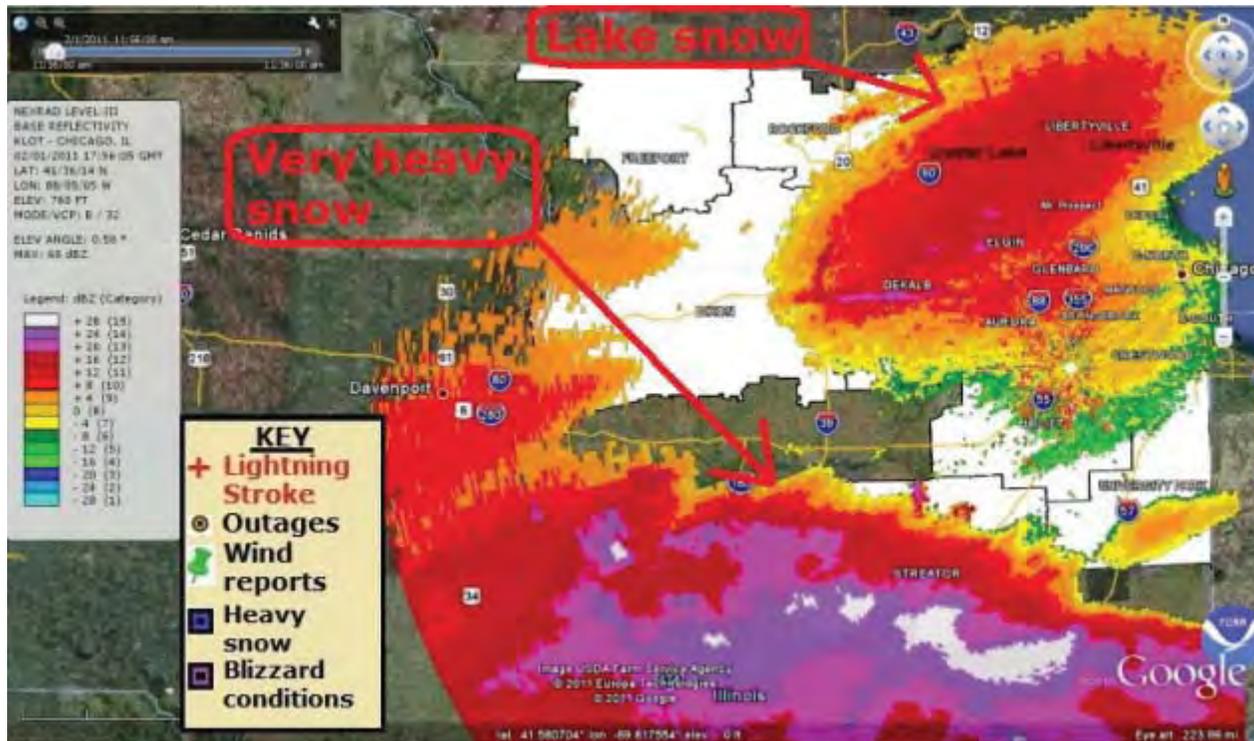


Image 6 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1200 hours

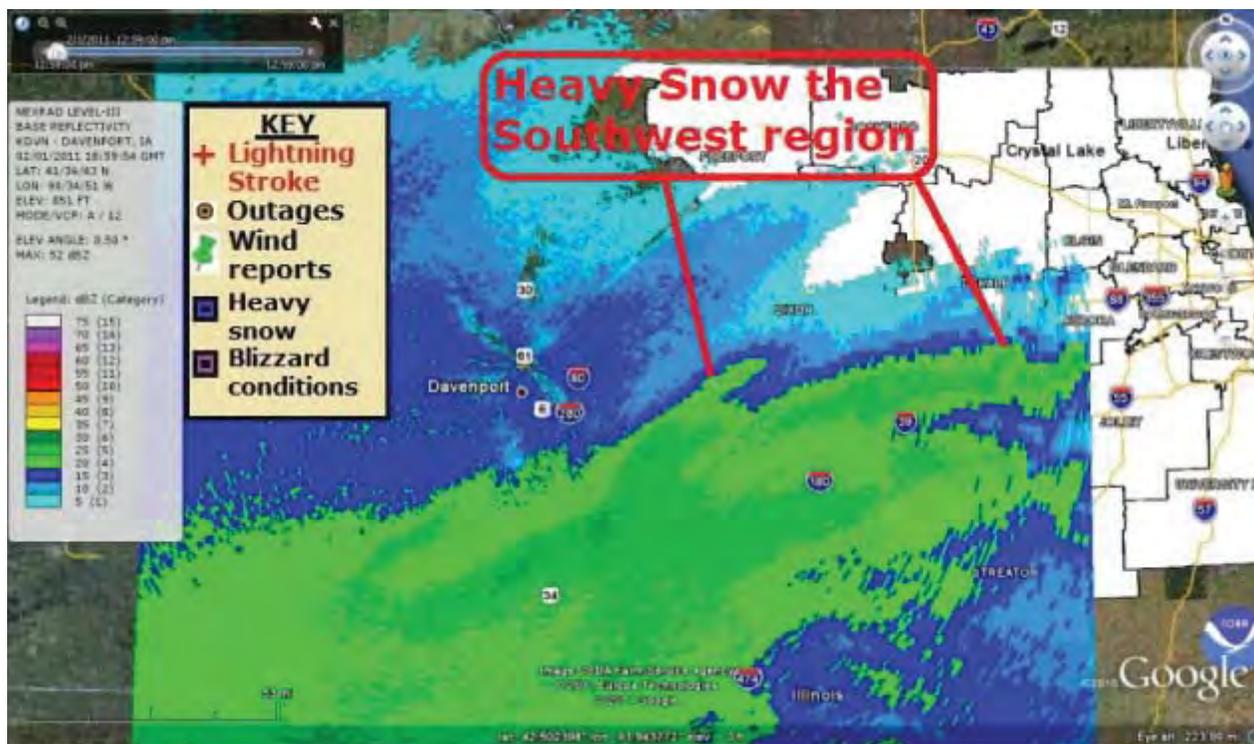


Image 7 KDVN NEXRAD Base Reflectivity Image on February 1, 2011 at 1300 hours

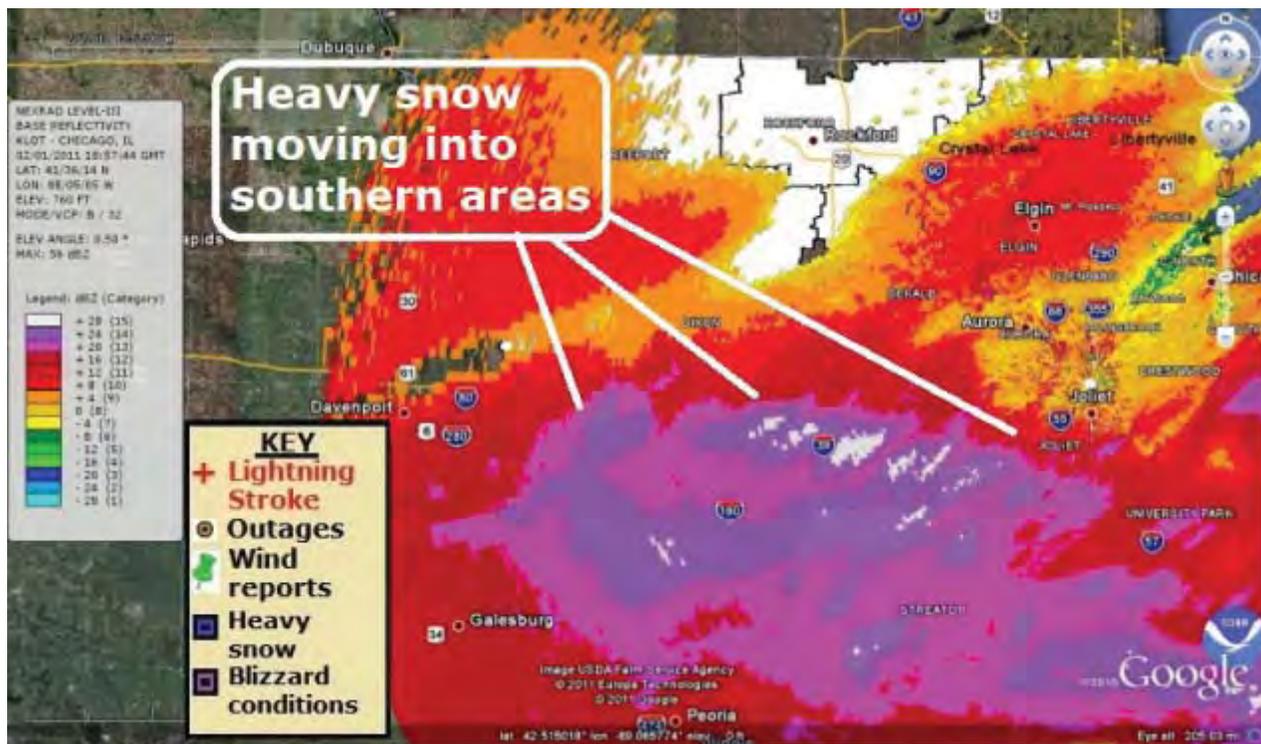


Image 8 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1300 hours

Total ComEd Customers Who Lost Power (Cumulative)	Customers Restored (Cumulative)	Customers Still Without Power
0	0	0

The above Table reflects counts through 1300 hours



Image 9 KDVN NEXRAD Base Reflectivity Image on February 1, 2011 at 1400 hours

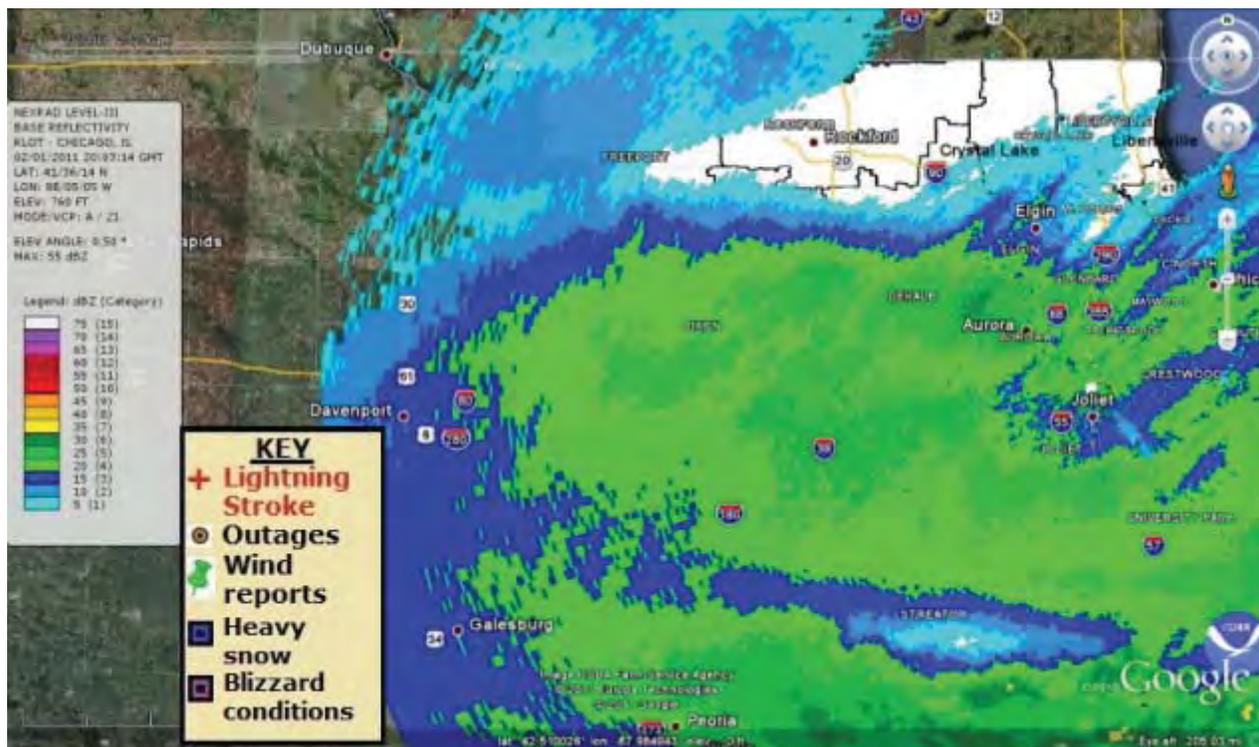


Image 10 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1400 hours

Total ComEd Customers Who Lost Power (Cumulative)	Customers Restored (Cumulative)	Customers Still Without Power
0	0	0

The above Table reflects counts through 1400 hours

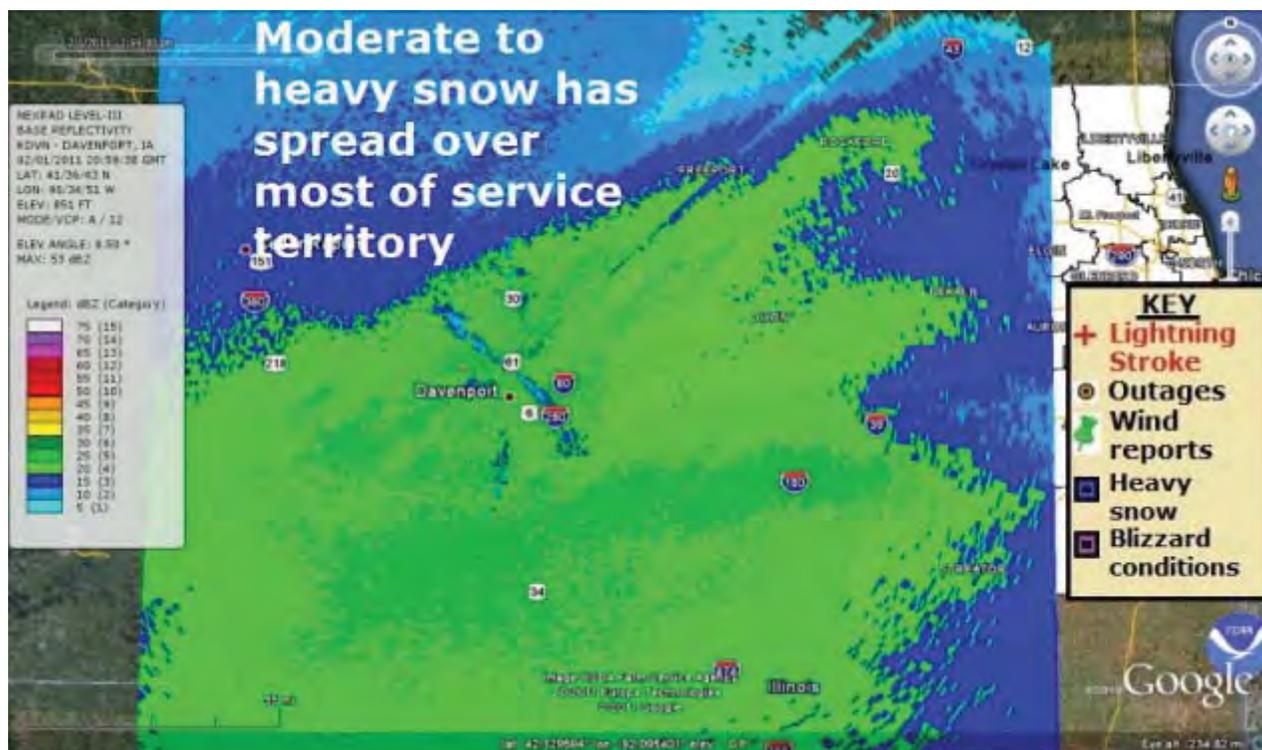


Image 11 KDVN NEXRAD Base Reflectivity Image on February 1, 2011 at 1500 hours

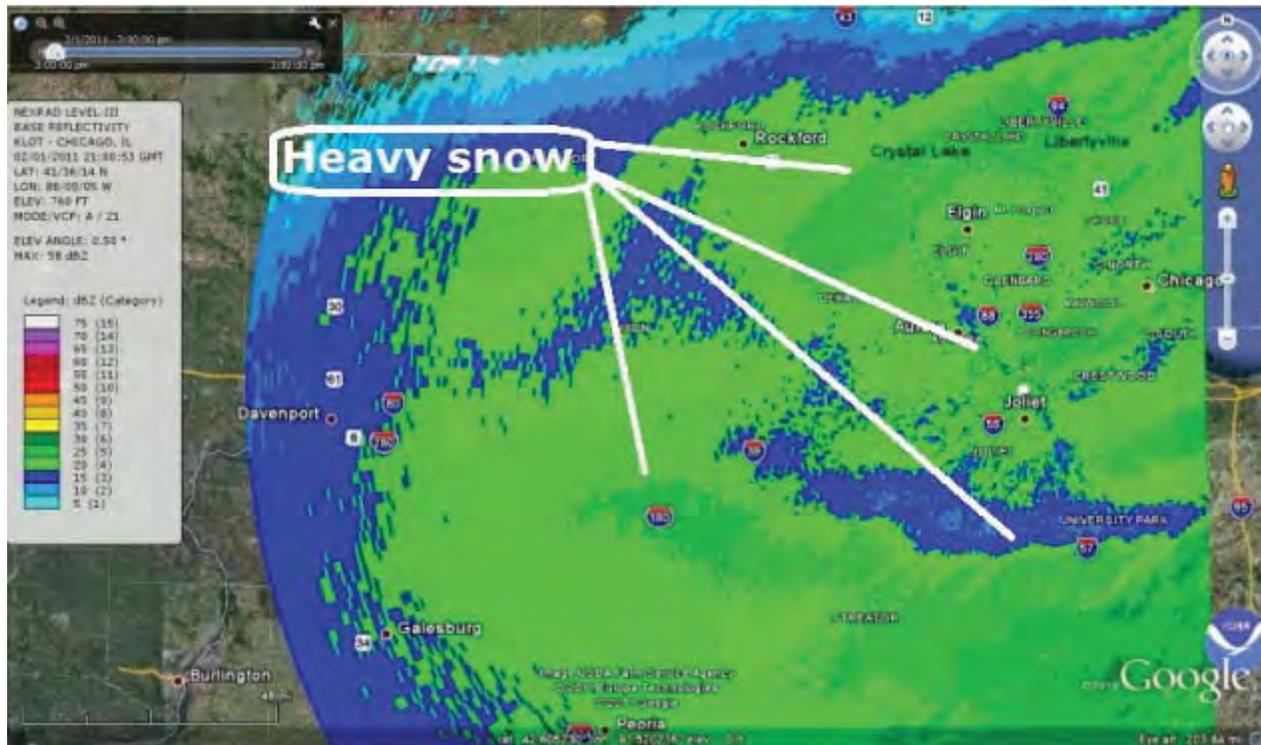


Image 12 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1500 hours

Total ComEd Customers Who Lost Power (Cumulative)	Customers Restored (Cumulative)	Customers Still Without Power
0	0	0

The above Table reflects counts through 1500 hours

During the afternoon hours on January 31st and morning hours on February 1st the NWS issued **BLIZZARD WARNINGS** for **ALL** of the ComEd service territory effective through mid-day on the 2nd. The following is a copy of the warnings issued at approximately 1100 hours on February 1st:

WWUS43 KILX 010406
 WSWILX
 URGENT - WINTER WEATHER MESSAGE
 NATIONAL WEATHER SERVICE LINCOLN IL
 1006 PM CST MON JAN 31 2011
 ...A MIXTURE OF LIGHT SLEET AND LIGHT FREEZING RAIN FOR PORTIONS OF CENTRAL ILLINOIS TONIGHT. THEN AN EXTREMELY DANGEROUS WINTER STORM IS EXPECTED TO IMPACT ILLINOIS TUESDAY AND WEDNESDAY...
 .MIXED PRECIPITATION HAS DIMINISHED OVER MUCH OF CENTRAL ILLINOIS THIS EVENING. SOME LIGHT FREEZING RAIN WILL STILL BE POSSIBLE OVER SOUTHEASTERN ILLINOIS...WITH LIGHT FREEZING DRIZZLE OR LIGHT SLEET AND SNOW ELSEWHERE. ADDITIONAL ACCUMULATIONS OVERNIGHT WILL BE MINOR.
 MEANWHILE A MAJOR WINTER STORM...DEVELOPING IN THE SOUTHERN PLAINS...WILL TAKE AIM ON CENTRAL AND SOUTHEAST ILLINOIS FOR TUESDAY THROUGH WEDNESDAY. AS THE STORM SYSTEM LIFTS NORTHEAST TOWARD THE OHIO VALLEY...A MIX OF SNOW... SLEET AND FREEZING RAIN WILL OVERSPREAD CENTRAL ILLINOIS FROM WEST TO EAST TUESDAY MORNING. AREAS SOUTH OF I-72 WILL SEE A MIX OF FREEZING RAIN... SNOW AND SLEET DURING THE DAY. AREAS SOUTH OF I-70 WILL SEE THE

PRECIPITATION BEGIN AS FREEZING RAIN AND SLEET TUESDAY MORNING AND THEN CHANGE TO ALL RAIN DURING THE AFTERNOON...WHEN TEMPERATURES RISE TO ABOVE FREEZING. HOWEVER...PRECIPITATION WILL CHANGE BACK TO FREEZING RAIN AND SLEET FOR TUESDAY EVENING... CHANGING TO ALL SNOW LATER TUESDAY NIGHT. THE HEAVIEST SNOWFALL ACCUMULATIONS WILL BE TUESDAY AFTERNOON THROUGH WEDNESDAY MORNING. GREATEST ICE ACCUMULATIONS WILL BE SOUTH OF A LINE FROM TAYLORVILLE TO PARIS DOWN TO AROUND THE I-70 CORRIDOR... WITH LESS ICE IN FAR SOUTHEAST ILLINOIS NEAR LAWRENCEVILLE. VERY WINDY CONDITIONS ARE ALSO EXPECTED WITH THIS SYSTEM TUESDAY AFTERNOON THROUGH WEDNESDAY...CREATING SIGNIFICANT BLOWING AND DRIFTING OF THE SNOW.

THE EXACT LOCATIONS OF THE HEAVIEST SNOWFALL AND ICE COULD STILL CHANGE DUE TO SMALL CHANGES IN THE FORECASTED STORM TRACK. THIS COULD ALSO RESULT IN CHANGES IN THE EXPECTED PRECIPITATION TYPES. SO STAY TUNED TO LATER UPDATES ON THIS DANGEROUS WINTER SITUATION. A LARGE PART OF THE MIDWEST IS EXPECTED TO BE IMPACTED BY THIS STORM. IF YOU ARE PLANNING TRAVEL OVER THE REGION...YOU SHOULD MONITOR THE LATEST FORECASTS...AND CONSIDER ALTERING YOUR PLANS IF POSSIBLE.

ILZ027>031-036>038-011000-

/O.CON.KILX.BZ.W.0001.110201T1200Z-110202T1800Z/

KNOX-STARK-PEORIA-MARSHALL-WOODFORD-FULTON-TAZEWELL-MCLEAN-
INCLUDING THE CITIES OF...GALESBURG...PEORIA...BLOOMINGTON...
NORMAL

1006 PM CST MON JAN 31 2011

...BLIZZARD WARNING REMAINS IN EFFECT FROM 6 AM TUESDAY TO NOON
CST WEDNESDAY...

A BLIZZARD WARNING REMAINS IN EFFECT FROM 6 AM TUESDAY TO NOON
CST WEDNESDAY.

* TIMING...LIGHT FREEZING DRIZZLE OR LIGHT SNOW WILL CONTINUE
ACROSS TONIGHT. SNOW WILL THEN INCREASE LATE TUESDAY MORNING AND
BECOME HEAVY TUESDAY AFTERNOON THROUGH TUESDAY NIGHT...THEN
DIMINISH WEDNESDAY. SIGNIFICANT BLOWING SNOW WILL OCCUR TUESDAY
AFTERNOON THROUGH WEDNESDAY.

* ACCUMULATIONS...SNOW ACCUMULATIONS OF 12 TO 18 INCHES ARE
EXPECTED...ESPECIALLY ALONG AND NW OF I-55.

* WINDS...NORTHEAST WINDS OF 25 TO 35 MPH WITH GUSTS TO 40 MPH
WILL OCCUR TUESDAY AFTERNOON AND TUESDAY NIGHT. WINDS WILL
REMAIN STRONG ON WEDNESDAY AS THEY BECOME NORTHWEST.

* IMPACTS...BLIZZARD CONDITIONS WILL CAUSE EXTREMELY HAZARDOUS
TRAVEL TUESDAY AFTERNOON THROUGH WEDNESDAY...OR LONGER.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A BLIZZARD WARNING MEANS SEVERE WINTER WEATHER CONDITIONS ARE
EXPECTED OR OCCURRING. FALLING AND BLOWING SNOW WITH STRONG WINDS
AND POOR VISIBILITIES ARE LIKELY. THIS WILL LEAD TO WHITEOUT
CONDITIONS...MAKING TRAVEL EXTREMELY DANGEROUS. DO NOT TRAVEL. IF
YOU MUST TRAVEL...HAVE A WINTER SURVIVAL KIT WITH YOU. IF YOU GET
STRANDED...STAY WITH YOUR VEHICLE.

&&

\$\$

WWUS43 KLOT 011726

WSWLOT

URGENT - WINTER WEATHER MESSAGE

NATIONAL WEATHER SERVICE CHICAGO IL

1126 AM CST TUE FEB 1 2011

...DANGEROUS MULTIFACETED AND LIFE THREATENING WINTER STORM...

ILZ019-021-023-032-033-039-INZ010-011-019-020130-

MURRAY & TRETTEL, INC. • 600 First Bank Drive, Ste A • Palatine, IL 60067 • 847-963-9000 • 847-963-0199

/O.CON.KLOT.BZ.W.0001.000000T0000Z-110202T2100Z/

LA SALLE-GRUNDY-KANKAKEE-LIVINGSTON-IROQUOIS-FORD-NEWTON-JASPER-
BENTON-

INCLUDING THE CITIES OF...OTTAWA...MORRIS...KANKAKEE...PONTIAC...
WATSEKA...PAXTON...MOROCO...RENSSELAER...FOWLER

1126 AM CST TUE FEB 1 2011 /1226 PM EST TUE FEB 1 2011/

...BLIZZARD WARNING REMAINS IN EFFECT UNTIL 3 PM CST /4 PM EST/
WEDNESDAY...

A BLIZZARD WARNING REMAINS IN EFFECT UNTIL 3 PM CST /4 PM EST/
WEDNESDAY.

- * TIMING...ACCUMULATING SNOW WILL DEVELOP EARLY THIS AFTERNOON AND CONTINUE OVERNIGHT BEFORE TAPERING OFF AND ENDING WEDNESDAY MORNING. THE MOST SIGNIFICANT SNOW MAY COME IN A COUPLE OF WAVES...WITH THE FIRST WAVE BEGINNING THIS AFTERNOON AND LASTING UNTIL THE EVENING FOLLOWED BY A SECOND WAVE OF INTENSE SNOW LATER THIS EVENING AND LASTING INTO THE OVERNIGHT HOURS.
- * ACCUMULATIONS...SNOW WILL BE HEAVY AT TIMES WITH ACCUMULATION RATES LIKELY REACHING OR EXCEEDING 1 TO 2 INCHES PER HOUR. STORM TOTAL SNOWFALL OF 10 TO 18 INCHES IS LIKELY...WITH POSSIBLE LOCALIZED TOTALS UP TO TWO FEET. SNOW MAY BECOME MIXED WITH OR CHANGE TO SLEET TONIGHT OVER EAST CENTRAL ILLINOIS...SHOULD SNOW MIX WITH OR CHANGE TO SLEET THEN THAT MAY LIKELY RESULT IN LOWER ACCUMULATIONS THAN ARE CURRENTLY FORECAST.
- * WINDS...NORTHEAST WINDS WILL INCREASE TO 20 TO 35 MPH BY LATE THIS AFTERNOON. WIND GUSTS UP TO 40 MPH WILL BE POSSIBLE BY EVENING WITH GUSTS OF 40 TO 50 MPH LIKELY TONIGHT.
- * BLIZZARD CONDITIONS...THE STRONG WINDS ALONG WITH BLOWING AND OCCASIONALLY HEAVY FALLING SNOW WILL REDUCE VISIBILITIES TO NEAR ZERO AT TIMES.
- * THUNDERSTORMS...ISOLATED SNOW-PRODUCING THUNDERSTORMS ARE EXPECTED TO DEVELOP TONIGHT...RESULTING IN LOCALIZED INTENSE SNOWFALL RATES. IT IS NOT UNCOMMON FOR SNOWFALL RATES TO EXCEED 4 INCHES PER HOUR IN THUNDER SNOW...MAKING TRAVEL NEARLY IMPOSSIBLE.
- * TRAVEL...CONDITIONS WILL RAPIDLY DETERIORATE THIS AFTERNOON AS SNOW DEVELOPS FROM SOUTH TO NORTH ACROSS THE AREA. TRAVEL IS EXPECTED TO BECOME TREACHEROUS BY EARLY AFTERNOON...AND EXTREMELY DANGEROUS BY EVENING AS WINDS INCREASE RESULTING IN WHITE OUT CONDITIONS. SNOWFALL RATES WILL BE SO INTENSE AT TIMES THAT ROAD CREWS MAY BE UNABLE TO KEEP PRIMARY ROADS AND HIGHWAYS CLEARED. UNNECESSARY TRAVEL SHOULD BE AVOIDED AT ALL COSTS THIS EVENING THROUGH EARLY WEDNESDAY MORNING AS MORE THAN HALF OF THE FATALITIES IN PREVIOUS ILLINOIS BLIZZARDS HAVE OCCURRED AS A RESULT OF TRAFFIC ACCIDENTS. BEFORE MAKING THE DECISION TO TRAVEL...CONSIDER IF GETTING TO YOUR DESTINATION IS WORTH PUTTING YOUR LIFE AT RISK.
- * POWER OUTAGES...THE COMBINATION OF STRONG AND GUSTY WINDS ALONG WITH POSSIBLY HEAVY WET SNOW COULD BRING POWER LINES DOWN AND RESULT IN POWER OUTAGES. DUE TO THE PROLONGED NATURE OF VERY ADVERSE CONDITIONS...PLAN ACCORDINGLY FOR THE POSSIBILITY OF POWER OUTAGES.

* OTHER IMPACTS...THE HEAVY NATURE OF THE SNOW WILL MAKE SHOVELING VERY DIFFICULT...AND POTENTIALLY DEADLY. DURING AND IMMEDIATELY FOLLOWING THE BLIZZARD OF 1999 OVER 40 PEOPLE IN THE CHICAGO AREA ALONE LOST THEIR LIVES TO HEART ATTACKS WHILE SHOVELING THE HEAVY SNOWFALL. TAKE FREQUENT BREAKS INDOORS AND DO NOT UNDERESTIMATE THE TASK AT HAND WHEN SHOVELING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A BLIZZARD WARNING MEANS SEVERE WINTER WEATHER CONDITIONS ARE EXPECTED OR OCCURRING. FALLING AND BLOWING SNOW WITH STRONG WINDS AND POOR VISIBILITIES ARE LIKELY. THIS WILL LEAD TO WHITEOUT CONDITIONS...MAKING TRAVEL EXTREMELY DANGEROUS. DO NOT TRAVEL. IF YOU ABSOLUTELY MUST TRAVEL...HAVE A WINTER SURVIVAL KIT WITH YOU. IF YOU GET STRANDED...STAY WITH YOUR VEHICLE.

&&

\$\$

ILZ003>006-008-010>014-020-022-INZ001-002-020130-

/O.CON.KLOT.BZ.W.0001.110201T2100Z-110202T2100Z/

WINNEBAGO-BOONE-MCHENRY-LAKE IL-OGLE-LEE-DE KALB-KANE-DUPAGE-COOK-KENDALL-WILL-LAKE IN-PORTER-

INCLUDING THE CITIES OF...ROCKFORD...BELVIDERE...WOODSTOCK...

WAUKEGAN...OREGON...DIXON...DEKALB...AURORA...WHEATON...CHICAGO...

OSWEGO...JOLIET...GARY...VALPARAISO

1126 AM CST TUE FEB 1 2011

...BLIZZARD WARNING REMAINS IN EFFECT FROM 3 PM THIS AFTERNOON TO 3 PM CST WEDNESDAY...

A BLIZZARD WARNING REMAINS IN EFFECT FROM 3 PM THIS AFTERNOON TO 3 PM CST WEDNESDAY.

* TIMING...ACCUMULATING SNOW WILL DEVELOP AROUND THE INTERSTATE 80 CORRIDOR DURING THE EARLY TO MID AFTERNOON...SPREADING NORTH TO THE WISCONSIN STATE LINE BY MID TO LATE AFTERNOON. THE MOST SIGNIFICANT SNOW MAY COME IN A COUPLE OF WAVES...WITH THE FIRST WAVE LATE THIS AFTERNOON INTO EARLY THIS EVENING... FOLLOWED BY A SECOND WAVE OF INTENSE SNOW LATER THIS EVENING INTO THE OVERNIGHT. ACCUMULATING LAKE EFFECT SNOW SHOWERS WILL CONTINUE OVER NORTHEAST ILLINOIS WEDNESDAY MORNING...SPREADING INTO NORTHWEST INDIANA WEDNESDAY AFTERNOON.

* ACCUMULATIONS...SNOW WILL BE HEAVY AT TIMES WITH ACCUMULATION RATES LIKELY REACHING OR EXCEEDING 1 TO 2 INCHES PER HOUR. STORM TOTAL SNOWFALL OF 10 TO 18 INCHES IS LIKELY TOWARD ROCKFORD AND DIXON. THE HEAVIEST SNOWFALL TOTALS ARE LIKELY DOWNWIND OF LAKE MICHIGAN IN THE CHICAGO METROPOLITAN AREA INTO NORTHWEST INDIANA WHERE 12 TO 20 INCHES OF SNOW IS LIKELY...WITH POSSIBLE LOCALIZED TOTALS UP TO TWO FEET.

* WINDS...NORTHEAST WINDS WILL INCREASE TO 20 TO 35 MPH BY LATE THIS AFTERNOON. WIND GUSTS UP TO 40 MPH WILL BE POSSIBLE BY EVENING WITH GUSTS OF 40 TO 50 MPH LIKELY TONIGHT. EVEN STRONGER WINDS ARE LIKELY NEAR THE IMMEDIATE LAKE SHORE WITH SUSTAINED WINDS OF 30 TO 40 MPH WITH GUSTS BETWEEN 50 AND 60 MPH.

* BLIZZARD CONDITIONS...THE STRONG WINDS ALONG WITH BLOWING AND OCCASIONALLY HEAVY FALLING SNOW WILL REDUCE VISIBILITIES TO

NEAR ZERO AT TIMES.

- * THUNDERSTORMS...ISOLATED SNOW-PRODUCING THUNDERSTORMS ARE EXPECTED TO DEVELOP TONIGHT...RESULTING IN LOCALIZED INTENSE SNOWFALL RATES. IT IS NOT UNCOMMON FOR SNOWFALL RATES TO EXCEED 4 INCHES PER HOUR IN THUNDER SNOW MAKING TRAVEL NEARLY IMPOSSIBLE.
- * TRAVEL...ROAD CONDITIONS WILL RAPIDLY DETERIORATE DURING THE MID TO LATE AFTERNOON AS SNOW DEVELOPS FROM SOUTH TO NORTH ACROSS THE AREA. TRAVEL IS EXPECTED TO BECOME TREACHEROUS BY LATE AFTERNOON...AND DOWNRIGHT DANGEROUS BY EARLY EVENING AS WINDS INCREASE RESULTING IN WHITE OUT CONDITIONS. SNOWFALL RATES WILL BE SO INTENSE AT TIMES THAT ROAD CREWS MAY BE UNABLE TO KEEP PRIMARY ROADS AND HIGHWAYS CLEARED. UNNECESSARY TRAVEL SHOULD BE AVOIDED AT ALL COSTS THIS AFTERNOON THROUGH EARLY WEDNESDAY MORNING AS MORE THAN HALF OF THE FATALITIES IN PREVIOUS ILLINOIS BLIZZARDS HAVE OCCURRED AS A RESULT OF TRAFFIC ACCIDENTS. BEFORE MAKING THE DECISION TO TRAVEL...CONSIDER IF GETTING TO YOUR DESTINATION IS WORTH PUTTING YOUR LIFE AT RISK.
- * POWER OUTAGES...THE COMBINATION OF STRONG AND GUSTY WINDS ALONG WITH POSSIBLY HEAVY WET SNOW STICKING TO POWER LINES COULD RESULT IN POWER OUTAGES. DUE TO THE PROLONGED NATURE OF VERY ADVERSE CONDITIONS...PLAN ACCORDINGLY FOR THE POSSIBILITY OF A PROLONGED DISRUPTION IN COMMERCIAL POWER.
- * OTHER IMPACTS...THE HEAVY NATURE OF THE SNOW WILL MAKE SHOVELING VERY DIFFICULT...AND POTENTIALLY DEADLY. DURING AND IMMEDIATELY FOLLOWING THE BLIZZARD OF 1999 OVER 40 PEOPLE IN THE CHICAGO AREA ALONE LOST THEIR LIVES TO HEART ATTACKS WHILE SHOVELING THE HEAVY SNOWFALL. TAKE FREQUENT BREAKS INDOORS AND DO NOT UNDERESTIMATE THE TASK AT HAND WHEN SHOVELING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A BLIZZARD WARNING MEANS SEVERE WINTER WEATHER CONDITIONS ARE EXPECTED OR OCCURRING. FALLING AND BLOWING SNOW WITH STRONG WINDS AND POOR VISIBILITIES ARE LIKELY. THIS WILL LEAD TO WHITEOUT CONDITIONS...MAKING TRAVEL EXTREMELY DANGEROUS. DO NOT TRAVEL! IF YOU ABSOLUTELY MUST TRAVEL...HAVE A WINTER SURVIVAL KIT WITH YOU. IF YOU GET STRANDED...STAY WITH YOUR VEHICLE.

&&

\$\$

SHEA

WWUS43 KDVN 011658

WSWDVN

URGENT - WINTER WEATHER MESSAGE

NATIONAL WEATHER SERVICE QUAD CITIES IA IL

1058 AM CST TUE FEB 1 2011

...LIFE THREATENING WINTER STORM WITH BLIZZARD CONDITIONS THIS AFTERNOON THROUGH WEDNESDAY MORNING...

.AN INTENSE WINTER STORM SYSTEM IN ARKANSAS WILL MOVE NORTHEAST INTO INDIANA BY LATE TONIGHT. THIS WILL SPREAD SNOW...HEAVY AT TIMES...ALONG WITH STRONG WINDS AND BLOWING SNOW ACROSS MUCH OF MISSOURI...IOWA AND ILLINOIS. HEAVY SNOW ACCUMULATIONS ARE EXPECTED OVER THE ENTIRE

BLIZZARD WARNING AREA.

THE GREATEST SNOW AMOUNTS APPEAR MOST LIKELY ALONG AND SOUTHEAST OF A LINE FROM FAIRFIELD TO THE QUAD CITIES THROUGH FREEPORT ILLINOIS ...WHERE WIDESPREAD TOTALS AT LEAST 15 TO 20 INCHES ARE EXPECTED WITH LOCALLY HIGHER AMOUNTS OF MORE THAN 20 INCHES POSSIBLE. NORTHWEST OF THIS LINE...AMOUNTS RANGING FROM 8 TO 15 INCHES ARE EXPECTED. A STRONG CIRCULATION AROUND THIS STORM...ALONG WITH ARCTIC HIGH PRESSURE OVER THE NORTHERN PLAINS WILL RESULT IN STRONG NORTH WINDS OF 25 TO 35 MPH WITH GUSTS OVER 50 MPH POSSIBLE. THE STRONG WINDS AND HEAVY SNOW WILL RESULT IN WIDESPREAD BLIZZARD CONDITIONS... ESPECIALLY FROM THIS AFTERNOON TO 9 AM WEDNESDAY.

IAZ087>089-098-099-ILZ025-026-034-035-MOZ009-010-020300-
/O.CON.KDVN.BZ.W.0001.110201T1800Z-110202T1800Z/

JEFFERSON-HENRY IA-DES MOINES-VAN BUREN-LEE-HENDERSON-WARREN-
HANCOCK-MCDONOUGH-SCOTLAND-CLARK-

INCLUDING THE CITIES OF...FAIRFIELD...MOUNT PLEASANT...

BURLINGTON...KEOSAUQUA...FORT MADISON...OQUAWKA...MONMOUTH...

CARTHAGE...MACOMB...MEMPHIS...KAHOKA

1058 AM CST TUE FEB 1 2011

...BLIZZARD WARNING REMAINS IN EFFECT UNTIL NOON CST WEDNESDAY...

A BLIZZARD WARNING REMAINS IN EFFECT UNTIL NOON CST WEDNESDAY.

- * SNOW WILL DEVELOP BY THIS AFTERNOON AND BECOME HEAVY AT TIMES...WITH STRONG WINDS PRODUCING WIDESPREAD BLOWING AND DRIFTING THIS AFTERNOON THROUGH WEDNESDAY MORNING. MEASURABLE SNOWFALL WILL END OVER MOST OF THE AREA BY 10 AM WEDNESDAY MORNING.
- * SNOWFALL TOTALS TODAY THROUGH WEDNESDAY ARE EXPECTED TO RANGE FROM 15 TO MORE THAN 20 INCHES.
- * WINDS ARE EXPECTED TO INCREASE TO 25 TO 30 MPH BY MIDDAY TODAY...INCREASING TO AS HIGH AS 45 MPH LATE THIS AFTERNOON. STRONG WINDS WILL CONTINUE OVERNIGHT INTO WEDNESDAY MORNING. THE WIND WILL INITIALLY BE FROM THE NORTHEAST...THEN BECOME NORTH TO NORTHWEST OVERNIGHT INTO WEDNESDAY. THE COMBINATION OF STRONG WINDS AND FALLING POWDERY SNOW WILL RESULT BLIZZARD CONDITIONS...INCLUDING HEAVY SNOW...STRONG WINDS AND VISIBILITIES BELOW A QUARTER MILE TONIGHT INTO EARLY WEDNESDAY.
- * ROADS ARE EXPECTED TO BECOME SNOW PACKED AND SLICK WITH CONSIDERABLE DRIFTING MAKING ROADS DIFFICULT TO KEEP CLEAR TONIGHT INTO WEDNESDAY. TRAVEL ON AREA ROADS WILL LIKELY BECOME DIFFICULT...IF NOT IMPOSSIBLE...ESPECIALLY TONIGHT. DRIFTS OF AT LEAST 3 TO 6 FEET ON AREA ROADS ARE LIKELY.
- * WIND CHILL READINGS AS LOW AS ZERO TO 10 BELOW ZERO WILL BE POSSIBLE WEDNESDAY MORNING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A BLIZZARD WARNING MEANS THAT FALLING AND BLOWING SNOW...STRONG WINDS AND POOR VISIBILITIES OF ONE QUARTER MILE OR LESS ARE OCCURRING OR IMMINENT. THIS WILL CAUSE WHITEOUT CONDITIONS... MAKING TRAVEL EXTREMELY DANGEROUS. DO NOT TRAVEL! IF YOU MUST TRAVEL DUE TO AN EMERGENCY...TAKE YOUR WINTER SURVIVAL KIT. IF YOU GET STRANDED...STAY WITH YOUR VEHICLE UNTIL HELP ARRIVES.

\$\$

IAZ040>042-051>054-063>068-076>078-ILZ001-002-007-009-015>018-024-020300-

/O.CON.KDVN.BZ.W.0001.110201T2100Z-110202T1800Z/

BUCHANAN-DELAWARE-DUBUQUE-BENTON-LINN-JONES-JACKSON-IOWA-JOHNSON-
CEDAR-CLINTON-MUSCATINE-SCOTT-KEOKUK-WASHINGTON-LOUISA-JO DAVIESS-
STEPHENSON-CARROLL-WHITESIDE-ROCK ISLAND-HENRY IL-BUREAU-PUTNAM-
MERCER-

INCLUDING THE CITIES OF...INDEPENDENCE...MANCHESTER...DUBUQUE...
VINTON...CEDAR RAPIDS...ANAMOSA...MAQUOKETA...MARENGO...
IOWA CITY...TIPTON...CLINTON...MUSCATINE...BETTENDORF...
DAVENPORT...SIGOURNEY...WASHINGTON...WAPELLO...GALENA...
FREEPORT...MOUNT CARROLL...STERLING...ROCK FALLS...MOLINE...
ROCK ISLAND...KEWANEE...PRINCETON...HENNEPIN...ALEDO

1058 AM CST TUE FEB 1 2011

...BLIZZARD WARNING REMAINS IN EFFECT FROM 3 PM THIS AFTERNOON TO
NOON CST WEDNESDAY...

A BLIZZARD WARNING REMAINS IN EFFECT FROM 3 PM THIS AFTERNOON TO
NOON CST WEDNESDAY.

* SNOW WILL DEVELOP THIS AFTERNOON AND BECOME HEAVY AT TIMES...
WITH STRONG WINDS PRODUCING WIDESPREAD BLOWING AND DRIFTING TONIGHT
INTO EARLY WEDNESDAY MORNING. MEASURABLE SNOWFALL WILL END OVER
MOST OF THE AREA BY NOON WEDNESDAY.

* SNOWFALL TOTALS FROM THIS AFTERNOON TO MIDDAY WEDNESDAY ARE
EXPECTED TO RANGE FROM 15 TO 20 INCHES ALONG AND SOUTHEAST OF A
LINE FROM SIGOURNEY IOWA THROUGH THE QUAD CITIES...TO STERLING
ILLINOIS. NORTHWEST OF THIS LINE 9 TO 15 INCHES ARE EXPECTED.

* WINDS ARE EXPECTED TO INCREASE TO 25 TO 30 MPH...WITH GUSTS AS
HIGH AS 45 MPH THIS AFTERNOON...CONTINUING OVERNIGHT INTO
WEDNESDAY. THE WIND WILL INITIALLY BE FROM THE NORTHEAST...THEN
BECOME NORTH TO NORTHWEST OVERNIGHT INTO WEDNESDAY. THE
COMBINATION OF STRONG WINDS AND FALLING POWDERY SNOW WILL RESULT
BLIZZARD CONDITIONS...INCLUDING HEAVY SNOW...STRONG WINDS AND
VISIBILITIES BELOW A QUARTER MILE TONIGHT INTO EARLY WEDNESDAY.

* ROADS ARE EXPECTED TO BECOME SNOW PACKED AND SLICK THIS AFTERNOON
WITH CONSIDERABLE DRIFTING MAKING ROADS DIFFICULT TO KEEP CLEAR
OVERNIGHT INTO WEDNESDAY. TRAVEL ON AREA ROADS WILL LIKELY
BECOME DIFFICULT...IF NOT IMPOSSIBLE...ESPECIALLY TONIGHT.
DRIFTS OF AT LEAST 3 TO 6 FEET ARE LIKELY.

* WIND CHILL READINGS AS LOW AS 10 BELOW TO 15 BELOW ZERO WILL
BE POSSIBLE WEDNESDAY MORNING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A BLIZZARD WARNING MEANS THAT FALLING AND BLOWING SNOW...STRONG
WINDS AND POOR VISIBILITIES OF ONE QUARTER MILE OR LESS ARE
OCCURRING OR IMMINENT. THIS WILL CAUSE WHITEOUT CONDITIONS...
MAKING TRAVEL EXTREMELY DANGEROUS. DO NOT TRAVEL! IF YOU MUST
TRAVEL DUE TO AN EMERGENCY...TAKE YOUR WINTER SURVIVAL KIT. IF
YOU GET STRANDED...STAY WITH YOUR VEHICLE UNTIL HELP ARRIVES.

&&

\$\$

HAASE

All of the warnings issued can be found in ATTACHMENT F.

At 1500 hours on February 1st the storm system was located in Northeast Arkansas, and by 1700 hours it had moved into the “Bootheel” of Missouri. At this time, the storm system had nearly achieved its lowest pressure level and the worst weather conditions of the storm were beginning across most of the ComEd service territory. Blizzard conditions were being reported with wind gusts over 40 mph in some locations. Images 13-24 show the weather conditions during this two hour period.

Note: All weather parameters and statistics presented on the following images were taken from a limited number of real time weather observations and local storm reports. The lack of surface reports and/or local storm reports over a particular area **does not imply** severe weather conditions were not occurring. ComEd’s service territory covers over 11,395 square miles while the NWS and Federal Aviation Administration (“FAA”) operate and maintain only nineteen (19) Surface Weather Stations in their service territory, which is one (1) weather observing station per 600 square miles of territory. In a storm such as this, conditions are more widespread and homogeneous as compared to a severe thunderstorm event. *Therefore, each reporting station would be more representative of weather conditions throughout a large area surrounding the observing site.*

The images present weather data and ComEd outage data in 30 minute timeframe increments. Not all the surface weather observation sites reported during each 30 minute timeframe and the local storm report data varied greatly. Therefore, the lack thereof does not indicate certain conditions were not occurring in that 30 minute timeframe, but more likely that conditions remained unchanged from the previous report from that site.

Image Plots

BLIZZARD: visibility is reduced to ¼ mile or less due to snow and/or blowing snow, the winds are 35 mph or higher, sustained or gusts.

SN+: Falling snow is heavy enough in and by itself to reduce the horizontal visibility to \leq ¼ mile.

48 mph: Peak wind reported in the past 30 minutes.

The **wind chill** plots are computed using the actual measured temperature and the sustained wind speed recorded at the time. This temperature is also known as the “**apparent temperature**” These are presented to provide a representation of the outside temperature working environment along with the present weather conditions throughout the ComEd service territory.

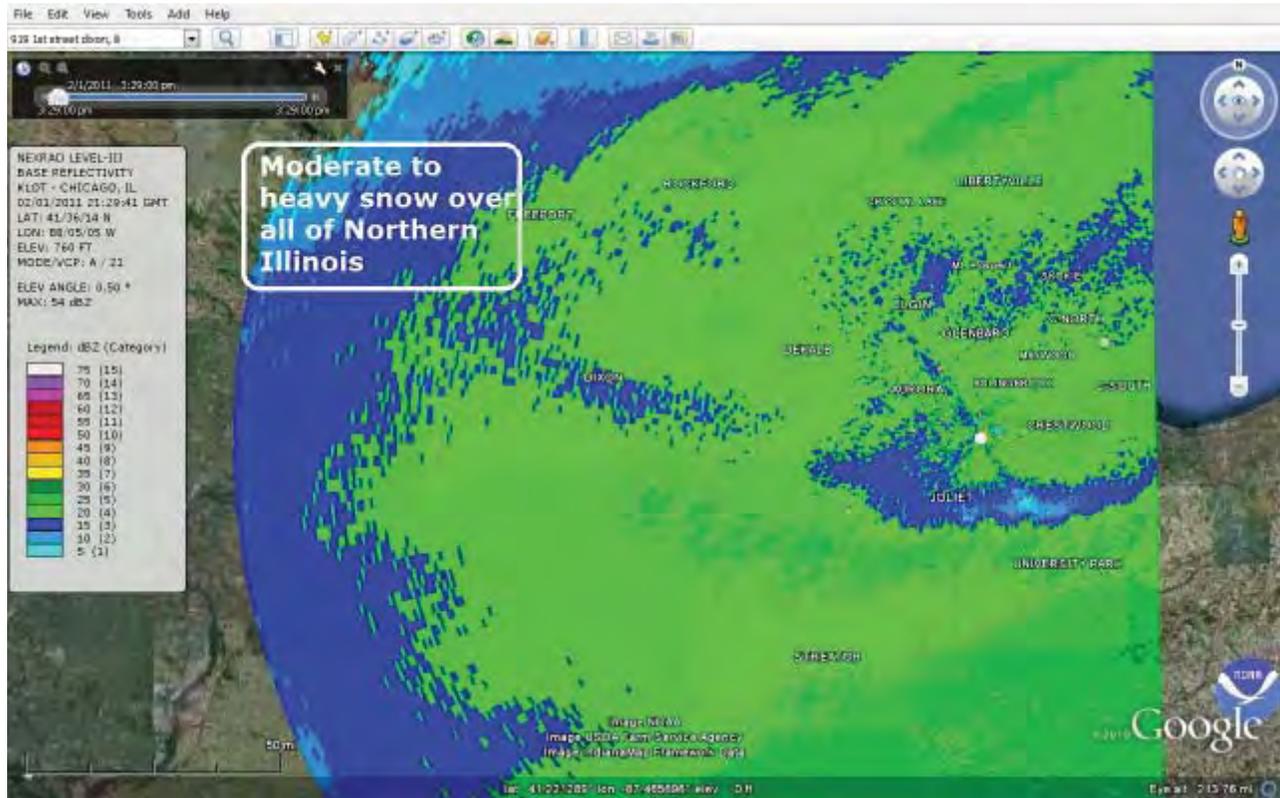


Image 13 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1530 hours

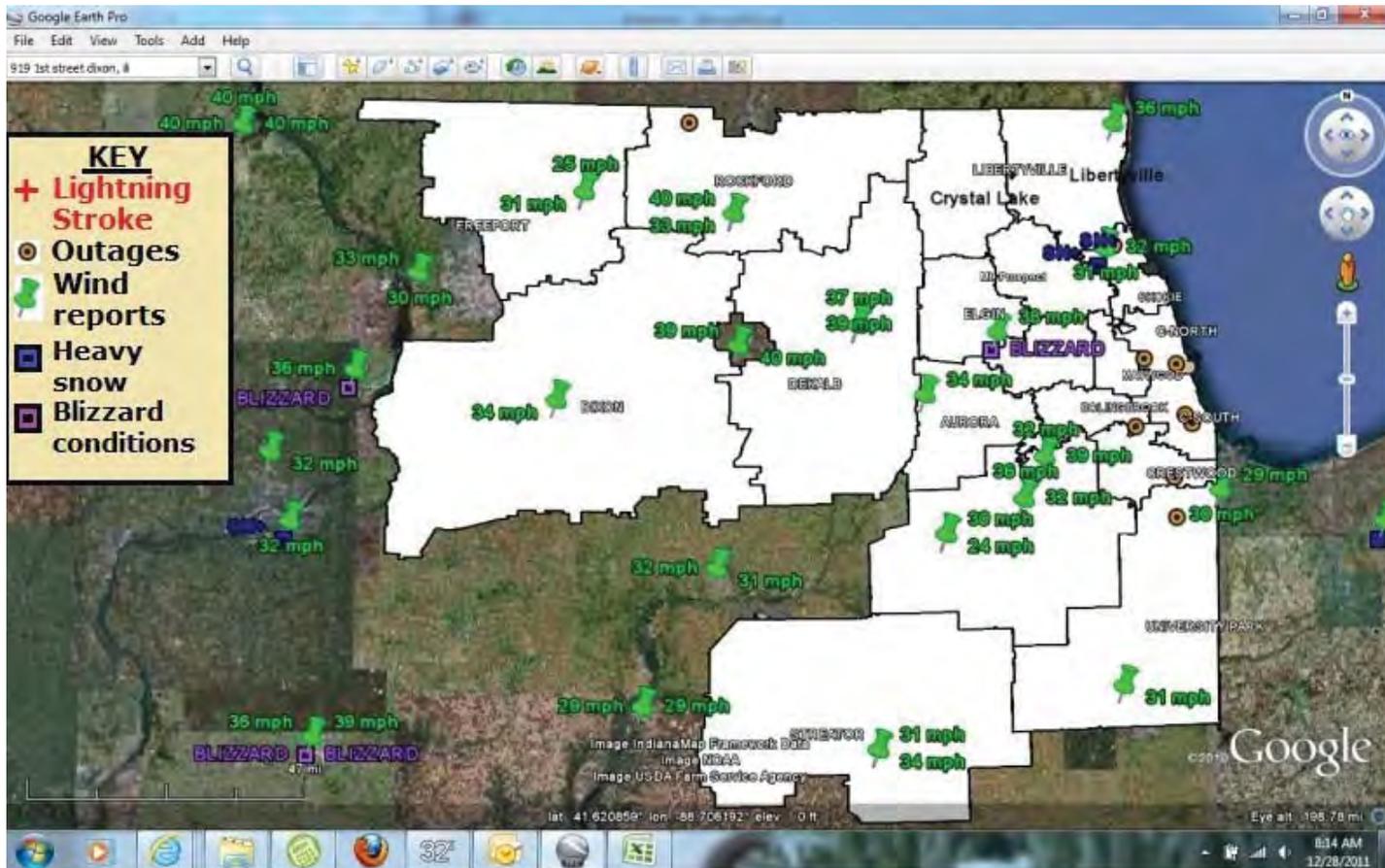


Image 14 ComEd Service Territory Map Image on February 1, 2011 at 1530 hours showing: Outages, Blizzard Conditions, Wind Gusts, Heavy Snow and Lightning Strokes during last 30 minute period.

Total ComEd Customers Who Lost Power (Cumulative)	Customers Restored (Cumulative)	Customers Still Without Power
1485	237	1253

The above Table reflects estimated counts through 1530 hours

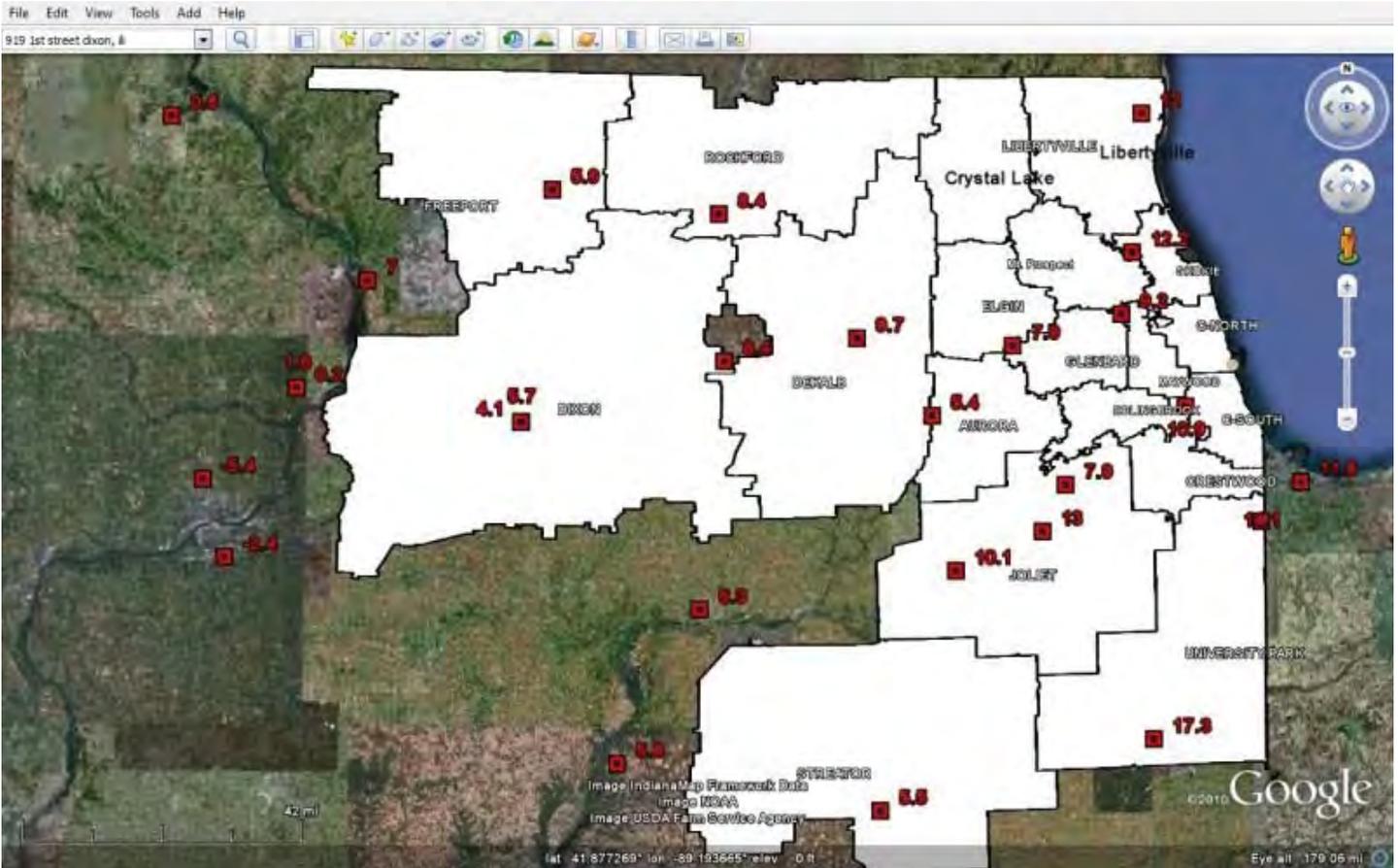


Image 15 ComEd Service Territory Map Image on February 1, 2011 at 1530 hours showing Wind Chill Index.



Image 16 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1600 hours

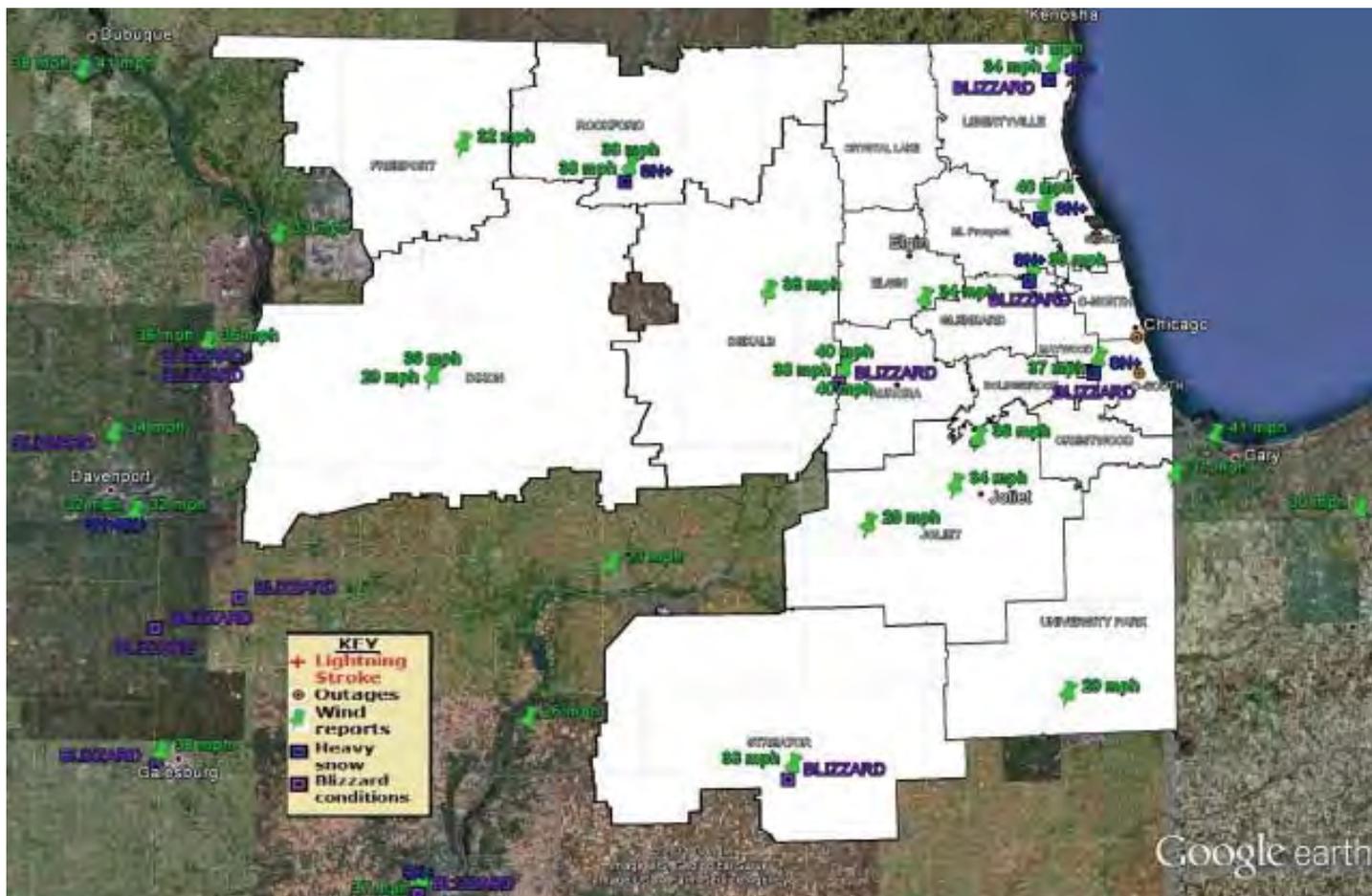


Image 17 ComEd Service Territory Map Image on February 1, 2011 at 1600 hours showing: Outages, Blizzard Conditions, Wind Gusts, Heavy Snow and Lightning Strokes during last 30 minute period.

Total ComEd Customers Who Lost Power (Cumulative)	Customers Restored (Cumulative)	Customers Still Without Power
2,971	465	2,506

The above Table reflects counts through 1601 hours

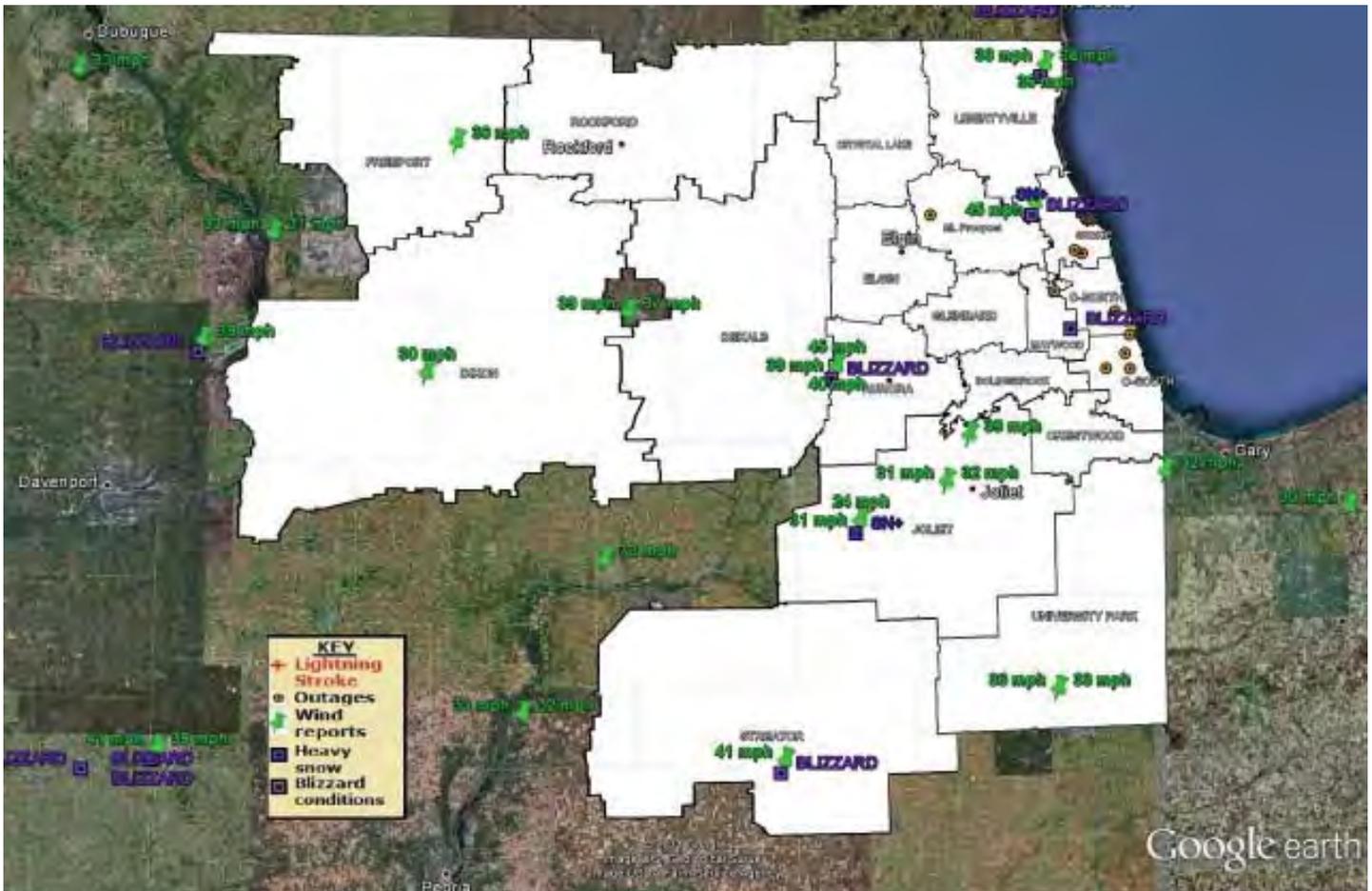


Image 20 ComEd Service Territory Map Image on February 1, 2011 at 1630 hours showing: Outages, Blizzard Conditions, Wind Gusts, Heavy Snow and Lightning Strokes during last 30 minute period.

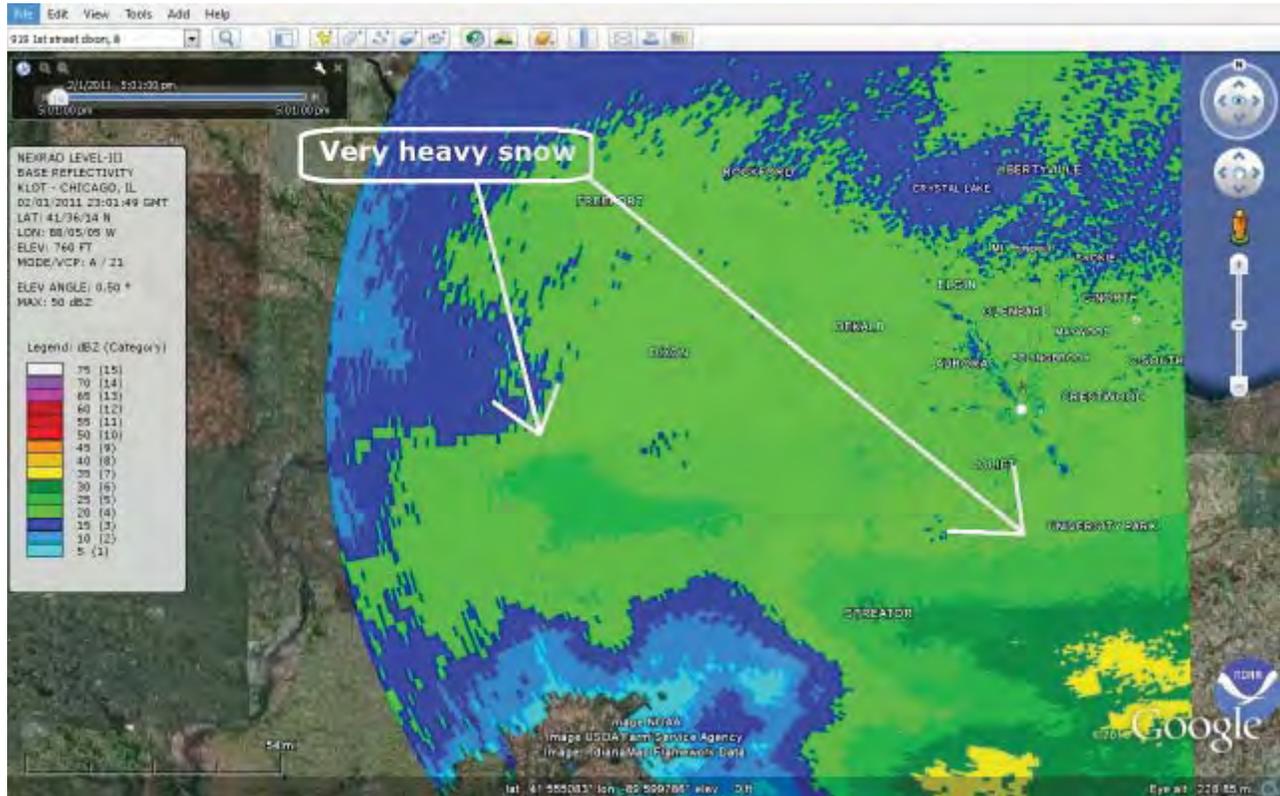


Image 22 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1700 hours

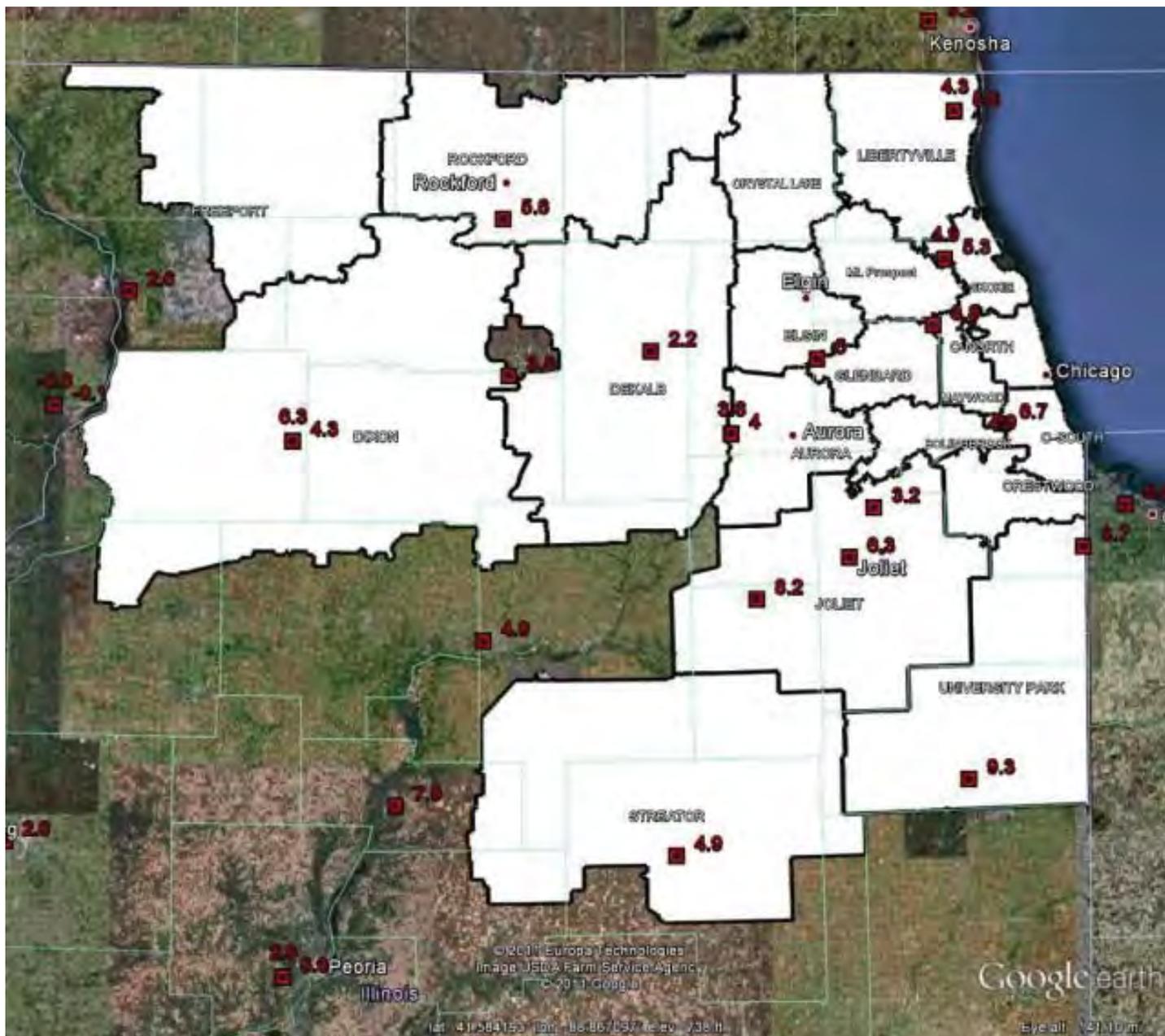


Image 24 ComEd Service Territory Map Image on February 1, 2011 at 1700 hours showing Wind Chill Index.

The storm system continued to move rapidly northeastward and from 1700 hours on February 1st through 0300 hours on February 2nd moved from the “Bootheel” of Missouri to North Central Indiana. **During this period of time the most intense conditions occurred across the ComEd service territory.** These conditions included: damaging winds of 50 to 70 mph, blizzard conditions with whiteout conditions, very heavy snowfall, cloud to ground lightning, and wind chill indices ranging from 10 to minus (-) 10 degrees Fahrenheit. Wind gusts were 5 to 15 mph higher along and near the Lake Michigan Shoreline due to the smoother surface of the water. Therefore, the fast moving air in the lower atmosphere encountered less friction along the surface of the earth enabling higher winds in those areas. These wind gusts combined with the heavy snow and blizzard conditions already occurring to cause crippling weather conditions across a wide geographic area, including all of the ComEd service territory. A summary of the peak wind gusts during this time frame can be found in Table 1 below:

Wind Gusts

Winds gusted to 45 mph to over 60 mph during the evening of February 1. The strongest winds were along the Lake Michigan shore. Following is a list of peak wind gusts (mph).

CHICAGO LAKEFRONT	70
BURNS HARBOR	68
WAUKEGAN HARBOR	63
PONTIAC	61
CHICAGO OHARE	61
AURORA	59
ROMEOVILLE	59
CHICAGO MIDWAY	58
WEST CHICAGO	54
LASALLE/PERU	53
WAUKEGAN	53
CALUMET	53
JOLIET	52
DEKALB	52
ROCHELLE	49
KANKAKEE	49
WHEELING	49
ROCKFORD	48
LANSING	47
STERLING	43
MORRIS	43
ROANOKE	64
TREMONT	56
BLOOMINGTON	53
LINCOLN	53
RANTOUL	52
PEORIA	52
DECATUR	51
GALESBURG	51
SPRINGFIELD	48
JACKSONVILLE	46

Table 1 Peak wind gusts (mph) Tuesday – February 1, 2011 evening

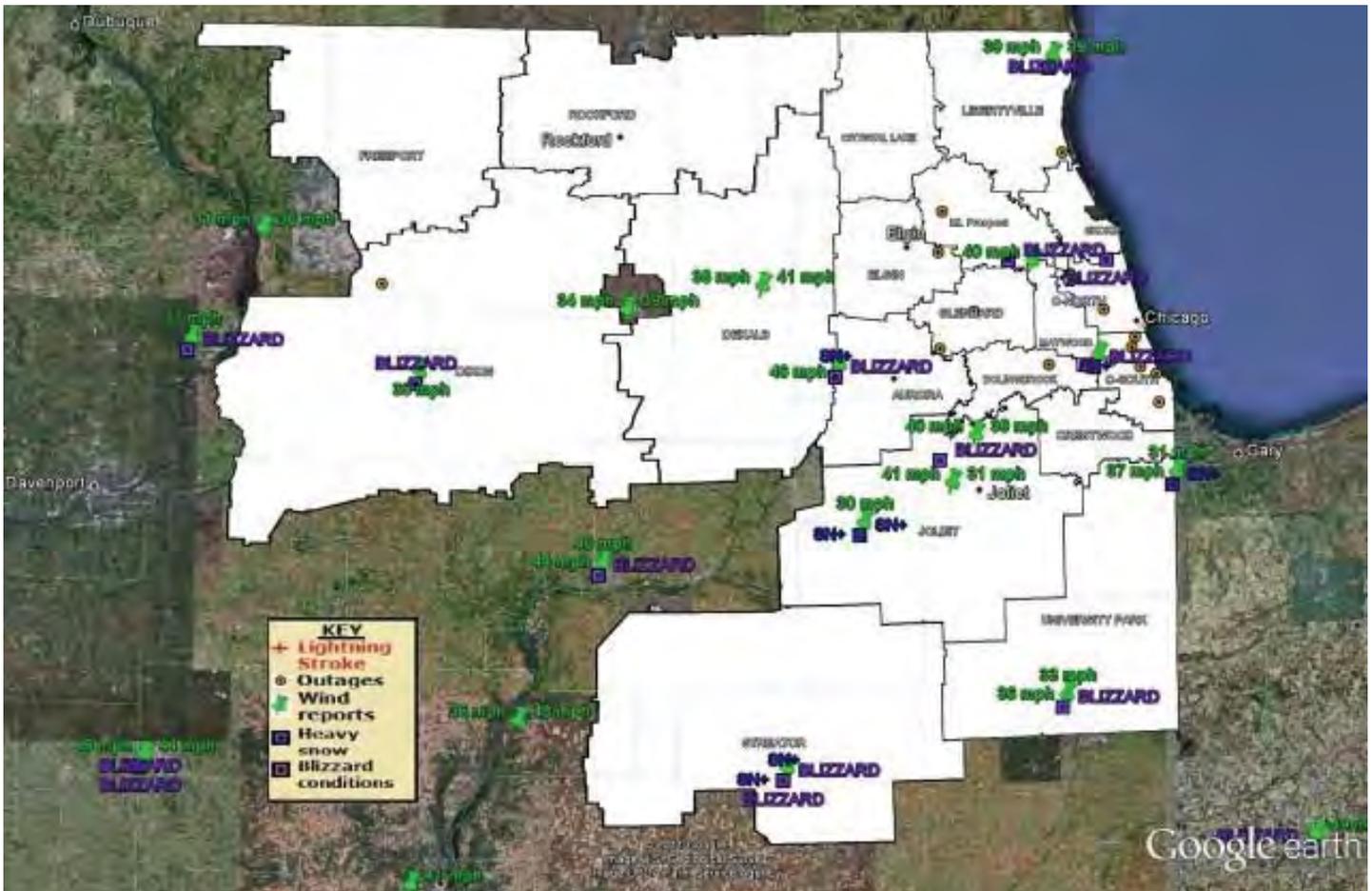


Image 26 ComEd Service Territory Map Image on February 1, 2011 at 1730 hours showing: Outages, Blizzard Conditions, Wind Gusts, Heavy Snow and Lightning Strokes during last 30 minute period.

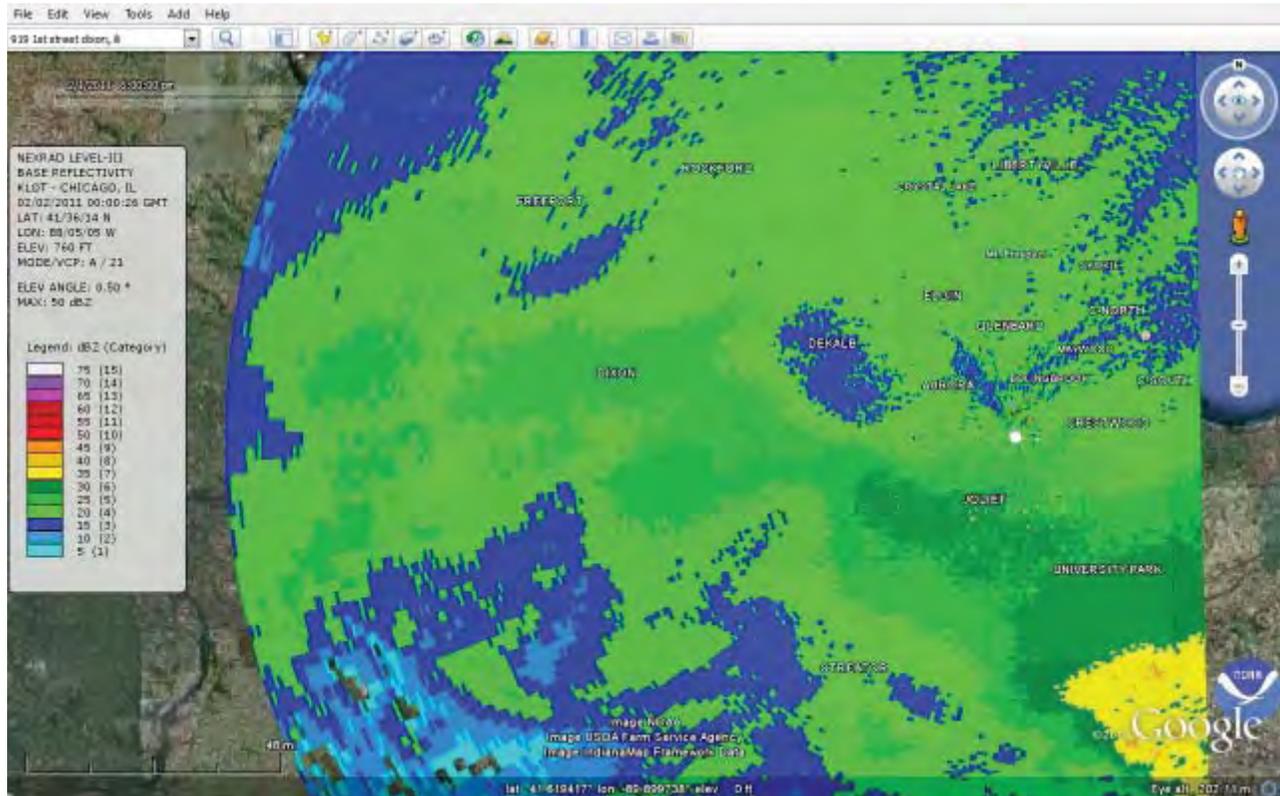


Image 28 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1800 hours

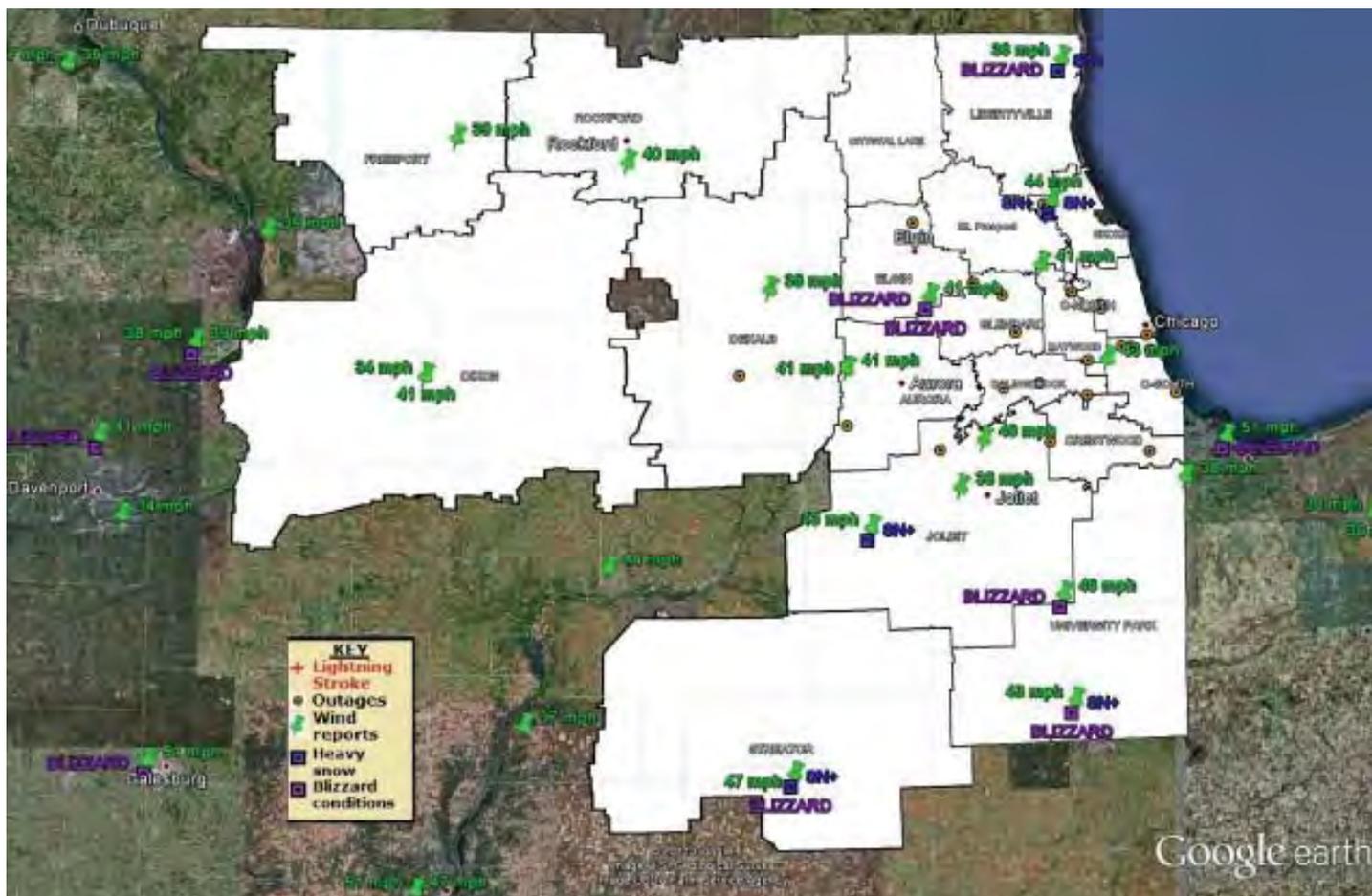


Image 29 ComEd Service Territory Map Image on February 1, 2011 at 1800 hours showing: Outages, Blizzard Conditions, Wind Gusts, Heavy Snow and Lightning Strokes during last 30 minute period.

Total ComEd Customers Who Lost Power (Cumulative)	Customers Restored (Cumulative)	Customers Still Without Power
25,583	10,535	15,048

The above Table reflects counts through 1801 hours

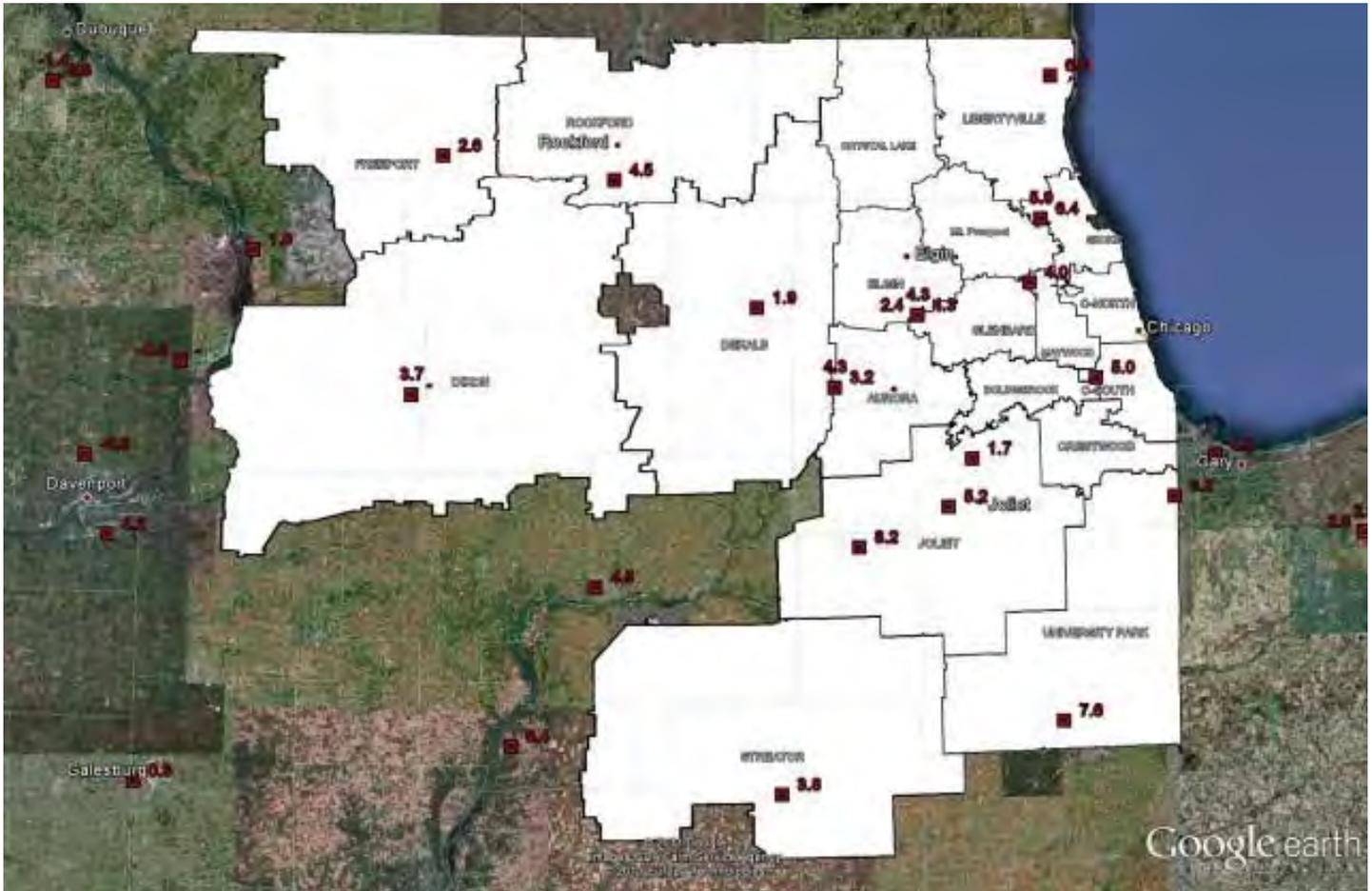


Image 30 ComEd Service Territory Map Image on February 1, 2011 at 1800 hours showing Wind Chill Index.

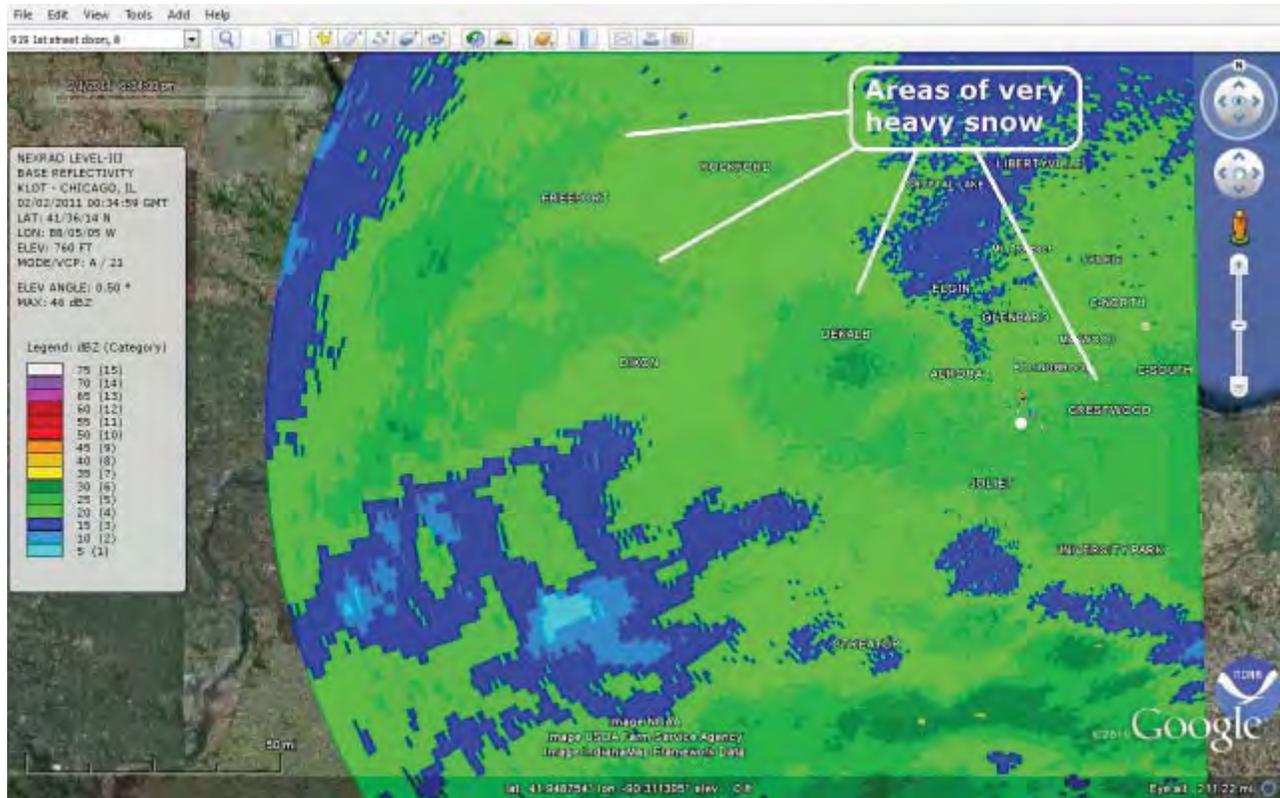


Image 31 KLOT NEXRAD Base Reflectivity Image on February 1, 2011 at 1830 hours

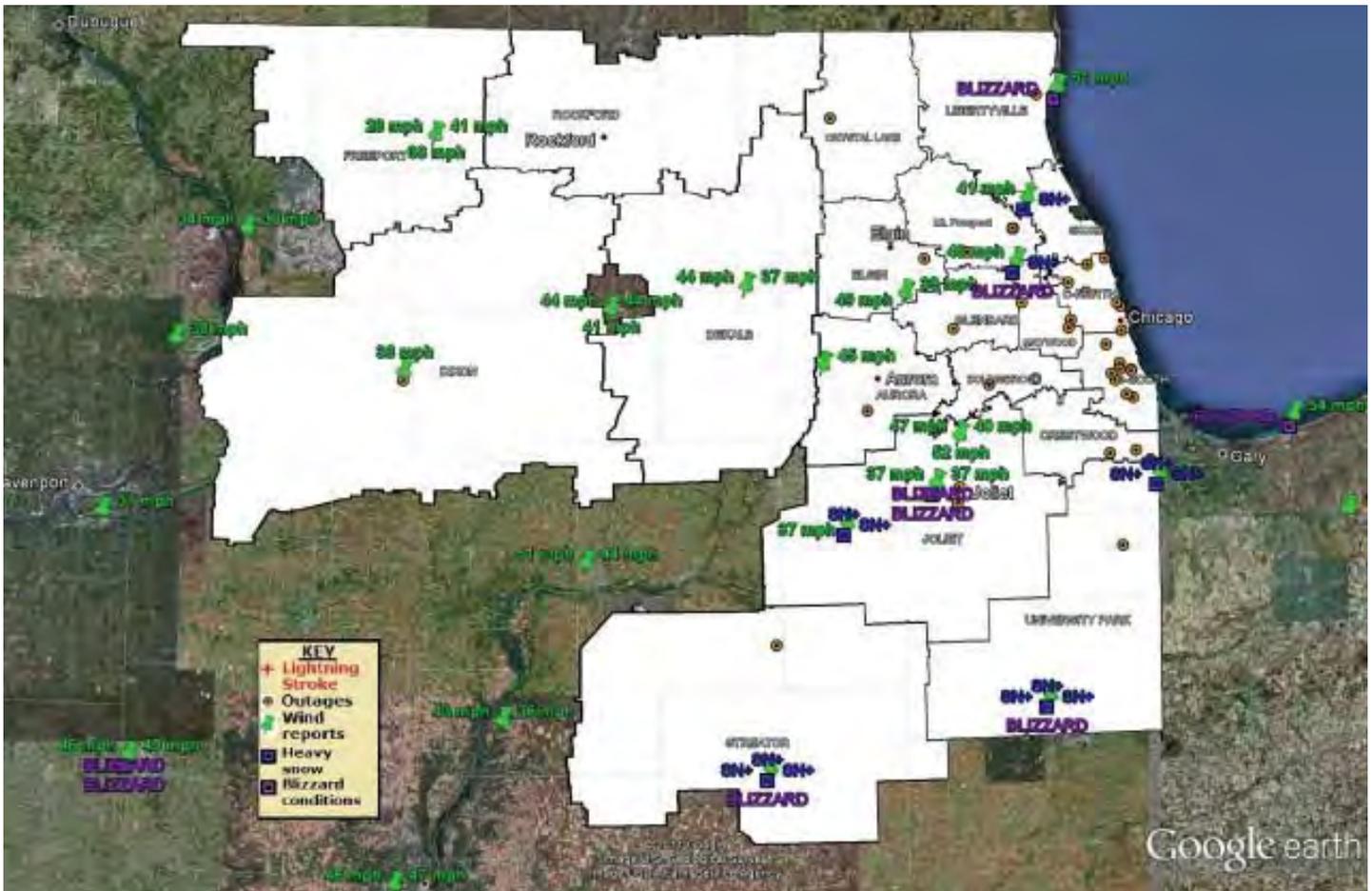


Image 32 ComEd Service Territory Map Image on February 1, 2011 at 1830 hours showing: Outages, Blizzard Conditions, Wind Gusts, Heavy Snow and Lightning Strokes during last 30 minute period.