

BOX/ZBW Partnerships



Joe DelliCarpini, SOO WFO BOX

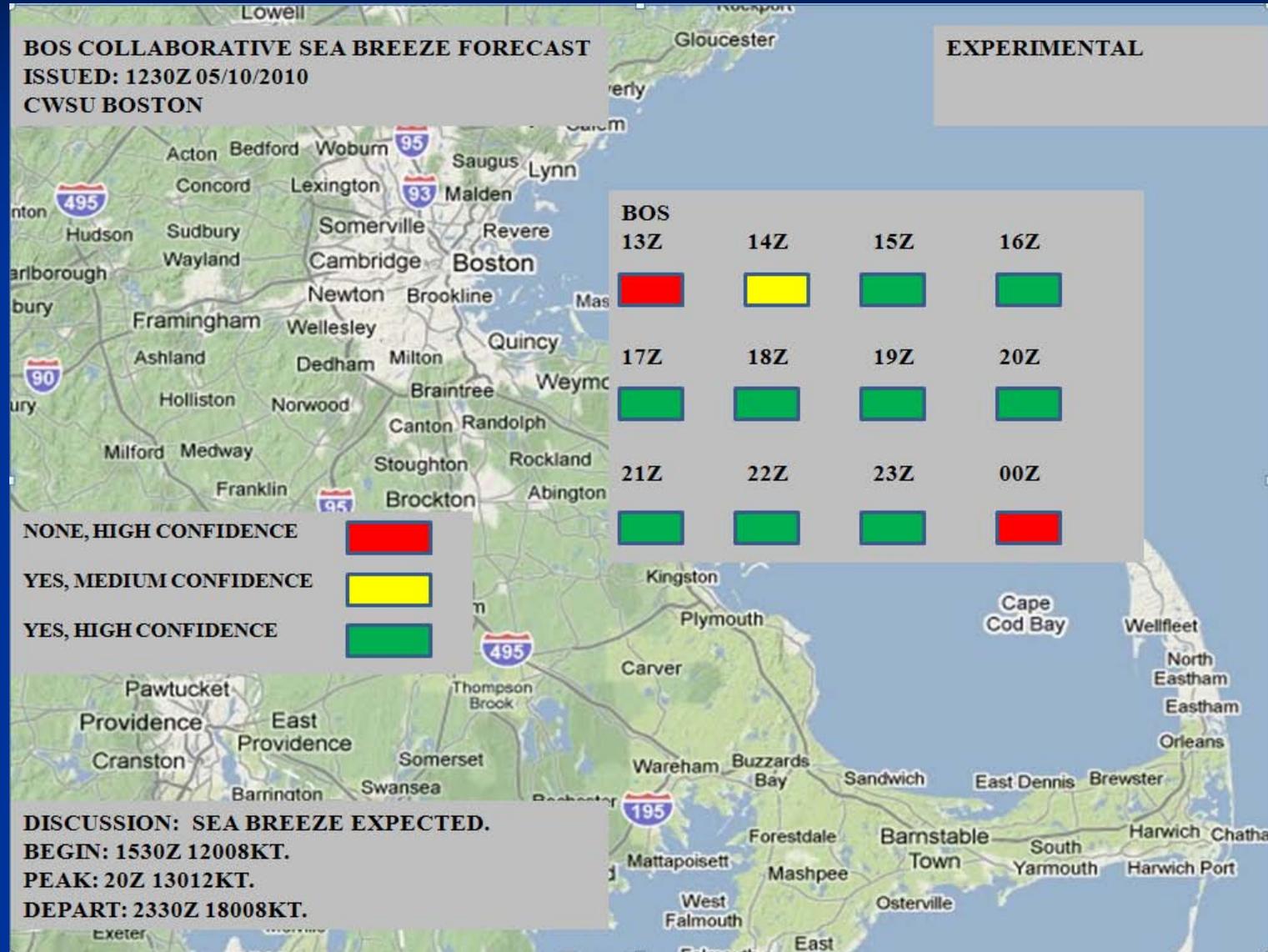
Scott Reynolds, MIC CWSU ZBW

May 4, 2010

Cross Training Program

- WFO SOO certified in CWSU ZBW operations
 - Better understanding of training requirements
 - Reduce instances of service backup by being able to “pinch hit” when needed (April 22!)
- CWSU MIC certified in WFO BOX operations
 - Maintain proficiency with GFE and WFO programs
 - “Pinch hit” when needed
- Minimal expense (day travel)
- Staffing is not compromised at either office

ZBW Graphical TDAs



NWSChat

- ZBW “locked” aviation room now available
 - Goal is to improve collaboration and forecast services (especially for BOS)
 - BOX and ZBW participation
 - Facilitates real-time dialog between NWS and stakeholders (FAA, Airlines in particular)
 - Sign up at <https://nwschat.weather.gov>
 - Email us for access to ZBW Chat Room
 - Joseph.Dellicarpini@noaa.gov

WFO BOX

Digital Aviation Services

The collage illustrates the WFO BOX digital aviation services. The top-left image shows a control room environment. The top-right image displays a weather radar interface with a list of forecast products on the left and a radar map on the right. The bottom-left image shows a terminal window with the following text:

```
Products Data Source Processor Issued By Help
TAF
File Edit Options CallToActions
ETUS41 KEOK 031952 AAX
TAF AMD
KEOK 031952Z 0320/0424 03018G31KT 3SM -SN OVC025
FM032100 03019G31KT 6SM -SN OVC008
FM040000 03018KT 3SM -SN OVC008
FM040300 02018KT 2SM -SN OVC015
FM040600 02019KT 3SM -SN OVC015
FM041200 01018G27KT P6SM VCSH OVC050
FM041500 01018G28KT P6SM OVC025
FM041600 01018G28KT P6SM VCSH OVC025
FM041800 01017G26KT P6SM -SN OVC015-
TAF AMD
MPVD 031952Z 0320/0418 03018G34KT 3SM -SN OVC020
FM032100 02018G33KT 3SM -SN OVC015
FM032300 02017KT 3SM -SN OVC015
FM040000 02017KT 3SM -SN OVC008
FM040300 02018KT 2SM -SN OVC008
FM040600 01017KT 2SM -SN OVC015
FM040900 36018KT 3SM -SN OVC015
FM041200 01018G27KT P6SM VCSH OVC025
FM041500 01018G27KT P6SM OVC025
FM041600 01018G28KT P6SM VCSH OVC025-
TAF AMD
KEDL 031952Z 0320/0424 01014G26KT 3SM -RA OVC008
FM032100 01014G26KT P6SM -RA OVC008
FM032300 36013KT P6SM -SN OVC008
FM040000 36013KT P6SM -SN OVC050
FM040300 36013KT P6SM -SN OVC025
FM040600 35012KT P6SM OVC025
FM041200 35012KT P6SM OVC050
FM041500 35013G23KT P6SM OVC025-
TAF AMD
KRAJ 031952Z 0320/0418 02012G24KT 6SM -RA OVC010
FM032100 02012G23KT P6SM -RA OVC008
FM032200 02012G20KT P6SM -SN OVC008
FM040000 02012KT P6SM -SN OVC050
FM040300 02011KT P6SM -SN OVC015
FM040600 01012KT P6SM OVC015
FM040900 01012KT P6SM OVC025
FM041200 36012KT P6SM OVC050
FM041500 01014G23KT P6SM OVC025-
TAF AMD
KORH 031952Z 0320/0418 03012G30KT 1SM -SN OVC003
```

The bottom-right image shows a large commercial airplane on a runway.

Digital Aviation Services

■ On the path to NextGen

- AWC/CWSU/WFO roles not yet defined, but we can start the process and provide meaningful input

■ Integrate Aviation forecasting into GFE

- Traditional public, marine, fire weather already there!
- Increases efficiency of forecast operations
- Generate TAFs quickly and maintain consistency with other forecast products
- Capability for additional TAF sites
 - Point and Click?

Digital Aviation Services

- **WFO BOX is now operational with ceiling and “improved” visibility grids**
 - Enhanced Short Term forecasting sets the foundation: hourly detailed grids (0-24 hours)
 - We are trying one method (deterministic grids) with the goal of having a manageable workload
 - ZBW provides impact information (BOS) and “enhanced” TAF monitoring as needed

Digital Aviation Services

■ How It Works

- Populate grids for 00z, 06z, 12z, and 18z TAFs
 - Interact with model data (LAV, MAV, MET, etc)
- Update grids at 3-hourly intervals and issue AMDs
 - Fits into EST and 3-Hourly TAF policy
- GFE formatter produces TAFs (sends to AvnFPS)
- Other AMDs: Issued through AvnFPS (for now)
- Hourly ceiling graphics on the web (early June)
- Verification of “non-TAF” sites

Digital Aviation Services

- The Grids Involved
 - T, Td, Wind, Wind Gust
 - Sky, PoP, W_x
 - PredHgt, CondPredHgt
 - PredVsby, CondPredVsby
 - CigHgt, Vsby
 - LLWS, LLWSHgt

Bundled Procedures

GFE: (jdellicia - JWDConfig)

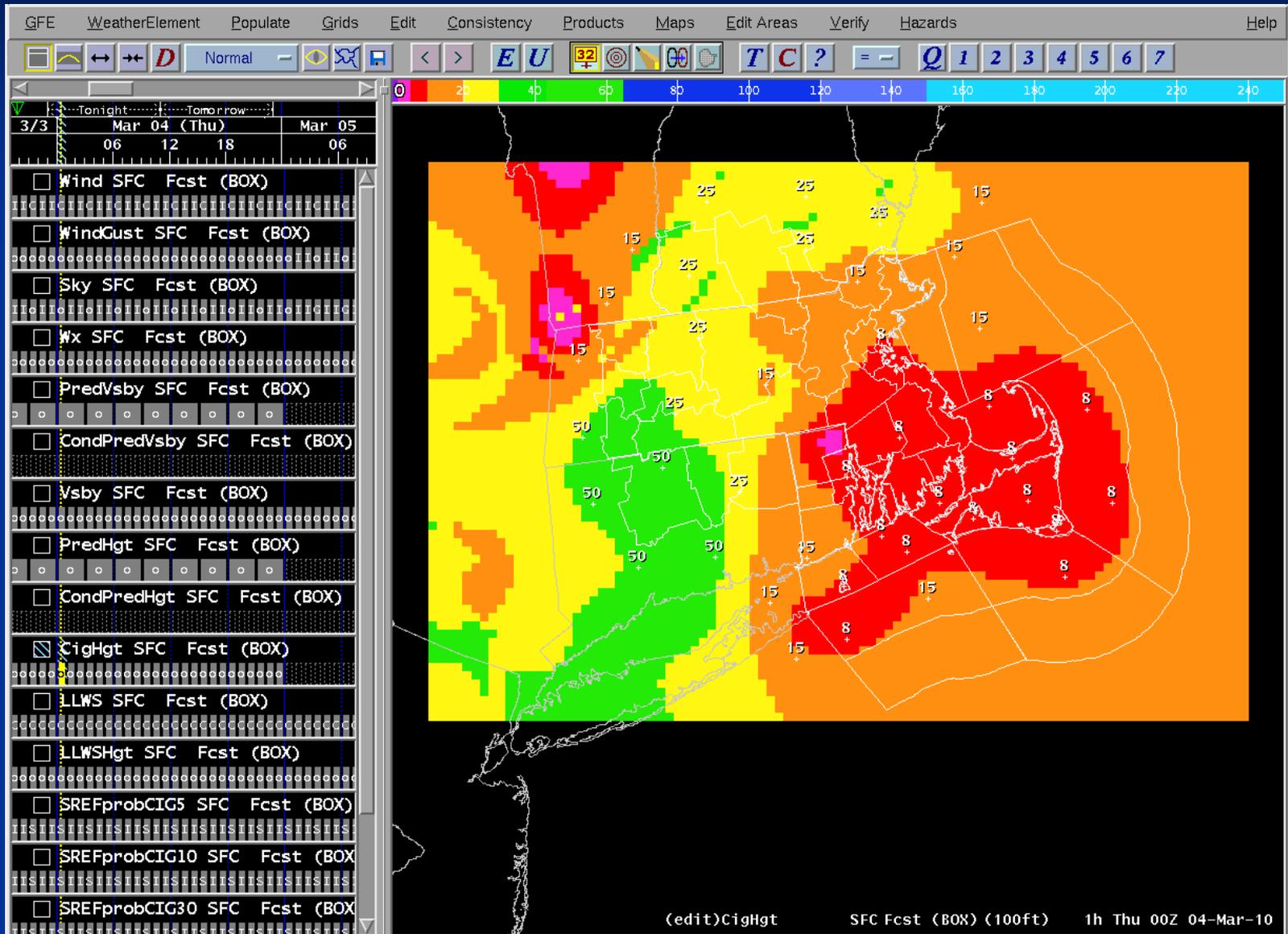
Aviation_CigHgt
 Aviation_CopySREF_CigVsby_Probs
 Aviation_LLWS
 Aviation_MatchGuidance
 Aviation_PredHgtFromRH
 Aviation_PredHgtFromRHnew
 Aviation_QCVsbyWx
 Aviation_Vsby
 BOX_Extended_LLWS
 BOX_Select_localLAPS
 DiffFromClimo
 DiurnalT_BOX
 Extended_MOSGuide
 GenerateCyclone
 MOSGuide_PoP
 MixHgt_Forecast
 PWS_Procedure
 PopulateFromClimo
 Populate_SkyProcedure
 ReturnFromServiceBkup
 StormTide
 TCMWindTool
 Vsby_Fcst
 WindGust_Forecast
 More
 Copy Selected Grids From...
 Copy All Grids From...

Wind	SFC Fcst (BOX) (kts)	1h Tue 02Z 09-Mar-10
WindGust	SFC Fcst (BOX) (kts)	1h Tue 02Z 09-Mar-10
Sky	SFC Fcst (BOX) (%)	1h Tue 02Z 09-Mar-10
Wx	SFC Fcst (BOX) (wx)	1h Tue 02Z 09-Mar-10
PredVsby	SFC Fcst (BOX) (mi)	1h Tue 02Z 09-Mar-10
CondPredVsby	SFC Fcst (BOX) (mi)	<No Grid>
Vsby	SFC Fcst (BOX) (mi)	1h Tue 02Z 09-Mar-10
(edit)PredHgt	SFC Fcst (BOX) (100ft)	1h Tue 02Z 09-Mar-10
CondPredHgt	SFC Fcst (BOX) (100ft)	<No Grid>
CigHgt	SFC Fcst (BOX) (100ft)	1h Tue 02Z 09-Mar-10
LLWS	SFC Fcst (BOX) (kts)	1h Tue 02Z 09-Mar-10
LLWSHgt	SFC Fcst (BOX) (100 ft)	1h Tue 02Z 09-Mar-10
SREFprobCIG5	SFC Fcst (BOX) (%)	1h Tue 02Z 09-Mar-10
SREFprobCIG10	SFC Fcst (BOX) (%)	1h Tue 02Z 09-Mar-10
SREFprobCIG30	SFC Fcst (BOX) (%)	1h Tue 02Z 09-Mar-10
SREFprobVSBY1	SFC Fcst (BOX) (%)	1h Tue 02Z 09-Mar-10
SREFprobVSBY3	SFC Fcst (BOX) (%)	1h Tue 02Z 09-Mar-10

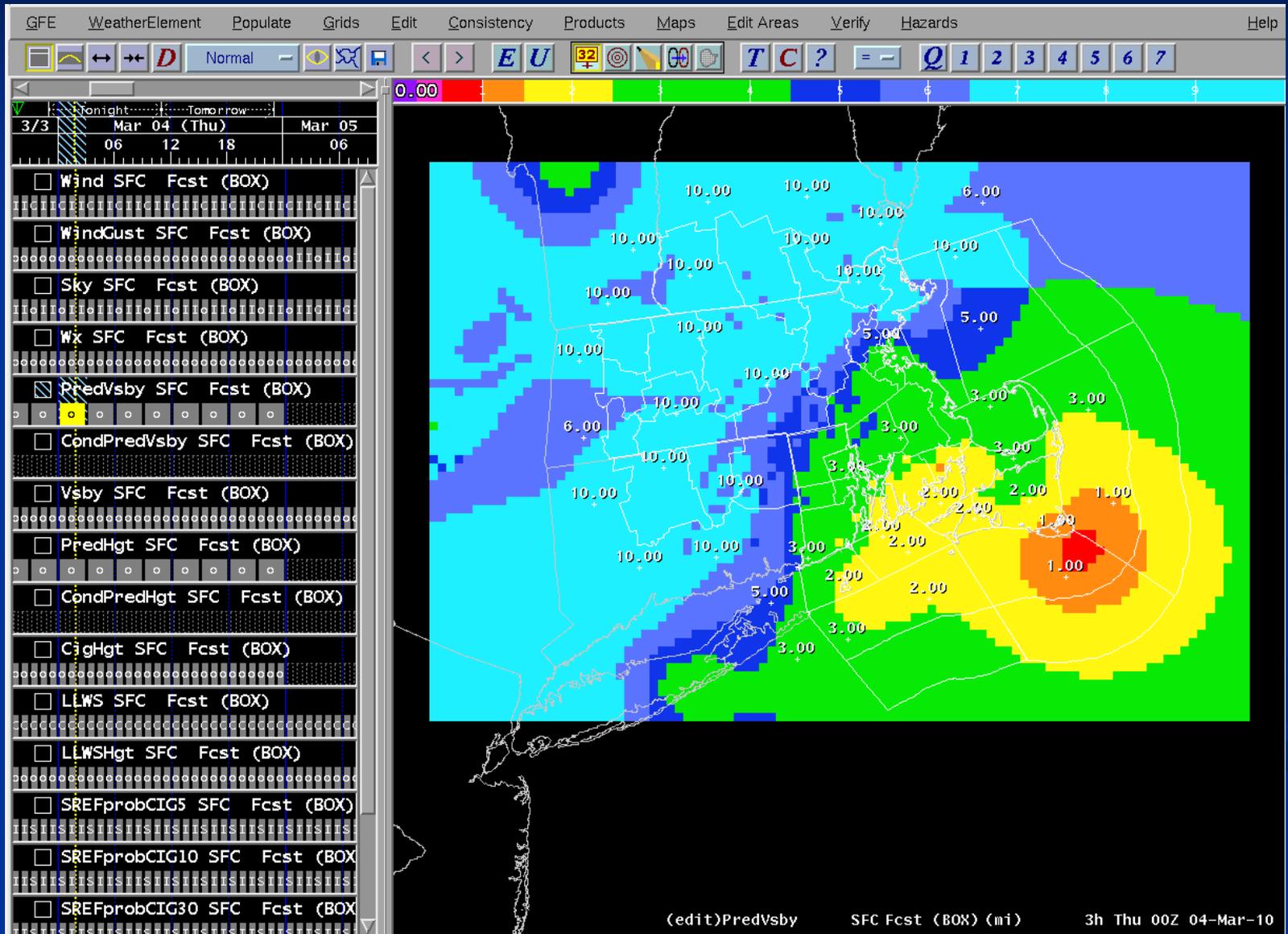
0:4
03/08
10

Status: ISC/Init: ISCxmt: Time: 20:44Z 08-Mar-10

CigHgt Grid



Vsby Grid



TAF Formatter

The screenshot displays the 'Formatter Launcher' application window. The main interface features a menu bar with 'Products', 'Data Source', 'Processor', 'Issued By', and 'Help'. A list of products is shown on the left, with 'TAF' selected. A 'TAF Values' dialog box is open in the foreground, allowing configuration of the TAF base time and mode.

Products List:

- AFD
- AFM
- CCF
- CWF
- ESF (Eastern Region ESF Formatter)
- FTP
- FWF
- FWS
- HourlyData
- MVF
- PFM
- PNS (ER PNS Formatter)
- SAF
- SFT
- SPS
- SRF
- StormTideSHEF
- TAF
- TotalWaterLevel
- ZFP

TAF Values Dialog:

TAF base time	TAF Mode
<input type="radio"/> 00Z	<input type="radio"/> Routine
<input type="radio"/> 06Z	<input checked="" type="radio"/> Amendment
<input type="radio"/> 12Z	<input type="radio"/> Delayed
<input checked="" type="radio"/> 18Z	<input type="radio"/> Corrected

Buttons: Ok, Cancel

System tray: Status: [green] Text Status: [green] ISCxmt: [green] Time: 19:51Z 03-Mar-10

TAF Formatter

Products Data Source Processor Issued By Help

TAF

File Edit Options CallToActions

FTUS41 KBOX 031952 AAX
TAF AMD
KBOS 031952Z 0320/0424 03019G31KT 3SM -SN OVC025
FM032100 03019G31KT 6SM -SN OVC008
FM040000 03018KT 3SM -SN OVC008
FM040300 02018KT 2SM -SN OVC015
FM040600 02019KT 3SM -SN OVC015
FM041200 01019G27KT P6SM VCSH OVC050
FM041500 01019G28KT P6SM OVC025
FM041600 01018G28KT P6SM VCSH OVC025
FM041800 01017G26KT P6SM -SN OVC015=

TAF AMD
KPVD 031952Z 0320/0418 03018G34KT 3SM -SN OVC020
FM032100 03018G33KT 3SM -SN OVC015
FM032300 02017KT 3SM -SN OVC015
FM040000 02017KT 3SM -SN OVC008
FM040300 02016KT 2SM -SN OVC008
FM040600 01017KT 2SM -SN OVC015
FM040900 36016KT 3SM -SN OVC015
FM041200 01015G27KT P6SM VCSH OVC025
FM041500 01016G27KT P6SM OVC025
FM041600 01015G26KT P6SM VCSH OVC025=

TAF AMD
KBDL 031952Z 0320/0424 01014G26KT 3SM -RA OVC008
FM032100 01014G26KT P6SM -RA OVC008
FM032300 36013KT P6SM -SN OVC008
FM040000 36013KT P6SM -SN OVC050
FM040300 36013KT P6SM -SN OVC025
FM040800 35012KT P6SM OVC025
FM041200 35012KT P6SM OVC050
FM041500 35013G23KT P6SM OVC025=

TAF AMD
KBAF 031952Z 0320/0418 02012G24KT 6SM -RA OVC010
FM032100 02012G23KT P6SM -RA OVC008
FM032200 02012G20KT P6SM -SN OVC008
FM040000 02012KT P6SM -SN OVC050
FM040300 02011KT P6SM -SN OVC015
FM040800 01012KT P6SM OVC015
FM040900 01012KT P6SM OVC025
FM041200 36012KT P6SM OVC050
FM041500 01014G23KT P6SM OVC025=

TAF AMD
KORH 031952Z 0320/0418 03012G30KT 1SM -SN OVC003
FM032100 03012G30KT P6SM -SN OVC003

Save Draft Transmit... Type: rou Product expires in: 12 At: 08:00Z 04-Mar-10

AvnFPS OB9.2 Monitor connected to local host

File Options

TAF Editor Climate

DATA-px2f XMIT-px2f INGEST-px2f

Current Observation 2-h Persistence

KBOS	<input type="checkbox"/>	TAF 17:21 MTR 17:54	tpo cat wnd wx	cat wnd wx
KPVD	<input type="checkbox"/>	TAF 17:21 MTR 17:51	tpo cat wnd wx	cat wnd wx
KBDL	<input type="checkbox"/>	TAF 17:21 MTR 17:51	tpo cat wnd wx	cat wnd wx
KBAF	<input type="checkbox"/>	TAF 17:21 MTR 17:53	tpo cat wnd wx	cat wnd wx
KORH	<input type="checkbox"/>	TAF 17:21 MTR 17:54	tpo cat wnd wx	cat wnd wx
KMHT	<input type="checkbox"/>	TAF 17:21 MTR 17:53	tpo cat wnd wx	cat wnd wx
KFMH	<input type="checkbox"/>	TAF 17:21 MTR 18:15	tpo cat wnd wx	cat wnd wx
KHYA	<input type="checkbox"/>	TAF 17:21 MTR 17:56	tpo cat wnd wx	cat wnd wx
KACK	<input type="checkbox"/>	TAF 17:21 MTR 17:53	tpo cat wnd wx	cat wnd wx

WFO BOX – All 9 TAF Sites Combined:
 ACK, BAF, BDL, BOS, FMH, HYA, MHT, ORH, PVD

Month	POD	FAR	CSI	%IFR	POD	FAR (GPRA FY2010)
Oct 2009	.650	.345	.434	9.8	.650	.420
Nov 2009	.842	.189	.703	7.3		
Dec 2009	.666	.297	.519	7.8		
Jan 2010	.732	.307	.553	7.6		
Feb 2010	.805	.224	.653	8.3		
Mar 2010	.805	.275	.617	7.2		

BOS (OEP Site)

Month	POD	FAR	CSI	%IFR	POD	FAR (GPRA FY2010)
Oct 2009	.730	.441	.463	10.7	.650	.420
Nov 2009	.923	.186	.762	7.6		
Dec 2009	.793	.391	.525	7.7		
Jan 2010	.881	.333	.612	7.4		
Feb 2010	.889	.156	.763	5.0		
Mar 2010	.829	.210	.679	6.3		

BOX/ZBW Partnerships



Questions or Comments ???