

# **National Transportation Safety Board**

## Office of Aviation Safety Washington, D.C. 20594-2000 December 18, 2017 ATTACHMENT 9 to the METEOROLOGY FACTUAL REPORT DCA17FA076

All YIP TAFs, Area Forecast Discussions and Area Forecasts issued between 0000 EST on March 6, 2017, and the accident time.

Submitted by: Mike Richards NTSB, AS-30 KYIP 060538Z 0606/0706 12006KT P6SM OVC060 FM060900 17007KT P6SM OVC045 FM061400 18013G18KT P6SM SCT028 OVC040 FM061800 18014G24KT P6SM -SHRA OVC028 FM062300 19014G20KT 6SM -SHRA OVC015=

KYIP 061128Z 0612/0712 18007KT P6SM SCT035 OVC045 FM061400 18010KT P6SM SCT028 OVC040 FM061800 18013G24KT P6SM -SHRA OVC028 FM062300 17014G20KT 6SM -SHRA BR OVC015 FM070400 18015KT 3SM –DZ BR OVC005 FM071000 19016G24KT 2SM SHRA BR OVC008=

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KYIP 061446Z 0615/0712 18010KT P6SM SCT050 OVC080 TEMPO 0615/0618 -SHRA BKN050 FM061800 18013G22KT P6SM SCT030 OVC045 FM062000 18013G24KT P6SM -SHRA OVC025 FM062300 17014G20KT 6SM –SHRA BR OVC015 FM070400 18015KT 3SM -DZ BR OVC005 FM071000 19016G24KT 2SM SHRA BR OVC008=

KYIP 061720Z 0618/0718 18013G22KT P6SM -SHRA SCT030 OVC045 FM062000 18013G24KT P6SM -SHRA OVC025 FM062300 17014G20KT 6SM -SHRA BR OVC015 FM070400 18015KT 3SM -DZ BR OVC005 FM071000 19016G24KT 2SM SHRA BR OVC008 FM071600 24018G30KT P6SM SCT025=

KYIP 061851Z 0619/0718 19013G24KT P6SM -SHRA OVC025 FM062300 18014G20KT 6SM -SHRA BR OVC015 FM070400 18015KT 3SM -DZ BR OVC005 FM071000 19016G24KT 2SM SHRA BR OVC008 FM071600 24018G30KT P6SM SCT025=

KYIP 062035Z 0621/0718 19015G25KT 6SM BR OVC015 FM062330 19015G24KT 4SM -SHRA OVC009 FM070300 18015KT 3SM –DZ BR OVC005 FM071000 19016G24KT 2SM SHRA BR OVC008 FM071600 24018G30KT P6SM SCT025= KYIP 062320Z 0700/0724 17013KT 3SM -SHRA OVC009 FM070300 18015KT 3SM -DZ BR OVC005 FM071000 19016G24KT 2SM SHRA BR OVC008 FM071400 21014G22KT 4SM –SHRA SCT008 OVC015 FM071600 24018G30KT P6SM SCT025=

KYIP 070531Z 0706/0806 18016G23KT 6SM BR OVC012 FM071000 19016G24KT 3SM SHRA BR OVC008 FM071400 21017G28KT 4SM -SHRA SCT008 OVC015 FM071800 24019G30KT P6SM SCT025 FM080000 23010KT P6SM SKC=

KYIP 070753Z 0708/0806 18016G23KT 6SM -SHRA BR SCT015 OVC035 FM071200 19016G24KT 3SM SHRA BR SCT008 OVC015 FM071400 21017G28KT 4SM -SHRA BKN015 OVC025 FM071700 24019G30KT P6SM SCT025 FM080000 23010KT P6SM SKC=

KYIP 071138Z 0712/0812 19016G24KT 5SM -SHRA BR SCT015 OVC035 WS020/21045KT TEMPO 0714/0716 3SM SHRA BKN015 OVC025 FM071600 22018G28KT P6SM SCT025 BKN045 FM072000 24020G30KT P6SM SCT035 FM080000 23011KT P6SM SKC=

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KYIP 071537Z 0716/0812 20022G31KT P6SM OVC025 FM071800 26020G31KT P6SM BKN025 OVC040 FM072000 27020G30KT P6SM SCT035 SCT040 FM080000 23011KT P6SM SKC=

KYIP 071720Z 0718/0818 23020G32KT P6SM BKN015 OVC025 FM071900 27020G32KT P6SM BKN025 OVC035 FM072100 27020G28KT P6SM SKC FM080000 23011KT P6SM SKC FM081300 23016G25KT P6SM SKC FM081700 25028G38KT P6SM SKC= KYIP 072002Z 0720/0818 26015G25KT P6SM BKN035 OVC045 FM072100 26014G25KT P6SM SKC FM080000 21011KT P6SM SKC FM081400 24020G30KT P6SM SKC FM081700 25028G40KT P6SM SKC=

KYIP 072320Z 0800/0824 27012KT P6SM SKC FM080900 21012KT P6SM FEW080 FM081400 24020G30KT P6SM SKC FM081700 25028G40KT P6SM SKC FM082000 26029G45KT P6SM SKC=

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KYIP 081401Z 0814/0912 23028G42KT P6SM SKC FM081600 24033G47KT P6SM SKC FM082100 26034G48KT P6SM SKC FM082300 26025G38KT P6SM FEW250 FM090100 26014KT P6SM FEW150 SCT250 FM090600 27009KT P6SM SCT150 BKN250=

KYIP 081722Z 0818/0918 25032G48KT P6SM FEW060 FM082100 26031G46KT P6SM SCT070 FM082300 26024G36KT P6SM SKC FM090100 27014KT P6SM SKC FM090800 25008KT P6SM BKN150 FM091600 26008KT P6SM SCT060 OVC080=

## FXUS63 KDTX 060758 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 258 AM EST Mon Mar 6 2017 .DISCUSSION...

Upper energy pushing inland from the West Coast will swing into the Plains and Upper Midwest today, then into East-Central Canada and the Great Lakes by Tuesday. The trough will take on a negative tilt, aiding strong upper jet forcing in deepening an area of surface low pressure out ahead of it. The low should track well north of the area from the Dakotas (today) into Hudson Bay by Wednesday, keeping Southeast Michigan solidly on the warm side of the system. Today will be characterized by steady warm air and theta-e advection. Weak forcing and dry air in the lower levels will hold showers to only a scattered coverage at best, but should see some activity as upper ridge axis slides east and mid-level lapse rates begin to steepen. Should see an overall upward trend to coverage through this evening, as all the aforementioned parameters slowly increase. Flow will turn more southerly today as high pressure continues to slide towards the east cost and low pressure organizes over the Northern Plains. Weakening inversion, warm air advection and flow no longer off Lake Huron will boost temperatures significantly today, with max temps expected to reach the mid 50s to near 60. The low will occlude late tonight as it lifts into Canada, casting a cold front towards Michigan. Nocturnal low-level jet ramping up to 70 kts is forecast to nose into Lower Michigan tonight, with strong moisture advection (H850 dewpoints rising to 8-9C) and steepening lapse rates above H850 working with forcing from strong diffluence aloft and the approaching front to bring widespread rain showers to the area. A few thunderstorms are also possible from after midnight until the front passes through the area on Tuesday.

Front will push west to east across the area during the morning and afternoon with drier air on the backside ending chances for rain showers. Max temps are a little tricky for Tuesday as they are dependent on frontal timing, which models are still struggling to resolve. Highs will be met early in the day over at least the western portion of the forecast area before starting to fall. Overall, not expecting max temps to rise too much from overnight mins in the low 50s, warming only to mid to upper 50s during the day. Could see a run at 60 degrees, especially over the far eastern portion of the forecast area, if frontal timing looks slower like in NAM solution.

Strong secondary cold front will push down into Michigan on Wednesday as the deepening surface low tracks across northern Ontario and into Hudson Bay. Deep mixed layer, steep low-level lapse rates, and strong core of winds aloft will support windy conditions. Latest forecast soundings from the NAM/GFS hint winds of at least 40 knots could mix to the surface. Will keep an eye on this for possible advisory.

Forecast models have been highly variable for several days now with any systems for Thursday and beyond. Overall trend is for a progressive and cold pattern for the end of the week, as several waves bring chances for snow to either Michigan or the Ohio Valley. &&

## .MARINE...

Southeast winds will veer slightly to a more due southerly direction this morning and range generally between 15 and 20 knots today. This will allow waves along the nearshore waters to subside to a degree. While southerly winds will increase within a tightening pressure gradient in advance of an approaching cold front tonight, the mild low level flow will create relatively stable conditions and limit wind gusts to about 30 knots over the open waters of Lake Huron. These winds may keep waves in the 2 to 4 foot range tonight along the nearshore, but do not anticipate another Small Craft Advisory. The aforementioned cold front will progress through the area Tuesday with southwest flow increasing in its wake. As winds veer further to a west direction during the day Wednesday, there will be a chance of gales conditions, namely frequent gale force gusts, particularly over Lake Huron as more unstable conditions develop with this new influx of cold air. A Gale Watch will be issued for all marine areas on Wednesday for this potential with an expectation to refine any subsequent warning area based on future model trends with the track and strength of the low pressure and attending cold front. &&

## .HYDROLOGY...

Strong lo pressure will lift north in eastern Manitoba and western Ontario tonight into Tuesday. An increasingly moist flow in advance of this system will bring light rain showers or drizzle into the region today. More widespread rainfall is then anticipated tonight into early Tuesday as a cold front pivots into the area around this low pressure. Total rainfall across Southeast Michigan should be limited to between 0.25 and 0.50 inches. No flooding is expected. &&

## .PREV DISCUSSION ...

Issued at 1154 PM EST Sun Mar 5 2017 AVIATION...

Extensive mid level moisture will accompany warmer air into the region tonight. This may also allow for intermittent very light high based showers, with no impact. Downward progression in ceiling height through this time, but with conditions remaining in VFR into the early morning period. Low level moisture will increase heading into Monday, although there remains some uncertainty yet as to timing MVFR onset. Modest pre-frontal E-SE wind, veering to southerly behind the front Monday morning. Points from PTK southward

potentially gusting up to 25 knots by afternoon as winds strengthen with time. Some pockets of light showers will be possible throughout the day, but greater chances will hold off until Monday night.

For DTW...Thick mid level cloud carrying cigs above 5000 ft for several more hours, before trending below this threshold after 09z per upstream trends. Modest E-SE wind initially, then veering to more of a southerly component with a warm frontal passage Monday morning. Southerly gusts 20 to 25 knots possible by afternoon. //DTW THRESHOLD PROBABILITIES...

\* Medium with cigs at or below 5000 feet late tonight, high Monday.&&

.DTX WATCHES/WARNINGS/ADVISORIES...

MI...NONE.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ363-421-422-441>443-462>464.

Gale Watch from Wednesday morning through late Wednesday night for LHZ361-362.

Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460.

Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for

LEZ444.

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\$\$ DISCUSSION...HLO MARINE......DG HYDROLOGY....DG

AVIATION.....MR

You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

FXUS63 KDTX 061159 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 659 AM EST Mon Mar 6 2017 .AVIATION... Low level moisture will continue to increase today into tonight as southerly flow increases in advance of approaching cold front. The trend will be from MVFR conditions to IFR and eventually periods of LIFR possible tonight. Precipitation can be best described as an increase in "pockets" -shra/-dz through this evening with a more widespread period of showers (perhaps even isolated thunder) for a period late tonight into Tuesday morning in advance/along the cold front, which will move through the region between 14z-18z Tuesday. For DTW...MVFR conditions should predominate today with a trend to IFR in -shra/-dz/br this evening into tonight. Showers will become increasingly widespread late tonight and persist into Tuesday am before being swept east by cold fropa.

//DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet much of the forecast period.
\* Very low in thunderstorms impacting terminal late tonight.
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.PREV DISCUSSION...

Issued at 258 AM EST Mon Mar 6 2017 DISCUSSION...

Upper energy pushing inland from the West Coast will swing into the Plains and Upper Midwest today, then into East-Central Canada and the Great Lakes by Tuesday. The trough will take on a negative tilt, aiding strong upper jet forcing in deepening an area of surface low pressure out ahead of it. The low should track well north of the area from the Dakotas (today) into Hudson Bay by Wednesday, keeping Southeast Michigan solidly on the warm side of the system. Today will be characterized by steady warm air and theta-e advection. Weak forcing and dry air in the lower levels will hold showers to only a scattered coverage at best, but should see some activity as upper ridge axis slides east and mid-level lapse rates begin to steepen. Should see an overall upward trend to coverage through this evening, as all the aforementioned parameters slowly increase. Flow will turn more southerly today as high pressure continues to slide towards the east cost and low pressure organizes over the Northern Plains. Weakening inversion, warm air advection and flow no longer off Lake Huron will boost temperatures significantly today, with max temps expected to reach the mid 50s to near 60. The low will occlude late tonight as it lifts into Canada, casting a cold front towards Michigan. Nocturnal low-level jet ramping up to 70 kts is forecast to nose into Lower Michigan tonight, with strong moisture advection (H850 dewpoints rising to 8-9C) and steepening lapse rates above H850 working with forcing from strong diffluence aloft and the approaching front to bring widespread rain showers to the area. A few thunderstorms are also possible from after midnight until the front passes through the area on Tuesday.

Front will push west to east across the area during the morning and afternoon with drier air on the backside ending chances for rain showers. Max temps are a little tricky for Tuesday as they are dependent on frontal timing, which models are still struggling to resolve. Highs will be met early in the day over at least the western portion of the forecast area before starting to fall. Overall, not expecting max temps to rise too much from overnight mins in the low 50s, warming only to mid to upper 50s during the day. Could see a run at 60 degrees, especially over the far eastern portion of the forecast area, if frontal timing looks slower like in NAM solution. Strong secondary cold front will push down into Michigan on Wednesday as the deepening surface low tracks across northern Ontario and into Hudson Bay. Deep mixed layer, steep low-level lapse rates, and strong core of winds aloft will support windy conditions. Latest forecast soundings from the NAM/GFS hint winds of at least 40 knots could mix to the surface. Will keep an eye on this for possible advisory.

Forecast models have been highly variable for several days now with any systems for Thursday and beyond. Overall trend is for a progressive and cold pattern for the end of the week, as several waves bring chances for snow to either Michigan or the Ohio Valley. MARINE...

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...NONE.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ363-421-422-441>443-462>464.

Gale Watch from Wednesday morning through late Wednesday night for LHZ361-362.

Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460.

Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd

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You can obtain your latest National Weather Service forecasts online
at www.weather.gov/detroit.

FXUS63 KDTX 061557 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 1057 AM EST Mon Mar 6 2017 .UPDATE...

The morning update boosts POPs in the Detroit area where radar trends indicate increasing coverage of showers. This activity is a result of moisture transport from the Ohio valley in the 850-700 mb layer level feeding into the area of better mid level lapse rates over the Midwest into Lower Michigan. The 12Z DTX sounding illustrates the profile nicely while late morning mesoanalysis shows the broad expanse of 700-500 mb lapse rate in the range of 7-8 C/km over most of the Great Lakes. Incoming model data does show the moisture transport will be inconsistent within the broader pattern of isentropic lift which will keep the showers occurring in difficult to time clusters through the afternoon. A trend back to scattered coverage mid to late afternoon appears on track while monitoring the Ohio valley activity that is projected to remain south through early evening.

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.PREV DISCUSSION ...

Issued at 659 AM EST Mon Mar 6 2017 AVIATION...

Low level moisture will continue to increase today into tonight as southerly flow increases in advance of approaching cold front. The trend will be from MVFR conditions to IFR and eventually periods of LIFR possible tonight. Precipitation can be best described as an increase in "pockets" -shra/-dz through this evening with a more widespread period of showers (perhaps even isolated thunder) for a period late tonight into Tuesday morning in advance/along the cold front, which will move through the region between 14z-18z Tuesday. For DTW...MVFR conditions should predominate today with a trend to IFR in -shra/-dz/br this evening into tonight. Showers will become increasingly widespread late tonight and persist into Tuesday am before being swept east by cold fropa.

#### //DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet much of the forecast period.
\* Very low in thunderstorms impacting terminal late tonight.
PREV DISCUSSION...

# Issued at 258 AM EST Mon Mar 6 2017 DISCUSSION...

Upper energy pushing inland from the West Coast will swing into the Plains and Upper Midwest today, then into East-Central Canada and the Great Lakes by Tuesday. The trough will take on a negative tilt, aiding strong upper jet forcing in deepening an area of surface low pressure out ahead of it. The low should track well north of the area from the Dakotas (today) into Hudson Bay by Wednesday, keeping Southeast Michigan solidly on the warm side of the system. Today will be characterized by steady warm air and theta-e advection. Weak forcing and dry air in the lower levels will hold showers to only a scattered coverage at best, but should see some activity as upper ridge axis slides east and mid-level lapse rates begin to steepen. Should see an overall upward trend to coverage through this evening, as all the aforementioned parameters slowly increase. Flow will turn more southerly today as high pressure continues to slide towards the east cost and low pressure organizes over the Northern Plains. Weakening inversion, warm air advection and flow no longer off Lake Huron will boost temperatures significantly today, with max temps expected to reach the mid 50s to near 60. The low will occlude late tonight as it lifts into Canada, casting a cold front towards Michigan. Nocturnal low-level jet ramping up to 70 kts is forecast to nose into Lower Michigan tonight, with strong moisture advection (H850 dewpoints rising to 8-9C) and steepening lapse rates above H850 working with forcing from strong diffluence aloft and the approaching front to bring widespread rain showers to the area. A few thunderstorms are also possible from after midnight until the front passes through the area on Tuesday.

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Strong secondary cold front will push down into Michigan on Wednesday as the deepening surface low tracks across northern Ontario and into Hudson Bay. Deep mixed layer, steep low-level lapse rates, and strong core of winds aloft will support windy conditions. Latest forecast soundings from the NAM/GFS hint winds of at least 40 knots could mix to the surface. Will keep an eye on this for possible advisory.

Forecast models have been highly variable for several days now with any systems for Thursday and beyond. Overall trend is for a progressive and cold pattern for the end of the week, as several waves bring chances for snow to either Michigan or the Ohio Valley. MARINE...

Southeast winds will veer slightly to a more due southerly direction this morning and range generally between 15 and 20 knots today. This will allow waves along the nearshore waters to subside to a degree. While southerly winds will increase within a tightening pressure gradient in advance of an approaching cold front tonight, the mild low level flow will create relatively stable conditions and limit wind gusts to about 30 knots over the open waters of Lake Huron. These winds may keep waves in the 2 to 4 foot range tonight along the nearshore, but do not anticipate another Small Craft Advisory. The aforementioned cold front will progress through the area Tuesday with southwest flow increasing in its wake. As winds veer further to a west direction during the day Wednesday, there will be a chance of gales conditions, namely frequent gale force gusts, particularly over Lake Huron as more unstable conditions develop with this new influx of cold air. A Gale Watch will be issued for all marine areas on Wednesday for this potential with an expectation to refine any subsequent warning area based on future model trends with the track and strength of the low pressure and attending cold front. HYDROLOGY ...

Strong lo pressure will lift north in eastern Manitoba and western Ontario tonight into Tuesday. An increasingly moist flow in advance of this system will bring light rain showers or drizzle into the region today. More widespread rainfall is then anticipated tonight into early Tuesday as a cold front pivots into the area around this low pressure. Total rainfall across Southeast Michigan should be limited to between 0.25 and 0.50 inches. No flooding is expected. &&

.DTX WATCHES/WARNINGS/ADVISORIES... MI...NONE.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ363-421-422-441>443-462>464.

Small Craft Advisory from 7 PM this evening to 7 AM EST Tuesday for LHZ441-442.

Gale Watch from Wednesday morning through late Wednesday night for LHZ361-362.

Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460.

Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for

LEZ444.

&& \$\$ UPDATE......BT AVIATION.....DG DISCUSSION...HLO MARINE......DG HYDROLOGY....DG You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

FXUS63 KDTX 061646 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 1146 AM EST Mon Mar 6 2017 .AVIATION...

Pushed back the timing of low clouds in earlier amendments, but next surge of low level moisture expected toward 21Z, supporting MVFR Ceilings, which should only lower this evening and Tonight as additional moisture and widespread showers overspread southeast Michigan, with a long period of IFR conditions anticipated. Cold front looks to be moving through just before Noon for most locations, resulting in a wind shift to the southwest (240 degrees) and abrupt clearing by early afternoon. Post frontal winds of 30 knots or slightly greater expected. Otherwise, strong southerly winds this afternoon, gusting around 25 knots should more or less be maintained overnight ahead of the cold front, as very strong low level jet (60 knots at 3 kft) works through. Otherwise if surface winds diminish, low level wind shear will be an issue. The low level jet will also provide a slight chance of thunderstorms, but not worthy of a mention in the TAFs.

For DTW...High based showers working through the early afternoon, with upstream obs showing MVFR Ceilings approaching the border, and have forecasted an arrival around 20z. Showers and continued moisture advection resulting in IFR cigs by Midnight. //DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet through Noon Tomorrow.

\* Very low in thunderstorms impacting terminal late tonight.

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.PREV DISCUSSION ...

Issued at 1057 AM EST Mon Mar 6 2017 UPDATE...

The morning update boosts POPs in the Detroit area where radar trends indicate increasing coverage of showers. This activity is a result of moisture transport from the Ohio valley in the 850-700 mb layer level feeding into the area of better mid level lapse rates over the Midwest into Lower Michigan. The 122 DTX sounding illustrates the profile nicely while late morning mesoanalysis shows the broad expanse of 700-500 mb lapse rate in the range of 7-8 C/km over most of the Great Lakes. Incoming model data does show the moisture transport will be inconsistent within the broader pattern of isentropic lift which will keep the showers occurring in difficult to time clusters through the afternoon. A trend back to scattered coverage mid to late afternoon appears on track while monitoring the Ohio valley activity that is projected to remain south through early evening.

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Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460.

Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for

LEZ444. && \$\$ AVIATION.....SF UPDATE......BT DISCUSSION...HLO MARINE......DG HYDROLOGY....DG You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

#### FXUS63 KDTX 062047

AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 347 PM EST Mon Mar 6 2017 .DISCUSSION...

Eastward progression of the upper level ridge axis tonight will bring deeper and stronger southwest flow over the Great Lakes which will help the low to mid level moisture axis mature over Lower Michigan. Steady isentropic ascent and moisture transport will support clusters of showers in otherwise typically nebulous warm sector forcing that will keep coverage more on the scattered side during the evening. Coverage will then increase considerably overnight as the upper trough and cold front approach. Broad difluent flow aloft will help with synoptic scale lift within the moisture axis followed by the more focused frontal forcing that will combine to produce a solid band of showers. There is good general agreement across the model spectrum that suggests there will be some thunderstorm potential in this strongly forced system but that the overall thermal profile will become more stable with time. Both mesoscale/cams and the larger scale deterministic solutions indicate a typical diurnal loss of surface based instability and also some exhaustion of mid level lapse rates as the front and leading moisture axis remain well ahead of the upper level cold pool. That being said, there are prospects for strong wind gusts to occur with any convection of moderate intensity. The warm sector temperature profile will be on the neutral side judging from model soundings and considering surface temperatures will remain in the 50s through the night. This will present some opportunity for a stray surface wind gust near 40 mph both from heavier showers/storms and just within the strong gradient flow itself. The post frontal boundary layer will

then deepen by Tuesday afternoon as low level cold advection ramps up enough to start temperatures falling through the 40s after early highs pushing 60s. As this occurs, the wind field will be diminished enough to limit gusts to the mid 30 mph range. Some trailing short wave energy is shown to sweep through the region Tuesday night which will bring an increase in clouds but not much else. Forecast soundings indicate enough preexisting dry air to support dissipation of the spotty model QPF before the wave moves through SE Michigan. This will leave conditions on the quiet side until Wednesday when strong wind will become the primary concern. The wind field will ramp up with the help of the strong upper jet shown to dig through the base of the long wave trough. The corresponding strong height gradient increase will sharpen the polar front as it sags into the Great Lakes during the day. At the same time, model soundings indicate a deep mixed layer developing up to about 750 mb and tapping into near 50 kt wind at 850 mb. These conditions are supported by wind gust probability guidance generated inhouse that show high values for gusts exceeding 40 mph and 50 mph thresholds and would make a wind advisory increasingly likely through Wednesday evening.

The GFS, GEM, and to a lesser-extent the ECMWF model runs are starting to show weak convergence across the southern half of the CWA, that will bring the chance to see rain throughout Thursday afternoon, as temperatures warm up into the upper 30s to lower 40s for a daytime high. A transition from rain to a wintry mix will be possible Thursday evening into Friday morning as surface temperatures cool to near or below freezing values post-sunset. Weak WAA is expected to cease early Friday, as CAA starts to ramp up across the Midwest, which will dip temperatures below the seasonal normal through the weekend.

The next potential system to influence the CWA will approach Saturday into early Sunday as low pressure from TX/OK moves east across TN and into the Carolinas. Current guidance produces the bulk of precipitation, just south of Michigan, across the Ohio Valley, with the GEM long-range models producing QPF well south of OH/IN. As a result, PoP values will remain low. A northern shift in the track of the low in future models would have us seeing snow, as daytime highs struggle to peak in the upper 30s for a daytime high over the weekend. A second chance to see precipitation will move in Monday into Tuesday as a second low from the Central Plains moves northeast over the Great Lakes.

#### &&

#### .MARINE...

Southerly winds increasing to between 20 to 30 knots over the Central Great Lakes tonight ahead of a cold front. A brief gust to Gales is not out of the question early Tomorrow morning, as the cold front passes through during mid day. Winds will shift to the southwest behind the front, and gusts are expected to reside predominantly in the 25 to 30 knot range as the cold advection is fairly weak. None-the-less, have expanded small craft advisories to include all nearshore waters on Tuesday. Much colder air will filter in on Wednesday as winds shift to the west, promoting deep mixing, and confidence is high in reaching Gales Wednesday afternoon into Wednesday Night. A gale watch remains in effect. Westerly winds will diminish as we head into Thursday as a ridge of high pressure builds into the area.

## &&

## .HYDROLOGY...

Strong low pressure will lift north in eastern Manitoba and western Ontario tonight into Tuesday. Widespread rainfall will arrive late tonight into early Tuesday as a cold front pivots into the area around this low pressure. There is also a slight chance of an embedded thunderstorm. Total rainfall across Southeast Michigan should be limited to between 0.25 and 0.50 inches. No flooding is expected.

## &&

.PREV DISCUSSION ...

Issued at 1146 AM EST Mon Mar 6 2017 AVIATION...

Pushed back the timing of low clouds in earlier amendments, but next surge of low level moisture expected toward 21Z, supporting MVFR Ceilings, which should only lower this evening and Tonight as additional moisture and widespread showers overspread southeast Michigan, with a long period of IFR conditions anticipated. Cold front looks to be moving through just before Noon for most locations, resulting in a wind shift to the southwest (240 degrees) and abrupt clearing by early afternoon. Post frontal winds of 30 knots or slightly greater expected. Otherwise, strong southerly winds this afternoon, gusting around 25 knots should more or less be maintained overnight ahead of the cold front, as very strong low level jet (60 knots at 3 kft) works through. Otherwise if surface winds diminish, low level wind shear will be an issue. The low level jet will also provide a slight chance of thunderstorms, but not worthy of a mention in the TAFs.

For DTW...High based showers working through the early afternoon, with upstream obs showing MVFR Ceilings approaching the border, and have forecasted an arrival around 20z. Showers and continued moisture advection resulting in IFR cigs by Midnight.

//DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet through Noon Tomorrow.

\* Very low in thunderstorms impacting terminal late tonight.&&

.DTX WATCHES/WARNINGS/ADVISORIES...

MI...NONE.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ421-422-441>443-462>464.

Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LHZ421-422. Small Craft Advisory from 7 PM this evening to 7 PM EST Tuesday for LHZ441>443. Gale Watch from Wednesday morning through late Wednesday night for LHZ361>363. Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460. Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LCZ460. Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for LEZ444. Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LEZ444. && \$\$ DISCUSSION...BT/AM MARINE.....SF HYDROLOGY.....SF AVIATION.....SF You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

FXUS63 KDTX 062323 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 623 PM EST Mon Mar 6 2017 .AVIATION...

Extensive low level moisture to hold firm through tonight under moderate and intermittely gusty southerly wind. Ceiling heights to remain between 500 ft and 1500 ft through this time, with latest trends now favoring predominant IFR conditions from PTK southward beginning this evening. Some pockets of light rain or drizzle may occur prior to 06z, but greater potential arrives mid-late morning Tuesday /08z-14z/ coincident with an inbound cold front. Very low probability for thunder within this particular window, but the potential remains too low to consider a thunder mention. Southerly winds expected to remain just strong enough at the surface overnight to preclude a mention of LLWS, but will continue to be monitored. Post-frontal southwest winds turn gusty as skies steadily clear Tuesday afternoon. Gusts expected into the 30 knot range. For DTW...IFR conditions in intermittent light rain/drizzle early tonight. Southerly winds will maintain lower frequency gust component, before increasing again overnight. Probability for thunder Tuesday morning /10z-15z/ remain too low to include at this time.

//DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet through Noon Tuesday.

 \* Very low in thunderstorms impacting terminal 10z-15z Tuesday morning.

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.PREV DISCUSSION ...

Issued at 347 PM EST Mon Mar 6 2017 DISCUSSION...

Eastward progression of the upper level ridge axis tonight will bring deeper and stronger southwest flow over the Great Lakes which will help the low to mid level moisture axis mature over Lower Michigan. Steady isentropic ascent and moisture transport will support clusters of showers in otherwise typically nebulous warm sector forcing that will keep coverage more on the scattered side during the evening. Coverage will then increase considerably overnight as the upper trough and cold front approach. Broad difluent flow aloft will help with synoptic scale lift within the moisture axis followed by the more focused frontal forcing that will combine to produce a solid band of showers. There is good general agreement across the model spectrum that suggests there will be some thunderstorm potential in this strongly forced system but that the overall thermal profile will become more stable with time. Both mesoscale/cams and the larger scale deterministic solutions indicate a typical diurnal loss of surface based instability and also some exhaustion of mid level lapse rates as the front and leading moisture axis remain well ahead of the upper level cold pool. That being said, there are prospects for strong wind gusts to occur with any convection of moderate intensity. The warm sector temperature profile will be on the neutral side judging from model soundings and considering surface temperatures will remain in the 50s through the night. This will present some opportunity for a stray surface wind gust near 40 mph both from heavier showers/storms and just within the strong gradient flow itself. The post frontal boundary layer will then deepen by Tuesday afternoon as low level cold advection ramps up enough to start temperatures falling through the 40s after early highs pushing 60s. As this occurs, the wind field will be diminished enough to limit gusts to the mid 30 mph range. Some trailing short wave energy is shown to sweep through the region Tuesday night which will bring an increase in clouds but not much else. Forecast soundings indicate enough preexisting dry air to support dissipation of the spotty model QPF before the wave moves through SE Michigan. This will leave conditions on the quiet side until Wednesday when strong wind will become the primary concern. The wind field will ramp up with the help of the strong upper jet shown to dig through the base of the long wave trough. The corresponding strong height gradient increase will sharpen the polar front as it sags into the Great Lakes during the day. At the same time, model soundings indicate a deep mixed layer developing up to about 750 mb and tapping into near 50 kt wind at 850 mb. These

conditions are supported by wind gust probability guidance generated inhouse that show high values for gusts exceeding 40 mph and 50 mph thresholds and would make a wind advisory increasingly likely through Wednesday evening.

The GFS, GEM, and to a lesser-extent the ECMWF model runs are starting to show weak convergence across the southern half of the CWA, that will bring the chance to see rain throughout Thursday afternoon, as temperatures warm up into the upper 30s to lower 40s for a daytime high. A transition from rain to a wintry mix will be possible Thursday evening into Friday morning as surface temperatures cool to near or below freezing values post-sunset. Weak WAA is expected to cease early Friday, as CAA starts to ramp up across the Midwest, which will dip temperatures below the seasonal normal through the weekend.

The next potential system to influence the CWA will approach Saturday into early Sunday as low pressure from TX/OK moves east across TN and into the Carolinas. Current guidance produces the bulk of precipitation, just south of Michigan, across the Ohio Valley, with the GEM long-range models producing QPF well south of OH/IN. As a result, PoP values will remain low. A northern shift in the track of the low in future models would have us seeing snow, as daytime highs struggle to peak in the upper 30s for a daytime high over the weekend. A second chance to see precipitation will move in Monday into Tuesday as a second low from the Central Plains moves northeast over the Great Lakes.

#### MARINE...

Southerly winds increasing to between 20 to 30 knots over the Central Great Lakes tonight ahead of a cold front. A brief gust to Gales is not out of the question early Tomorrow morning, as the cold front passes through during mid day. Winds will shift to the southwest behind the front, and gusts are expected to reside predominantly in the 25 to 30 knot range as the cold advection is fairly weak. None-the-less, have expanded small craft advisories to include all nearshore waters on Tuesday. Much colder air will filter in on Wednesday as winds shift to the west, promoting deep mixing, and confidence is high in reaching Gales Wednesday afternoon into Wednesday Night. A gale watch remains in effect. Westerly winds will diminish as we head into Thursday as a ridge of high pressure builds into the area.

## HYDROLOGY ....

Strong low pressure will lift north in eastern Manitoba and western Ontario tonight into Tuesday. Widespread rainfall will arrive late tonight into early Tuesday as a cold front pivots into the area around this low pressure. There is also a slight chance of an embedded thunderstorm. Total rainfall across Southeast Michigan should be limited to between 0.25 and 0.50 inches. No flooding is expected. && .DTX WATCHES/WARNINGS/ADVISORIES...

MI...NONE.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ421-422-441>443-462>464.

Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LHZ421-422.

Small Craft Advisory until 7 PM EST Tuesday for LHZ441>443.

Gale Watch from Wednesday morning through late Wednesday night for LHZ361>363.

Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460.

Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LCZ460. Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for

LEZ444.

Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LEZ444.

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\$\$ AVIATION ..... MR DISCUSSION...BT/AM MARINE.....SF HYDROLOGY....SF You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

## FXUS63 KDTX 070459

AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 1159 PM EST Mon Mar 6 2017 .AVIATION...

Moist low level flow under strengthening and intermittently gusty southerly wind will sustain widespread low MVFR/IFR conditions through the morning period. Some pockets of light rain or drizzle may occur prior to 10z, but greater potential arrives mid-late morning Tuesday /10z-15z/ coincident with the arrival of a cold front. Very low probability for thunder within this particular window, but the potential remains too low to consider a thunder mention. Southerly winds expected to remain just strong enough at the surface overnight to preclude a mention of LLWS. Post-frontal southwest winds turn gusty as skies steadily clear Tuesday afternoon. Gusts expected into the 30 knot range. For DTW...IFR conditions in intermittent light rain/drizzle through 10z, with increasing coverage of showers thereafter through roughly 15z. Probability for thunder Tuesday morning /10z-15z/ remain too low to include at this time. Gusty southerly winds of 20-25 kts overnight, then increasing from the southwest behind a cold front Tuesday afternoon /30 kt gusts/. Winds expected to remain backed just enough to preclude crosswind concerns /240 degrees/.

//DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet through Noon Tuesday.

 \* Very low in thunderstorms impacting terminal 10z-15z Tuesday morning.

&& .PREV DISCUSSION... Issued at 347 PM EST Mon Mar 6 2017

DISCUSSION...

Eastward progression of the upper level ridge axis tonight will bring deeper and stronger southwest flow over the Great Lakes which will help the low to mid level moisture axis mature over Lower Michigan. Steady isentropic ascent and moisture transport will support clusters of showers in otherwise typically nebulous warm sector forcing that will keep coverage more on the scattered side during the evening. Coverage will then increase considerably overnight as the upper trough and cold front approach. Broad difluent flow aloft will help with synoptic scale lift within the moisture axis followed by the more focused frontal forcing that will combine to produce a solid band of showers. There is good general agreement across the model spectrum that suggests there will be some thunderstorm potential in this strongly forced system but that the overall thermal profile will become more stable with time. Both mesoscale/cams and the larger scale deterministic solutions indicate a typical diurnal loss of surface based instability and also some exhaustion of mid level lapse rates as the front and leading moisture axis remain well ahead of the upper level cold pool. That being said, there are prospects for strong wind gusts to occur with any convection of moderate intensity. The warm sector temperature profile will be on the neutral side judging from model soundings and considering surface temperatures will remain in the 50s through the night. This will present some opportunity for a stray surface wind gust near 40 mph both from heavier showers/storms and just within the strong gradient flow itself. The post frontal boundary layer will then deepen by Tuesday afternoon as low level cold advection ramps up enough to start temperatures falling through the 40s after early highs pushing 60s. As this occurs, the wind field will be diminished enough to limit gusts to the mid 30 mph range. Some trailing short wave energy is shown to sweep through the region Tuesday night which will bring an increase in clouds but not much

else. Forecast soundings indicate enough preexisting dry air to support dissipation of the spotty model QPF before the wave moves through SE Michigan. This will leave conditions on the quiet side until Wednesday when strong wind will become the primary concern. The wind field will ramp up with the help of the strong upper jet shown to dig through the base of the long wave trough. The corresponding strong height gradient increase will sharpen the polar front as it sags into the Great Lakes during the day. At the same time, model soundings indicate a deep mixed layer developing up to about 750 mb and tapping into near 50 kt wind at 850 mb. These conditions are supported by wind gust probability guidance generated inhouse that show high values for gusts exceeding 40 mph and 50 mph thresholds and would make a wind advisory increasingly likely through Wednesday evening.

The GFS, GEM, and to a lesser-extent the ECMWF model runs are starting to show weak convergence across the southern half of the CWA, that will bring the chance to see rain throughout Thursday afternoon, as temperatures warm up into the upper 30s to lower 40s for a daytime high. A transition from rain to a wintry mix will be possible Thursday evening into Friday morning as surface temperatures cool to near or below freezing values post-sunset. Weak WAA is expected to cease early Friday, as CAA starts to ramp up across the Midwest, which will dip temperatures below the seasonal normal through the weekend.

The next potential system to influence the CWA will approach Saturday into early Sunday as low pressure from TX/OK moves east across TN and into the Carolinas. Current guidance produces the bulk of precipitation, just south of Michigan, across the Ohio Valley, with the GEM long-range models producing QPF well south of OH/IN. As a result, PoP values will remain low. A northern shift in the track of the low in future models would have us seeing snow, as daytime highs struggle to peak in the upper 30s for a daytime high over the weekend. A second chance to see precipitation will move in Monday into Tuesday as a second low from the Central Plains moves northeast over the Great Lakes.

#### MARINE...

Southerly winds increasing to between 20 to 30 knots over the Central Great Lakes tonight ahead of a cold front. A brief gust to Gales is not out of the question early Tomorrow morning, as the cold front passes through during mid day. Winds will shift to the southwest behind the front, and gusts are expected to reside predominantly in the 25 to 30 knot range as the cold advection is fairly weak. None-the-less, have expanded small craft advisories to include all nearshore waters on Tuesday. Much colder air will filter in on Wednesday as winds shift to the west, promoting deep mixing, and confidence is high in reaching Gales Wednesday afternoon into Wednesday Night. A gale watch remains in effect. Westerly winds will diminish as we head into Thursday as a ridge of high pressure builds into the area.

## HYDROLOGY ...

Strong low pressure will lift north in eastern Manitoba and western Ontario tonight into Tuesday. Widespread rainfall will arrive late tonight into early Tuesday as a cold front pivots into the area around this low pressure. There is also a slight chance of an embedded thunderstorm. Total rainfall across Southeast Michigan should be limited to between 0.25 and 0.50 inches. No flooding is expected. &&

.DTX WATCHES/WARNINGS/ADVISORIES... MI...NONE. Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ421-422-441>443-462>464. Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LHZ421-422. Small Craft Advisory until 7 PM EST Tuesday for LHZ441>443. Gale Watch from Wednesday morning through late Wednesday night for LHZ361>363. Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460. Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LCZ460. Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for LEZ444. Small Craft Advisory from 7 AM to 7 PM EST Tuesday for LEZ444. && \$\$ AVIATION.....MR DISCUSSION...BT/AM MARINE.....SF HYDROLOGY....SF You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit. FXUS63 KDTX 070806 AFDDTX

Area Forecast Discussion National Weather Service Detroit/Pontiac MI 306 AM EST Tue Mar 7 2017 .DISCUSSION...

Large area of upper level low pressure, with multiple embedded shortwaves, centered over southern Manitoba this morning will slowly lift northeast towards Hudson Bay today and Wednesday. Cold front extending down from surface low pressure will track through Lower Michigan this morning, while surface low pressure deepens and then occludes over Ontario later today.

Plume of deeper moisture is working across the area this morning in advance of the cold front, as a strong 60-70 knot low-level jet slides into the area ahead of the upper low and strong shortwave energy moving through the Plains. Expecting a generous coverage of showers until the front works across during approximately the 14-18Z window. A few thunderstorms will also be possible as mid-levels cool and warmer air arrives in the low-levels. Severe weather is not expected, but thunderstorms and stronger showers may tap into higher winds aloft and provide gusts to 45 mph. It will be windy in general early this morning and today, with gusts up to 40 mph this morning in southerly flow ahead of the front, and then as cold air advection

deepens the boundary layer behind the front and we mix into 30-40 mph gusts through mid-afternoon.

Temperatures have been rising overnight into the mid and upper 50s as warm air advection, dewpoints, and winds have all increased. Max temperatures for today in the upper 50s to low 60s will occur early in the day, before falling behind the front as it passes through the area from west to east.

Tonight should be fairly quiet, even as upper energy pivoting around the low over Ontario drops down through the area. Model forecast soundings hint that too much dry air will be in place for shower development. We will also see a brief respite from strong winds tonight as high pressure building into the Central and Southern Plains relaxes the gradient and surface low pressure remains over far northwest Ontario. The gradient will then increase over Southeast Michigan tomorrow as the high builds towards the Tennessee Valley and the area of low pressure tracks towards St James Bay. Secondary push of cold air will also occur tomorrow behind the upper energy dropping through the area. Model forecast soundings continue to support the development of a deep mixed layer (as high as 750mb), while a strong core of 40-50 knot winds slides into Southern Michigan on the south side of the low, with 30 knots now shown on model forecast soundings just off the surface. Sustained speeds around 30 mph with gusts as high as 50 mph look increasingly likely, as mixing processes are also supported by unidirectional wind field and tight pressure gradient. A wind advisory may be needed for Wednesday. Winds will subside in the evening as weak ridging slides in overhead, inversion heights lower, and stronger winds aloft slide east.

Northwest flow is expected to dominate the Central Great Lakes for the end of the week, keeping cooler and more winter-like temperatures locked in place. Latest model trends keep periods of rain/snow south of the area over the Ohio Valley through the weekend. &&

#### .MARINE...

Southerly winds will continue in the 20 to 25 knot range with gusts to 30 knots over parts of Lake Huron early this morning. There may be some gusts near gale force later this morning as a cold front sweeps through the area. This will be especially true from Saginaw Bay into central Lake Huron where funneling of the wind will enhance wind speeds as winds veer to southwest with the frontal passage. This period of strongest southwest flow will be limited to several hours immediately behind the front, so feel the ongoing Small Craft Advisory should cover the situation. Gust potential will also be limited somewhat by stable low level conditions as temperatures near 60 only gradually fall through the 50s in the wake of the cold front. Colder air will sweep into the area on Wednesday as winds shift from southwest to west. This will promote deep mixing, and confidence is rather high in reaching gales, especially from midday into Wednesday night. A Gale Watch remains will remain in effect for all marine zones with an upgrade to warnings expected for much if not all of the area. Westerly winds will then diminish into Thursday as a ridge of high pressure builds into the area.

&&

.HYDROLOGY ...

Strong low pressure will lift northeast into western Ontario this morning. Widespread showers with a few embedded thunderstorms can be expected this morning as an attending cold front encroaches and then passes through the forecast area. Total rainfall across Southeast Michigan should, by and large, be limited to around one quarter of an inch localized amounts up to one half of an inch. No flooding is expected.

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.PREV DISCUSSION...

Issued at 1159 PM EST Mon Mar 6 2017

AVIATION...

Moist low level flow under strengthening and intermittently gusty southerly wind will sustain widespread low MVFR/IFR conditions through the morning period. Some pockets of light rain or drizzle may occur prior to 10z, but greater potential arrives mid-late morning Tuesday /10z-15z/ coincident with the arrival of a cold front. Very low probability for thunder within this particular window, but the potential remains too low to consider a thunder mention. Southerly winds expected to remain just strong enough at the surface overnight to preclude a mention of LLWS. Post-frontal southwest winds turn gusty as skies steadily clear Tuesday afternoon. Gusts expected into the 30 knot range. For DTW...IFR conditions in intermittent light rain/drizzle through 10z, with increasing coverage of showers thereafter through roughly 15z. Probability for thunder Tuesday morning /10z-15z/ remain too low to include at this time. Gusty southerly winds of 20-25 kts overnight, then increasing from the southwest behind a cold front Tuesday afternoon /30 kt gusts/. Winds expected to remain backed just enough to preclude crosswind concerns /240 degrees/.

//DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet through Noon Tuesday.

 \* Very low in thunderstorms impacting terminal 10z-15z Tuesday morning.

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...NONE.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ421-422-441>443-462>464.

Small Craft Advisory until 7 PM EST this evening for LHZ421-422.

Small Craft Advisory until 7 PM EST this evening for LHZ441>443.

Gale Watch from Wednesday morning through late Wednesday night for LHZ361>363.

Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460. Small Craft Advisory until 7 PM EST this evening for LCZ460. Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for LEZ444. Small Craft Advisory until 7 PM EST this evening for LEZ444. && \$\$ DISCUSSION...HLO MARINE......DG HYDROLOGY....DG AVIATION.....MR You can obtain your latest National Weather Service forecasts online at <u>www.weather.gov/detroit</u>.

### FXUS63 KDTX 071101

AFDDTX

Area Forecast Discussion

National Weather Service Detroit/Pontiac MI

601 AM EST Tue Mar 7 2017

.AVIATION...

Expect generally MVFR conditions this morning within moist SSW flow in advance of cold front. Scattered showers will be common, but tsra chances appear to lessen considerably before forecast period begins. IFR conditions will be possible on occasion within heavier showers. South winds will gust to 25 to 30 knots and veer to southwest with fropa midday. VFR conditions are expected early/mid afternoon on into tonight with SSW/SW winds subsiding to 10-15 knots during the evening.

For DTW...MVFR conditions will predominate with occasional IFR in heavier showers through 16z. A trend to VFR will occur 16z-20z within drier SW flow in wake of cold front. Gusts to 25 knots will be common today with some gusts to 30 knots. Quiter tonight, but SW flow begins to increase in the 24-30 hour portion of the forecast with gusts possibly to 40 knots 18z and beyond Wednesday. //DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet through 18z.

\* Very low in thunderstorms impacting terminal through 16z.&&

.PREV DISCUSSION ...

Issued at 306 AM EST Tue Mar 7 2017

DISCUSSION...

Large area of upper level low pressure, with multiple embedded shortwaves, centered over southern Manitoba this morning will slowly lift northeast towards Hudson Bay today and Wednesday. Cold front extending down from surface low pressure will track through Lower Michigan this morning, while surface low pressure deepens and then occludes over Ontario later today.

Plume of deeper moisture is working across the area this morning in advance of the cold front, as a strong 60-70 knot low-level jet slides into the area ahead of the upper low and strong shortwave energy moving through the Plains. Expecting a generous coverage of showers until the front works across during approximately the 14-18Z window. A few thunderstorms will also be possible as mid-levels cool and warmer air arrives in the low-levels. Severe weather is not expected, but thunderstorms and stronger showers may tap into higher winds aloft and provide gusts to 45 mph. It will be windy in general early this morning and today, with gusts up to 40 mph this morning in southerly flow ahead of the front, and then as cold air advection deepens the boundary layer behind the front and we mix into 30-40 mph gusts through mid-afternoon.

Temperatures have been rising overnight into the mid and upper 50s as warm air advection, dewpoints, and winds have all increased. Max temperatures for today in the upper 50s to low 60s will occur early in the day, before falling behind the front as it passes through the area from west to east.

Tonight should be fairly quiet, even as upper energy pivoting around the low over Ontario drops down through the area. Model forecast soundings hint that too much dry air will be in place for shower development. We will also see a brief respite from strong winds tonight as high pressure building into the Central and Southern Plains relaxes the gradient and surface low pressure remains over far northwest Ontario. The gradient will then increase over Southeast Michigan tomorrow as the high builds towards the Tennessee Valley and the area of low pressure tracks towards St James Bay. Secondary push of cold air will also occur tomorrow behind the upper energy dropping through the area. Model forecast soundings continue to support the development of a deep mixed layer (as high as 750mb), while a strong core of 40-50 knot winds slides into Southern Michigan on the south side of the low, with 30 knots now shown on model forecast soundings just off the surface. Sustained speeds around 30 mph with gusts as high as 50 mph look increasingly likely, as mixing processes are also supported by unidirectional wind field and tight pressure gradient. A wind advisory may be needed for Wednesday. Winds will subside in the evening as weak ridging slides in overhead, inversion heights lower, and stronger winds aloft slide east.

Northwest flow is expected to dominate the Central Great Lakes for the end of the week, keeping cooler and more winter-like temperatures locked in place. Latest model trends keep periods of rain/snow south of the area over the Ohio Valley through the weekend. MARINE...

Southerly winds will continue in the 20 to 25 knot range with gusts to 30 knots over parts of Lake Huron early this morning. There may

be some gusts near gale force later this morning as a cold front sweeps through the area. This will be especially true from Saginaw Bay into central Lake Huron where funneling of the wind will enhance wind speeds as winds veer to southwest with the frontal passage. This period of strongest southwest flow will be limited to several hours immediately behind the front, so feel the ongoing Small Craft Advisory should cover the situation. Gust potential will also be limited somewhat by stable low level conditions as temperatures near 60 only gradually fall through the 50s in the wake of the cold front. Colder air will sweep into the area on Wednesday as winds shift from southwest to west. This will promote deep mixing, and confidence is rather high in reaching gales, especially from midday into Wednesday night. A Gale Watch remains will remain in effect for all marine zones with an upgrade to warnings expected for much if not all of the area. Westerly winds will then diminish into Thursday as a ridge of high pressure builds into the area. HYDROLOGY...

Strong low pressure will lift northeast into western Ontario this morning. Widespread showers with a few embedded thunderstorms can be expected this morning as an attending cold front encroaches and then passes through the forecast area. Total rainfall across Southeast Michigan should, by and large, be limited to around one quarter of an inch localized amounts up to one half of an inch. No flooding is expected.

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...NONE.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ421-422-441>443-462>464.

Small Craft Advisory until 7 PM EST this evening for LHZ421-422-441>443.

Gale Watch from Wednesday morning through late Wednesday night for LHZ361>363.

Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460.

Small Craft Advisory until 7 PM EST this evening for LCZ460.

Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for

LEZ444.

Small Craft Advisory until 7 PM EST this evening for LEZ444.

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AVIATION.....99

DISCUSSION...HLO MARINE......DG

HYDROLOGY....DG

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## FXUS63 KDTX 071613

AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 1113 AM EST Tue Mar 7 2017 .UPDATE...

Borderline wind advisory conditions ongoing today over all of SE Michigan with peak gusts around 40 mph reported after passage of the cold front. Gusts have been more frequent in the Tri Cities and northern Thumb on up into northern Lower Michigan during the late morning peak of maximized low level cold advection and isentropic descent. Incoming model guidance suggests the gusty conditions will continue through early afternoon with similar distribution before diminishing closer to 30 mph during mid afternoon and then further below 30 mph by early evening. The incoming cooler air will have temperatures falling through the 40s during the afternoon but with a decreasing cloud trend through the day.

The main push in the morning update is for issuance of the high wind watch headline for Wednesday. The new 12Z model data continues to depict an even stronger wind field compared to today and for a longer duration. Gusts over 50 mph are likely and gusts to 60 mph possible. Considering conditions are borderline advisory today, heightened awareness seems necessary for the high end advisory to near warning level gusts expected Wednesday.

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.PREV DISCUSSION...

Issued at 601 AM EST Tue Mar 7 2017 AVIATION...

Expect generally MVFR conditions this morning within moist SSW flow in advance of cold front. Scattered showers will be common, but tsra chances appear to lessen considerably before forecast period begins. IFR conditions will be possible on occasion within heavier showers. South winds will gust to 25 to 30 knots and veer to southwest with fropa midday. VFR conditions are expected early/mid afternoon on into tonight with SSW/SW winds subsiding to 10-15 knots during the evening.

For DTW...MVFR conditions will predominate with occasional IFR in heavier showers through 16z. A trend to VFR will occur 16z-20z within drier SW flow in wake of cold front. Gusts to 25 knots will be common today with some gusts to 30 knots. Quieter tonight, but SW flow begins to increase in the 24-30 hour portion of the forecast with gusts possibly to 40 knots 18z and beyond Wednesday. //DTW THRESHOLD PROBABILITIES...

\* High in cigs at or below 5000 feet through 18z.

\* Very low in thunderstorms impacting terminal through 16z. PREV DISCUSSION...

Issued at 306 AM EST Tue Mar 7 2017 DISCUSSION...

Large area of upper level low pressure, with multiple embedded shortwaves, centered over southern Manitoba this morning will slowly lift northeast towards Hudson Bay today and Wednesday. Cold front extending down from surface low pressure will track through Lower Michigan this morning, while surface low pressure deepens and then occludes over Ontario later today.

Plume of deeper moisture is working across the area this morning in advance of the cold front, as a strong 60-70 knot low-level jet slides into the area ahead of the upper low and strong shortwave energy moving through the Plains. Expecting a generous coverage of showers until the front works across during approximately the 14-18Z window. A few thunderstorms will also be possible as mid-levels cool and warmer air arrives in the low-levels. Severe weather is not expected, but thunderstorms and stronger showers may tap into higher winds aloft and provide gusts to 45 mph. It will be windy in general early this morning and today, with gusts up to 40 mph this morning in southerly flow ahead of the front, and then as cold air advection deepens the boundary layer behind the front and we mix into 30-40 mph gusts through mid-afternoon.

Temperatures have been rising overnight into the mid and upper 50s as warm air advection, dewpoints, and winds have all increased. Max temperatures for today in the upper 50s to low 60s will occur early in the day, before falling behind the front as it passes through the area from west to east.

Tonight should be fairly quiet, even as upper energy pivoting around the low over Ontario drops down through the area. Model forecast soundings hint that too much dry air will be in place for shower development. We will also see a brief respite from strong winds tonight as high pressure building into the Central and Southern Plains relaxes the gradient and surface low pressure remains over far northwest Ontario. The gradient will then increase over Southeast Michigan tomorrow as the high builds towards the Tennessee Valley and the area of low pressure tracks towards St James Bay. Secondary push of cold air will also occur tomorrow behind the upper energy dropping through the area. Model forecast soundings continue to support the development of a deep mixed layer (as high as 750mb), while a strong core of 40-50 knot winds slides into Southern Michigan on the south side of the low, with 30 knots now shown on model forecast soundings just off the surface. Sustained speeds around 30 mph with gusts as high as 50 mph look increasingly likely, as mixing processes are also supported by unidirectional wind field and tight pressure gradient. A wind advisory may be needed for Wednesday. Winds will subside in the evening as weak ridging slides in overhead, inversion heights lower, and stronger winds aloft slide east.

Northwest flow is expected to dominate the Central Great Lakes for

the end of the week, keeping cooler and more winter-like temperatures locked in place. Latest model trends keep periods of rain/snow south of the area over the Ohio Valley through the weekend. MARINE...

Southerly winds will continue in the 20 to 25 knot range with gusts to 30 knots over parts of Lake Huron early this morning. There may be some gusts near gale force later this morning as a cold front sweeps through the area. This will be especially true from Saginaw Bay into central Lake Huron where funneling of the wind will enhance wind speeds as winds veer to southwest with the frontal passage. This period of strongest southwest flow will be limited to several hours immediately behind the front, so feel the ongoing Small Craft Advisory should cover the situation. Gust potential will also be limited somewhat by stable low level conditions as temperatures near 60 only gradually fall through the 50s in the wake of the cold front. Colder air will sweep into the area on Wednesday as winds shift from southwest to west. This will promote deep mixing, and confidence is rather high in reaching gales, especially from midday into Wednesday night. A Gale Watch remains will remain in effect for all marine zones with an upgrade to warnings expected for much if not all of the area. Westerly winds will then diminish into Thursday as a ridge of high pressure builds into the area. HYDROLOGY ....

Strong low pressure will lift northeast into western Ontario this morning. Widespread showers with a few embedded thunderstorms can be expected this morning as an attending cold front encroaches and then passes through the forecast area. Total rainfall across Southeast Michigan should, by and large, be limited to around one quarter of an inch localized amounts up to one half of an inch. No flooding is expected.

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...High Wind Watch from Wednesday morning through Wednesday evening for MIZ047>049-053>055-060>063-068>070-075-076-082-083.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ421-422-441>443-462>464.

Small Craft Advisory until 7 PM EST this evening for LHZ441>443.

Gale Warning until 7 PM EST this evening for LHZ421-422.

Gale Watch from Wednesday morning through late Wednesday night for LHZ361>363.

Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460.

Small Craft Advisory until 7 PM EST this evening for LCZ460.

Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for

LEZ444.

Small Craft Advisory until 7 PM EST this evening for LEZ444.

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\$\$ UPDATE......BT AVIATION.....DG DISCUSSION...HLO MARINE......DG HYDROLOGY....DG You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

FXUS63 KDTX 071711

AFDDTX

Area Forecast Discussion

National Weather Service Detroit/Pontiac MI

1211 PM EST Tue Mar 7 2017

.AVIATION...

Back edge to MVFR cloud shield now approaching KMBS. Steady west-toeast clearing expected through 20/21z with passage of cold front. Gusts will hover around 30 kts through the daytime period with a few localized higher gusts not out of the question...particularly near FNT/MBS. Nocturnal stabilization will bring an end to gustiness 23-00z. Clear skies and steady southwest gradient overnight will rapidly intensify with the passing of an upper wave on Wednesday. Strong pressure gradient will support SW wind gusts veering to WSW through the day becoming sustained near 30 kts by the end of the forecast period with gusts near 40 kts. Strengthening wind field above the inversion could lead to a couple hours of wind shear concerns toward sunrise.

For DTW...Wind shift to westerly anticipated by 19z, leading to crosswind concerns as gusts hold steady around 30 kts. Wind will be slightly more backed on Wednesday, but not enough to negate crosswind concerns once again.

//DTW THRESHOLD PROBABILITIES...

\* High for cigs aob 5kft through 20z.

\* High for exceeding crosswind thresholds this afternoon and again by late Wednesday morning.

&&

.PREV DISCUSSION...

Issued at 1113 AM EST Tue Mar 7 2017

UPDATE...

Borderline wind advisory conditions ongoing today over all of SE Michigan with peak gusts around 40 mph reported after passage of the cold front. Gusts have been more frequent in the Tri Cities and northern Thumb on up into northern Lower Michigan during the late morning peak of maximized low level cold advection and isentropic descent. Incoming model guidance suggests the gusty conditions will continue through early afternoon with similar distribution before diminishing closer to 30 mph during mid afternoon and then further below 30 mph by early evening. The incoming cooler air will have temperatures falling through the 40s during the afternoon but with a decreasing cloud trend through the day.

The main push in the morning update is for issuance of the high wind watch headline for Wednesday. The new 12Z model data continues to depict an even stronger wind field compared to today and for a longer duration. Gusts over 50 mph are likely and gusts to 60 mph possible. Considering conditions are borderline advisory today, heightened awareness seems necessary for the high end advisory to near warning level gusts expected Wednesday.

PREV DISCUSSION...

Issued at 306 AM EST Tue Mar 7 2017 DISCUSSION...

Large area of upper level low pressure, with multiple embedded shortwaves, centered over southern Manitoba this morning will slowly lift northeast towards Hudson Bay today and Wednesday. Cold front extending down from surface low pressure will track through Lower Michigan this morning, while surface low pressure deepens and then occludes over Ontario later today.

Plume of deeper moisture is working across the area this morning in advance of the cold front, as a strong 60-70 knot low-level jet slides into the area ahead of the upper low and strong shortwave energy moving through the Plains. Expecting a generous coverage of showers until the front works across during approximately the 14-18Z window. A few thunderstorms will also be possible as mid-levels cool and warmer air arrives in the low-levels. Severe weather is not expected, but thunderstorms and stronger showers may tap into higher winds aloft and provide gusts to 45 mph. It will be windy in general early this morning and today, with gusts up to 40 mph this morning in southerly flow ahead of the front, and then as cold air advection deepens the boundary layer behind the front and we mix into 30-40 mph gusts through mid-afternoon.

Temperatures have been rising overnight into the mid and upper 50s as warm air advection, dewpoints, and winds have all increased. Max temperatures for today in the upper 50s to low 60s will occur early in the day, before falling behind the front as it passes through the area from west to east.

Tonight should be fairly quiet, even as upper energy pivoting around the low over Ontario drops down through the area. Model forecast soundings hint that too much dry air will be in place for shower development. We will also see a brief respite from strong winds tonight as high pressure building into the Central and Southern Plains relaxes the gradient and surface low pressure remains over far northwest Ontario. The gradient will then increase over Southeast Michigan tomorrow as the high builds towards the Tennessee Valley and the area of low pressure tracks towards St James Bay. Secondary push of cold air will also occur tomorrow behind the upper energy dropping through the area. Model forecast soundings continue to support the development of a deep mixed layer (as high as 750mb), while a strong core of 40-50 knot winds slides into Southern Michigan on the south side of the low, with 30 knots now shown on model forecast soundings just off the surface. Sustained speeds around 30 mph with gusts as high as 50 mph look increasingly likely, as mixing processes are also supported by unidirectional wind field and tight pressure gradient. A wind advisory may be needed for Wednesday. Winds will subside in the evening as weak ridging slides in overhead, inversion heights lower, and stronger winds aloft slide east.

Northwest flow is expected to dominate the Central Great Lakes for the end of the week, keeping cooler and more winter-like temperatures locked in place. Latest model trends keep periods of rain/snow south of the area over the Ohio Valley through the weekend. MARINE...

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...High Wind Watch from Wednesday morning through Wednesday evening for MIZ047>049-053>055-060>063-068>070-075-076-082-083.

Lake Huron...Gale Watch from Wednesday morning through Wednesday evening for LHZ421-422-441>443-462>464.

Small Craft Advisory until 7 PM EST this evening for LHZ441>443.

Gale Warning until 7 PM EST this evening for LHZ421-422. Gale Watch from Wednesday morning through late Wednesday night for LHZ361>363. Lake St Clair...Gale Watch from Wednesday morning through Wednesday evening for LCZ460. Small Craft Advisory until 7 PM EST this evening for LCZ460. Michigan waters of Lake Erie...Gale Watch from Wednesday morning through Wednesd ay evening for LEZ444. Small Craft Advisory until 7 PM EST this evening for LEZ444. && \$\$ AVIATION....JVC UPDATE.....BT DISCUSSION...HLO MARINE.....DG HYDROLOGY....DG

You can obtain your latest National Weather Service forecasts online at <u>www.weather.gov/detroit</u>.

FXUS63 KDTX 072100 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 400 PM EST Tue Mar 7 2017 .DISCUSSION...

A steady diminishing wind trend will follow clearing sky during the late afternoon into the evening. The incoming cooler air under clear sky will allow some wind decoupling along the idea of model soundings. This will eliminate the gusty conditions while the surface pressure gradient remains steep enough to maintain steady gradient flow. Southwest wind holding in the 10 to 15 knot range is expected to keep min temps above freezing across the region despite the clear sky.

Full sunshine Wednesday morning will then give surface heating a jump start and lead into the very windy conditions expected to develop by late morning. Confidence remains high that a damaging wind event will develop with no big changes to the large scale weather features governing the event. Satellite imagery today shows the upper level cold pool moving through the northern Plains as good observational evidence of the upper trough leading the low level cold air reinforcement from southern Canada. Surface observations also report mid afternoon temperatures in the teens across North Dakota with several peak wind gusts of 50+ kts. Members of the 12Z model cycle have a good handle on this cold air reinforcement and project it to arrive over Lower Michigan and deepen during Wednesday morning based on the progress of the 850 mb -5C isotherm. This is also a good measure of the dividing line between clear sky and stratocu observed today over the northern Plains which sets up the key opportunity for strong surface heating into the afternoon over Lower Michigan during Wednesday. The incoming upper jet max will take it from there and sharpen the mid level height gradient which will then feed into strengthening the front and low level wind field. This strengthening wind field is further illustrated in model soundings that show development of a deep mixed layer through the diurnal cycle which normally results in some evening and lowering of wind speed through the layer as momentum is redistributed. In the case of this event, wind speed is shown to increase through the diurnal cycle despite the deep mixed layer. Model soundings across solutions show 850 mb wind holding above 50 kts while the mixed layer builds toward 750 mb during mid afternoon. This backs up inhouse probability guidance that suggests frequent gusts reaching 50 mph as early as 9-10 am and lasting through early evening as late as 8-9 pm, along with nonzero probability for reaching 60 mph. The potential for a nearly 12 hour event with frequent 50 mph wind gusts, and with gusts to 60 mph possible, warrants the high wind watch for prolonged high wind impacts to power, structures, and travel conditions.

The front will settle south of the Great Lakes Wednesday night into Thursday while fast flow aloft transitions toward a more zonal configuration. The zonal flow continues to exhibit smaller scale waves with typically low predictability, the first of which is shown to move through Thursday night. Chance POPs near the Ohio border seem reasonable for this scenario which is likely to continue shifting from run to run. This will lead to a more convincing surge of surface high pressure and colder air for the weekend as the transitional zonal flow begins a new round of trough development over the Great Lakes. Below normal temperatures are then projected to last into next week.

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#### .MARINE...

Winds will rapidly diminish this evening allowing small craft advisories to expire before midnight local time. Gale warnings are in effect for all area waters through the day Wednesday as southwest flow rapidly re-intensifies. Strong southwest or west-southwest wind will gust up to 45 knots. Due to relatively stable conditions over the lake...the highest wind gusts are forecast to occur in the nearshore zones. Offshore flow will force the highest waves to focus over central Lake Huron and areas east of the International Border. Unsettled marine conditions will persist through the week.

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.PREV DISCUSSION...

Issued at 1211 PM EST Tue Mar 7 2017

AVIATION...

Back edge to MVFR cloud shield now approaching KMBS. Steady west-to-

east clearing expected through 20/21z with passage of cold front. Gusts will hover around 30 kts through the daytime period with a few localized higher gusts not out of the question...particularly near FNT/MBS. Nocturnal stabilization will bring an end to gustiness 23-00z. Clear skies and steady southwest gradient overnight will rapidly intensify with the passing of an upper wave on Wednesday. Strong pressure gradient will support SW wind gusts veering to WSW through the day becoming sustained near 30 kts by the end of the forecast period with gusts near 40 kts. Strengthening wind field above the inversion could lead to a couple hours of wind shear concerns toward sunrise.

For DTW...Wind shift to westerly anticipated by 19z, leading to crosswind concerns as gusts hold steady around 30 kts. Wind will be slightly more backed on Wednesday, but not enough to negate crosswind concerns once again.

//DTW THRESHOLD PROBABILITIES...

\* High for cigs aob 5kft through 20z.

\* High for exceeding crosswind thresholds this afternoon and again

by late Wednesday morning.

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...High Wind Watch from Wednesday morning through Wednesday evening for MIZ047>049-053>055-060>063-068>070-075-076-082-083.

Lake Huron...Gale Warning from 7 AM to 10 PM EST Wednesday for LHZ421-422-441>443-462>464.

Small Craft Advisory until 10 PM EST this evening for LHZ421-422-441>443.

Gale Warning from 7 AM Wednesday to 4 AM EST Thursday for LHZ361>363.

Lake St Clair...Gale Warning from 7 AM to 10 PM EST Wednesday for LCZ460. Small Craft Advisory until 10 PM EST this evening for LCZ460.

Michigan waters of Lake Erie...Gale Warning from 7 AM to 10 PM EST Wednesday for LEZ444.

Small Craft Advisory until 10 PM EST this evening for LEZ444.

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\$\$ DISCUSSION...JVC MARINE......BT AVIATION....JVC You can obtain your latest National Weather Service forecasts online at <u>www.weather.gov/detroit</u>.

FXUS63 KDTX 072334 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 634 PM EST Tue Mar 7 2017

#### .AVIATION...

Deep dry slot core is in place over all of southeastern Michigan this evening. Midlevel instability exists back across the upper Mississippi River Valley under steep midlevel lapse rates. Additionally, mixing depths are high enough that some diurnal mixing is contributing to the altocumulus activity upstream. Suspect that much of this altocumulus will thin out with the setting sun, but the potential does exist for a FEW coverage of 7000-8000 ft agl bases overnight. Deep substaturated conditions will exist again tomorrow. Main weather story is the high wind potential on Wednesday. High confidence in west winds of 30 to 45 knots, with additional high confidence in a long duration for sustained winds of 30 knots during the afternoon. What remains lowest confidence is the high end magnitude of wind gusts Wednesday afternoon. Right now, the potential does exist for peak wind gusts to reach 50 knots. For DTW...The potential exists for exceeding crosswind threshold Wednesday afternoon.

//DTW THRESHOLD PROBABILITIES...

\* High for cigs aob 5kft through Wednesday

\* Moderate for exceeding crosswind thresholds late Wednesday morning. &&

.PREV DISCUSSION ...

Issued at 400 PM EST Tue Mar 7 2017 DISCUSSION...

A steady diminishing wind trend will follow clearing sky during the late afternoon into the evening. The incoming cooler air under clear sky will allow some wind decoupling along the idea of model soundings. This will eliminate the gusty conditions while the surface pressure gradient remains steep enough to maintain steady gradient flow. Southwest wind holding in the 10 to 15 knot range is expected to keep min temps above freezing across the region despite the clear sky.

Full sunshine Wednesday morning will then give surface heating a jump start and lead into the very windy conditions expected to develop by late morning. Confidence remains high that a damaging wind event will develop with no big changes to the large scale weather features governing the event. Satellite imagery today shows the upper level cold pool moving through the northern Plains as good observational evidence of the upper trough leading the low level cold air reinforcement from southern Canada. Surface observations also report mid afternoon temperatures in the teens across North Dakota with several peak wind gusts of 50+ kts. Members of the 12Z model cycle have a good handle on this cold air reinforcement and project it to arrive over Lower Michigan and deepen during Wednesday morning based on the progress of the 850 mb -5C isotherm. This is also a good measure of the dividing line between clear sky and stratocu observed today over the northern Plains which sets up the key opportunity for strong surface heating into the afternoon over

Lower Michigan during Wednesday. The incoming upper jet max will take it from there and sharpen the mid level height gradient which will then feed into strengthening the front and low level wind field. This strengthening wind field is further illustrated in model soundings that show development of a deep mixed layer through the diurnal cycle which normally results in some evening and lowering of wind speed through the layer as momentum is redistributed. In the case of this event, wind speed is shown to increase through the diurnal cycle despite the deep mixed layer. Model soundings across solutions show 850 mb wind holding above 50 kts while the mixed layer builds toward 750 mb during mid afternoon. This backs up inhouse probability guidance that suggests frequent gusts reaching 50 mph as early as 9-10 am and lasting through early evening as late as 8-9 pm, along with nonzero probability for reaching 60 mph. The potential for a nearly 12 hour event with frequent 50 mph wind gusts, and with gusts to 60 mph possible, warrants the high wind watch for prolonged high wind impacts to power, structures, and travel conditions.

The front will settle south of the Great Lakes Wednesday night into Thursday while fast flow aloft transitions toward a more zonal configuration. The zonal flow continues to exhibit smaller scale waves with typically low predictability, the first of which is shown to move through Thursday night. Chance POPs near the Ohio border seem reasonable for this scenario which is likely to continue shifting from run to run. This will lead to a more convincing surge of surface high pressure and colder air for the weekend as the transitional zonal flow begins a new round of trough development over the Great Lakes. Below normal temperatures are then projected to last into next week.

MARINE...

Winds will rapidly diminish this evening allowing small craft advisories to expire before midnight local time. Gale warnings are in effect for all area waters through the day Wednesday as southwest flow rapidly re-intensifies. Strong southwest or west-southwest wind will gust up to 45 knots. Due to relatively stable conditions over the lake...the highest wind gusts are forecast to occur in the nearshore zones. Offshore flow will force the highest waves to focus over central Lake Huron and areas east of the International Border. Unsettled marine conditions will persist through the week. &&

.DTX WATCHES/WARNINGS/ADVISORIES...

MI...High Wind Watch from Wednesday morning through Wednesday evening for MIZ047>049-053>055-060>063-068>070-075-076-082-083.

Lake Huron...Gale Warning from 7 AM to 10 PM EST Wednesday for LHZ421-422-441>443-462>464.

Small Craft Advisory until 10 PM EST this evening for LHZ421-422-441>443.

Gale Warning from 7 AM Wednesday to 4 AM EST Thursday for

LHZ361>363.

Lake St Clair...Gale Warning from 7 AM to 10 PM EST Wednesday for LCZ460. Small Craft Advisory until 10 PM EST this evening for LCZ460. Michigan waters of Lake Erie...Gale Warning from 7 AM to 10 PM EST Wednesday for LEZ444. Small Craft Advisory until 10 PM EST this evening for LEZ444. && \$\$e AVIATION.....CB DISCUSSION...JVC MARINE......BT You can obtain your latest National Weather Service forecasts online

at www.weather.gov/detroit.

FXUS63 KDTX 080341 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 1041 PM EST Tue Mar 7 2017 .UPDATE...

Upgraded the High Wind Watch to a Warning that will be in effect from 15-00Z Wednesday. Impressive wind event ongoing for the eastern Dakotas, Minnesota today and this evening with the heart of the arctic airmass infiltrating those states. Question now becomes what will happen over southeastern Michigan tomorrow. Overall, extremely large wavelength upper level trough over all of at least the northern half of North America leads to a forecast of high confidence for wind. Not a typical high wind scenario of strong front passage, sudden height rises, isallobaric forcing. Instead, looking at a reorganization of the strong and deep pressure gradient, with deep layer mixing of upwards of 5000 ft agl, or approximately 815 mb. Inhouse wind probability progs lend high confidence in a long duration wind event with sustained winds of 30 to 35 mph. These progs hold true for all of the southeastern Michigan. The same probability progs are suggesting a moderate to high confidence in wind gusts reaching 50 mph. Will offer a word of caution that it appears the urban roughness length mask is wreaking havoc with the hi-resolution datasets for those areas in metro Detroit, especially the HRRR. Given the longer duration aspect of these forecasted winds, the decision was made to upgrade the headline to a High Wind Warning. &&

.PREV DISCUSSION... Issued at 634 PM EST Tue Mar 7 2017 AVIATION...

Deep dry slot core is in place over all of southeastern Michigan this evening. Midlevel instability exists back across the upper Mississippi River Valley under steep midlevel lapse rates. Additionally, mixing depths are high enough that some diurnal mixing is contributing to the altocumulus activity upstream. Suspect that much of this altocumulus will thin out with the setting sun, but the potential does exist for a FEW coverage of 7000-8000 ft agl bases overnight. Deep substaturated conditions will exist again tomorrow. Main weather story is the high wind potential on Wednesday. High confidence in west winds of 30 to 45 knots, with additional high confidence in a long duration for sustained winds of 30 knots during the afternoon. What remains lowest confidence is the high end magnitude of wind gusts Wednesday afternoon. Right now, the potential does exist for peak wind gusts to reach 50 knots. For DTW...The potential exists for exceeding crosswind threshold Wednesday afternoon.

//DTW THRESHOLD PROBABILITIES...

\* High for cigs aob 5kft through Wednesday

\* Moderate for exceeding crosswind thresholds late Wednesday morning. PREV DISCUSSION...

Issued at 400 PM EST Tue Mar 7 2017 DISCUSSION...

A steady diminishing wind trend will follow clearing sky during the late afternoon into the evening. The incoming cooler air under clear sky will allow some wind decoupling along the idea of model soundings. This will eliminate the gusty conditions while the surface pressure gradient remains steep enough to maintain steady gradient flow. Southwest wind holding in the 10 to 15 knot range is expected to keep min temps above freezing across the region despite the clear sky.

Full sunshine Wednesday morning will then give surface heating a jump start and lead into the very windy conditions expected to develop by late morning. Confidence remains high that a damaging wind event will develop with no big changes to the large scale weather features governing the event. Satellite imagery today shows the upper level cold pool moving through the northern Plains as good observational evidence of the upper trough leading the low level cold air reinforcement from southern Canada. Surface observations also report mid afternoon temperatures in the teens across North Dakota with several peak wind gusts of 50+ kts. Members of the 12Z model cycle have a good handle on this cold air reinforcement and project it to arrive over Lower Michigan and deepen during Wednesday morning based on the progress of the 850 mb -5C isotherm. This is also a good measure of the dividing line between clear sky and stratocu observed today over the northern Plains which sets up the key opportunity for strong surface heating into the afternoon over Lower Michigan during Wednesday. The incoming upper jet max will take it from there and sharpen the mid level height gradient which will then feed into strengthening the front and low level wind field. This strengthening wind field is further illustrated in model soundings that show development of a deep mixed layer through the

diurnal cycle which normally results in some evening and lowering of wind speed through the layer as momentum is redistributed. In the case of this event, wind speed is shown to increase through the diurnal cycle despite the deep mixed layer. Model soundings across solutions show 850 mb wind holding above 50 kts while the mixed layer builds toward 750 mb during mid afternoon. This backs up inhouse probability guidance that suggests frequent gusts reaching 50 mph as early as 9-10 am and lasting through early evening as late as 8-9 pm, along with nonzero probability for reaching 60 mph. The potential for a nearly 12 hour event with frequent 50 mph wind gusts, and with gusts to 60 mph possible, warrants the high wind watch for prolonged high wind impacts to power, structures, and travel conditions.

The front will settle south of the Great Lakes Wednesday night into Thursday while fast flow aloft transitions toward a more zonal configuration. The zonal flow continues to exhibit smaller scale waves with typically low predictability, the first of which is shown to move through Thursday night. Chance POPs near the Ohio border seem reasonable for this scenario which is likely to continue shifting from run to run. This will lead to a more convincing surge of surface high pressure and colder air for the weekend as the transitional zonal flow begins a new round of trough development over the Great Lakes. Below normal temperatures are then projected to last into next week.

MARINE...

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...High Wind Warning from 10 AM to 7 PM EST Wednesday for MIZ047>049-053>055-060>063-068>070-075-076-082-083.

Lake Huron...Gale Warning from 7 AM to 10 PM EST Wednesday for LHZ421-422-441>443-462>464.

Gale Warning from 7 AM Wednesday to 4 AM EST Thursday for LHZ361>363.

Lake St Clair...Gale Warning from 7 AM to 10 PM EST Wednesday for LCZ460. Michigan waters of Lake Erie...Gale Warning from 7 AM to 10 PM EST Wednesday for LEZ444. && \$\$ UPDATE......CB AVIATION.....CB DISCUSSION...JVC MARINE......BT You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

FXUS63 KDTX 080507 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 1207 AM EST Wed Mar 8 2017 .AVIATION...

Deep dry slot core remains in place over all of southeastern Michigan. Innocuous sprinkles and light shower activity have been steadily progressing towards portions of southeastern Michigan this evening, falling out of midlevel altocumulus. Overall, dynamics remain low, relegated to some modest cyclonic vorticity advection and a very narrow convergence corridor. Given amount of dry air will continue to go with a dry forecast. Best potential for a trace type event is at KMBS.

Otherwise, the main weather story continues to be the impending high wind event on Wednesday. Have now climbed into the time horizon of many of the hi-res models. Latest guidance trends increase confidence in a long duration sustained wind scenario of 25 to 30 knots. Wind gust magnitudes remain a tough call but peak winds of greater than 40 to 45 knots remains possible. Higher wind activity is expected to decrease rapidly after 23Z Wednesday. For DTW...The potential exists for exceeding crosswind threshold

Wednesday afternoon.

//DTW THRESHOLD PROBABILITIES...

\* High for cigs aob 5kft through Wednesday \* Moderate for exceeding crosswind thresholds by

\* Moderate for exceeding crosswind thresholds by late Wednesday morning.

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.PREV DISCUSSION ...

Issued at 1041 PM EST Tue Mar 7 2017 UPDATE...

Upgraded the High Wind Watch to a Warning that will be in effect from 15-00Z Wednesday. Impressive wind event ongoing for the eastern Dakotas, Minnesota today and this evening with the heart of the arctic airmass infiltrating those states. Question now becomes what will happen over southeastern Michigan tomorrow. Overall, extremely large wavelength upper level trough over all of at least the northern half of North America leads to a forecast of high confidence for wind. Not a typical high wind scenario of strong front passage, sudden height rises, isallobaric forcing. Instead, looking at a reorganization of the strong and deep pressure gradient, with deep layer mixing of upwards of 5000 ft agl, or approximately 815 mb. Inhouse wind probability progs lend high confidence in a long duration wind event with sustained winds of 30 to 35 mph. These progs hold true for all of the southeastern Michigan. The same probability progs are suggesting a moderate to high confidence in wind gusts reaching 50 mph. Will offer a word of caution that it appears the urban roughness length mask is wreaking havoc with the hi-resolution datasets for those areas in metro Detroit, especially the HRRR. Given the longer duration aspect of these forecasted winds, the decision was made to upgrade the headline to a High Wind Warning. PREV DISCUSSION...

# Issued at 400 PM EST Tue Mar 7 2017 DISCUSSION...

A steady diminishing wind trend will follow clearing sky during the late afternoon into the evening. The incoming cooler air under clear sky will allow some wind decoupling along the idea of model soundings. This will eliminate the gusty conditions while the surface pressure gradient remains steep enough to maintain steady gradient flow. Southwest wind holding in the 10 to 15 knot range is expected to keep min temps above freezing across the region despite the clear sky.

Full sunshine Wednesday morning will then give surface heating a jump start and lead into the very windy conditions expected to develop by late morning. Confidence remains high that a damaging wind event will develop with no big changes to the large scale weather features governing the event. Satellite imagery today shows the upper level cold pool moving through the northern Plains as good observational evidence of the upper trough leading the low level cold air reinforcement from southern Canada. Surface observations also report mid afternoon temperatures in the teens across North Dakota with several peak wind gusts of 50+ kts. Members of the 12Z model cycle have a good handle on this cold air reinforcement and project it to arrive over Lower Michigan and deepen during Wednesday morning based on the progress of the 850 mb -5C isotherm. This is also a good measure of the dividing line between clear sky and stratocu observed today over the northern Plains which sets up the key opportunity for strong surface heating into the afternoon over Lower Michigan during Wednesday. The incoming upper jet max will take it from there and sharpen the mid level height gradient which will then feed into strengthening the front and low level wind field. This strengthening wind field is further illustrated in model soundings that show development of a deep mixed layer through the diurnal cycle which normally results in some evening and lowering of wind speed through the layer as momentum is redistributed. In the case of this event, wind speed is shown to increase through the diurnal cycle despite the deep mixed layer. Model soundings across solutions show 850 mb wind holding above 50 kts while the mixed layer builds toward 750 mb during mid afternoon. This backs up inhouse probability guidance that suggests frequent gusts reaching

50 mph as early as 9-10 am and lasting through early evening as late as 8-9 pm, along with nonzero probability for reaching 60 mph. The potential for a nearly 12 hour event with frequent 50 mph wind gusts, and with gusts to 60 mph possible, warrants the high wind watch for prolonged high wind impacts to power, structures, and travel conditions.

The front will settle south of the Great Lakes Wednesday night into Thursday while fast flow aloft transitions toward a more zonal configuration. The zonal flow continues to exhibit smaller scale waves with typically low predictability, the first of which is shown to move through Thursday night. Chance POPs near the Ohio border seem reasonable for this scenario which is likely to continue shifting from run to run. This will lead to a more convincing surge of surface high pressure and colder air for the weekend as the transitional zonal flow begins a new round of trough development over the Great Lakes. Below normal temperatures are then projected to last into next week.

MARINE...

Winds will rapidly diminish this evening allowing small craft advisories to expire before midnight local time. Gale warnings are in effect for all area waters through the day Wednesday as southwest flow rapidly re-intensifies. Strong southwest or west-southwest wind will gust up to 45 knots. Due to relatively stable conditions over the lake...the highest wind gusts are forecast to occur in the nearshore zones. Offshore flow will force the highest waves to focus over central Lake Huron and areas east of the International Border. Unsettled marine conditions will persist through the week. &&

.DTX WATCHES/WARNINGS/ADVISORIES...

MI...High Wind Warning from 10 AM this morning to 7 PM EST this evening for MIZ047>049-053>055-060>063-068>070-075-076-082-083.

Lake Huron...Gale Warning from 7 AM this morning to 10 PM EST this evening for LHZ421-422-441>443-462>464.

Gale Warning from 7 AM this morning to 4 AM EST Thursday for LHZ361>363.

Lake St Clair...Gale Warning from 7 AM this morning to 10 PM EST this evening fo r

LCZ460.

Michigan waters of Lake Erie...Gale Warning from 7 AM this morning to 10 PM EST this evening for

## LEZ444.

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AVIATION.....DG UPDATE......CB DISCUSSION...JVC

MARINE.....BT

You can obtain your latest National Weather Service forecasts online

at www.weather.gov/detroit.

## FXUS63 KDTX 080837 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 337 AM EST Wed Mar 8 2017 .DISCUSSION...

Main forecast concern is the strong, damaging winds expected across Southeast Michigan today. Upper/surface low pressure over extreme northern Ontario will lift into Hudson Bay today, with Michigan remaining on the southern periphery of the large upper system. A strong core of upper level winds will slide into the Great Lakes today as the upper low lifts northward, with models bringing 50 knots as low as 1400 feet (RAP/GFS) by early this afternoon. Arctic air in place already over North Dakota and Northern Minnesota, where gusts are still solidly in the 40 to 50 mph range, will meanwhile slide southward into Michigan this afternoon. The cold air combined with sunshine/good surface heating will serve to deepen the mixed layer today, with mixing heights reaching as high as 750mb. This will allow stronger winds to mix to the surface. Diurnal mixing of winds will be supported by tight pressure gradient between the low over Hudson Bay and high pressure building northward into the Tennessee Valley. Expect to see sustained winds of 30 to 35 mph given strong winds right off the surface, with gusts solidly between 50 and 60 mph. Duration and magnitude of sustained speeds was a factor in High Wind Warning decision. Temperatures will begin to fall from north to south in the late afternoon as arctic airmass settles in, and begins to shrink the depth of the mixed layer. This combined with weak ridging starting to build in from the west should allow damaging wind gusts to subside during the evening. The strongest winds during the event should be during the afternoon, coinciding with both peak heating and the strongest winds aloft. Arctic front will settle over the Ohio Valley tonight and Thursday. Weak wave of low pressure riding along this feature may spread some light snow, or snow mixed with rain, into Southern Lower Michigan late Thursday into Thursday night. There is still some uncertainty on where this fairly narrow area of light snow will set up given differences in model timing with how quickly the front settles south. NAM is the furthest north with the front by late Thursday, but seems to be holding it further northward as a result of over-deepening the surface low over Missouri, probably due to convective feedback issues. Only low pops were carried in the forecast until better consensus can be reached on location. Max temps rising into the low 40s south of M-59 could allow some rain to mix in during the late afternoon/early evening if precipitation develops, but low dewpoints should keep p-type primarily snow.

Well below normal temperatures can be expected for the end of the week as we remain on the north side of the front and flow remains primarily northwest. Max temps should stay in the 20s to low 30s, with min temps falling into the single digits and teens Friday and Saturday nights.

Models keep cold air in place into early next week, while driving low pressure down across the Northern Rockies and into the Ohio Valley by Monday night. This looks to provide a better chance of snow accumulations Monday morning through Monday night. Pops are in the likely category now due to good model consistency over the past few days with this feature.

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#### .MARINE...

Gale warnings are in effect for all area waters into tonight as southwest flow will rapidly strengthen as the pressure gradient tightens and deep mixing occurs with daytime heating. The Gale Warning will also be upgraded to a Storm Warning over Saginaw Bay where funneling of the southwest wind will allow wind gusts to approach 50 knots at times. Elsewhere, winds gusts will reach 40 to 45 knots. Due to the relatively stable conditions over the lake, the highest wind gusts are expected to occur in the nearshore zones. Offshore flow will force the highest waves to focus over central Lake Huron and areas east of the International Border. Unsettled marine conditions will then persist through the rest of the week with another period of gales quite possible over portions of Lake Huron on Friday as a reinforcing shot of very cold air

surges southeast across the area.

## .PREV DISCUSSION...

Issued at 1207 AM EST Wed Mar 8 2017 AVIATION...

Deep dry slot core remains in place over all of southeastern Michigan. Innocuous sprinkles and light shower activity have been steadily progressing towards portions of southeastern Michigan this evening, falling out of midlevel altocumulus. Overall, dynamics remain low, relegated to some modest cyclonic vorticity advection and a very narrow convergence corridor. Given amount of dry air will continue to go with a dry forecast. Best potential for a trace type event is at KMBS.

Otherwise, the main weather story continues to be the impending high wind event on Wednesday. Have now climbed into the time horizon of many of the hi-res models. Latest guidance trends increase confidence in a long duration sustained wind scenario of 25 to 30 knots. Wind gust magnitudes remain a tough call but peak winds of greater than 40 to 45 knots remains possible. Higher wind activity is expected to decrease rapidly after 23Z Wednesday.

For DTW...The potential exists for exceeding crosswind threshold Wednesday afternoon.

//DTW THRESHOLD PROBABILITIES...

\* High for cigs aob 5kft through Wednesday

\* Moderate for exceeding crosswind thresholds by late Wednesday morning.

&&

.DTX WATCHES/WARNINGS/ADVISORIES...

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Lake Huron...Gale Warning from 7 AM this morning to 10 PM EST this evening for LHZ441>443-462>464.

Storm Warning from 7 AM this morning to 10 PM EST this evening for LHZ421-422.

Gale Warning from 7 AM this morning to 4 AM EST Thursday for LHZ361>363.

Lake St Clair...Gale Warning from 7 AM this morning to 10 PM EST this evening fo r

LCZ460.

Michigan waters of Lake Erie...Gale Warning from 7 AM this morning to 10 PM EST this evening for

LEZ444.

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DISCUSSION...HLO
MARINE......DG
AVIATION.....DG
You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit.

FXUS63 KDTX 081019 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 519 AM EST Wed Mar 8 2017 .AVIATION...

The main weather story will be high winds today. Latest guidance trends continue to suggest a long duration sustained wind scenario of 25 to 30 knots with the highest wind gusts to around 45 knots on average. The period of highest gusts will exist from 17z-23z or so, but already expect gusts to 30 or more shortly after the forecast begins as the boundary layer is already fairly well mixed early this morning.

For DTW...The potential exists for exceeding crosswind threshold Wednesday afternoon.

//DTW THRESHOLD PROBABILITIES...

\* Moderate to high for exceeding crosswind thresholds from roughly 17z-23z today.

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#### .PREV DISCUSSION... Issued at 337 AM EST Wed Mar 8 2017

DISCUSSION...

Main forecast concern is the strong, damaging winds expected across Southeast Michigan today. Upper/surface low pressure over extreme northern Ontario will lift into Hudson Bay today, with Michigan remaining on the southern periphery of the large upper system. A strong core of upper level winds will slide into the Great Lakes today as the upper low lifts northward, with models bringing 50 knots as low as 1400 feet (RAP/GFS) by early this afternoon. Arctic air in place already over North Dakota and Northern Minnesota, where gusts are still solidly in the 40 to 50 mph range, will meanwhile slide southward into Michigan this afternoon. The cold air combined with sunshine/good surface heating will serve to deepen the mixed layer today, with mixing heights reaching as high as 750mb. This will allow stronger winds to mix to the surface. Diurnal mixing of winds will be supported by tight pressure gradient between the low over Hudson Bay and high pressure building northward into the Tennessee Valley. Expect to see sustained winds of 30 to 35 mph given strong winds right off the surface, with gusts solidly between 50 and 60 mph. Duration and magnitude of sustained speeds was a factor in High Wind Warning decision. Temperatures will begin to fall from north to south in the late afternoon as arctic airmass settles in, and begins to shrink the depth of the mixed layer. This combined with weak ridging starting to build in from the west should allow damaging wind gusts to subside during the evening. The strongest winds during the event should be during the afternoon, coinciding with both peak heating and the strongest winds aloft. Arctic front will settle over the Ohio Valley tonight and Thursday. Weak wave of low pressure riding along this feature may spread some light snow, or snow mixed with rain, into Southern Lower Michigan late Thursday into Thursday night. There is still some uncertainty on where this fairly narrow area of light snow will set up given differences in model timing with how quickly the front settles south. NAM is the furthest north with the front by late Thursday, but seems to be holding it further northward as a result of over-deepening the surface low over Missouri, probably due to convective feedback issues. Only low pops were carried in the forecast until better consensus can be reached on location. Max temps rising into the low 40s south of M-59 could allow some rain to mix in during the late afternoon/early evening if precipitation develops, but low dewpoints should keep p-type primarily snow. Well below normal temperatures can be expected for the end of the week as we remain on the north side of the front and flow remains primarily northwest. Max temps should stay in the 20s to low 30s, with min temps falling into the single digits and teens Friday and Saturday nights.

Models keep cold air in place into early next week, while driving

low pressure down across the Northern Rockies and into the Ohio Valley by Monday night. This looks to provide a better chance of snow accumulations Monday morning through Monday night. Pops are in the likely category now due to good model consistency over the past few days with this feature.

#### MARINE...

Gale warnings are in effect for all area waters into tonight as southwest flow will rapidly strengthen as the pressure gradient tightens and deep mixing occurs with daytime heating. The Gale Warning will also be upgraded to a Storm Warning over Saginaw Bay where funneling of the southwest wind will allow wind gusts to approach 50 knots at times. Elsewhere, winds gusts will reach 40 to 45 knots. Due to the relatively stable conditions over the lake, the highest wind gusts are expected to occur in the nearshore zones. Offshore flow will force the highest waves to focus over central Lake Huron and areas east of the International Border. Unsettled marine conditions will then persist through the rest of the week with another period of gales quite possible over portions of Lake Huron on Friday as a reinforcing shot of very cold air surges southeast across the area.

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Michigan waters of Lake Erie...Gale Warning until 10 PM EST this evening for LEZ 444.

&& \$\$ AVIATION.....99 DISCUSSION...HLO MARINE......DG You can obtain your latest National Weather Service forecasts online at <u>www.weather.gov/detroit</u>.

FXUS63 KDTX 081439 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 939 AM EST Wed Mar 8 2017 .UPDATE... Straight-forward forecast today with only cosmetic changes needed.

Strong wind max has developed as embedded energy rotates around the deep cyclone near Hudson Bay. Dry column featuring low and mid-level

lapse rates in excess of 8C/KM evident on this morning's 12z DTX sounding is primed for mixing as unabated insolation deepens the boundary layer to around 7kft this afternoon. Model soundings indicate 70kts at the top of the mixed layer and 0-2km mean wind around 50 kts. Indeed, gusts in excess of 60 mph have already been observed over Lower Michigan this morning (KGRR) along with downed power lines and trees reported in Bay County. The High Wind Warning remains in effect from 10am to 7pm with a long duration of gusts around 50 mph likely with peak wind gusts in excess of 60 mph. Highest gusts south of the cold front this afternoon, mainly south of I-69, where mixing depth will be maximized. The power outage footprint will steadily grow through the day.

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.PREV DISCUSSION ...

Issued at 519 AM EST Wed Mar 8 2017 AVIATION...

The main weather story will be high winds today. Latest guidance trends continue to suggest a long duration sustained wind scenario of 25 to 30 knots with the highest wind gusts to around 45 knots on average. The period of highest gusts will exist from 17z-23z or so, but already expect gusts to 30 or more shortly after the forecast begins as the boundary layer is already fairly well mixed early this morning.

For DTW...The potential exists for exceeding crosswind threshold Wednesday afternoon.

//DTW THRESHOLD PROBABILITIES...

\* Moderate to high for exceeding crosswind thresholds from roughly 17z-23z today.

PREV DISCUSSION...

Issued at 337 AM EST Wed Mar 8 2017

DISCUSSION...

Main forecast concern is the strong, damaging winds expected across Southeast Michigan today. Upper/surface low pressure over extreme northern Ontario will lift into Hudson Bay today, with Michigan remaining on the southern periphery of the large upper system. A strong core of upper level winds will slide into the Great Lakes today as the upper low lifts northward, with models bringing 50 knots as low as 1400 feet (RAP/GFS) by early this afternoon. Arctic air in place already over North Dakota and Northern Minnesota, where gusts are still solidly in the 40 to 50 mph range, will meanwhile slide southward into Michigan this afternoon. The cold air combined with sunshine/good surface heating will serve to deepen the mixed layer today, with mixing heights reaching as high as 750mb. This will allow stronger winds to mix to the surface. Diurnal mixing of winds will be supported by tight pressure gradient between the low over Hudson Bay and high pressure building northward into the Tennessee Valley. Expect to see sustained winds of 30 to 35 mph given strong winds right off the surface, with gusts solidly between

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Models keep cold air in place into early next week, while driving low pressure down across the Northern Rockies and into the Ohio Valley by Monday night. This looks to provide a better chance of snow accumulations Monday morning through Monday night. Pops are in the likely category now due to good model consistency over the past few days with this feature.

## MARINE...

Gale warnings are in effect for all area waters into tonight as southwest flow will rapidly strengthen as the pressure gradient tightens and deep mixing occurs with daytime heating. The Gale Warning will also be upgraded to a Storm Warning over Saginaw Bay where funneling of the southwest wind will allow wind gusts to approach 50 knots at times. Elsewhere, winds gusts will reach 40 to 45 knots. Due to the relatively stable conditions over the lake, the highest wind gusts are expected to occur in the nearshore zones. Offshore flow will force the highest waves to focus over central Lake Huron and areas east of the International Border. Unsettled marine conditions will then persist through the rest of the week with another period of gales quite possible over portions of Lake Huron on Friday as a reinforcing shot of very cold air surges southeast across the area.

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FXUS63 KDTX 081713 AFDDTX Area Forecast Discussion National Weather Service Detroit/Pontiac MI 1213 PM EST Wed Mar 8 2017 .AVIATION...

A strong low level wind field courtesy of a 970mb low near Hudson Bay and a deepening mixed layer has been supporting southwest wind gusts between 45 and 55 knots over the last few hours. Mixing depths and the low level wind fields will remain high through the afternoon sustaining these intense winds. The deepening of the mixed layer will result in a slight veering of the wind toward the west (around 270 deg) around 21Z. The loss of daytime heating will result in a quick drop in the winds between 23Z and 01Z. Further nocturnal cooling and a weakening of the pressure gradient will lead to a steady decrease in the winds during the course of the evening and overnight, with gusts likely falling below 20 knots shortly after 01Z.

For DTW...The latest guidance supports a slight shift toward a more westerly wind direction around 21Z. Gusts should then steadily decrease after 23Z.

//DTW THRESHOLD PROBABILITIES...

\* High in crosswind thresholds on the NE-SW runways being exceeded through 23Z this evening. Moderate between 23Z and 01Z.

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.PREV DISCUSSION ...

Issued at 939 AM EST Wed Mar 8 2017 UPDATE...

Straight-forward forecast today with only cosmetic changes needed. Strong wind max has developed as embedded energy rotates around the deep cyclone near Hudson Bay. Dry column featuring low and mid-level lapse rates in excess of 8C/KM evident on this morning's 12z DTX sounding is primed for mixing as unabated insolation deepens the boundary layer to around 7kft this afternoon. Model soundings indicate 70kts at the top of the mixed layer and 0-2km mean wind around 50 kts. Indeed, gusts in excess of 60 mph have already been observed over Lower Michigan this morning (KGRR) along with downed power lines and trees reported in Bay County. The High Wind Warning remains in effect from 10am to 7pm with a long duration of gusts around 50 mph likely with peak wind gusts in excess of 60 mph. Highest gusts south of the cold front this afternoon, mainly south of I-69, where mixing depth will be maximized. The power outage footprint will steadily grow through the day. PREV DISCUSSION ...

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Main forecast concern is the strong, damaging winds expected across Southeast Michigan today. Upper/surface low pressure over extreme northern Ontario will lift into Hudson Bay today, with Michigan remaining on the southern periphery of the large upper system. A strong core of upper level winds will slide into the Great Lakes today as the upper low lifts northward, with models bringing 50 knots as low as 1400 feet (RAP/GFS) by early this afternoon. Arctic air in place already over North Dakota and Northern Minnesota, where gusts are still solidly in the 40 to 50 mph range, will meanwhile slide southward into Michigan this afternoon. The cold air combined with sunshine/good surface heating will serve to deepen the mixed layer today, with mixing heights reaching as high as 750mb. This will allow stronger winds to mix to the surface. Diurnal mixing of winds will be supported by tight pressure gradient between the low over Hudson Bay and high pressure building northward into the Tennessee Valley. Expect to see sustained winds of 30 to 35 mph given strong winds right off the surface, with gusts solidly between 50 and 60 mph. Duration and magnitude of sustained speeds was a factor in High Wind Warning decision. Temperatures will begin to fall from north to south in the late afternoon as arctic airmass settles in, and begins to shrink the depth of the mixed layer. This combined with weak ridging starting to build in from the west should allow damaging wind gusts to subside during the evening. The strongest winds during the event should be during the afternoon, coinciding with both peak heating and the strongest winds aloft. Arctic front will settle over the Ohio Valley tonight and Thursday. Weak wave of low pressure riding along this feature may spread some light snow, or snow mixed with rain, into Southern Lower Michigan late Thursday into Thursday night. There is still some uncertainty on where this fairly narrow area of light snow will set up given

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MARINE...

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.DTX WATCHES/WARNINGS/ADVISORIES...

MI...High Wind Warning until 7 PM EST this evening for MIZ047>049-053>055-060>063-068>070-075-076-082-083.

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Storm Warning until 10 PM EST this evening for LHZ421-422.

Gale Warning until 4 AM EST Thursday for LHZ361>363.

Lake St Clair...Storm Warning until 10 PM EST this evening for LCZ460. Michigan waters of Lake Erie...Gale Warning until 10 PM EST this evening for LEZ

444.

Low Water Advisory until 4 AM EST Thursday for LEZ444.

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\$\$ AVIATION.....SC UPDATE......JVC DISCUSSION...HLO MARINE......DG You can obtain your latest National Weather Service forecasts online at www.weather.gov/detroit. FAUS43 KKCI 061045 FA3W -CHIC FA 061045 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 070500 CLDS/WX VALID UNTIL 062300...OTLK VALID 062300-070500 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...LOW PRES OVR SWRN ND WITH WRMFNT THRU NWRN MN-N CNTRL WI-SRN LH AND CDFNT THRU WRN SD-ERN CO. BY 05Z CDFNT OVR NERN MN-CNTRL WI-NWRN IL-SWRN MO.

ND

NW...OVC035 LYRD FL250. WDLY SCT -SHSN. 15Z OVC030 TOP 160. VIS 3SM -SN. 18Z WND NW 25G35KT. OTLK...MVFR CIG WND. SW-CNTRL...BKN120 TOP FL220. 14Z OVC025-035 LYRD FL250. OCNL VIS 3SM -RASN. 19Z WND NW 25G35KT. OTLK...MVFR CIG WND TIL 02Z SHSN. E...BKN025 TOP 040. VIS 3SM BR. 17Z TOP FL250. WDLY SCT -SHRA. 21Z TOP FL180. SCT -SHRA. WND W 20G30KT. OTLK...N PTN IFR CIG RA WND 00Z SHSN WND S PTN MVFR CIG WND TIL 01Z SHRA.

## SD

W HLF...BKN150 TOP FL220. 17Z BKN040 TOP 160. SCT -SHRA. WND NW 30G45KT. 20Z TOP FL220. OTLK...VFR WND. E HLF...OVC025 TOP 040. 15Z SCT120 SCT-BKN CI. WND SW G25KT. 21Z BKN060 TOP FL200. WND SW 20G30KT. OTLK...N PTN MVFR CIG SHRA WND S PTN VFR WND.

# NE

PNHDL-CNTRL...SCT120 SCT CI. 16Z SCT-BKN120 TOP FL180. WND W 30G45KT. 18Z N PTN WDLY SCT -SHRA. OTLK...VFR WND. E...OVC020-025 TOP 050. WND S G25KT. 19Z SCT040. WND SW 20G35KT. OTLK...VFR WND.

# KS

W...SCT CI. 15Z WND SW 25G35KT. 18Z OCNL VIS 4SM BLDU. WND W 30G40KT. OTLK...VFR WND.

CNTRL-E...BKN-OVC020-030 TOP 050. WND S 20G30KT. 17Z CNTRL SCT050 SCT CI. WND SW 20G35KT THRUT. 21Z E PTN BKN035 TOP 120. WDLY SCT -TSRA. CB TOP FL400. OTLK...VFR WND TIL 04Z E PTN TSRA.

# MN

N-CNTRL...BKN-OVC020-030 TOP 070. 15Z TOP 090. ISOL -SHRA. 20Z BKN035 TOP 120. WDLY SCT -SHRA/ISOL -TSRA. CB TOP FL370. OTLK...OTLK...MVFR CIG SHRA WND TIL 04Z TSRA.

S...OVC020 TOP 070. OCNL VIS 3SM -DZ/BR. 17Z BKN030 TOP 120. WDLY SCT -SHRA/ISOL -TSRA. CB TOP FL380. WND S 20G30KT. OTLK...W PTN VFR WND E PTN MVFR CIG SHRA WND TIL 03Z TSRA.

IA

BKN-OVC020-030 TOP 060. OCNL VIS 3SM -DZ/BR. 17Z BKN-OVC030 TOP FL220. WDLY SCT -SHRA/TSRA. CB TOP FL380. WND S 20G30KT. OTLK...W HLF VFR WND E HLF MVFR CIG SHRA WND TIL 04Z TSRA.

# мо

OVC020-030 TOP 100. WND S G25KT. OCNL -DZ. W PTN BECMG 1618 BKN035 TOP FL250. WDLY SCT -SHRA/TSRA POSS SEV. CB TOP FL400. WND SW 20G35KT. 21Z E PTN BKN035 TOP FL200. WDLY SCT -SHRA/TSRA POSS SEV. CB TOP FL400. WND SW 20G35KT. OTLK...MVFR CIG SHRA TSRA WND 03Z NW QTR VFR WND.

# WI

W 2/3...OVC020-030 TOP 080. OCNL VIS 3SM -DZ/BR. BECMG 1719 OVC035 TOP FL220. WDLY SCT -SHRA/TSRA. CB TOP FL380. OTLK...MVFR CIG SHRA TSRA WND.

E 1/3...OVC015-025 TOP 080. OCNL VIS 3SM -DZ/BR. 19Z OVC020-030. WDLY SCT -SHRA. OTLK...MVFR CIG SHRA 00Z TSRA WND.

# LS UPR MI

OVC015-020 TOP 070. VIS 3-5SM -DZ/BR. BECMG 1921 LYRD FL250. WDLY SCT -SHRA. OTLK...IFR CIG SHRA BR 00Z SW PTN TSRA.

# LM LWR MI LH

N HLF...OVC015-025 TOP 080. 13Z OCNL VIS 3SM -DZ/BR. OTLK...IFR CIG SHRA BR 03Z W PTN TSRA.

SW PTN...BKN-OVC015 TOP 100. OCNL VIS 3SM BR. 15Z OVC030 TOP FL180. WDLY SCT -SHRA. OTLK...MVFR CIG SHRA WND 04Z TSRA. SE PTN...BKN025-035 TOP 120. BECMG 1618 OVC030 LYRD FL250. WDLY SCT -SHRA. OTLK...MVFR CIG SHRA.

. IL

N 2/3...OVC035 TOP 130-150. WND S G25KT. 18Z WDLY SCT -SHRA. OTLK...MVFR CIG SHRA WND W PTN TSRA 04Z E PTN TSRA. S 1/3...OVC025 TOP 160. OCNL VIS 3SM SCT -SHRA/BR. OTLK...MVFR CIG SHRA WND 03Z TSRA.

IN

N-CNTRL...BKN040 TOP 160. BECMG 1416 OVC020 TOP FL200. WDLY SCT -SHRA. OTLK...MVFR CIG SHRA WND.

S...BKN030 TOP 150. WDLY SCT -SHRA. 14Z OVC020-030 TOP FL200. OCNL VIS 3SM -RA/BR. OTLK...MVFR CIG SHRA. KY W...OVC030 TOP FL200. OCNL VIS 3SM SCT -SHRA/BR. OTLK...MVFR CIG SHRA WND.. CNTRL...BKN050 TOP FL200. 13Z OVC035. OCNL VIS 3SM SCT -SHRA/BR. OTLK...MVFR CIG SHRA BR. E...OVC060 TOP FL240. 14Z WDLY SCT -SHRA. OTLK...VFR SHRA.

FAUS43 KKCI 061945 FA3W -CHIC FA 061945 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 071400 CLDS/WX VALID UNTIL 070800...OTLK VALID 070800-071400 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...NONE.

ND

W...OVC040 TOP FL240. VIS 3SM -SN BR. WND NW G40KT. OTLK...VFR WND.

NERN...OVC025 TOP 100. VIS 3SM RA BR. WND W G25KT. 01Z VIS 3SM -SN BR. WND W G40KT. OTLK...MVFR CIG WND.

SE...BKN040 TOP 080. 00Z OVC025. VIS 3SM -SN BR. WND W G30KT. 06Z BKN050. WND W G50KT. OTLK...VFR WND.

SD

W...BKN060 TOP 120. WND NW G50KT. 01Z BKN CI. WND NW G30KT. OTLK...VFR WND.

E...SCT CI. WND SW G40KT. 00Z BKN050 TOP 100. WND W G50KT. OTLK...VFR WND.

NE

PNHDL...BKN070 TOP 160. WND W G45KT. TIL 00Z -SN. WND W G30KT. 05Z BKN CI. WND W G30KT. OTLK...VFR WND. CNTRL...SCT CI. WND SW G45KT. 03Z SCT CI. OTLK...VFR. E...SCT060. WND W G45KT. 00Z OVC120 TOP FL180. SCT SHRA/TSRA. CB TOP FL400. WND W G35KT. OTLK...VFR.

KS

NW...SKC. WND NW G60KT. 00Z WND NW G30KT. 03Z SCT CI. OTLK...VFR. SW...SKC. WND NW G45KT. 01Z SKC. OTLK...VFR. NERN...SCT050. WND S G35KT. 22Z SCT SHRA/TSRA. CB TOP FL380. WND S G35KT. 02Z SKC. WND SW G30KT. OTLK...VFR. SE...BKN040 TOP 120. WND S G35KT. 00Z SCT SHRA/TSRA. CB TOP FL380. WND SW G25KT. OTLK...VFR.

#### MN

NW...OVCO20 TOP 060. WND S G25KT. 02Z VIS 3SM -RASN BR. WND SW G25KT. 06Z VIS 3SM -SN BR. OTLK...IFR CIG SN BR WND. NERN...OVCO25 TOP 060. 02Z OVCO25 TOP FL240. SCT SHRA/TSRA. CB TOP FL320. OTLK...IFR CIG SHRA TSRA 09Z SN WND. SW...SCT040. WND W G45KT. 00Z BKN040 TOP FL180. SCT SHRA/TSRA. CB TOP FL360. WND W G45KT. 04Z BKN040 TOP 090. WND W G45KT. OTLK...VFR WND. SE...OVCO20 TOP 050. WND S G35KT. 01Z OVC025 TOP FL240. SCT

SHRA/TSRA. CB TOP FL360. WND SW G35KT. 05Z BKN040. WND SW G35KT. OTLK...VFR WND.

## IA

NW...SCT040. 22Z BKN050 TOP FL180. ISOL SHRA/TSRA. CB TOP FL360. WND S G40KT. 01Z SCT CI. WND W G35KT. OTLK...VFR WND. ERN...OVC030 TOP 070. WND S G30KT. 03Z SCT SHRA/TSRA. CB TOP FL380. 08Z SKC. OTLK...VFR.

SW...BKN030 TOP 060. WND SW G40KT. 00Z BKN120 TOP FL180. SCT SHRA/TSRA. CB TOP FL380. WND W G40KT. 02Z SKC. WND W G35KT. OTLK...VFR.

# MO

NW...SCT040. WND S G40KT. 23Z BKN100 TOP 160. TIL 03Z SCT -SHRA/TSRA. CB TOP FL420. OTLK...VFR. NERN...BKN030 LYRD FL180. SCT -SHRA. WND S G40KT. 03Z BKN030. SCT -SHRA/TSRA. CB TOP FL420. 07Z SCT100. OTLK...VFR. SW...BKN050 TOP 140. WND S G40KT. 03Z SCT SHRA/TSRA. CB TOP FL420. OTLK...VFR. SE...OVC010 TOP 070. WND S G30KT. 05Z SCT SHRA/TSRA. CB TOP FL400. OTLK...IFR CIG SHRA TSRA.

# wı

W HLF...OVC020 TOP FL180. WND S G30KT. 04Z OVC020. SCT SHRA/TSRA. CB TOP FL380. OTLK...MVFR CIG. E HLF...OVC020 TOP FL180. 02Z SCT -SHRA. 06Z OVC025. SCT SHRA/TSRA. CB TOP FL380. OTLK...VFR.

# LS UPR MI

OVC025 TOP 060. VIS 3SM -DZ BR. 06Z OVC025 TOP FL180. SCT SHRA/TSRA. CB TOP FL380. OTLK...MVFR CIG SHRA TSRA.

LM LWR MI LH W...OVC025 TOP FL240. SCT -SHRA. 05Z OVC020. SCT SHRA/TSRA. CB TOP FL400. WND S G30KT. OTLK...IFR CIG SHRA TSRA 11Z VFR. E...BKN080 TOP FL240. 00Z OVC020. 06Z SCT -SHRA. OTLK...IFR CIG SHRA TSRA.

IL

NW...OVC025 TOP FL200. WND S G30KT. 05Z OVC015. SCT SHRA/TSRA. CB TOP FL400. WND W G25KT. OTLK...IFR CIG SHRA TSRA. NERN...OVC020 TOP FL240. WND S G30KT. 07Z OVC025. SCT SHRA/TSRA. CB TOP FL400. OTLK...MVFR CIG SHRA TSRA. S...OVC015 TOP 050. TIL 01Z SCT -SHRA. WND S G30KT. 06Z OVC020. SCT SHRA/TSRA. CB TOP FL400. OTLK...MVFR CIG SHRA TSRA.

IN

N...OVC025 TOP 100. TIL 00Z SCT -SHRA. OTLK...MVFR CIG SHRA TSRA.

S... OVC025 TOP 150. 03Z BKN050. OTLK...VFR SHRA TSRA.

KΥ

W...OVC025 TOP 150. SCT SHRA. 01Z BKN050. 07Z OVC025. SCT SHRA/TSRA. CB TOP FL400. OTLK...MVFR CIG SHRA TSRA. CNTRL...BKN080 TOP FL180. TIL 03Z RA. OTLK...VFR 10Z SHRA TSRA. E...BKN100 TOP FL240. TIL 03Z RA. OTLK...VFR 12Z SHRA.

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FAUS43 KKCI 062013 AAA FA3W -CHIC FA 062013 AMD SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 071400 CLDS/WX VALID UNTIL 070800...OTLK VALID 070800-071400 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...NONE.

ND

W...OVC040 TOP FL240. VIS 3SM -SN BR. WND NW G40KT. OTLK...VFR WND.

NERN...OVC025 TOP 100. VIS 3SM RA BR. WND W G25KT. 01Z VIS 3SM -SN BR. WND W G40KT. OTLK...MVFR CIG WND.

SE...BKN040 TOP 080. 00Z OVC025. VIS 3SM -SN BR. WND W G30KT. 06Z BKN050. WND W G50KT. OTLK...VFR WND.

SD

W...BKN060 TOP 120. WND NW G50KT. 01Z BKN CI. WND NW G30KT.

OTLK...VFR WND.

E...SCT CI. WND SW G40KT. 00Z BKN050 TOP 100. WND W G50KT. OTLK...VFR WND.

## NE

PNHDL...BKN070 TOP 160. WND W G45KT. TIL 00Z -SN. WND W G30KT. 05Z BKN CI. WND W G30KT. OTLK...VFR WND. CNTRL...SCT CI. WND SW G45KT. 03Z SCT CI. OTLK...VFR. E...BKN080 TOP FL180. SCT SHRA/TSRA. CB TOP FL400. WND SW G45KT. 03Z OVC120. WND W G35KT. OTLK...VFR.

КS

NW...SKC. WND NW G60KT. 00Z WND NW G30KT. 03Z SCT CI. OTLK...VFR. SW...SKC. WND NW G45KT. 01Z SKC. OTLK...VFR. NERN...SCT050. WND S G35KT. 22Z SCT SHRA/TSRA. CB TOP FL380. WND S G35KT. 02Z SKC. WND SW G30KT. OTLK...VFR. SE...BKN040 TOP 120. WND S G35KT. 00Z SCT SHRA/TSRA. CB TOP FL380. WND SW G25KT. OTLK...VFR.

## MN

NW...OVC020 TOP 060. WND S G25KT. 02Z VIS 3SM -RASN BR. WND SW G25KT. 06Z VIS 3SM -SN BR. OTLK...IFR CIG SN BR WND. NERN...OVC025 TOP 060. 02Z OVC025 TOP FL240. SCT SHRA/TSRA. CB TOP FL320. OTLK...IFR CIG SHRA TSRA 09Z SN WND. SW...SCT040. WND W G45KT. 00Z BKN040 TOP FL180. SCT SHRA/TSRA. CB TOP FL360. WND W G45KT. 04Z BKN040 TOP 090. WND W G45KT.

OTLK...VFR WND.

SE...OVC020 TOP 050. WND S G35KT. 01Z OVC025 TOP FL240. SCT SHRA/TSRA. CB TOP FL360. WND SW G35KT. 05Z BKN040. WND SW G35KT. OTLK...VFR WND.

# IA

NW...SCT040. 22Z BKN050 TOP FL180. ISOL SHRA/TSRA. CB TOP FL360. WND S G40KT. 01Z SCT CI. WND W G35KT. OTLK...VFR WND. ERN...OVC030 TOP 070. WND S G30KT. 03Z SCT SHRA/TSRA. CB TOP FL380. 08Z SKC. OTLK...VFR. SW...BKN030 TOP 060. WND SW G40KT. 00Z BKN120 TOP FL180. SCT

SHRA/TSRA. CB TOP FL380. WND W G40KT. 02Z SKC. WND W G35KT. OTLK...VFR.

# MO

NW...SCT040. WND S G40KT. 23Z BKN100 TOP 160. TIL 03Z SCT -SHRA/TSRA. CB TOP FL420. OTLK...VFR.

NERN...BKN030 LYRD FL180. SCT -SHRA. WND S G40KT. 03Z BKN030. SCT -SHRA/TSRA. CB TOP FL420. 07Z SCT100. OTLK...VFR.

SW...BKN050 TOP 140. WND S G40KT. 03Z SCT SHRA/TSRA. CB TOP FL420. OTLK...VFR.

SE...OVC010 TOP 070. WND S G30KT. 05Z SCT SHRA/TSRA. CB TOP

FL400. OTLK...IFR CIG SHRA TSRA.

WI

W HLF...OVC020 TOP FL180. WND S G30KT. 04Z OVC020. SCT SHRA/TSRA. CB TOP FL380. OTLK...MVFR CIG. E HLF...OVC020 TOP FL180. 02Z SCT -SHRA. 06Z OVC025. SCT SHRA/TSRA. CB TOP FL380. OTLK...VFR.

LS UPR MI

OVC025 TOP 060. VIS 3SM -DZ BR. 06Z OVC025 TOP FL180. SCT SHRA/TSRA. CB TOP FL380. OTLK...MVFR CIG SHRA TSRA.

LM LWR MI LH

W...OVC025 TOP FL240. SCT -SHRA. 05Z OVC020. SCT SHRA/TSRA. CB TOP FL400. WND S G30KT. OTLK...IFR CIG SHRA TSRA 11Z VFR. E...BKN080 TOP FL240. 00Z OVC020. 06Z SCT -SHRA. OTLK...IFR CIG SHRA TSRA.

IL

NW...OVC025 TOP FL200. WND S G30KT. 05Z OVC015. SCT SHRA/TSRA. CB TOP FL400. WND W G25KT. OTLK...IFR CIG SHRA TSRA.

NERN...OVC020 TOP FL240. WND S G30KT. 07Z OVC025. SCT SHRA/TSRA. CB TOP FL400. OTLK...MVFR CIG SHRA TSRA.

S...OVC015 TOP 050. TIL 01Z SCT -SHRA. WND S G30KT. 06Z OVC020. SCT SHRA/TSRA. CB TOP FL400. OTLK...MVFR CIG SHRA TSRA.

IN

N...OVC025 TOP 100. TIL 00Z SCT -SHRA. OTLK...MVFR CIG SHRA TSRA.

S... OVC025 TOP 150. 03Z BKN050. OTLK...VFR SHRA TSRA.

КΥ

W...OVC025 TOP 150. SCT SHRA. 01Z BKN050. 07Z OVC025. SCT SHRA/TSRA. CB TOP FL400. OTLK...MVFR CIG SHRA TSRA. CNTRL...BKN080 TOP FL180. TIL 03Z RA. OTLK...VFR 10Z SHRA TSRA. E...BKN100 TOP FL240. TIL 03Z RA. OTLK...VFR 12Z SHRA.

FAUS43 KKCI 070245 FA3W -CHIC FA 070245 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 072100 CLDS/WX VALID UNTIL 071500...OTLK VALID 071500-072100 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN.

TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...02Z CDFNT WRN WI-ERN IA-NERN MO-SERN KS. SCNDRY CDFNT ERN ND-SCNTRL SD-WCNTRL SD. 21Z CDFNT NCNTRL KY-SCNTRL KY. CDFNT NERN MN-SWRN SD.

#### ND

W..SCT060. WND W 25G35KT. 06Z WND W 20G30KT. 15Z SCT060. WND W 30G40KT. OTLK...VFR WND.

CNTRL..BKN040 TOP FL240. WDLY SCT -SHSN. WND W 30G40KT. 06Z SCT060 BKN CI. WND W G25KT. 15Z SKC. WND W 20G30KT. OTLK...VFR WND.

E..OVC035 TOP 090. WDLY SCT -SHSN. WND W 20G30KT. 13Z SCT035 BKN CI. WND W 30G40KT. OTLK...VFR WND.

## SD

W..SCT CI. WND W G25KT. 15Z WND NW 25G35KT. OTLK...VFR WND. CNTRL..BKN120 TOP FL250. WND W 30G40KT. 06Z BKN CI. WND W 20G30KT. OTLK...VFR WND. E..BKN060 TOP 090. WND W 25G35KT. 08Z SCT060 BKN CI. WND W 20G30KT. OTLK...VFR WND.

## NE

PNHDL..BKN CI. WND W G25KT THRU PD. OTLK...VFR WND. CNTRL..SCT CI. 15Z WND W 20G30KT. OTLK...VFR WND. E..SCT CI. TIL 12Z WND W G25KT. OTLK...VFR.

# KS

W-CNTRL..SKC OR SCT CI. TIL 05Z WND NW G25KT CNTRL. 15Z WND W 25G35KT. OTLK...VFR WND.

Ε...

N..SCT CI. OTLK...VFR 16Z WND.

S..BKN050 TOP 120. TIL 04Z VIS 3SM SCT -TSRA. CB TOP FL430. TS POSS SEV. 05Z SCT100. OTLK...VFR 17Z WND.

# MN

NW..BKN025 TOP 060. 08Z OVC025 LYRD FL260. WND SW 20G30KT. ISOL -SHSN. OTLK...IFR CIG SHSN WND. NERN..OVC025 TOP 070. WDLY SCT -SHRA/ISOL -TSRA. CB TOP FL370. 05Z BKN070. 09Z BKN050 TOP FL250. 12Z TOP 100. WND W 20G30KT. OTLK...MVFR CIG WND. SE..OVC030 TOP FL180. WDLY SCT -TSRA. CB TOP FL400. TS POSS SEV. 06Z BKN040 TOP 080. WND SW 20G35KT. 12Z SCT040. WND SW 20G30KT. OTLK...VFR WND.

SW..BKN050 TOP FL270. WND W 30G45KT THRU PD. 11Z SCT CI. OTLK...VFR WND.

#### IA

W-CNTRL..SCT CI. WND W 20G30KT THRU PD. OTLK...VFR. E..OVC015 TOP 090. VIS 3SM SCT -TSRA. CB TOP FL440. TS POSS SEV. 06Z BKN100. WND SW 20G30KT THRU PD. 10Z SCT CI. OTLK...VFR WND.

#### MO

NW..SKC OR SCT CI. TIL 05Z WND W G25KT. OTLK...VFR 17Z WND. SW..BKN030 TOP 090. VIS 3-5SM SCT -TSRA. CB TOP FL430. TS POSS SEV. 09Z SCT050 BKN CI. 13Z SKC. OTLK...VFR 18Z WND. E 1/2..BKN020 LYRD FL260. VIS 3SM SCT -SHRA. WND S 20G30KT. 07Z VIS 3SM SCT -TSRA. CB TOP FL400. TS POSS SEV. WND SW G25KT. 10Z WDLY SCT -SHRA. 14Z SCT030 BKN CI. OTLK...VFR.

#### WI

OVC020 LYRD FL250. VIS 3-5SM SCT -TSRA. CB TOP FL390. 06Z BKN030 TOP 120. ISOL -SHRA SRN. WND SW G25KT. 10Z SCT050. WND SW 20G30KT. OTLK...VFR WND.

#### LS UPR MI

OVC025 TOP 100. WDLY SCT -SHRA. WND S G25KT. 08Z BKN100 TOP 160. ISOL -SHRA. 12Z BKN050 TOP 070. WND SW 20G30KT. OTLK...VFR WND.

#### LM LWR MI LH

N..OVC015 TOP 160. VIS 3SM SCT -SHRA. 14Z TOP 050. WND SW 20G30KT. OTLK...VFR WND.

S..OVC015 LYRD FL260. VIS 3SM SCT -SHRA. WND S G25KT. 12Z OVC020. VIS 5SM SCT -SHRA. WND SW 20G30KT THRU PD. 15Z SCT050. OTLK...VFR WND.

#### IL

N-CNTRL..OVC015 TOP 070. ISOL -SHRA. WND S 25G35KT. 05Z LYRD FL250. VIS 3SM SCT -TSRA. CB TOP FL400. 08Z BKN100 TOP 150. ISO L-SHRA. WND SW G25KT. 15Z SKC. WND W 20G30KT. OTLK...VFR. WND. S..BKN015 LYRD FL250. VIS 3SM SCT -SHRA. WND S G25KT. 08Z VIS 3SM SCT -TSRA. CB TOP FL400. WND SW G25KT. 12Z BKN025. ISOL -SHRA. 15Z SCT030 BKN CI. OTLK...VFR.

#### IN

N-CNTRL..OVC015 TOP 060. WND S 20G30KT. 07Z LYRD FL250. VIS 3SM SCT -TSRA NRN PTNS. CB TOP FL400. 09Z VIS 5SM SCT -SHRA. WND SW G25KT. 13Z BKN CI. OTLK...VFR 16Z WND.

S..BKN025 LYRD FL250. 06Z VIS 4SM SCT -SHRA THRU PD. TIL 09Z WND S G25KT. OTLK...MVFR CIG TIL 16Z SHRA.

## KΥ

W...BKN050 LYRD FL250. 05Z WDLY SCT -SHRA. WND S G25KT. 08Z VIS 3SM SCT -TSRA. CB TOP FL420. WND SW G25KT. 11Z WDLY SCT -SHRA. OTLK...MVFR CIG SHRA 17Z VFR.

CNTRL-E...OVC070 LYRD FL250. ISOL -SHRA. 13Z OVC035. WDLY SCT -SHRA. WND SW G25KT. OTLK...MVFR CIG TSRA WND.

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FAUS43 KKCI 070308 AAA FA3W -CHIC FA 070308 AMD SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 072100 CLDS/WX VALID UNTIL 071500...OTLK VALID 071500-072100 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...CDFNT WRN WI-ERN IA-NERN MO-SERN KS. SCNDRY CDFNT ERN ND-SCNTRL SD-WCNTRL SD. 21Z CDFNT ACRS CNTRL KY. CDFNT NERN MN-SWRN SD.

#### ND

W..SCT060. WND W 25G35KT. 06Z WND W 20G30KT. 15Z SCT060. WND W 30G40KT. OTLK...VFR WND.

CNTRL..BKN040 TOP FL240. WDLY SCT -SHSN. WND W 30G40KT. 06Z SCT060 BKN CI. WND W G25KT. 15Z SKC. WND W 20G30KT. OTLK...VFR WND.

E..OVC035 TOP 090. WDLY SCT -SHSN. WND W 20G30KT. 13Z SCT035 BKN CI. WND W 30G40KT. OTLK...VFR WND.

SD

W..SCT CI. WND W G25KT. 15Z WND NW 25G35KT. OTLK...VFR WND. CNTRL..BKN120 TOP FL250. WND W 30G40KT. 06Z BKN CI. WND W 20G30KT. OTLK...VFR WND. E..BKN060 TOP 090. WND W 25G35KT. 08Z SCT060 BKN CI. WND W 20G30KT. OTLK...VFR WND.

NE

PNHDL..BKN CI. WND W G25KT THRU PD. OTLK...VFR WND. CNTRL..SCT CI. 15Z WND W 20G30KT. OTLK...VFR WND. E..SCT CI. TIL 12Z WND W G25KT. OTLK...VFR.

. KS...UPDT W-CNTRL..SKC OR SCT CI. TIL 05Z WND NW G25KT CNTRL. 15Z WND W 25G35KT. OTLK...VFR WND. E... N..SCT CI. OTLK...VFR 16Z WND. S..BKN050 TOP 120. TIL 04Z VIS 3SM SCT -TSRA. CB TOP FL430. TS POSS SEV. 06Z SCT100. OTLK...VFR 17Z WND.

MN...UPDT

NW..BKN025 TOP 060. 08Z OVC025 LYRD FL260. WND SW 20G30KT. ISOL -SHSN. OTLK...IFR CIG SHSN WND.

NERN..OVC025 TOP 070. WDLY SCT -SHRA/ISOL -TSRA. CB TOP FL370. 05Z BKN070. 09Z BKN050 TOP FL250. 12Z TOP 100. WND W 20G30KT. OTLK...MVFR CIG WND.

SE..OVC030 TOP FL180. WDLY SCT -SHRA. 06Z BKN040 TOP 080. WND SW 20G35KT. 12Z SCT040. WND SW 20G30KT. OTLK...VFR WND. SW..BKN050 TOP FL270. WND W 30G45KT THRU PD. 11Z SCT CI. OTLK...VFR WND.

#### IA

W-CNTRL..SCT CI. WND W 20G30KT THRU PD. OTLK...VFR. E..OVC015 TOP 090. VIS 3SM SCT -TSRA. CB TOP FL440. TS POSS SEV. 06Z BKN100. WND SW 20G30KT THRU PD. 10Z SCT CI. OTLK...VFR WND.

#### MO...UPDT

NW..SKC OR SCT CI. TIL 05Z WND W G25KT. OTLK...VFR 17Z WND. SW..BKN030 TOP 090. VIS 3-5SM SCT -TSRA. CB TOP FL430. TS POSS SEV. 09Z SCT050 BKN CI. 13Z SKC. OTLK...VFR 18Z WND. E 1/2..BKN020 LYRD FL260. BECMG 0407 VIS 3SM SCT -TSRA. CB TOP FL450. TS POSS SEV. WND S 20G30KT. 10Z WDLY SCT -SHRA. 14Z SCT030 BKN CI. OTLK...VFR.

## WI...UPDT

OVC020 LYRD FL250. VIS 3-5SM SCT -TSRA. CB TOP FL440. TS POSS SEV SW. 06Z BKN030 TOP 120. ISOL -SHRA SRN. WND SW G25KT. 10Z SCT050. WND SW 20G30KT. OTLK...VFR WND.

#### LS UPR MI

OVC025 TOP 100. WDLY SCT -SHRA. WND S G25KT. 08Z BKN100 TOP 160. ISOL -SHRA. 12Z BKN050 TOP 070. WND SW 20G30KT. OTLK...VFR WND.

#### LM LWR MI LH

N..OVC015 TOP 160. VIS 3SM SCT -SHRA. 14Z TOP 050. WND SW 20G30KT. OTLK...VFR WND.

S..OVC015 LYRD FL260. VIS 3SM SCT -SHRA. WND S G25KT. 12Z OVC020. VIS 5SM SCT -SHRA. WND SW 20G30KT THRU PD. 15Z SCT050. OTLK...VFR WND.

## IL...UPDT

N-CNTRL..OVC015 TOP 070. WND S 25G35KT. 05Z LYRD FL250. VIS 3SM NMRS -TSRA. CB TOP FL440. TS POSS SEV. 08Z BKN100 TOP 150. ISO L-SHRA. WND SW G25KT. 15Z SKC. WND W 20G30KT. OTLK...VFR. WND. S..BKN015 LYRD FL250. VIS 3SM SCT -SHRA. WND S G25KT. 08Z VIS 3SM SCT -TSRA. CB TOP FL420. WND SW G25KT. 12Z BKN025. ISOL -SHRA. 15Z SCT030 BKN CI. OTLK...VFR.

IN

N-CNTRL..OVC015 TOP 060. WND S 20G30KT. 07Z LYRD FL250. VIS 3SM SCT -TSRA NRN PTNS. CB TOP FL400. 09Z VIS 5SM SCT -SHRA. WND SW G25KT. 13Z BKN CI. OTLK...VFR 16Z WND.

S..BKN025 LYRD FL250. 06Z VIS 4SM SCT -SHRA THRU PD. TIL 09Z WND S G25KT. OTLK...MVFR CIG TIL 16Z SHRA.

КΥ

W...BKN050 LYRD FL250. 05Z WDLY SCT -SHRA. WND S G25KT. 08Z VIS 3SM SCT -TSRA. CB TOP FL420. WND SW G25KT. 11Z WDLY SCT -SHRA. OTLK...MVFR CIG SHRA 17Z VFR.

CNTRL-E...OVC070 LYRD FL250. ISOL -SHRA. 13Z OVC035. WDLY SCT -SHRA. WND SW G25KT. OTLK...MVFR CIG TSRA WND.

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FAUS43 KKCI 070437 AAA FA3W -CHIC FA 070437 AMD SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 072100 CLDS/WX VALID UNTIL 071500...OTLK VALID 071500-072100 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...CDFNT WRN WI-ERN IA-NERN MO-SERN KS. SCNDRY CDFNT ERN ND-SCNTRL SD-WCNTRL SD. 21Z CDFNT ACRS CNTRL KY. CDFNT NERN MN-SWRN SD.

## ND...UPDT

W..BKN060 TOP 080. WND W 30G40KT. 06Z WND W 25G35KT. 15Z SCT060. WND W 30G40KT. OTLK...VFR WND. CNTRL..BKN040 TOP FL240. VIS 3SM WDLY SCT -SHSN BLSN. WND W

30G40KT. 08Z BKN CI. WND W G25KT. 15Z WND W 20G30KT. OTLK...VFR WND.

E..OVC035 TOP 090. WDLY SCT -SHSN. WND W 20G30KT. 13Z BKN CI. WND W 30G40KT. OTLK...VFR WND.

# SD

W..SCT CI. WND W G25KT. 15Z WND NW 25G35KT. OTLK...VFR WND. CNTRL..BKN120 TOP FL250. WND W 30G40KT. 06Z BKN CI. WND W 20G30KT. OTLK...VFR WND.

E..BKN060 TOP 090. WND W 25G35KT. 08Z SCT060 BKN CI. WND W

20G30KT. OTLK...VFR WND.

NE

PNHDL..BKN CI. WND W G25KT THRU PD. OTLK...VFR WND. CNTRL..SCT CI. 15Z WND W 20G30KT. OTLK...VFR WND. E..SCT CI. TIL 12Z WND W G25KT. OTLK...VFR.

KS...UPDT

W-CNTRL..SKC OR SCT CI. TIL 05Z WND NW G25KT CNTRL. 15Z WND W 25G35KT. OTLK...VFR WND.

Ε...

N..SCT CI. OTLK...VFR 16Z WND.

S..BKN050 TOP 120. TIL 04Z VIS 3SM SCT -TSRA. CB TOP FL430. TS POSS SEV. 06Z SCT100. OTLK...VFR 17Z WND.

## MN...UPDT

NW..BKN025 TOP 060. 08Z OVC025 LYRD FL260. WND SW 20G30KT. ISOL -SHSN. OTLK...IFR CIG SHSN WND.

NERN..OVC025 TOP 070. WDLY SCT -SHRA/ISOL -TSRA. CB TOP FL370. 05Z BKN070. 09Z BKN050 TOP FL250. 12Z TOP 100. WND W 20G30KT. OTLK...MVFR CIG WND.

SE..OVC030 TOP FL180. WDLY SCT -SHRA. 06Z BKN040 TOP 080. WND SW 20G35KT. 12Z SCT040. WND SW 20G30KT. OTLK...VFR WND. SW..BKN050 TOP FL270. WND W 30G45KT THRU PD. 11Z SCT CI. OTLK VER WND

OTLK...VFR WND.

IA

W-CNTRL..SCT CI. WND W 20G30KT THRU PD. OTLK...VFR. E..OVC015 TOP 090. VIS 3SM SCT -TSRA. CB TOP FL440. TS POSS SEV. 06Z BKN100. WND SW 20G30KT THRU PD. 10Z SCT CI. OTLK...VFR WND.

## MO...UPDT

NW..SKC OR SCT CI. TIL 05Z WND W G25KT. OTLK...VFR 17Z WND. SW..BKN030 TOP 090. VIS 3-5SM SCT -TSRA. CB TOP FL430. TS POSS SEV. 09Z SCT050 BKN CI. 13Z SKC. OTLK...VFR 18Z WND. E 1/2..BKN020 LYRD FL260. BECMG 0407 VIS 3SM SCT -TSRA. CB TOP FL450. TS POSS SEV. WND S 20G30KT. 10Z WDLY SCT -SHRA. 14Z SCT030 BKN CI. OTLK...VFR.

#### WI...UPDT

OVC020 LYRD FL250. VIS 3-5SM SCT -TSRA. CB TOP FL440. TS POSS SEV SW. 06Z BKN030 TOP 120. ISOL -SHRA SRN. WND SW G25KT. 10Z SCT050. WND SW 20G30KT. OTLK...VFR WND.

## LS UPR MI

OVC025 TOP 100. WDLY SCT -SHRA. WND S G25KT. 08Z BKN100 TOP 160. ISOL -SHRA. 12Z BKN050 TOP 070. WND SW 20G30KT. OTLK...VFR WND.

LM LWR MI LH

N..OVC015 TOP 160. VIS 3SM SCT -SHRA. 14Z TOP 050. WND SW 20G30KT. OTLK...VFR WND. S..OVC015 LYRD FL260. VIS 3SM SCT -SHRA. WND S G25KT. 12Z OVC020.

VIS 5SM SCT -SHRA. WND SW 20G30KT THRU PD. 15Z SCT050. OTLK...VFR WND.

#### IL...UPDT

N-CNTRL..OVC015 TOP 070. WND S 25G35KT. 05Z LYRD FL250. VIS 3SM NMRS -TSRA. CB TOP FL440. TS POSS SEV. 08Z BKN100 TOP 150. ISO L-SHRA. WND SW G25KT. 15Z SKC. WND W 20G30KT. OTLK...VFR. WND. S..BKN015 LYRD FL250. VIS 3SM SCT -SHRA. WND S G25KT. 08Z VIS 3SM SCT -TSRA. CB TOP FL420. WND SW G25KT. 12Z BKN025. ISOL -SHRA. 15Z SCT030 BKN CI. OTLK...VFR.

## IN

N-CNTRL..OVC015 TOP 060. WND S 20G30KT. 07Z LYRD FL250. VIS 3SM SCT -TSRA NRN PTNS. CB TOP FL400. 09Z VIS 5SM SCT -SHRA. WND SW G25KT. 13Z BKN CI. OTLK...VFR 16Z WND.

S..BKN025 LYRD FL250. 06Z VIS 4SM SCT -SHRA THRU PD. TIL 09Z WND S G25KT. OTLK...MVFR CIG SHRA.

KΥ

W...BKN050 LYRD FL250. 05Z WDLY SCT -SHRA. WND S G25KT. 08Z VIS 3SM SCT -TSRA. CB TOP FL420. WND SW G25KT. 11Z WDLY SCT -SHRA. OTLK...MVFR CIG SHRA 17Z VFR.

CNTRL-E...OVC070 LYRD FL250. ISOL -SHRA. 13Z OVC035. WDLY SCT -SHRA. WND SW G25KT. OTLK...MVFR CIG TSRA WND.

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FAUS43 KKCI 071045 FA3W -CHIC FA 071045 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 080500 CLDS/WX VALID UNTIL 072300...OTLK VALID 072300-080500 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...CDFNT OVR NWRN LH-NERN IN-WRN KY BY 18Z OVR WRN LE-CNTRL KY AND E OF FA BY 03Z. SECOND CDFNT OVR NRN MN-SRN SD BY 05Z OVR WRN LS-N CNTRL WI-NERN IA-NRN NE.

ND

W-CNTRL...SCT060 SCT-BKN CI. WND NW G25KT. 15Z SCT080. WND NW 20G30KT. 18Z BKN-SCT050 TOP 100. OCNL VIS 3SM BLSN. WND NW 25G35KT. OTLK...N CNTRL MVFR CIG BLSN WND ELSW VFR WND. E...BKN040 TOP 120. OCNL VIS 3SM -SN. WND NW 25G35KT. 18Z BKN040 TOP 100. WND W 25G35KT. OTLK...VFR WND.

### SD

SCT-BKN CI. OCNL SCT080. WND NW 20G30KT. BECMG 1618 WND NW 30G40KT. OTLK...VFR WND.

## NE

PNHDL-CNTRL...SCT130-150. WND NW G25KT. BECMG 1618 SCT120 SCT CI. WND NW 30G40KT. OTLK...VFR WND.

E...SCT150. WND WW G25KT. 18Z WND W 20G35KT. OTLK...VFR TIL 03Z WND.

# KS

W-CNTRL...SCT CI. BECMG 1618 WND NW 20G35KT. OTLK...VFR TIL 02Z WND.

E...SCT CI. 15Z WND NW G25KT. 19Z WND W 20G30KT. OTLK...VFR TIL 02Z WND.

# MN

N...OVC030 TOP FL180. VIS 3SM SCT -SHSN. WND W 20G30KT THRUT. 18Z BKN035 TOP 120. WDLY SCT -SHSN. OTLK...MVFR CIG SHSN WND 01Z VFR WND.

CNTRL...BKN035 TOP 160. ISOL -SHSN. WND W 20G30KT. 15Z SCT040. WND W 25G35KT. OTLK...VFR WND.

SW...SCT120. WND W 20G30KT. 18Z SCT100. WND W 30G40KT. OTLK...VFR WND.

SE...BKN030 TOP 140. WND SW 20G30KT. 13Z SCT050 SCT120. WND W 25G35KT. 18Z WND W 30G40KT. OTLK...VFR WND.

# IA

W HLF...SCT100. WND W G25KT. 18Z SCT CI. WND W 25G35KT. OTLK...VFR WND.

E HLF...BKN-SCT040 TOP 080. WND W G25KT. 14Z SCT CI. WND W 20G30KT. 18Z WND W 25G35KT. OTLK...VFR WND.

## MO

N HLF-SW...SCT150 SCT CI. BECMG 1517 SCT CI. WND W 20G30KT. OTLK...VFR TIL 01Z WND.

SE...BKN020 LYRD FL250. OCNL VIS 3SM SCT -SHRA/BR. ISOL -TSRA. CB TOP FL390. WND W 25G40KT. 16Z SCT120 SCT CI. OTLK...VFR.

WI

N 2/3...BKN030 TOP 100. N PTN ISOL -SHSN. WND SW 20G30KT THRUT. BECMG 1416 SCT-BKN040 TOP 070. 20Z SCT050. OTLK...VFR WND. S 1/3...SCT-BKN040 TOP 070. WND SW G25KT. 16Z SCT050. WND SW 20G35KT. OTLK...VFR TIL 00Z WND.

### LS UPR MI

W HLF...OVC015-025 TOP 150. WND SW 20G35KT. 15Z BKN040-050 TOP 100. WND SW 25G35KT THRUT. 20Z SCT050. OTLK...VFR SHRASN WND. E HLF...OVC015 LYRD FL250. OCNL VIS 3SM SCT -SHRA. TIL 13Z ISOL -TSRA. CB TOP FL370. WND SW 20G30KT. 15Z BKN030 TOP 070. WND SW 20G35KT THRUT. 19Z SCT-BKN050 TOP 080. OTLK...VFR TIL 02Z WND.

### LM LWR MI LH

N HLF...OVC015-025 LYRD FL250. VIS 3SM SCT -SHRA/TSRA. CB TOP FL390. BECMG 1416 BKN-SCT030 TOP 070. WND SW 20G35KT THRUT. 20Z SCT040-050. OTLK...VFR WND.

S HLF...OVC020-030 TOP FL220. VIS 3-5SM SCT -SHRA. ISOL -TSRA. CB TOP FL390. WND SW 20G30KT. 17Z W PTN SCT050. WND SW 20G35KT. 20Z E PTN SCT050. WND SW 20G30KT. OTLK...VFR TIL 01Z WND.

# IL

N-CNTRL...

W HLF..SCT050 SCT CI. WND SW 20G30KT THRUT. OTLK...VFR WND. E HLF..BKN030 BKN100 LYRD FL250. OCNL VIS 3SM SCT -SHRA. ISOL -TSRA. CB TOP FL380. BECMG 1214 SCT120 SCT CI. WND SW 20G30KT THRUT. OTLK...VFR WND.

S...BKN020 LYRD FL250. OCNL VIS 3SM SCT -SHRA. TIL 15Z WDLY SCT -TSRA. CB TOP FL400. TIL 15Z WND SW 25G40KT. 17Z SCT040 SCT CI. OTLK...VFR.

## IN

OVC020-030 TOP FL220. OCNL VIS 3SM SCT -SHRA/TSRA. CB TOP FL400. WND SW G25KT. 15Z N-CNTRL SCT030 BKN100-120. WDLY SCT -SHRA. BECMG 1618 N -CNTRL BKN-SCT040 TOP 080. ISOL -SHRA. WND SW 20G30KT. S PTN BKN-SCT030. WDLY SCT -SHRA. OTLK...VFR.

## KΥ

W HLF...OVC030 TOP FL220. VIS 3-5SM SCT -SHRA/TSRA. CB TOP FL400. BECMG 1719 SCT025 BKN070 TOP 160. WDLY SCT -SHRA. OTLK...VFR. E HLF...BKN080-100 TOP FL180. 15Z BKN-OVC030 LYRD FL250. WDLY SCT -SHRA/TSRA. CB TOP FL420. OTLK...W PTN MVFR CIG SHRA 02Z VFR E PTN IFR CIG SHRA TIL 01Z TSRA 03Z MVFR CIG SHRA.

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FAUS43 KKCI 071451 AAA FA3W -CHIC FA 071451 AMD SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 080500 CLDS/WX VALID UNTIL 072300...OTLK VALID 072300-080500 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG. SYNOPSIS...CDFNT OVR NWRN LH-NERN IN-WRN KY BY 18Z OVR WRN LE-CNTRL KY AND E OF FA BY 03Z. SECOND CDFNT OVR NRN MN-SRN SD BY 05Z OVR WRN LS-N CNTRL WI-NERN IA-NRN NE.

### ND

W-CNTRL...SCT060 SCT-BKN CI. WND NW G25KT. 15Z SCT080. WND NW 20G30KT. 18Z BKN-SCT050 TOP 100. OCNL VIS 3SM BLSN. WND NW 25G35KT. OTLK...N CNTRL MVFR CIG BLSN WND ELSW VFR WND. E...BKN040 TOP 120. OCNL VIS 3SM -SN. WND NW 25G35KT. 18Z BKN040 TOP 100. WND W 25G35KT. OTLK...VFR WND.

## SD

SCT-BKN CI. OCNL SCT080. WND NW 20G30KT. BECMG 1618 WND NW 30G40KT. OTLK...VFR WND.

## NE...UPDT

PNHDL-CNTRL...SCT130-150. WND NW G25KT. BECMG 1618 SCT120 SCT CI. WND NW 30G40KT. OTLK...VFR WND.

E...SCT150. WND W G25KT. 18Z WND W 20G35KT. OTLK...VFR TIL 03Z WND.

KS

W-CNTRL...SCT CI. BECMG 1618 WND NW 20G35KT. OTLK...VFR TIL 02Z WND.

E...SCT CI. 15Z WND NW G25KT. 19Z WND W 20G30KT. OTLK...VFR TIL 02Z WND.

# ΜN

N...OVC030 TOP FL180. VIS 3SM SCT -SHSN. WND W 20G30KT THRUT. 18Z BKN035 TOP 120. WDLY SCT -SHSN. OTLK...MVFR CIG SHSN WND 01Z VFR WND.

CNTRL...BKN035 TOP 160. ISOL -SHSN. WND W 20G30KT. 15Z SCT040. WND W 25G35KT. OTLK...VFR WND.

SW...SCT120. WND W 20G30KT. 18Z SCT100. WND W 30G40KT. OTLK...VFR WND.

SE...BKN030 TOP 140. WND SW 20G30KT. 13Z SCT050 SCT120. WND W 25G35KT. 18Z WND W 30G40KT. OTLK...VFR WND.

## IA

W HLF...SCT100. WND W G25KT. 18Z SCT CI. WND W 25G35KT. OTLK...VFR WND.

E HLF...BKN-SCT040 TOP 080. WND W G25KT. 14Z SCT CI. WND W

20G30KT. 18Z WND W 25G35KT. OTLK...VFR WND.

MO

N HLF-SW...SCT150 SCT CI. BECMG 1517 SCT CI. WND W 20G30KT. OTLK...VFR TIL 01Z WND.

SE...BKN020 LYRD FL250. OCNL VIS 3SM SCT -SHRA/BR. ISOL -TSRA. CB TOP FL390. WND W 25G40KT. 16Z SCT120 SCT CI. OTLK...VFR.

### wı

N 2/3...BKN030 TOP 100. N PTN ISOL -SHSN. WND SW 20G30KT THRUT. BECMG 1416 SCT-BKN040 TOP 070. 20Z SCT050. OTLK...VFR WND. S 1/3...SCT-BKN040 TOP 070. WND SW G25KT. 16Z SCT050. WND SW 20G35KT. OTLK...VFR TIL 00Z WND.

### LS UPR MI

W HLF...OVC015-025 TOP 150. WND SW 20G35KT. 15Z BKN040-050 TOP 100. WND SW 25G35KT THRUT. 20Z SCT050. OTLK...VFR SHRASN WND. E HLF...OVC015 LYRD FL250. OCNL VIS 3SM SCT -SHRA. TIL 13Z ISOL -TSRA. CB TOP FL370. WND SW 20G30KT. 15Z BKN030 TOP 070. WND SW 20G35KT THRUT. 19Z SCT-BKN050 TOP 080. OTLK...VFR TIL 02Z WND.

### LM LWR MI LH

N HLF...OVC015-025 LYRD FL250. VIS 3SM SCT -SHRA/TSRA. CB TOP FL390. BECMG 1416 BKN-SCT030 TOP 070. WND SW 20G35KT THRUT. 20Z SCT040-050. OTLK...VFR WND.

S HLF...OVC020-030 TOP FL220. VIS 3-5SM SCT -SHRA. ISOL -TSRA. CB TOP FL390. WND SW 20G30KT. 17Z W PTN SCT050. WND SW 20G35KT. 20Z E PTN SCT050. WND SW 20G30KT. OTLK...VFR TIL 01Z WND.

#### . IL

N-CNTRL...

W HLF..SCT050 SCT CI. WND SW 20G30KT THRUT. OTLK...VFR WND. E HLF..BKN030 BKN100 LYRD FL250. OCNL VIS 3SM SCT -SHRA. ISOL -TSRA. CB TOP FL380. BECMG 1214 SCT120 SCT CI. WND SW 20G30KT THRUT. OTLK...VFR WND.

S...BKN020 LYRD FL250. OCNL VIS 3SM SCT -SHRA. TIL 15Z WDLY SCT -TSRA. CB TOP FL400. TIL 15Z WND SW 25G40KT. 17Z SCT040 SCT CI. OTLK...VFR.

### IN

OVC020-030 TOP FL220. OCNL VIS 3SM SCT -SHRA/TSRA. CB TOP FL400. WND SW G25KT. 15Z N-CNTRL SCT030 BKN100-120. WDLY SCT -SHRA. BECMG 1618 N -CNTRL BKN-SCT040 TOP 080. ISOL -SHRA. WND SW 20G30KT. S PTN BKN-SCT030. WDLY SCT -SHRA. OTLK...VFR.

KΥ

W HLF...OVC030 TOP FL220. VIS 3-5SM SCT -SHRA/TSRA. CB TOP FL400. BECMG 1719 SCT025 BKN070 TOP 160. WDLY SCT -SHRA. OTLK...VFR. E HLF...BKN080-100 TOP FL180. 15Z BKN-OVC030 LYRD FL250. WDLY SCT -SHRA/TSRA. CB TOP FL420. OTLK...W PTN MVFR CIG SHRA 02Z VFR E PTN IFR CIG SHRA TIL 01Z TSRA 03Z MVFR CIG SHRA.

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FAUS43 KKCI 071945 FA3W -CHIC FA 071945 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 081400 CLDS/WX VALID UNTIL 080800...OTLK VALID 080800-081400 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...19Z CDFNT CNTRL KY-SERN TX. CDFNT NERN MN-NWRN IA-SWRN SD. BY 14Z CDFNT NERN LWR MI-SRN IA-SWRN SD. HIGH PRESS WRN MN.

ND

W...SCT CI. WND W 35G50KT. 01Z WND W 25G35KT. 07Z SCT CI. OTLK...VFR. CNTRL...SCT CI. WND W 35G50KT. 00Z WND W 30G40KT. 05Z WND NW 20G30KT. OTLK...VFR TIL 10Z WND. E...SCT-BKN050 TOP 070. WND W 30G40KT. 01Z BKN050. TIL 07Z WND W 25G35KT. OTLK...VFR.

SD

W...SCT120. WND NW 25G40KT. 01Z SCT CI. OTLK...VFR. CNTRL...SCT CI. WND W 25G40KT. 02Z WND W 20G30KT. 06Z SCT CI. OTLK...VFR. E...SCT CI. WND W 30G40KT. 23Z WND W 25G35KT. 02Z SCT CI. OTLK...VFR.

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NE

PNHDL...SKC OR SCT140. WND NW 35G45KT. 00Z BKN CI. TIL 05Z WND NW G25KT. OTLK...VFR.

CNTRL...SCT140. WND W 30G40KT. TIL 00Z OCNL VIS 5SM BLDU. 01Z SKC. OTLK...VFR.

E...SKC. TIL 01Z WND SW 20G30KT. 07Z SCT CI. OTLK...VFR.

KS

W...SCT CI. WND W 30G40KT NRN HLF G25KT SRN HLF. TIL 23Z OCNL VIS 5SM BLDU. 00Z SCT CI. OTLK...VFR. CNTRL-E...SKC. OCNL FU ALF SCNTRL PTNS. WND W 20G30KT. 00Z SKC.

OTLK...VFR.

ΜN

NW...OVC040 TOP 090. ISOL -SHSN. WND SW 20G30KT. OTLK...VFR WND. SW... SKC. WND W 30G40KT. 00Z WND W 20G30KT. OTLK...VFR WND. SE...SKC. WND SW 30G40KT. 00Z WND SW 20G30KT. OTLK...VFR WND. NERN...BKN050 TOP 070. ISOL -SHSN. WND SW 25G40KT. 01Z WND W 20G35KT. 06Z OVC040 TOP 160. WND W 20G30KT. OTLK...VFR WND.

IA

W...SCT120 OR SKC. WND W 25G35KT. 00Z WND W 20G30KT. 05Z SKC. OTLK..VFR.

CNTRL...SKC. WND W 20G35KT. 23Z SCT CI. TIL 02Z WND W G25KT. OTLK...VFR.

E...SKC. WND SW 25G35KT. 00Z SCT150 SCT CI. OTLK...VFR.

MO

SERN...SCT CI. 01Z SKC. OTLK...VFR. RMNDR...SKC. TIL 00Z WND W 20G30KT. OTLK...VFR.

WI

NW...SCT040. WND SW 25G40KT. 00Z SCT080. WND SW 20G35KT. 04Z BKN060 TOP 100. WND SW 20G30KT. OTLK...VFR WND. NERN...SCT050. WND SW 25G40KT. 23Z SCT CI. WND SW G25KT. OTLK...VFR 13Z WND.

SE...SKC. WND SW 25G35KT. 07Z SCT CI. OTLK...VFR 10Z WND. SW...SKC. WND SW 25G40KT. 01Z WND SW G25KT. OTLK...VFR WND.

LS UPR MI

W...

LS...SCT-BKN035 TOP 060. WND SW 30G45KT THRU PD. OTLK...VFR WND. RMNDR...BKN050 TOP 070. WND SW 20G35KT. 05Z WND W 20G35KT. OTLK...VFR WND 11Z MVFR CIG WND. E...BKN040 TOP 070. WND SW 25G35KT. 23Z SKC. OTLK...VFR 14Z WND.

LM LWR MI LH

NW...SCT070. WND SW 20G30KT. 00Z SCT CI. OTLK...VFR. SW...SCT040. WND SW G25KT. 00Z SKC. OTLK...VFR. SE...SCT-BKN030 TOP 050. WND SW 20G30KT. 20Z SCT035. WND W 20G30KT. 00Z SKC. OTLK...VFR. NERN...SCT040 SCT CI. WND SW G25KT. 00Z SKC. OTLK...VFR.

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N...SKC OR SCT CI. WND SW 20G30KT. 01Z SKC. OTLK..VFR. CNTRL...SKC. TIL 00Z WND SW G25KT. OTLK...VFR. S...SCT CI. 00Z SKC. OTLK...VFR.

. IN

N...SCT040. WND SW 20G30KT. 00Z SCT CI. OTLK...VFR.

CNTRL...SCT-BKN050 TOP 070. 00Z SKC OR SCT CI. OTLK...VFR. S... W HLF...SCT040. 23Z SKC. OTLK...VFR. E HLF...BKN030 TOP FL280. ISOL -SHRA. 23Z BKN040 TOP 060. 01Z SKC. OTLK...VFR.

### KΥ

W...SCT CI. 00Z SKC. OTLK...VFR. CNTRL...BKN020 TOP FL270. VIS 3SM SCT -SHRA. 23Z BKN050 TOP 100. ISOL -SHRA. 02Z SKC. OTLK...VFR. E...BKN030 TOP FL260. VIS 3SM WDLY SCT -SHRA/ISOL -TSRA. CB TOP FL350. 00Z WDLY SCT -SHRA. 03Z TOP 100. TIL 06Z ISOL -SHRA. OTLK...VFR.

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FAUS43 KKCI 080245 FA3W -CHIC FA 080245 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 082100 CLDS/WX VALID UNTIL 081500...OTLK VALID 081500-082100 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...02Z CDFNT NW WI-CNTRL MN-NWRN SD. BY 21Z CDFNT SERN LWR MI-SRN IA-WCNTRL NEB.

ND

SW...SCT CI. WND W 25G35KT. 06Z WND NW 20G30KT. 14Z BKN120 TOP FL200. OTLK...VFR. RMNDR...OVC030 TOP 050. WND W 30G40KT. 07Z BKN050 TOP 070. WND NW 25G35KT. 13Z SCT050. WND NW 20G30KT. OTLK...VFR WND.

SD

W...SCT100 BKN CI. 15Z BKN120 TOP FL280. OTLK...VFR. CNTRL...SCT CI. WND W 20G30KT. 05Z SCT CI. 15Z BKN100 TOP FL260. OTLK...VFR. E...SKC. 12Z SCT CI. OTLK...VFR.

NE PNHDL...SCT CI. 15Z SCT-BKN CI. OTLK...VFR. CNTRL-E...SCT CI. 15Z SCT100 BKN CI. OTLK...VFR. W-CNTRL...SCT CI. OCNL FU ALF SRN PTNS. OTLK...VFR. E...SKC OR SCT CI. 15Z SCT140 BKN CI. OTLK...VFR.

ΜN

NW...OVC040 LYRD FL250. TIL 11Z WND W 20G30KT. 13Z BKN050 TOP 080. OTLK...VFR. NERN...OVC035 LYRD FL250. WDLY SCT -SHSN. TIL 08Z OCNL VIS 3SM SCT -SHSN. WND W 20G35KT. 09Z OVC050 TOP 080. WND W 20G30KT. OTLK...VFR WND. SE...SCT100. WND W 20G30KT. 09Z SCT060. WND W 25G35KT. OTLK...VFR

WND.

SW...SKC. WND W 20G30KT. 09Z SCT070. WND W 20G30KT. 14Z WND W 25G35KT. OTLK...VFR WND.

IA

W-CNTRL...SCT-BKN120 TOP 150. TIL 05Z WND W G25KT. 09Z SCT CI. 15Z BKN CI. OTLK...VFR. E...BKN080 TOP 130. 09Z SCT080. 14Z WND W 20G30KT. OTLK...VFR WND.

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MO NERN MO...SCT-BKN100 TOP 130. 07Z SKC. 15Z SCT120 SCT CI. OTLK...VFR. RMNDR...SKC. 10Z SCT CI. OTLK...VFR.

. WI

NW...BKN060 TOP 100. WND SW 20G30KT. OTLK...VFR WND. SW...SCT-BKN070 TOP 100. WND SW 20G30KT. 05Z SKC. WND SW 25G35KT. OTLK...VFR WND. SE...BKN070 TOP 100. 09Z SKC. 15Z SCT050. WND W 20G30KT. OTLK..VFR WND. NERN...SCT070. WND SW G25KT. 10Z SCT120. WND SW 20G30KT. OTLK...VFR WND.

LS UPR MI

W...

LS...BKN040 TOP 060. ISOL -SHSN. WND SW 35G50KT. 15Z WND W 30G45KT. OTLK...VFR WND. RMNDR...BKN050 TOP 070. WND SW 25G35KT. 08Z BKN030 TOP 140. TIL 12Z ISOL -SHSN. WND W 20G35KT THRU PD. OTLK... MVFR CIG WND. E...SCT040. WND SW G25KT THRU PD. 12Z OVC040 TOP 150. ISOL -SHSN. OTLK...VFR WND.

LM LWR MI LH

LM...SCT-BKN090 TOP 140. 10Z BKN060 TOP 080. WND SW 30G40KT. 15Z WND SW 35G45KT. OTLK...VFR WND. LWR MI LH...

N...BKN100 TOP 140. 12Z BKN060 TOP 080. WND SW 20G30KT. 15Z

BKN050 TOP 100. WND SW 20G35KT. OTLK...VFR WND. S...SCT-BKN090 TOP 130. 13Z SCT CI. WND SW 20G30KT. OTLK...VFR WND.

IL

N...BKN080 TOP 120. 10Z SCT120. 15Z SCT CI. WND SW 20G35KT. OTLK...VFR WND. CNTRL...SCT120. 15Z WND SW G25KT. OTLK...VFR WND. S...SKC OR SCT120. 15Z SCT CI. OTLK...VFR.

. IN N...SKC OR SCT CI. 14Z WND SW G25KT NRN PTNS. OTLK...VFR WND NRN PTNS. S...SKC. 14Z SCT CI. OTLK...VFR.

KY W...SKC. 14Z SCT CI. OTLK...VFR. CNTRL...SCT040. 13Z SKC. OTLK...VFR. E...BKN035 TOP 100. 06Z SCT CI. OTLK...VFR.

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FAUS43 KKCI 081045 FA3W -CHIC FA 081045 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 090500 CLDS/WX VALID UNTIL 082300...OTLK VALID 082300-090500 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...CDFNT OVR XTRM NWRN LH-SRN LM-NERN IA-XTRM SWRN MN-NWRN SD. BY 05Z CDFNT OVR NRN IN-CNTRL IL-NRN MO-SERN NE-NE PNHDL.

ND

W HLF...SCT050 SCT150. WND NW 20G30KT. 15Z BKN120-140 TOP FL180. 18Z BKN090 OVC120. OTLK...VFR 03Z MVFR CIG SHSN. E HLF...BKN050 TOP 100. WND NW 30G40KT. 15Z SCT050 SCT150. WND NW 25G35KT. 19Z SCT-BKN140 TOP FL180. WND NW 20G30KT. OTLK...VFR TIL 00Z WND.

SD W-CNTRL...SCT100. 15Z BKN100-120 TOP FL180. 18Z N PTN OCNL BKN080. OTLK...VFR 01Z N PTN SHSN. E...SCT050 SCT CI. WND NW 20G30KT. 18Z SCT-BKN100 BKN140 TOP FL180. OTLK...VFR.

### NE

PNHDL-CNTRL...SCT150 SCT CI. 16Z SCT100-120 SCT CI. PNHDL WND NW 25G35KT. 19Z CNTRL NW G25KT. OTLK...VFR TIL 01Z WND. E...SCT120 SCT CI. 15Z SCT-BKN120 TOP FL180. 20Z SCT100-120. OTLK...VFR.

# KS

W-CNTRL...SKC OR SCT CI. 17Z S CNTRL WND SW 20G30KT. OTLK...VFR. E...SCT CI. 18Z SCT150 SCT CI. WND SW 20G30KT. OTLK...VFR TIL 00Z WND.

## MN

N-CNTRL...BKN-OVC040 TOP 140. OCNL VIS 3SM SCT -SHSN/BLSN. WND NW 25G35KT. BECMG 1618 N PTN BKN040 TOP 100. WND NW 20G35KT. CNTRL PTN SCT040 SCT150. WND NW 20G30KT. OTLK...CNTRL VFR N MVFR CIG WND 03Z VFR.

SE...SCT060. WND NW 25G35KT. 20Z BKN100-120 TOP FL180. WND NW G25KT. OTLK...VFR.

SW...SCT-BKN050 TOP 100. WND NW 25G35KT. 18Z SCT050 SCT CI. WND NW 20G35KT. OTLK...VFR TIL 01Z WND.

## IA

W-CNTRL...SCT100 SCT CI. 15Z WND W G25KT. 18Z OCNL SCT080. OTLK...VFR.

E...SCT CI. 15Z SCT080-100 SCT-BKN CI. WND W 20G35KT. OTLK...VFR.

## мо

SCT CI. BECMG 1618 SCT150 SCT-BKN CI. WND SW G25KT. OTLK...VFR TIL 00Z WND.

# wı

N-CNTRL...BKN050-060 TOP 140. NW PTN WDLY SCT -SHSN. WND NW 25G35KT THRUT. BECMG 1618 BKN050 TOP 100. OTLK...VFR TIL 02Z WND. S...SKC. WND SW G30KT. 15Z SCT060 SCT CI. WND 25G40KT. OTLK...VFR TIL 02Z WND.

## LS UPR MI

W HLF...OVC025-035 TOP 160. OCNL VIS 3SM SCT -SHSN. WND W 30G40KT. OTLK...MVFR CIG SHSN WND. E HLF...BKN040-050 TOP 160. OCNL VIS 3SM SCT -SHSN. WND W 25G35KT. 19Z TOP 140. OTLK...VFR SHSN WND.

LM LWR MI LH N HLF...BKN-SCT080 TOP 140. WND SW 20G30KT. 15Z BKN050 TOP 160. N PTN ISOL -SHSN. WND SW 25G35KT. OTLK...VFR WND TIL 03Z XTRM N SHSN.

S HLF...SCT120. 14Z SCT070. WND SW 20G30KT. 17Z WND SW 30G40KT. OTLK...VFR WND.

IL

N-N CNTRL...SCT080-100. BECMG 1416 WND SW 25G40KT. OTLK...VFR TIL 02Z WND.

S CNTRL-S...SCT CI. 15Z WND SW G25KT. 18Z S OCNL BKN CI. OTLK...VFR TIL 00Z WND.

IN

N-N CNTRL...SCT120. BECMG 1416 SCT100 SCT CI. WND SW 25G40KT. OTLK...VFR TIL 01Z WND. S CNTRL-S...SCT CI. 14Z SCT100-120 SCT CI. WND SW G25KT. 18Z WND SW 20G30KT. OTLK...VFR TIL 00Z WND.

КΥ

W-CNTRL...SCT100 SCT CI. BECMG 1719 SCT100 SCT-BKN CI. WND SW 20G30KT. OTLK...VFR. E...SCT100 SCT CI. 16Z SCT CI. WND W G25KT. OTLK...VFR.

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FAUS43 KKCI 081945 FA3W -CHIC FA 081945 SYNOPSIS AND VFR CLDS/WX SYNOPSIS VALID UNTIL 091400 CLDS/WX VALID UNTIL 090800...OTLK VALID 090800-091400 ND SD NE KS MN IA MO WI LM LS MI LH IL IN KY

SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN. TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS. NON MSL HGTS DENOTED BY AGL OR CIG.

SYNOPSIS...20Z CDFNT ALG A YYZ-DXO-GIJ-DSM-OBH-40N BFF-SHR LN. 14Z CDFNT ALG A 30N CVG-AXC-20N MCI-MCK-DDY LN.

ND

NW QTR...BKN100 TOPS FL180. 03Z BKN050 OVC070. OCNL VIS 5SM -SN. OTLK...MVFR CIG SN BR. SW QTR...BKN090 LYRD FL180. OTLK...MVFR CIG. S HLF...SCT-BKN150 TOPS FL180. 01Z BKN-SCT110. OTLK...VFR.

SD

N HLF...BKN080-100 TOPS FL180. OTLK...VFR. SW QTR...SCT100. 02Z BKN080-100 TOPS 120. OTLK...VFR. SE QTR...SCT-BKN100 LYRD FL180. BECMG 0103 SCT-BKN060 BKN100. 06Z OCNL -SN NRN SXNS. OTLK...VFR.

NE

PNHDL...SCT120. TIL 01Z WND W 20G35KT. OTLK...VFR. RMNDR W HLF...SCT CI. TIL 00Z WND W G25KT SRN SXNS. OTLK...VFR. E HLF...SKC. OCNL SCT CI. OTLK...VFR.

### KS

W HLF...SKC. OCNL SCT CI. OTLK...VFR. E HLF...SKC. TIL 00Z WND SW G25KT. OTLK...VFR.

### MN

NW QTR...SCT-BKN045 TOPS 060. WND NW G25-30KT. BECMG 2302 SCT150 SCT-BKN CI. OTLK...VFR. NERN QTR...BKN035 TOPS 070. WND NW 20G30KT. BECMG 2302 SCT035.

OTLK...VFR.

SW QTR...SCT035 SCT100 SCT-BKN150 TOPS FL180. WND NW 20G35KT. BECMG 2200 BKN100. 05Z BKN-SCT050 BKN100. OTLK...VFR NRN SXNS...MVFR CIG SN SRN SXNS.

SE QTR...SCT150 SCT CI. WND NW 20G35KT. BECMG 0003 SCT-BKN100 TOPS 150. OTLK...VFR THRUT 10Z SN SRN SXNS.

### IA

WRN-CNTRL...SCT-BKN150 TOPS 170. 22Z SCT CI. OTLK...VFR. ERN...SCT150. WND W 25G35KT. 23Z SCT100-120. OTLK...VFR.

## мо

N HLF...SCT CI. 03Z SKC. OTLK...VFR. S HLF...SCT CI. OTLK...VFR.

## WI

N HLF...BKN045 TOPS 070. WND W 25G40KT. BECMG 2302 SCT050. BECMG 0306 BKN-SCT150 TOPS FL180. OTLK...VFR.

## LS UPR MI

SCT020 BKN050 TOPS 130. OCNL VIS 3SM IN SCT -SHSN MAINLY NRN SXNS. WND W 25G40KT. BECMG 0104 WND NW 20G30KT. OTLK...VFR THRUT SHSN WND NRN SXNS.

## LM LWR MI LH

N HLF...SCT030 BKN050 TOPS 130. WDLY SCT -SHSN. WND W 20G40KT. BECMG 0003 BKN070 TOPS 100. WND NW G25-30KT. OTLK...VFR. S HLF...SCT070. OCNL BKN070 TOPS 100 NRN SXNS. WND W 30G45KT. BECMG 2301 SKC. OTLK...VFR.

IL N THIRD...SCT-BKN150 TOPS FL180. TIL 00Z WND W 25G45KT. OTLK...VFR. CNTRL THIRD...SCT150 SCT CI. TIL 23Z WND W G25-30KT. OTLK...VFR. S THIRD...SCT CI. OTLK...VFR.

. IN

NRN...WND W 30G45KT. BECMG 2302 SCT120 SCT CI. OTLK...VFR. CNTRL...SCT CI. TIL 23Z WND W G25-30KT. OTLK...VFR. SRN...SKC. OCNL SCT CI. TIL 23Z WND W G25KT. OTLK...VFR.

KΥ

WRN...SCT CI. OTLK...VFR. CNTRL...SCT CI. TIL 00Z WND W G25-30KT NRN SXNS. OTLK...VFR. ERN...SKC. OCNL SCT CI. OTLK...VFR.

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