

Decision Support

Future of the NWS

- What Does It Mean?
- Where Are We Going?
- When Are We Going To Get There?
- How Are We Going To Get There?

Decision Support Foundation

Forecaster

Analyze
Study Guidance
Interact with Guidance
Populate

2025

Analyze
Study Guidance
Draw

12

Analyze
Study Guidance
Type

90s

Text "Package"
Digital Grid

4 D Digital Forecast Grid
Derived Products
Probability (ie National, RFC)
& Expert (WFO) Forecasts

Service

Text "Package"

Derived Products

Digital

Detail/Expert

Support

Personal
Interaction
(limited
Audience)

Personal Interaction
(Limited Audience)
Expanded/Detailed
Products

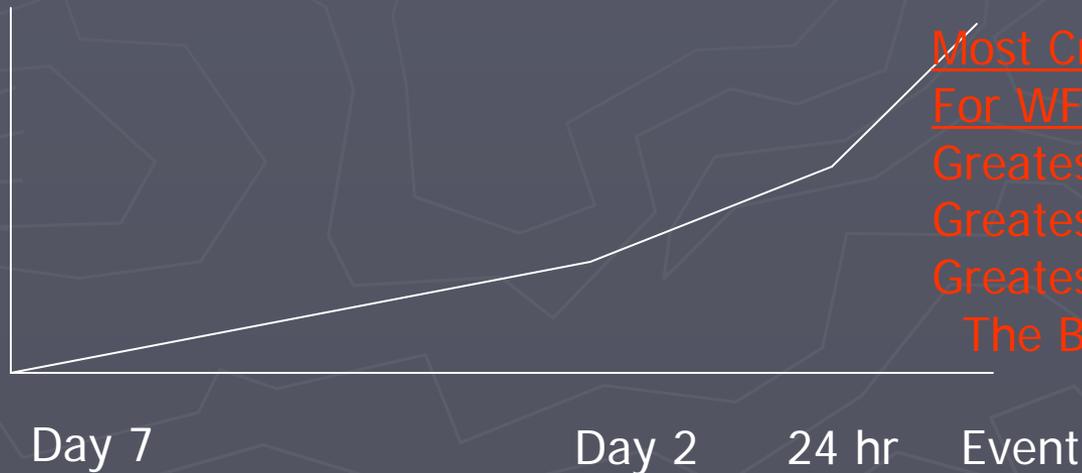
Personal Interaction
(Limited Audience)
Expanded/detailed
Products
Detailed Data for Intelligent
Software Capability

Decision Support

Future of the NWS

- What Does It Mean?
- Where Are We Going?

Support
Intensity



Most Critical Mitigation Pt.
For WFO Forecaster
Greatest Needs
Greatest Expectations
Greatest Bang For
The Buck

Decision Support

Future of the NWS



Probability

**Models, Climatology,
WFO Forecaster, Etc.**



Expert Advice-Single Authoritative Source

WFO

Forecaster

Most Critical Mitigation Pt.

For WFO Forecaster

Greatest Needs

Greatest Expectations

Greatest Bang For

The Buck

Support
Intensity



Day 7

Day 2

24 hr

Event

Excerpts from 2010 Aviation Weather Community Forum

Example of Delta Meteorological Needs

“problem anticipation as well as strategic planning and actions for flight routes, flight altitude, delays/cancellations, and surface operations throughout the day as it progresses. How will arrival rates, runway conditions, tarp conditions, etc. change? When will deicing activities need to be started/ended, when will precipitation types/rates change, how will the temperatures change for the deicer/water fluid mix through the day.”

FAA Traffic Management

“The lack of detailed forecasts in the past has made the traffic managers reactionary. Hourly detailed WFO forecasts for the next 12 to 24 hours can facilitate pre-emptive action. This needs to be available from all WFO’s in a region to be of the most value. The number 1 high demand, limited capacity area that can benefit from improved detailed forecast data is the “Golden Triangle” from Chicago to the northeast to Atlanta. There is currently not enough detail in the forecasts, so there is very limited integration of weather information into traffic flow management decision support tools. The NWS needs to think NOWGEN not just NEXTGEN to provide help now. Flight planning management tools will use detailed forecasts across the airspace for traffic management if available.”

Decision Support

*WFO Forecaster Expert Advice
Single Authoritative Source*



**Enhanced Short Term
Detail in space/Time**



**Round Out Aviation
Ceiling, Visibility,
Prob of Thunder**



Personal EM Interaction When Needed

Decision Support

Future of the NWS

Aviation Is Foundational

Epitomize Our Users

If we gear our forecast operations to aviation user needs, we hit nearly all our users

Aviation

Decision Support

What Does It Mean?

WFO • Where and When in detail across entire forecast area

WFO • Four dimensional forecasts

WFO • Forecasts with digital detail for creative/versatile display and applications

CWSU • Analysis, interpretation and opinions

Aviation

Decision Support

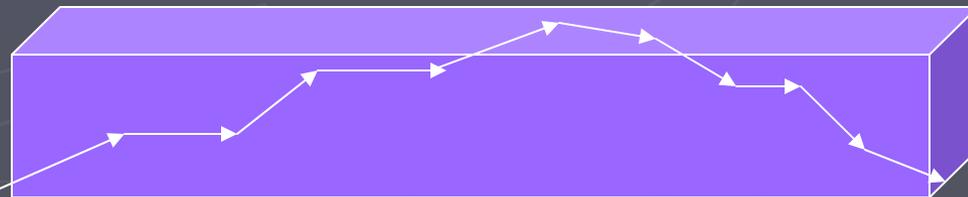
What Does It Mean?

Where are we going?

“Yes/No”, probability/confidence, hourly forecasts
out 24 hours

entire CWA, convection & tops, precip type,
cross winds, snow fall, areal ceilings, etc.

WFO helps populate 4 dimensional WX database

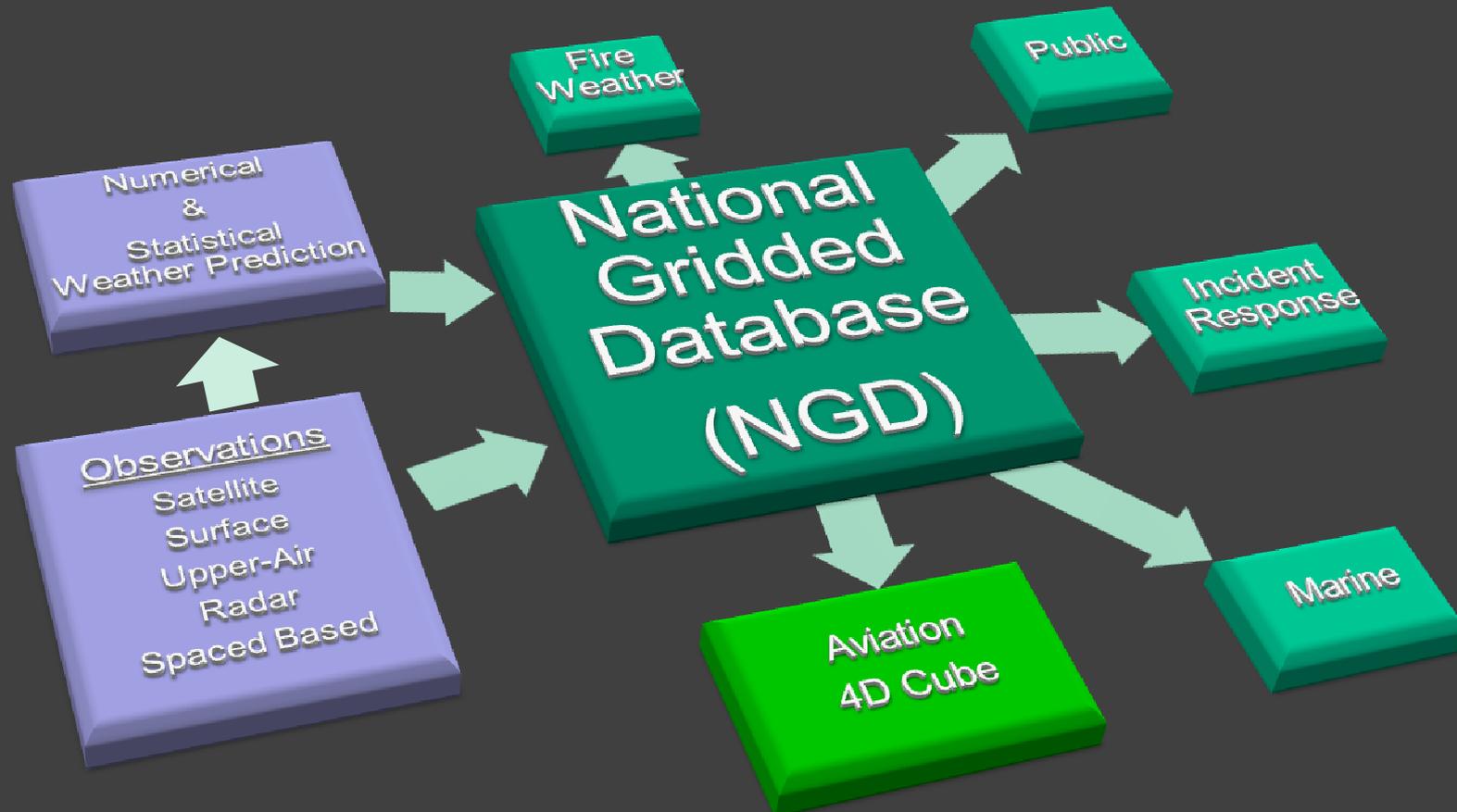




NextGen IOC

NGD Conceptual Model

NDFD Evolution



MODELS

WFO

AWC



FAA

Airlines

Etc.

CWSU

EXPERT.....
Interpretation
Analysis
Opinion

Aviation

Decision Support

When are we going
to start?

***We Already Have! because
Problems are already here!***

Regional Aviation Guidance

- Navigate CWSUs
- Eastern Region
- Cleveland
- Boston
- New York
- Washington, DC
- Indianapolis
- Atlanta
- Jacksonville

- Hub Sectors
- NYC
- BOS
- DCA
- DTW
- PIT

Gate/Hub Status

ZOB

Terminal Status

ZOB

LAMP/SREF Plot

KAGC

Radar Imagery

- Nationwide
- NE Loop
- SE Loop
- NC Loop
- SC Loop

BY SITE

AWC Products

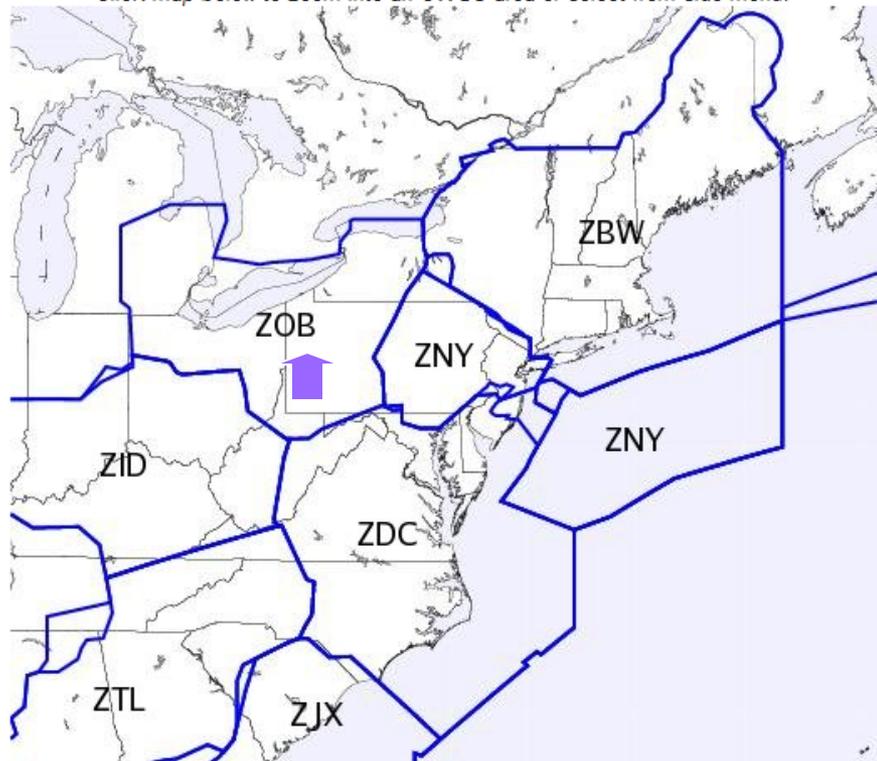
- Convection
- Turbulence
- Icing
- Winds/Temps
- Prog Charts
- PIREPS

SPC Products

- Conv. Outl.
- Meso. Disc.

The **Regional Aviation Guidance** web page is an automatically-generated guidance product that supplements official aviation forecasts and warnings. It is not a substitute for information contained in official aviation products and does not meet the FAA requirements for a pre-flight weather brief.

Click map below to zoom into an CWSU area or select from side menu.



National Weather Service
Eastern Region Headquarters
630 Johnson Avenue
Bohemia, NY 11716
Webmaster: erhwebmaster@noaa.gov
Page last modified: March 22, 2008

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ER Regional Aviation Guidance Page

WFO



FAA



Airlines ↔ CWSU

<http://www.erh.noaa.gov/zrlx/>

ZOB Aviation Guidance

The **Regional Aviation Guidance** web page is an automatically-generated guidance product that supplements official aviation forecasts and warnings. It is not a substitute for information contained in official aviation products and does not meet the FAA requirements for a pre-flight weather brief.

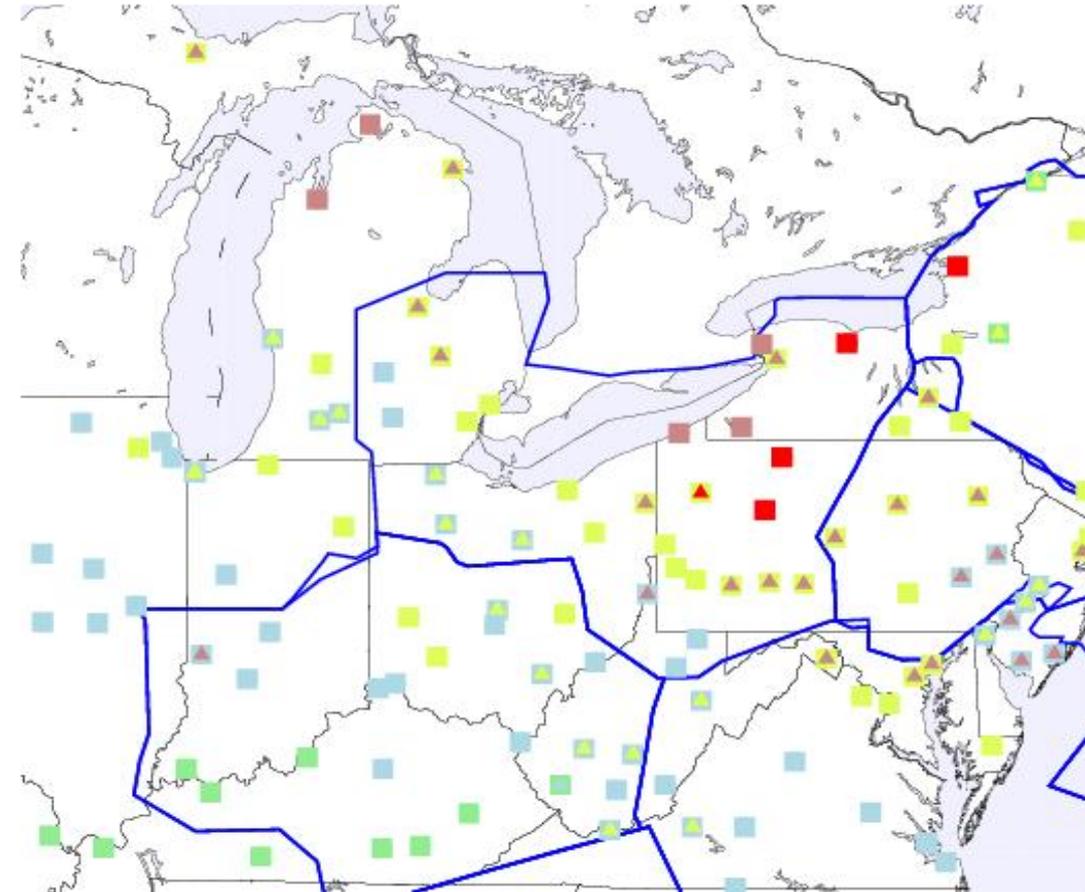
Terminal Guidance

J-Route Guidance

V-Route Guidance

Main Map

(mouse-over or click an area on the map below)



LEGEND:

Icons denote forecast for a 0-6 hour period (inner triangle) and a 6-12 hour period (outer square).

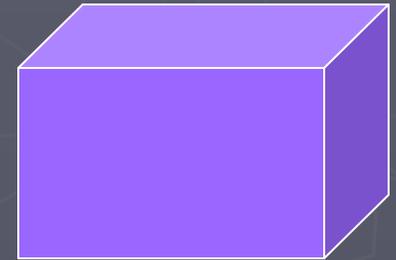
▲ Upward triangles denote an improving trend in flight conditions.

▼ Downward triangles denote a deteriorating trend in flight conditions.

■ Solid squares denote a static trend in flight conditions.

Green colors indicate VFR flight conditions, while blue, yellow, pink, and red, denote increasing hazards.

WFO



FAA



Airlines



CWSU

<http://www.erh.noaa.gov/zrlx/>

ZOB Aviation Guidance

Navigate CWSUs
KFKL

Airport: KFKL-VENANGO REGIONAL AIRPORT-FRANKLIN PA

Updated: 11/10/2008 at 16:55 UTC

[View TAF](#)[View WFO/CWSU Discussion](#)

Hour-UTC	SFC	16	17	18	19	20	21	22	23	00	01	02	03
CIG<5KFT	22	25	25	25	25	25	25	25	25	25	25	25	25
VIS	5	7	7	7	7	7	7	7	7	7	7	7	7
FLTCAT	M	M	M	M	M	M	M	M	M	M	M	M	M
WINDSPD	14	12	12	12	12	12	12	12	12	12	12	12	12
WINDGST	18	20	20	20	20	20	20	20	20	20	20	20	20
X-WIND													
RY-3/21	21-8	21-8	21-8	21-8	21-8	21-8	21-8	21-8	21-8	21-8	21-8	21-8	21-8
RY-12/30	30-12	30-9	30-9	30-9	30-9	30-9	30-9	30-9	30-9	30-9	30-9	30-9	30-9
PICE050		M	H	H	H	M	M	L	L	L	MM	MM	MM
PICE030		M	H	H	H	M	M	L	L	L	MM	MM	MM
PICE010		M	H	H	H	M	M	L	L	L	MM	MM	MM

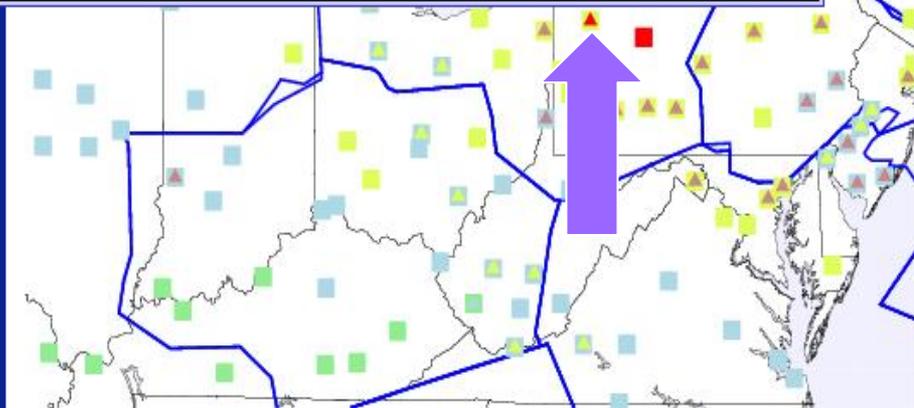
ZOB

LAMP/SREF Plot

KAGC

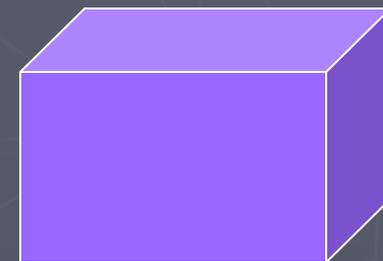
CWSU Brief

ZOB



ce product
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Main Map

WFO



FAA



Airlines



CWSU

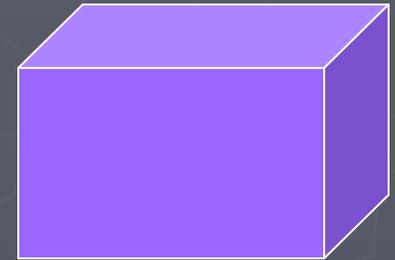
Forecast Guidance for KCKB

Select additional sites:

Airport: KCKB-HARRISON-MARION REGIONAL AIRPORT-CLARKSBURG WV
 Updated: 03/24/2008 at 12:28 UTC

Hour-UTC	SFC	12	13	14	15	16	17	18	19	20	21	22	23
Hour-Lcl	OBS	08	09	10	11	12	13	14	15	16	17	18	19
CIG<5KFT	N	N	N	N	N	N	N	N	N	N	N	N	N
VIS	10	7	7	7	7	7	7	7	7	7	7	7	7
SKY	OV	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK
PCCT		291	291	291	291	291	291	291	291	291	291	MM	MM
WX	NO	NO	SW-	SW-	SW-	SW-	RW-						
WX2		NO	NO	NO	NO	NO	SW-	SW-	NO	NO	NO	NO	SW-
POP		10	20	20	20	20	20	30	30	20	20	20	20
FLTCAT	V	V	V	V	V	V	V	V	V	V	V	V	V
CONF		H	H	H	H	H	H	H	H	H	H	H	H
FLTCAT2		M	M	M	M	M	M	M	M	M	M	M	M
TEMP	28	28	29	31	33	35	36	37	38	39	40	39	37
DEWP	21	20	21	22	22	22	21	21	21	20	20	20	20
WINDDIR	340	000	000	000	000	320	320	320	320	320	320	320	320
WINDSPD	03	00	00	00	00	06	06	06	06	06	06	06	06
WNDGST	03	00	00	00	00	06	06	06	06	06	06	06	06
X-WIND													
RY-3/21	3-2	21-0	21-0	21-0	21-0	3-6	3-6	3-6	3-6	3-6	3-6	3-6	3-6
PLLWS		N	N	N	N	N	N	N	N	N	N	MM	MM
ICE050		M	H	H	H	M	M	M	L	N	N	MM	MM
ICE030		L	M	M	L	L	L	L	L	N	N	MM	MM
ICE010		M	H	H	H	M	M	M	L	N	N	MM	MM

WFO



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FAA



Airlines



CWSU

Forecast Guidance for KSUM

Product Description

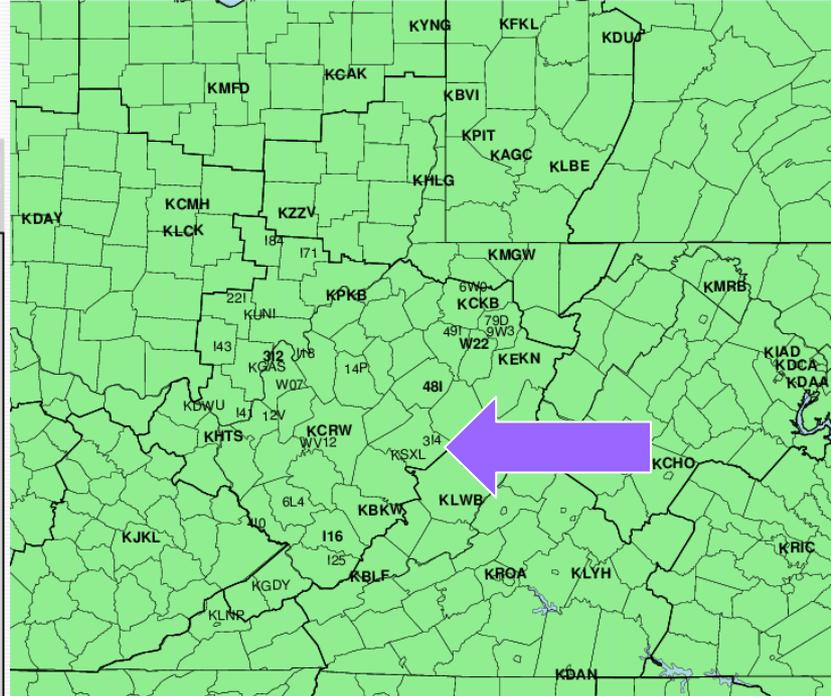
Select additional sites:

Airport: KSUM-SUMMERSVILLE GERALD RADER FIELD-SUMMERSVILLE

Updated: 11/10/2008 at 17:28 UTC

[View TAF](#) [View WFO/CWSU Discussion](#)

Hour-UTC	SFC	17	18	19	20	21	22	23	00	01	02	03	04
CIG<5KFT		25	34	N	N	N	N	N	N	N	N	N	N
VIS		7	7	7	7	7	7	7	7	7	7	7	7
SKY													
PCCT		340	390	390	390	390	390	390	390	390	390	390	MM
PTSTM		0	0	0	0	0	0	0	0	0	0	0	0
WX	NO	NO											
WX2		NO	NO										
POP		0	0	0	0	0	0	0	0	0	0	0	0
FLTCAT	N/A	M	V	V	V	V	V	V	V	V	V	V	V
CONF		H	H	H	H	H	H	H	H	H	H	H	H
FLTCAT2		M	M	M	M	M	M	M	M	M	M	M	M
TEMP		41	42	43	44	42	39	36	34	33	32	31	30
DEWP		26	25	25	24	24	24	24	24	24	23	23	23
WINDDIR													
WNDSPD		6	6	6	5	5	3	2	0	0	0	0	0
WNDGST		9	9	9	8	8	5	3	0	0	0	0	0
PLLWS		N	N	N	N	N	N	N	N	N	N	N	MM
PICE050		N	L	N	N	N	N	N	N	N	N	N	MM
PICE030		N	N	N	N	N	N	N	N	N	N	N	MM
PICE010		N	L	N	N	N	N	N	N	N	N	N	MM



[Click here for Ground Operations Forecast at KSUM](#)



<http://www.erh.noaa.gov/zrlx/>

CIG<5KFT	3	3	3	3	3	3	3	3	3	8	8	8	8	8
VIS	5	6	6	6	6	6	6	6	6	3	3	3	3	3
FLTCAT	L	L	L	L	L	L	L	L	L	I	I	I	I	I
CONF		H	H	M	H	H	M	H	H	H	H	H	H	H
FLTCAT2		M	M	I	M	M	L	M	M	M	M	M	M	M

FLTCAT – flight category (cig and vsby) from TAF

CONF – confidence

Derived from comparison to the three 3 guidance

FLTCAT2 – most likely if TAF is wrong

Flight Cat 2

Forecast

Match TAF

SREF = RUC = LAMP

Y = use next lower category
N = assign category of SREF/RUC/LAMP

SREF = RUC ≠ LAMP

Y = Category of LAMP
N = Category of SREF/RUC

SREF = LAMP ≠ RUC

Y = Category of RUC
N = Category of SREF/ LAMP

RUC = LAMP ≠ SREF

Y = Category of SREF
N = Category of RUC/LAMP

RUC ≠ LAMP ≠ SREF

Y or N one category lower than TAF assigned

- A missing model counts as 'no match'
- All models missing Flight Category 2 is assigned missing

Confidence Table

- 0 = No flight category difference (i.e TAF is VFR model(s) are VFR)
- 1 = One flight category difference (i.e TAF is VFR, model(s) are MVFR)
- 2 = Two flight category difference compared to the TAF
- 3 = Three flight category difference compared to the TAF

HIGH - confidence forecast are shaded in yellow
MEDIUM - confidence forecast are orange
LOW - confidence forecast are in red

If the model is missing than it is assigned a value of one.

SREF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LAV	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3
Ruc13	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
SREF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
LAV	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3
Ruc13	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
SREF	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
LAV	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3
Ruc13	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
SREF	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
LAV	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3
Ruc13	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3

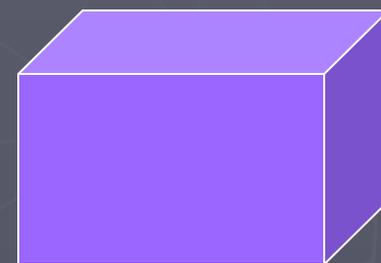
Give the CWSU forecaster and user a frame of reference for the TAF verses guidance to help with decision making

CWSU ZOB: TERMINAL INFORMATION BOARD

updated: 11/10/2008 at 17:34 UTC
0 - 3 hour status and 3 to 6 hour status

SITE	PTSTM	ICE	WIND	CIG	VIS	LLWS
KDTW			Light Blue	Light Blue	Light Green	Light Green
KCLE		Light Green				
KPIT	Light Green					
KORD			Light Blue	Light Blue	Light Green	Light Green
KDET			Light Blue	Light Blue	Light Green	Light Green
KAGC	Light Green					
KAOO	Light Green					
KBFD	Light Green					
KBVI	Light Green					
KBUF	Light Green					
KCAK			Light Green	Light Blue	Light Green	Light Green
KCKB	Light Green	Light Green	Light Blue	Light Blue	Light Green	Light Green
KCMH			Light Green	Light Blue	Light Green	Light Green
KDUJ	Light Green					
KERI			Light Green	Light Green	Light Green	Light Green
KFNT			Light Green	Light Green	Light Green	Light Green
KFDY			Light Green	Light Green	Light Green	Light Green
KFKL	Light Green	Light Green	Light Green	Light Blue	Light Green	Light Green
KHLG	Light Green	Light Green	Light Green	Light Blue	Light Green	Light Green
KIAG	Light Green					
KJHW	Light Green					
KJST	Light Green					
KJXN			Light Blue	Light Blue	Light Green	Light Green

WFO



FAA



Airlines



CWSU

CWSU ZNY: TERMINAL INFORMATION BOARD

updated: 11/10/2008 at 17:35 UTC
0 - 3 hour status and 3 to 6 hour status

SITE	PTSTM	ICE	WIND	CIG	VIS	LLWS
KEWR						
KJFK						
KLGA						
KTEB						
KABE						
KAVP						
KBGM						
KELM						
KIPT						
KMDT						

CWSU ZNY: TERMINAL INFORMATION BOARD

updated: 11/10/2008 at 17:35 UTC
0 - 3 hour status and 3 to 6 hour status

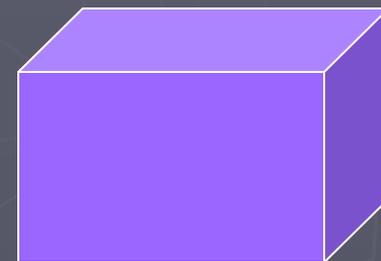
SITE	PTSTM	ICE	WIND	CIG	VIS	LLWS
KEWR						
KJFK						
KLGA						

KLGA

Airport: KLGA-LAGUARDIA AIRPORT-QUEENS NY
Updated: 11/10/2008 at 17:28 UTC
[View TAF](#)[View WFO/CWSU Discussion](#)

Hour-UTC	SFC	17	18	19	20	21	22	23	00	01	02	03	04
WINDSPD	15	16	16	15	14	13	11	10	8	7	7	7	7
WINDGST	20	21	21	20	18	16	14	12	10	10	9	9	9
X-WIND													
RY-13/31	31-8	31-6	31-6	31-6	31-5	31-5	31-4	31-4	31-3	31-3	31-3	31-3	31-3
RY-4/22	22-13	22-15	22-15	22-14	22-13	22-12	22-10	22-9	22-7	22-6	22-6	22-6	22-6

WFO



FAA

Airlines ↔ CWSU

<http://www.erh.noaa.gov/zrlx/>



National Weather Service Forecast Office Eastern Region Headquarters

Home News Organization

View this status page without banners

CWSU ZOB: GATE INFORMATION BOARD

updated: 09/11/2008 at 11:35 UTC
0 - 3 hour status and 3 to 6 hour status

SITE	PTSTM	ICE	WIND	CIG	VIS	LLWS
KDTW						
GEMNI						
MIZAR						
POLAR						
SPICA						
WEEDA						
KCLE						
CHARDON						
HIMEZ						
KEATN						
ZABER						
KPIT						
CUTTA						
GRACE						
NESTO						
WISKE						
KORD						
GHOST						
SAYRS						
BEARZ						
KNOX						

- Navigate CWSUs
 - Eastern Region
 - Cleveland
 - Boston
 - New York
 - Washington, DC
 - Indianapolis
 - Atlanta
 - Jacksonville
- Hub Sectors
 - NYC
 - BOS
 - DCA
 - DTW
 - PIT
- Gate/Hub Status

ZOB
- Terminal Status

ZOB
- LAMP/SREF Plot

KAGC
- CWSU Brief

ZOB

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CWSU ZOB: GATE INFORMATION BOARD

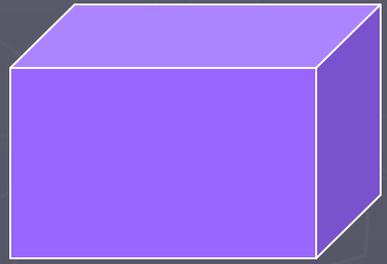
updated: 09/11/2008 at 11:35 UTC
0 - 3 hour status and 3 to 6 hour status

SITE	PTSTM	ICE	WIND	CIG	VIS	LLWS
KDTW						
GEMNI						
MIZAR						
POLAR						
SPICA						
WEEDA						
KCLE						
CHARDON						
HIMEZ						
KEATN						
ZABER						
KPIT						
CUTTA						
GRACE						
NESTO						
WISKE						

KPIT
Airport: KPIT-PITTSBURGH INTERNATIONAL-PITTSBURGH PA
Updated: 09/11/2008 at 11:28 UTC
[View TAF](#)[View WFO/CWSU Discussion](#)

Hour-UTC	SFC	11	12	13	14	15	16	17	18	19	20	21	22
WINDSPD	00	2	03	03	03	08	08	08	08	08	08	08	08
WINDGST	00	3	03	03	03	08	08	08	08	08	08	08	08
X-WIND													
RY-10/28	28-0	10-0	28-3	28-3	28-3	10-7	10-7	10-7	10-7	10-7	10-7	10-7	10-7

WFO



FAA



Airlines



CWSU

<http://www.erh.noaa.gov/zrlx/>

Forecast Guidance for GRACE

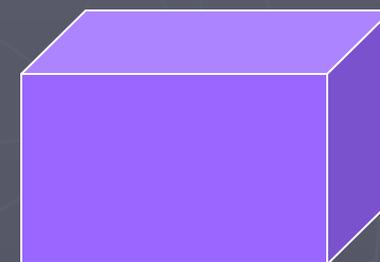
Product Description

Select additional sites:

Forecast: GRACE
Updated: 11/10/2008 at 19:28 UTC

Hour-UTC	19	20	21	22	23	00	01	02	03	04	05	06
PICE180	N	N	N	N	N	N	N	N	N	MM	MM	MM
PICE150	N	N	N	N	N	N	N	N	N	MM	MM	MM
PICE130	N	N	N	N	N	N	N	N	N	MM	MM	MM
PICE110	N	N	N	N	N	N	N	N	N	MM	MM	MM
PICE090	N	N	N	N	N	N	N	N	N	MM	MM	MM
PICE070	L	L	L	L	N	N	N	N	N	MM	MM	MM
PICE050	L	L	M	L	N	N	N	N	N	MM	MM	MM
PICE030	L	L	L	L	N	N	N	N	N	MM	MM	MM
PICE010	N	N	N	N	N	N	N	N	N	MM	MM	MM
FL WND												
Dir/spd(kts)												
FL180	280 57	280 56	290 54	290 52	290 54	290 55	290 56	290 58	290 60	MM MM	MM MM	MM MM
FL150	280 55	280 53	290 51	290 49	290 48	290 48	290 48	290 47	290 47	MM MM	MM MM	MM MM
FL130	290 53	290 52	290 51	290 48	290 47	290 46	290 46	290 45	290 43	MM MM	MM MM	MM MM
FL110	290 50	290 49	290 48	290 46	290 45	290 44	290 43	300 41	300 40	MM MM	MM MM	MM MM
FL090	290 44	290 42	290 41	290 39	290 39	290 39	290 37	300 35	300 34	MM MM	MM MM	MM MM
FL070	290 35	290 34	290 34	290 32	290 31	290 30	300 29	300 27	300 26	MM MM	MM MM	MM MM
FL050	290 24	290 23	290 23	290 23	290 23	290 23	300 21	300 20	300 20	MM MM	MM MM	MM MM
FL030	280 21	280 20	280 20	280 21	280 22	280 21	280 20	290 20	290 20	MM MM	MM MM	MM MM
FL010	270 12	270 12	280 10	270 10	270 10	270 9	270 8	270 8	260 9	MM MM	MM MM	MM MM
PCCT	340	340	340	340	340	390	390	390	340	MM	MM	MM
PTSTM	0	0	0	0	0	0	0	0	0	0	MM	MM

WFO



FAA



Airlines



CWSU

<http://www.erh.noaa.gov/zrlx/>

ZOB J-Route Guidance

The **Regional Aviation Guidance** web page is an automatically-generated guidance product that supplements official aviation forecasts and warnings. It is not a substitute for information contained in official aviation products and does not meet the FAA requirements for a pre-flight weather brief.

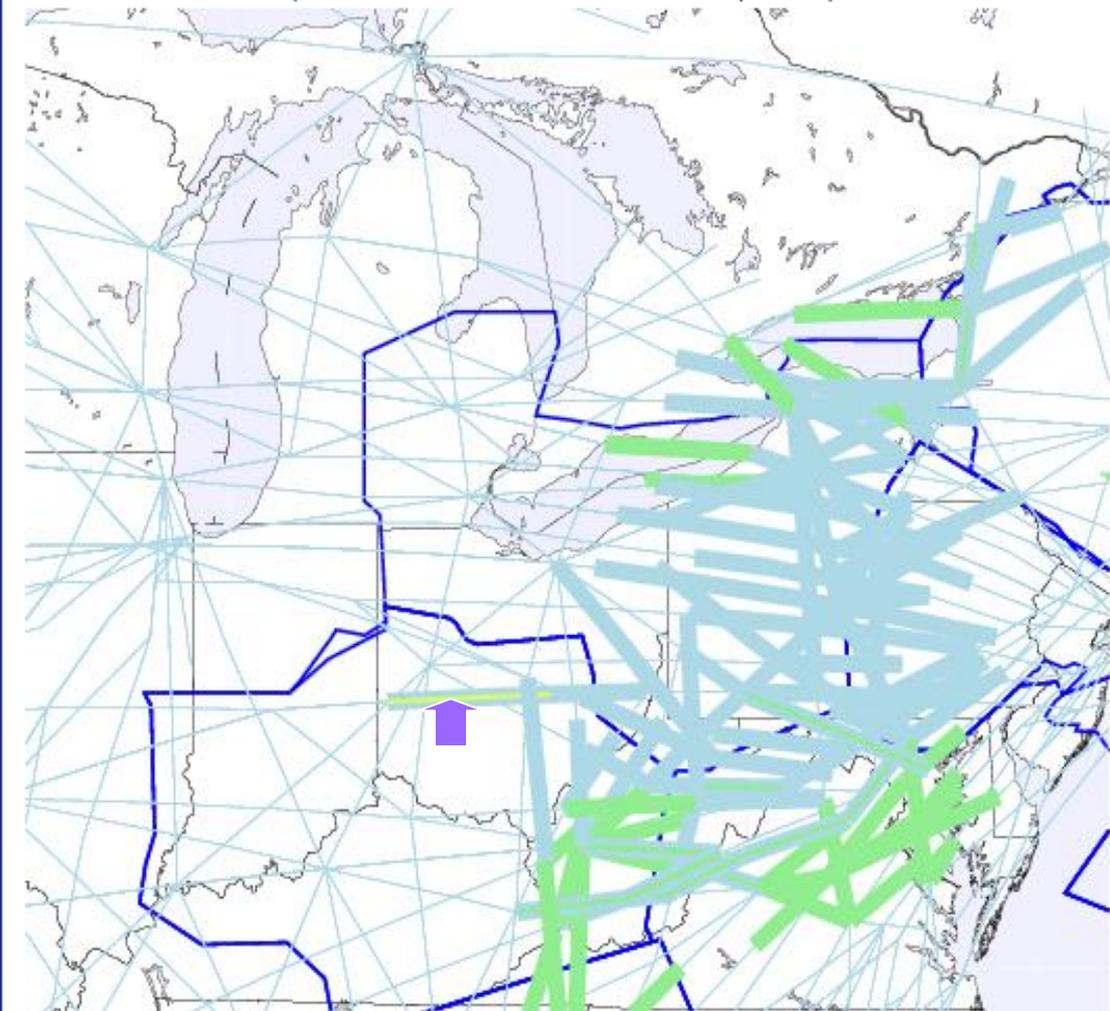
Terminal Guidance

J-Route Guidance

V-Route Guidance

Main Map

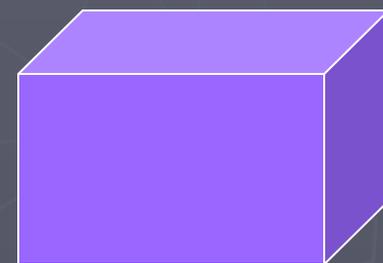
(mouse-over or click an area on the map below)



Inner colored line indicates flight conditions for 0 to 6 hour period.

Outer colored line indicates flight condition for 6 to 12 hour period.

WFO



FAA



Airlines



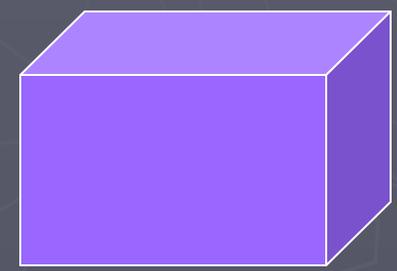
CWSU

<http://www.erh.noaa.gov/zrlx/>

Forecast: J145-HVQ-HACKS
 Updated: 03/28/2008 at 15:11 UTC

Hour-UTC	15	16	17	18	19	20	21	22	23	00	01	02
Turb. data(kts)												
PTURB420	N	N	N	N	N	N	N	MM	MM	MM	MM	MM
PTURB390	N	N	N	N	N	N	N	MM	MM	MM	MM	MM
PTURB360	N	N	N	N	N	N	N	MM	MM	MM	MM	MM
PTURB330	N	N	N	N	N	N	N	MM	MM	MM	MM	MM
PTURB300	N	N	N	N	N	L	L	MM	MM	MM	MM	MM
PTURB270	N	N	N	N	N	L	L	MM	MM	MM	MM	MM
PTURB240	N	N	N	N	N	L	L	MM	MM	MM	MM	MM
PTURB210	N	N	N	N	N	L	L	MM	MM	MM	MM	MM
PTURB180	N	N	N	N	N	L	L	MM	MM	MM	MM	MM
FL WND Dir/spd(kts)												
FL420	270 125	270 128	270 133	270 136	270 142	270 142	270 153	MM	MM	MM	MM	MM
FL390	270 125	270 128	270 133	270 136	270 142	270 142	270 153	MM	MM	MM	MM	MM
FL360	270 125	270 128	270 133	270 136	270 142	270 142	270 153	MM	MM	MM	MM	MM
FL330	270 125	270 128	270 133	270 136	270 142	270 142	270 153	MM	MM	MM	MM	MM
FL300	260 127	260 128	270 133	260 137	260 143	260 143	260 153	MM	MM	MM	MM	MM
FL270	250 75	260 72	260 74	260 80	260 83	260 84	260 85	MM	MM	MM	MM	MM
FL240	250 69	260 70	260 72	260 79	270 81	270 82	270 85	MM	MM	MM	MM	MM
FL210	250 66	260 68	260 72	260 76	270 78	270 78	270 83	MM	MM	MM	MM	MM
FL180	250 65	260 66	260 67	260 69	270 71	270 71	270 76	MM	MM	MM	MM	MM
PCCT	300	300	300	300	300	300	300	MM	MM	MM	MM	MM
TS PROB	50	50	50	25	25	0	0	0	0	0	0	0

WFO



FAA



Airlines



CWSU

Aviation

Decision Support

AWC Test Bed development for national 2nd generation guidance page has begun

CWSU ZNY: EXPERIMENTAL TERMINAL INFORMATION BOARD

updated: 11/10/2008 at 19:48 UTC

Obs. | 0-3 hrs. | 3-6 hrs. | 6-12 hrs.

Get Tafs

SITE	CIG	VIS	WindS	WindG	LLWS
KEWR	Green	Green	Yellow	Orange	Green
KJFK	Green	Green	Yellow	Orange	Green
KLGA	Green	Green	Yellow	Orange	Green
KTEB	Green	Green	Yellow	Blue	Green
KABE	Green	Green	Yellow	Blue	Green
KAVP	Green	Green	Yellow	Blue	Green
KBGM	Orange	Orange	Yellow	Blue	Green
KELM	Yellow	Orange	Yellow	Blue	Green
KIPT	Green	Green	Yellow	Blue	Green
KMDT	Green	Green	Yellow	Blue	Green
KRDG	Green	Green	Yellow	Blue	Orange
KTTN	Green	Green	Yellow	Blue	Orange
KUNV	Green	Green	Yellow	Blue	Orange
KMTN	Green	Green	Yellow	Blue	Green
KPNE	Green	Green	Yellow	Blue	Orange
KSWF	Green	Green	Yellow	Blue	Green

Aviation

Decision Support

Google Earth Pro

Hour-UTC	OB	16	17	18	19	20	21	22	23	0	1	2	3
CIG<5K	16	25	25	35	35	35	35	35	50	50	50	50	50
VIS	1.25	3	3	3	3	3	3	3	P6	P6	P6	P6	P6
WX	-SN	-SN BR	-SN BR	-SN BR	-SN BR	-SN BR	-SN BR	-SN BR	N	N	N	N	N
FLT CAT	I	M	M	M	M	M	M	M	V	V	V	V	V
WDIR	270	280	280	280	280	280	280	280	280	280	280	280	280
WSPD	13	13	13	17	17	17	17	17	8	8	8	8	8
WVGT	25	21	21	25	25	25	25	25	8	8	8	8	8
TEMP	14												
DP	6												
R-X-T													
RY-14/32	R32-9-9	R32-7-11	R32-7-11	R32-10-14	R32-10-14	R32-10-14	R32-10-14	R32-10-14	R32-4-7	R32-4-7	R32-4-7	R32-4-7	R32-4-7
RY-5/23	R23-9-9	R23-11-7	R23-11-7	R23-14-10	R23-14-10	R23-14-10	R23-14-10	R23-14-10	R23-7-4	R23-7-4	R23-7-4	R23-7-4	R23-7-4

Inclusion of NDFD hourly forecast Grids temp, dew point, POP next for each TAF site in Summer

Inclusion of icing, turbulence, upper level winds, and gate forecast points planned in Fall

AWC Test Bed development for national 2nd generation guidance page

ZOB Aviation Guidance

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Terminal Guidance Route Guidance V-Route Guidance Main Map

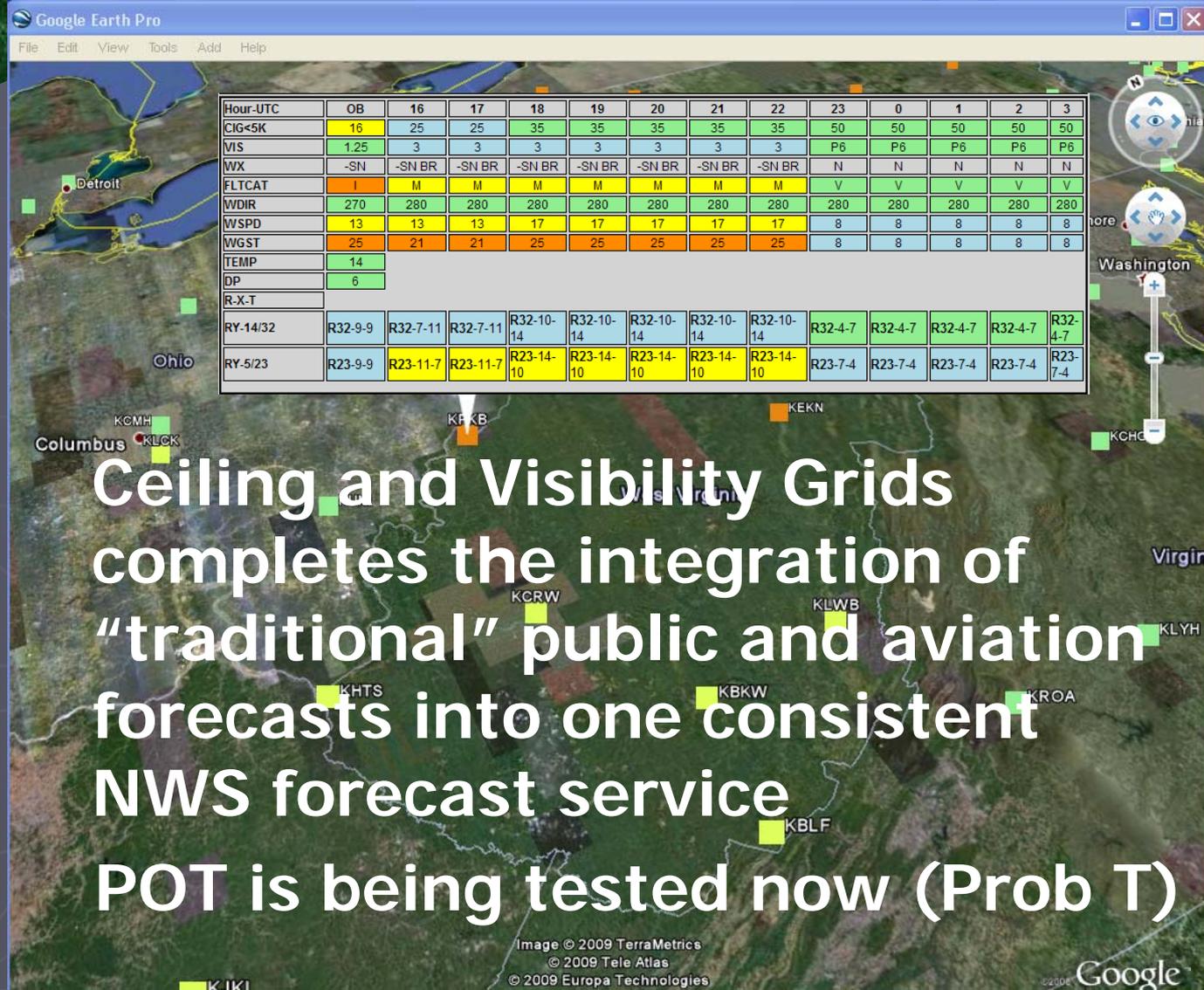
(mouse-over or click an area on the map below)

LEGEND:

- Icons denote forecast for a 0-6 hour period (inner triangle) and a 6-12 hour period (outer square).
- Upward triangles denote an improving trend in flight conditions.
- Downward triangles denote a deteriorating trend in flight conditions.
- Solid squares denote a static trend in flight conditions.
- Green colors indicate VFR flight conditions, while blue, yellow, pink, and red, denote increasing hazards.

Aviation

Decision Support

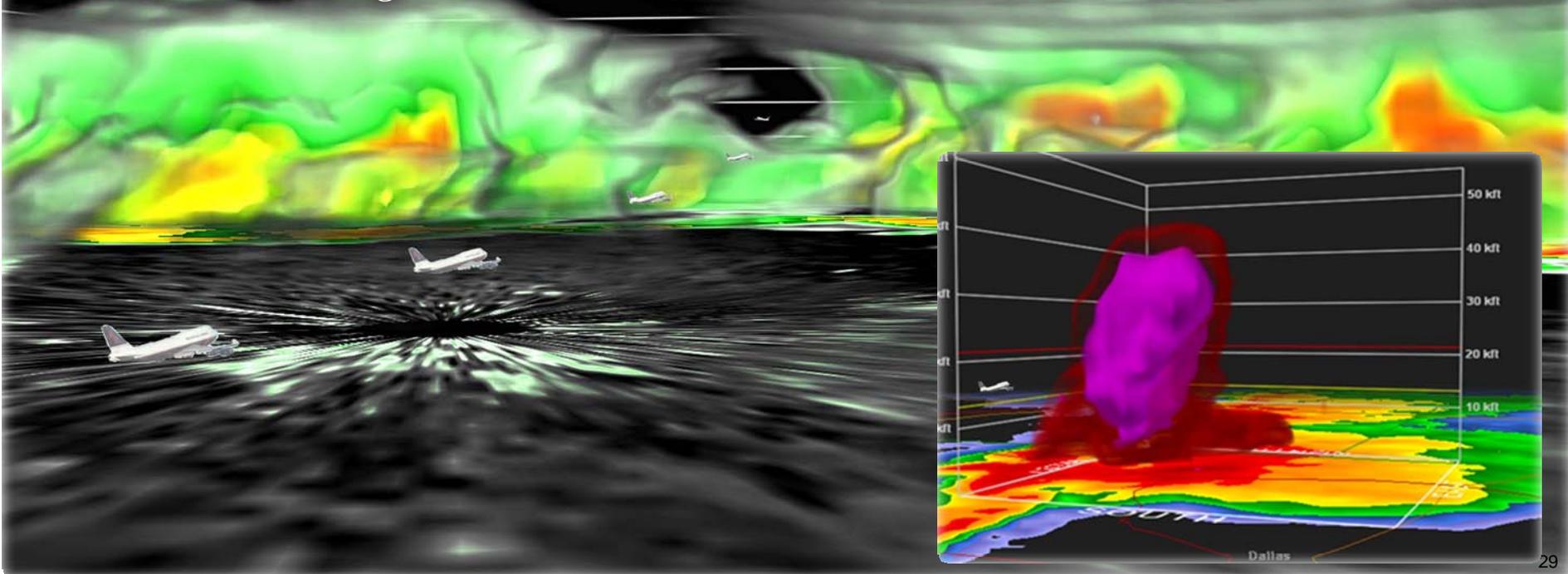


AWC Test Bed
development
for national 2nd
generation
guidance page

Ceiling and Visibility Grids
completes the integration of
“traditional” public and aviation
forecasts into one consistent
NWS forecast service
POT is being tested now (Prob T)

NextGen (2025)

Graphical output increases rapidly in richness becoming increasingly three dimensional and highly realistic. One could use GIS to simulate driving to work in a snow storm three days into the future. Below a pilot uses a simulator plans his route through a squall line between ORD and JFK. The squall line depiction are layered isosurfaces of reflectivity derived from a select set of ensemble members carefully chosen by an NWS forecaster. The squall line will not exist for another eight hours...



Aviation

Decision Support

How are we going
to get there?

We Already Have Begun!

Eastern Region Offices Are In Various Stages Of:

Enhanced Short Term – Detail space/time

Ceiling/Visibility NDFD grids

Confidence Forecasts

Prototype “poor man” 4 D Weather DBase

Aviation

Decision Support

How are we going to get there?

Without the WFO providing the Detail Grid Forecasts in space and time, the service fails!

Each WFO Needs to Find The Way That Works Best For Their Situation
There are Strategy Plans, A Variety of WFO Experiences, Etc. To Help

Enhanced Short Term

Enhanced and Short Term

Grid Aviation Forecasts

WFO Evolution

- **Change WFO Operations**
 - Forecaster dedicated to first 12 to 24 hours
 - New forecast every 3 hours
 - Forecast elements by hour/period, not text product
- Automated text products to focus on meteorology
- High detail, placement of weather in space and time.

Where will it be and wont it be each hour?

- Model and probability grids used in the GFE grid preparation process
- Short term models and grids support GFE grid preparation process

Enhanced Short Term *Enhanced* **and** *Short Term* *and* **Grid Aviation Forecasts**

The Operations Change Cycle

Phase One

We Can't, We are different

Staffing, Marine, Phone Load, Critical Forecast
Area, Our Workload Is At Max Already
In context of "squeezing it into" current
operations

Enhanced Short Term *Enhanced and Short Term* *and* **Grid Aviation Forecasts**

The Operations Change Cycle

Phase Two

If We Want To Stay Relevant, try and figure how!
Transition Team

Visit and bring in other offices (did not realize
model, tools, etc that is already done)

Evaluate all our operations

Develop strategy and transition plan

Radical changes?

Enhanced Short Term *Enhanced* **and** *Short Term* *and* **Grid Aviation Forecasts**

The Operations Change Cycle

Phase Three

Transition

Commit to 3 months

Reevaluate/Adjust

Reactions

Constantly working

Grids, grids and more grids

Chasing not forecasting

Enhanced Short Term *Enhanced* **and** *Short Term* *and* **Grid Aviation Forecasts**

The Operations Change Cycle

Phase Four

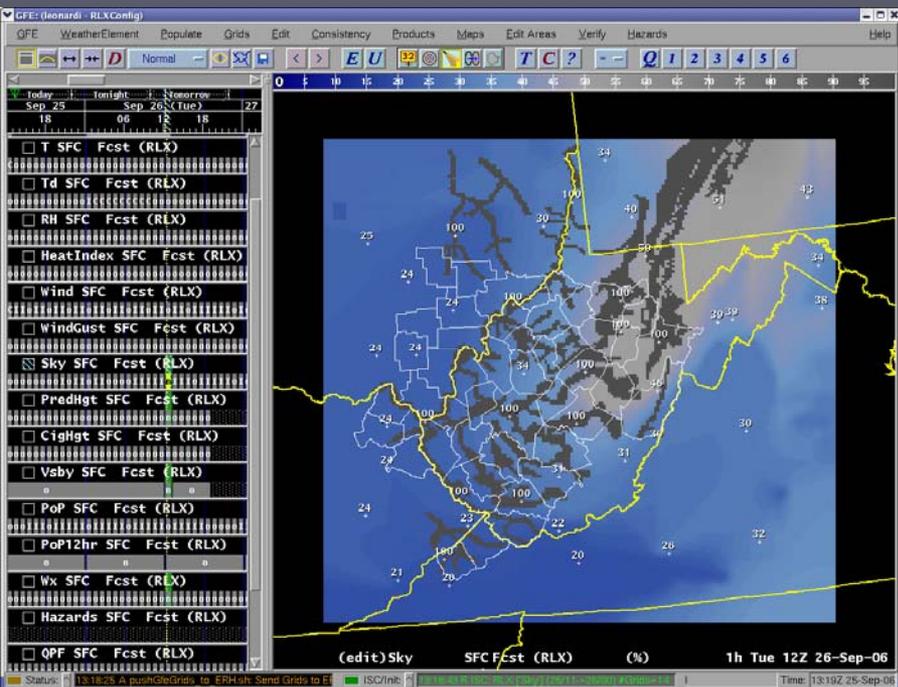
Revelation

I'm doing more forecasting now than before
There is a lot more model interaction capability
in GFE than I realized
Users are relying on me in different and
more important ways

Decision Support

Future of the NWS

VSBY



SKY

