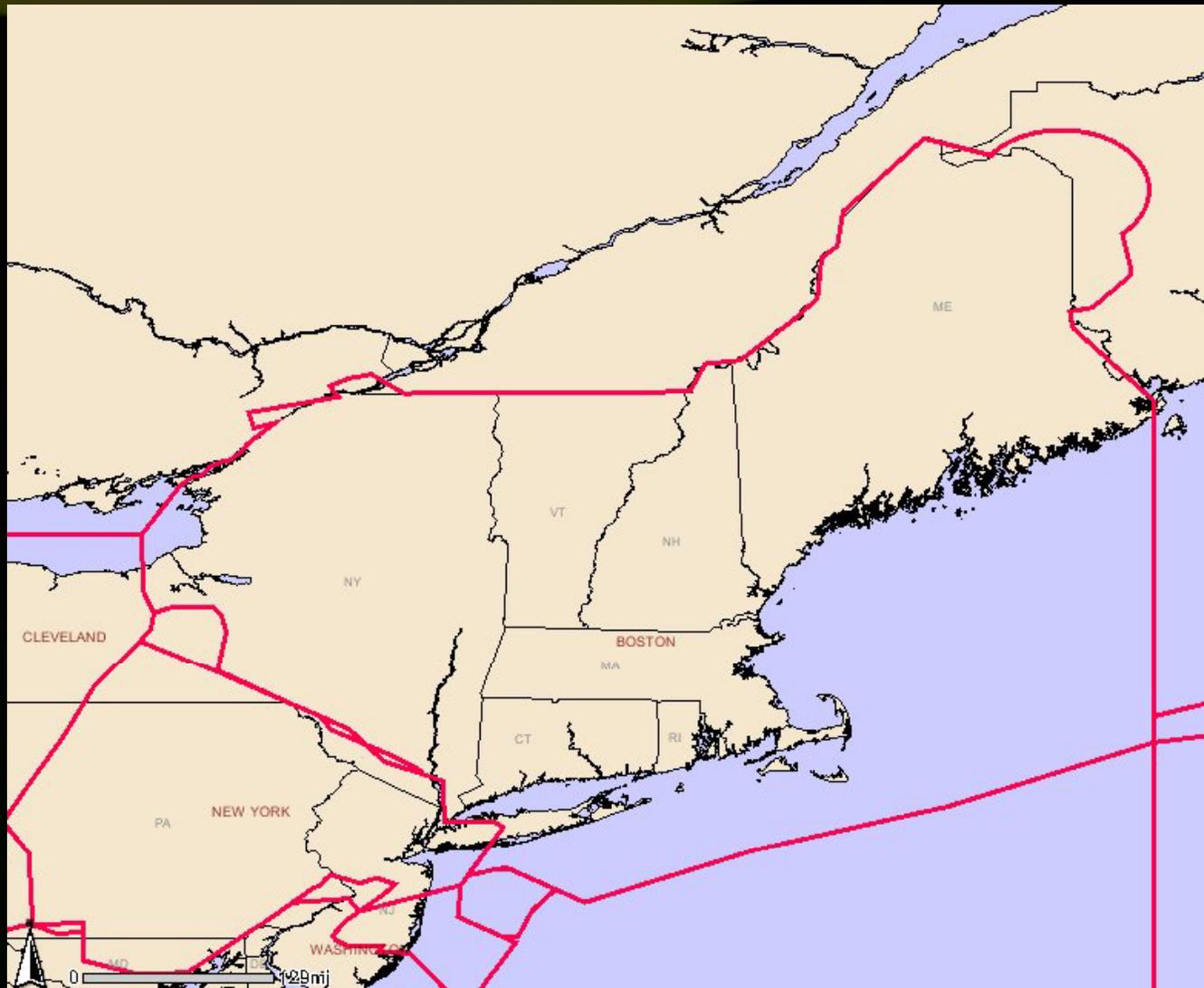


Aviation Services from Center Weather Service Units

**Aviation Weather Users Workshop
Ronkonkoma NY**

**Scott Reynolds
Meteorologist-in-Charge
NOAA/NWS CWSU Nashua NH**

ZBW Airspace



Tools of the Trade

● FAA Systems:

- *WARP (Weather and Radar Processor)*
 - **Observational data, very basic forecast data, briefing graphic generation**
- *AIS-R (Aerospace Information System)*
 - **Transmittal/receipt of CWA/MIS/PIREP products**
- *ITWS (Integrated Terminal Weather System)*
- *CIWS (Corridor Integrated Weather System) – MIT/LL*

● NWS Systems:

- *AWIPS Remote Display*
- *(Coming soon) FX-Net workstation*

● Internet

- *BUFKIT, ALY wsWRF data, other models and observational data, Web TSD, AMDAR/MDCRS*

A “Normal” Day at CWSU Nashua (Boston Center)

- **0600 local: Coffee in hand ... open up CWSU**
- **0630-0645: Brief ZBW TMU**
 - ▬ *Briefing primarily geared toward BOS, NY Metros overview, significant weather across NAS*
- **0645-0700: Brief Boston TRACON TMU**
 - ▬ *Phone brief – BOS, BCT airspace*
- **0715: Brief Tech Ops**
 - ▬ *General wx brief*
- **0800: ZBW Stand-up brief (Front line supervisors, ARTCC management)**
 - ▬ *Briefing covering ZBW next 6-12 hours, outlook for next day, significant NAS wx issues*

A “Normal” Day ...

- **Meteorological Impact Statement issuances**
 - 0815-0900; 1230-1330
- **CCFP chats (in season)**
 - 0615-0645, 0815-0845, 1015-1045, 1215-1245
- **TMU Briefs**
 - *Emphasis on NY Metros (EWR Metering support), CCFP Briefing, BOS updates*
 - 0900-0910; 1100-1110 and 1300-1310 as needed
 - **LGA: late-Feb 2009; JFK May '09; PHL Fall '09**
- **On-demand briefings for ZBW TMU, BCT TMU, Watch Desk, Front-Line supervisors, other ZBW-area facilities**
- **Forecast collaboration with WFOs as needed**

A “Normal” Evening Shift ...

- **1545: Standup briefing**
- **CCFP (in season): 1430, 1630, 1830, 2030**
- **TMU/Metering Briefs: 1500, 1700, 1900, as needed**
- **End of day briefing for TMU and OMIC/Watch Desk: 2045-2100**
- **2100 (Weather permitting): Go home.**

Meteorological Impact Statement

- **Issued minimum 3x/day**
 - 0815-0900
 - 1200-1300 (EDT)/1130-1230 (EST)
 - 1800-1900 (EDT)/1730-1830 (EST)
- **Near Term (0-6 hours from issuance)**
 - *Impacts – most significant hazards*
 - *Thunderstorms – detailed TS outlook*
- **Short Term (0-12 hours)**
 - *Discussion/forecast*
- **Outlook (12-24 hours)**
 - *Forecast of significant hazards*
 - *Spring 2009: add convective outlook (categorical)*

ZBW MIS 01 VALID 131355-131900
...FOR ATC PLANNING PURPOSES ONLY...

MIS Example

ISSUED: 1355Z THU NOV 12 2008

IMPACTS: 131400-132000

- S OF SYR-ENE LN: OCNL MOD CAT FL260-380.
- W OF PLB-LGA LN: OCNL MOD TURB BLW 100 AND POTENTIAL FOR LLWS BLW 020. AREAS MVFR/LOC IFR CIG IN -RA. OCNL LGT-MOD ICE FRZLVL-FL200. FRZLVL 060-090.

THUNDERSTORMS: 131400-132000

- NONE.

SHORT TERM: 131400-140200

SFC LO PRES S OF DC METROS AND ASCTD WRMFNT SLOWLY PUSHING NWD TWD ZBW TDA. AREAS MVFR/IFR CIG IN -RA BR DVLPG FM SW TO NE ACRS ZBW THRU THE DAY. FCST PROFILES AND UPSTREAM PIREPS SHOWING ICE POTENTIAL FM FRZLVL-FL200.

OCNL MOD TURB BLW 100 DVLPG ACRS WRN/SRN ZBW IN INCRG GRADIENT AND WITH 40-50 KT LL JET IN WRN ZBW. POSS LLWS WRN ZBW WITH THIS FEATURE.

BOS: VFR THRU ARND 21Z. LGT NE WIND BCMG SE THIS AM AND CONTG THRU TNGT. MVFR/IFR AFT 21Z IN -RA BR.

OUTLOOK: 140200-141400

- WDSRPD IFR/AREAS LIFR...OCNL MOD ICE FRZLVL-FL200 THRUT MOST OF ZBW IN RA BR/FG. SLOW IMPROVEMENT POSS AFT 12Z FAR WRN ZBW.
- CONTD OCNL MOD CAT ABV FL260 AND OCNL TURB BLW 100.

CWSU ZBW/SR

Metering Position Briefings

- CWSU has always provided briefing support ZBW TMU for NY Metros and BOS Metering
- With EWR Metering now daily occurrence (1000-2200 local), minimum 2-hourly briefings geared toward NY Metros
 - *Briefings to help Metering position better anticipate “issues” to effect NY Metros*
 - Example: any wind shift resulting in EWR runway change ... 15-20+ minute airborne delays for runway switch, depending on traffic
- “Quiet” weather = little workload impact
- “Bad” weather = significant workload increase

Forecast Collaboration

- **How?**

- *Telephone*
- *12-Planet (AWIPS Chat Room)*
- *WRKTAF product in AWIPS*

- **AWC**

- **Always been important for forecast continuity between CWSU ZBW and WFO Taunton MA**

- *BOS TAF in particular*

- **Increased importance between CWSU ZBW and ...**

- *CWSUs ZNY, ZOB*
- *Other WFOs within ZBW Airspace*

Why is Collaboration Important?

- **Examples...**

- *BDL departures heading SW (over Carmel and Sparta) impact BOS departures headed west down J16/J547*
 - **Area E already very busy with NY Metros traffic**
- *TS MAD-PVD impacts entire flow into BOS*
 - **Forces flow to ALB-BRONC-BOS**
- *SYR-ALB-BRONC similar impact*
 - **Forces traffic north to LEB-ENE-SCUPP-BOS**

- **We all need to be on the same page!**

What ZBW TMU is looking for ...

- **Lead times of at least 30-45 minutes ...**
 - *Wet runways at BOS*
 - **LAHSO AAR ~ 60**
 - **Wet runway AAR ~30 (no LAHSO) ... BOS immediately into metering, 15+ minute airborne delays**
 - *TS at BOS, downwind to final approach*
 - *Wind shear*
 - *Any snowfall (esp. resulting in 0.5"+ in an hour)*
 - *Any change in conditions resulting in runway change, lowering of AAR (wind shift, lowering of cig/vis, snow, etc)*
- **60+ minute lead times ...**
 - *Any TS impacting approach/departure routes*
 - **MAD-PVD**
 - **CMK, SAX**
 - **SYR-ALB-BRONC-BOS**

Service Backup

- **Currently, CWSU ZBW paired up with CWSU ZOB**
 - *CWSU ZNY paired with CWSU ZDC*
- **No formal secondary backup in place**
 - *ZOB has requested ZID backup a few times*
- **Basic CWSU services provided to office requesting backup**
 - *On-demand, end-of-day briefings*
 - *Information exchange via phone, fax*
 - *Capability in WARP to transmit graphics to CWSU requiring backup*
 - *CWAs issued ... but no MIS at this time*

Other Services

- **Outreach / Education**

- *Aviation user groups, workshops, expos*
- *ZBW ARTCC Training Branch*
- *WFOs*
- *Schools*

- **Research**

- *BOS Sea Breeze*
- *wsWRF Evaluation (CSTAR III)*

Where Do We Go From Here?

- **Briefings**

- *Web-based briefings*

- **Camtasia/PowerPoint TRACON briefings from CWSU ZTL**
 - **ATC Planning Briefing packages from CWSU ZFW, ZLA or ZSE**

- **Enhancements to CWSU ZBW Webpage**

- <http://www.erh.noaa.gov/zbw/>
 - *Working with nowCoast developers*

- <http://nowcoast.noaa.gov/>

- **BOX-ZBW Cross-Training Initiative**

- **??????**