Bringing Diverse Missions into a Common Focus

Air Force Operational Weather Squadrons and the National Weather Service

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15th Operational Weather Sq

Why are we here?

- To give organizations a glimpse of how an Operational Weather Squadron is organized and how it completes the aviation and force protection missions.

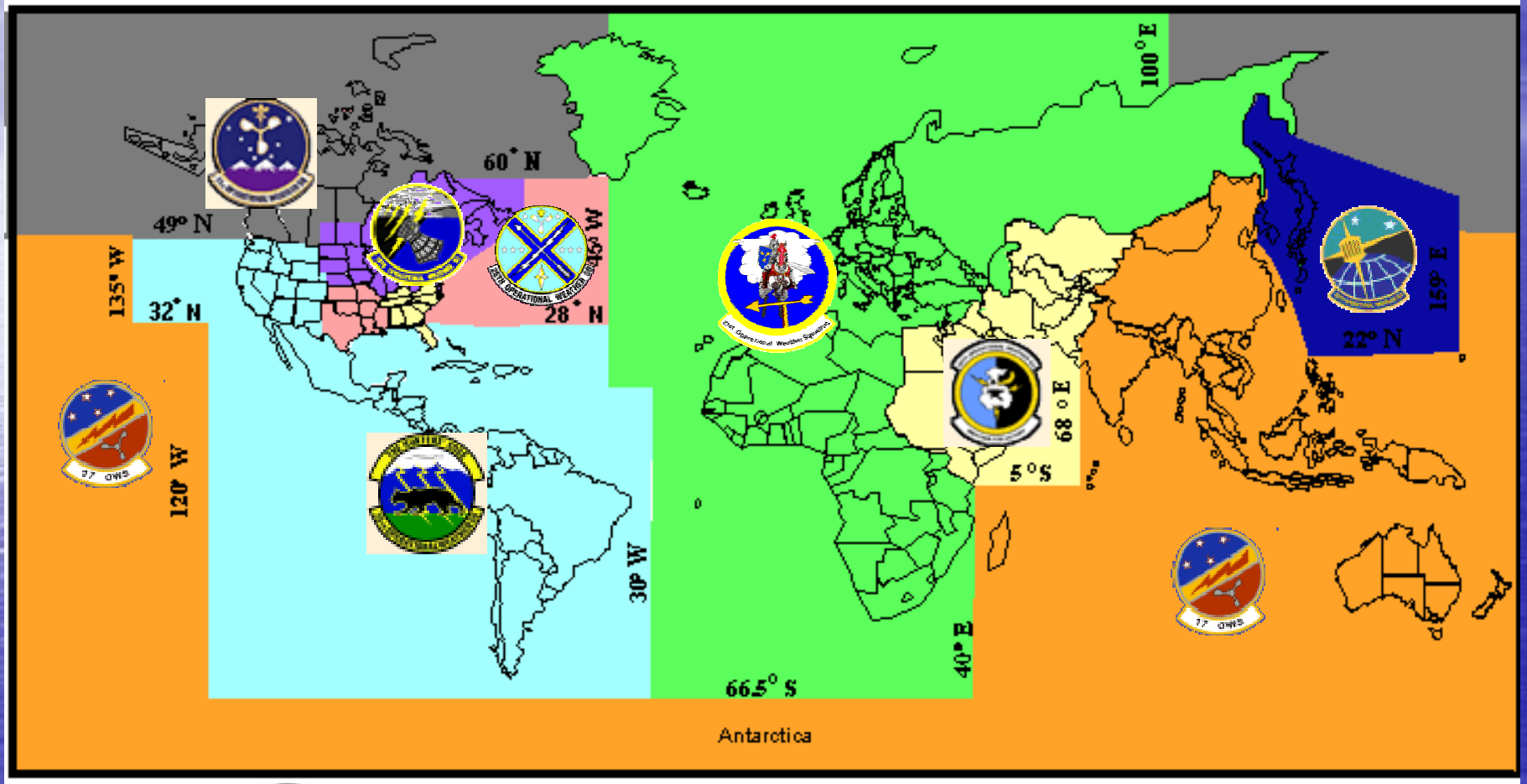
- To promote a collective effort between all agencies involved in the collection, distribution, and verification of weather information.

- First, a little history…

In 1997, the Air Force Chief of Staff signed a Strategic Plan that directed Air Force Weather to be "reengineered".

This reengineering plan mandated that eight regional hubs, or Operational Weather Squadrons (OWS), be opened to produce Synoptic, Mesoscale, and Microscale forecast products and Force Protection (warning) products for a predefined Area of Responsibility (AOR).

AF Weather OWS AORs



- 11 OWS (Elmendorf AFB)
- 15 OWS (Scott AFB)
- 17 OWS (Hickam AFB)
- 28 OWS (Shaw AFB)
- 20 OWS (Yokota AB)
- 25 OWS (Davis-Monthan AFB)
- 26 OWS (Barksdale AFB)
- 21 OWS (Sembach AB)

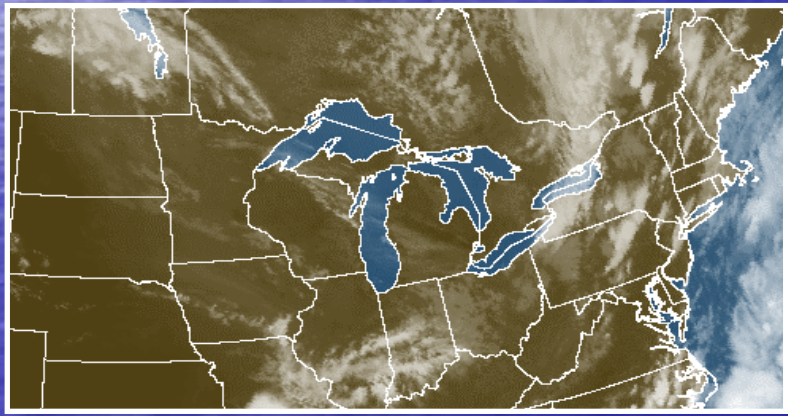
In February of 1999, the 15th Operational Weather Squadron opened at Scott AFB,IL

15 OWS Mission Statement

Provide weather operations and training to fuse accurate, timely and relevant weather intelligence into every aspect of warfighter mission planning and execution to ensure effective, safe, and efficient regional and global military operations.

Mission

Global Mobility Weather Ops



Regional Forecast Center For Army/Air Force Units In NE CONUS

Training Ground For 15% of AFW Accessions

Global Mobility

- The Tanker Airlift Control Center (TACC) controls almost all military airlift, through Flight Managers, anywhere in the world.
- This usually exceeds 60,000 flights per year.

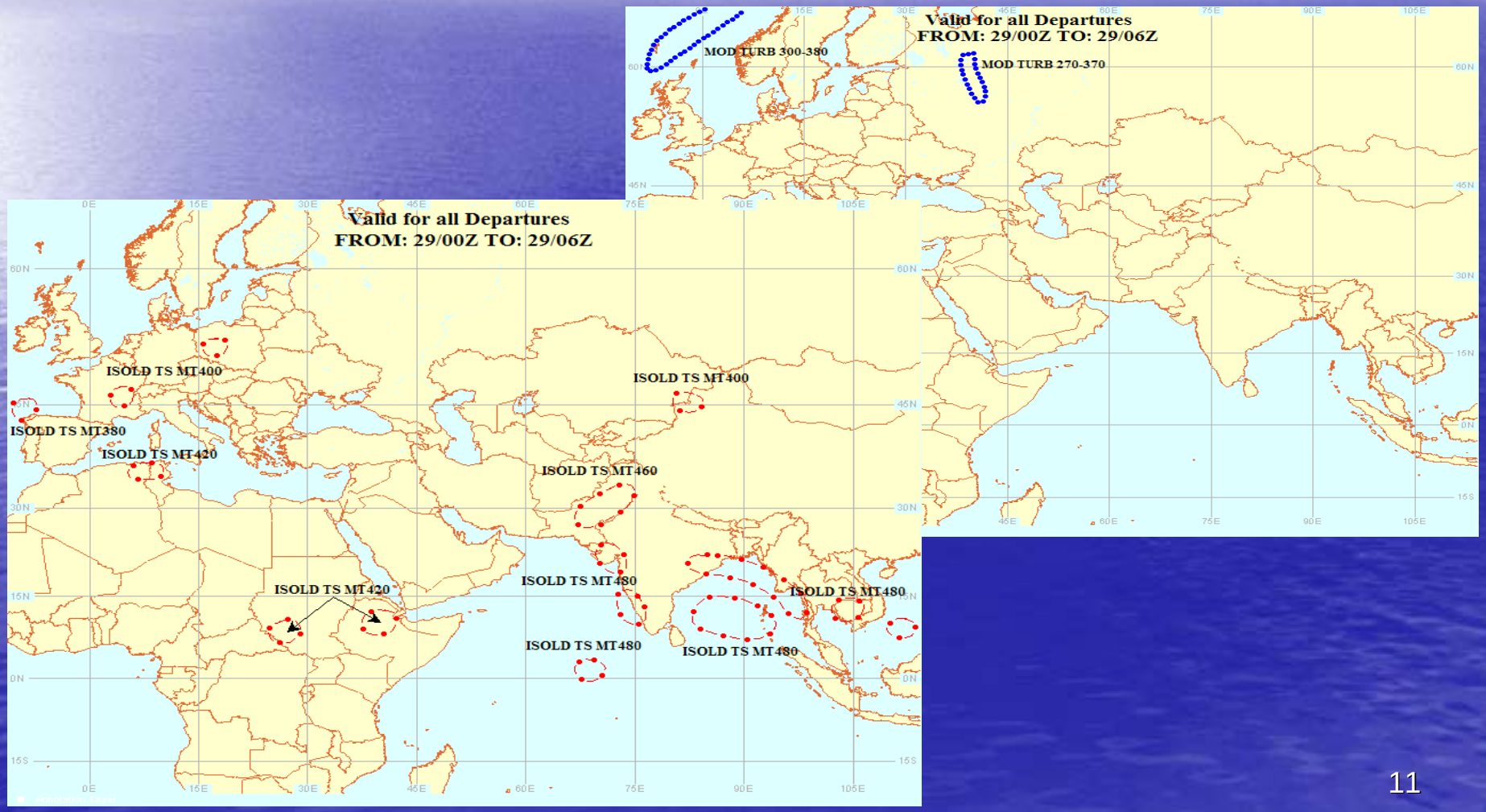
Integrated Management Tool (IMT)

View: 15 OWS WX PREDEPARTURE * Filter: 15 OWS WX PREDEPARTURE * Layout: WX PREDEPARTURE *

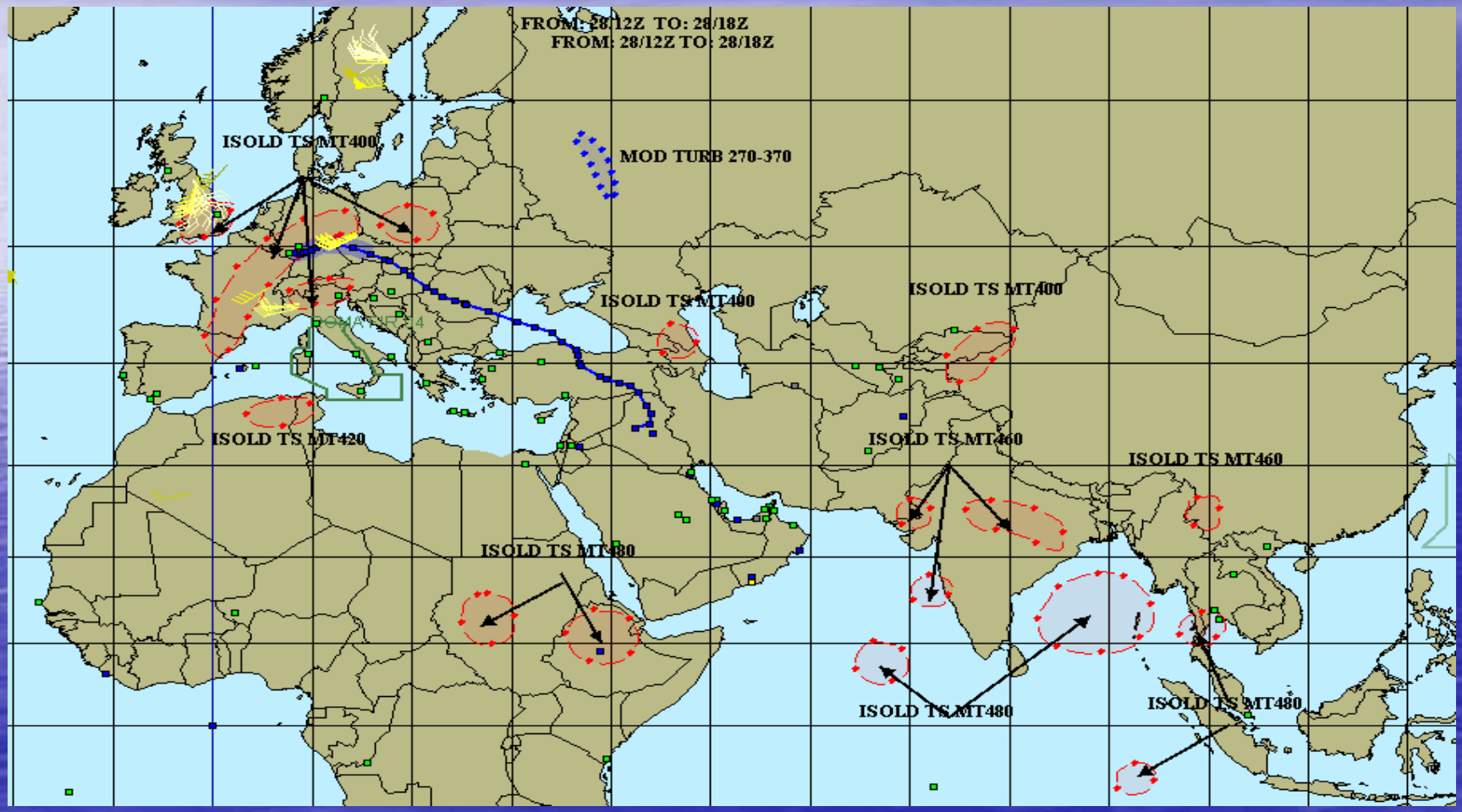
FM Name	Flight Mgr	Mission	Planned A/R	A/C Type	Call Sign	Tail	Flight Type	Wx ORM	Wx Pkg	Crew Paper	Status	Dep Airfield	Dep Exc	ETD
KO/DEMOISY/2-2 XOOS	15	AVM6839Y1207	.	C017A	RCH397	70043A	SAAM	Y	RD 2-2	PB 2-2	FILED	ORAA	Notam	5209/1700
BIVONA	6	7MW51IG01209	.	KC135R	RCH7432	71432S	OPLAN	Y	RD 1-1	PB 1-1	FILED	KBHM	Notam	5209/1700
CASPER	1	AJYA50177209	.	C005B	RCH6015	60015B	CONTIN	G	RD 1-1	PB 1-1	FILED	KDOV		5209/1700
O'HERON	5	AJM179401209	.	C017A	RCH338T	44130A	SAAM	G	RD 1-1	PB 1-1	FILED	KWRI	Notam	5209/1700
EVANS	4	PJP0571X0209	.	C017A	RCH2108	21108A	CHANNE	G	RD 1-1	PB 1-1	FILED	KTCM	Notam	5209/1705
EVANS/BERRY	4	PJC054300209	.	C017A	RCH2102	21102A	CHANNE	G	RD 1-1	PB 1-1	FILED	KTCM	Notam	5209/1725
EVANS/BERRY/ETD1730Z	4	PVM122801207	.	C017A	RCH287T	21109A	SAAM	G	RD 1-1	PB 1-1	FILED NO ACK	BIKF	Notam	5209/1730
COBBLE XOOL	9	XBC54E200207	.	KC010A	RCH3078	30078S	CHANNE	G	RD 1-1	PB 1-1	FILED NO ACK	PHIK	Notam	5209/1730
STANCIL	16	PMYF50173209	.	C005B	RCH321	50008B	CONTIN	G	RD 1-1	IW 1-1	FILED	KVPS	> 90°F	5209/1755
CASPER	2	XBBRFR40E205	.	C005A	RCH467	90017B	CHANNE	G	RD 1-1	PB 1-1	FILED	ETAR	Notam	5209/1800
MOYLAN X2	3	ABW20F5E7209	.	C017A	RCH027	33114A	CHANNE	G	RD 1-2	PB 1-2	FILED	LTAG	Notam	5209/1800
LANDRY AE	12	JLC775100209	.	KC135R	E00365	00365S	CHANNE	G	RD 1-1	PB 1-1	FILED NO ACK	PHIK	Notam	5209/1800
EVANS XOOL	4	AVM181603196	.	C017A	RCH1816	00177A	SAAM	G	RD 1-1	PB 1-1	FILED	KADW	Notam	5209/1815
KO/JIMBO/DEMOISY/X2	15	AAM114101206	.	C017A	RCH907	60007A	SAAM	Y	RD 1-2	PB 1-2	FILED	ETAR	Notam	5209/1815
DODSON AE	10	8LW42461C209	.	KC135R	E80100	80100S	CHANNE	G	RD 1-1	PB 1-1	FILED	KSUU	Notam	5209/1830
O'CONNELL	15	XJBRFR30E209	.	C005A	RCH8211	80211B	CHANNE	G	RD 1-1	PB 1-1	FILED	KCEF	Notam	5209/1830
STANCIL X2	16	ABW2059E4209	.	C017A	RCH147	21099A	CHANNE	G	RD 1-2	PB 1-2	FILED	LTAG	Notam	5209/1830
GRIZZO	7	8JH544W11207	.	KC135T	WOODN81	80094S	CORONE	G	RD 1-1	PB 1-1	FILED NO ACK	RODN	Notam	5209/1839
B2/AR @	11	AMRF70410208	Y	C017A	RCH1191	10191A	CONTIN	Y	RD 1-1	PB 1-1	FILED	KMCF	Notam	5209/1841
COBBLE/SKIP/2-2	9	PAM144703209	.	C017A	TBIRD14	00535A	SAAM	G	RD 2-2	PB 2-2	FILED	KCYS	Notam	5209/1850
DODSON	10	JDN81075R208	.	KC135E	RCH7485	71485S	SUPPOR	G	RD 1-1	PB 1-1	FILED	KTCM	Notam	5209/1900
MAV/2-2	10	AVW2060E2209	.	C017A	RCH030	33113A	CHANNE	G	RD 2-2	PB 2-2	FP CNX	ORBI	Notam	5209/1901
COBBLE	9	XBWRFY60D209	.	C005A	RCH234	90019B	CHANNE	R	RD 1-1	PB 1-1	FILED	OTBH	> 90°F	5209/1910
MOYLAN	3	AVM502701205	.	C017A	RCH993	10193A	SAAM	Y	RD 1-1	PB 1-1	FILED	ETAR	Notam	5209/1920
KNOEBEL	2	AJYF301YT209	.	C017A	RCH423	10195A	CONTIN	G	RD 1-1	PB 1-1	FILED NO ACK	OTBH	> 90°F	5209/1930
DODSON	10	AMYA50170204	.	C005B	RCH412	60011B	CONTIN	G	.	.	DEP DIVERT	LERT	Notam	5209/1930
O'CONNELL X2 AR	15	PMYA80262208	Y	C017A	RCH314	21110A	CONTIN	Y	RD 1-2	PB 1-2	FILED	ETAR	Notam	5209/1945
O'CONNELL	15	PMUM70394207	.	C017A	RCH246	21111A	CONTIN	G	RD 1-1	PB 1-1	FILED	UTAA	> 90°F	5209/1948
THRIFT X2 AR XOOS	8	PAM6837Y1208	Y	C017A	RCH388	90169A	SAAM	Y	RD 1-2	PB 1-2	FILED	ETAR	Notam	5209/1955
STANCIL X2 FL230	16	AMYF330YT209	.	C017A	RCH489	50102A	CONTIN	G	RD 1-2	PB 1-2	FILED NO ACK	OKBK	Notam	5209/2000
STANCIL	16	7MW51IG01209	.	KC135R	RCH403	71432S	OPLAN	Y	RD 1-1	PB 1-1	FILED	KGSB	Notam	5209/2000
LANDRY	12	8MH47DG02208	.	KC135R	RCH7488	71488S	DEPLOY	G	RD 1-1	PB 1-1	FILED NO ACK	PHIK	Notam	5209/2000
GRIZZO	7	PMYF50175206	.	C005B	RCH7042	70042B	CONTIN	Y	RD 1-1	PB 1-1	FILED	KHRT	Notam *	5209/2020
B2	11	JBRGF350D208	.	C005A	RCH9015	90015B	CHANNE	G	RD 1-1	IW 1-1	FILED	KDOV	*	5209/2050
2-2	99	JBAGDJ800209	.	C005A	RCH203	00454B	CHANNE	Y	RD 2-2	PB 2-2	FILED NO ACK	MHSC	Notam *	5209/2104
MOYLAN X2	3	ABW2063E9209	.	C017A	RCH111		CHANNE	G	RD 1-2	PB 1-2	FILED	LTAG	Notam *	5209/2115
BIVONA/AE	6	JLWGR434B207	.	C130H	E90480	90480T	CHANNE	G	RD 1-1	PB 1-1	FILED	KTCM	Notam *	5209/2115
LANDRY	12	PVUM70427208	.	C017A	RCH1194	10194A	CONTIN	Y	RQ 1-1	IW 1-1	RELEASED	KNKT	TRW *	5209/2125
O'CONNELLX2 AR	15	AMRJ70429209	.	C017A	RCH393	10197A	CONTIN	Y	RQ 1-2	IW 1-2	FILED	EDDF	Op Hrs *	5209/2125
MOYLAN/2-2	3	AVW20F6E7209	.	C017A	RCH027	33114A	CHANNE	G	RD 2-2	PB 2-2	FILED	ORAT	Notam *	5209/2130
COBBLE	9	XJRRO350F209	.	C005A	RCH9002	90002B	CHANNE	R	RD 1-1	IW 1-1	FILED	KSKF	*	5209/2130
JS/2-2	16	AVW2060E4209	.	C017A	RCH147	21099A	CHANNE	G	RD 2-2	PB 2-2	FILED	ORBI	Notam *	5209/2130

Global Mobility Products

- The Global Mobility Weather Flight is fully integrated into this process, providing weather data to every flight.

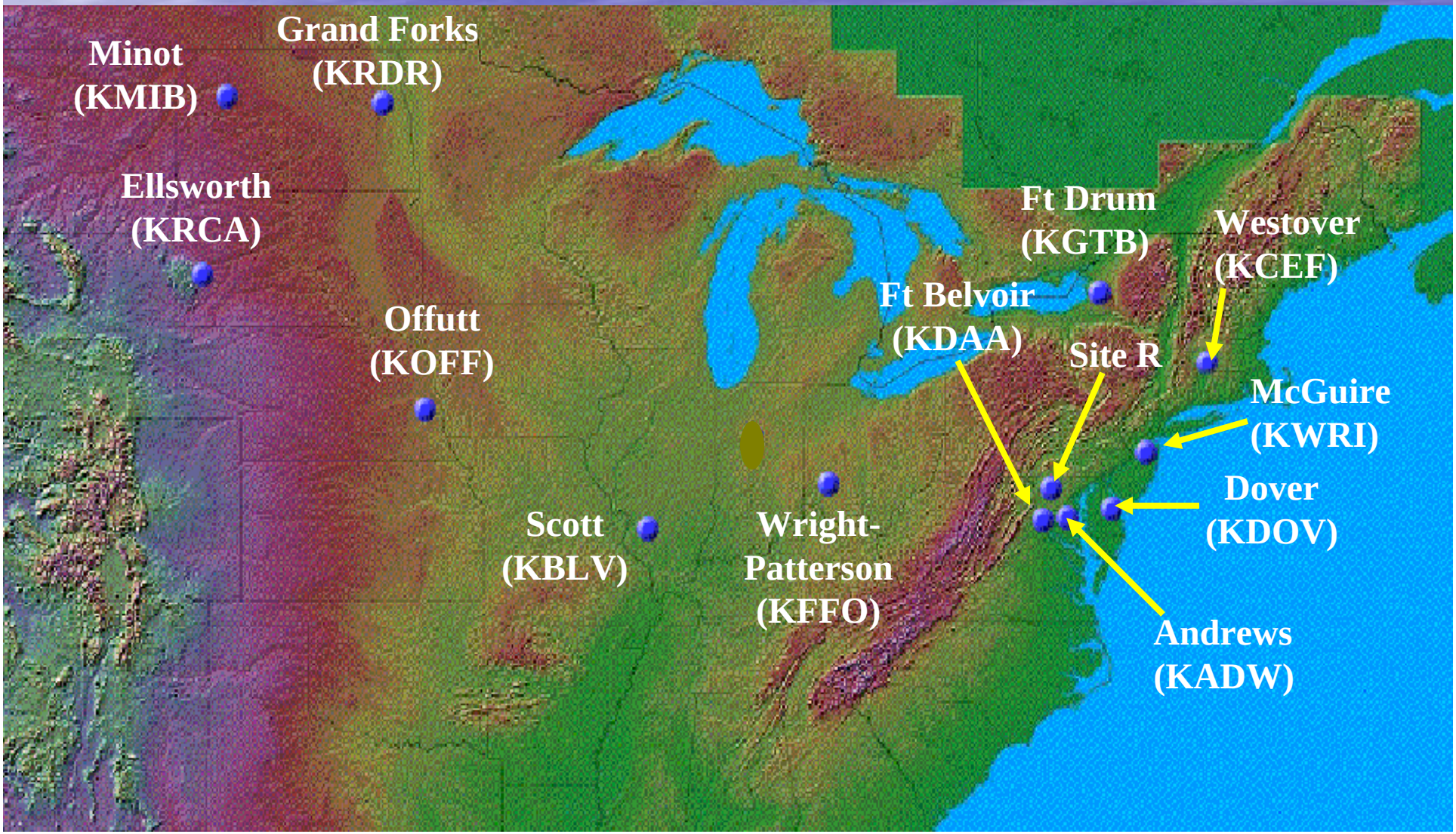


Global Air Mobility Advanced Technology (GAMAT)



NE CONUS Area of Responsibility

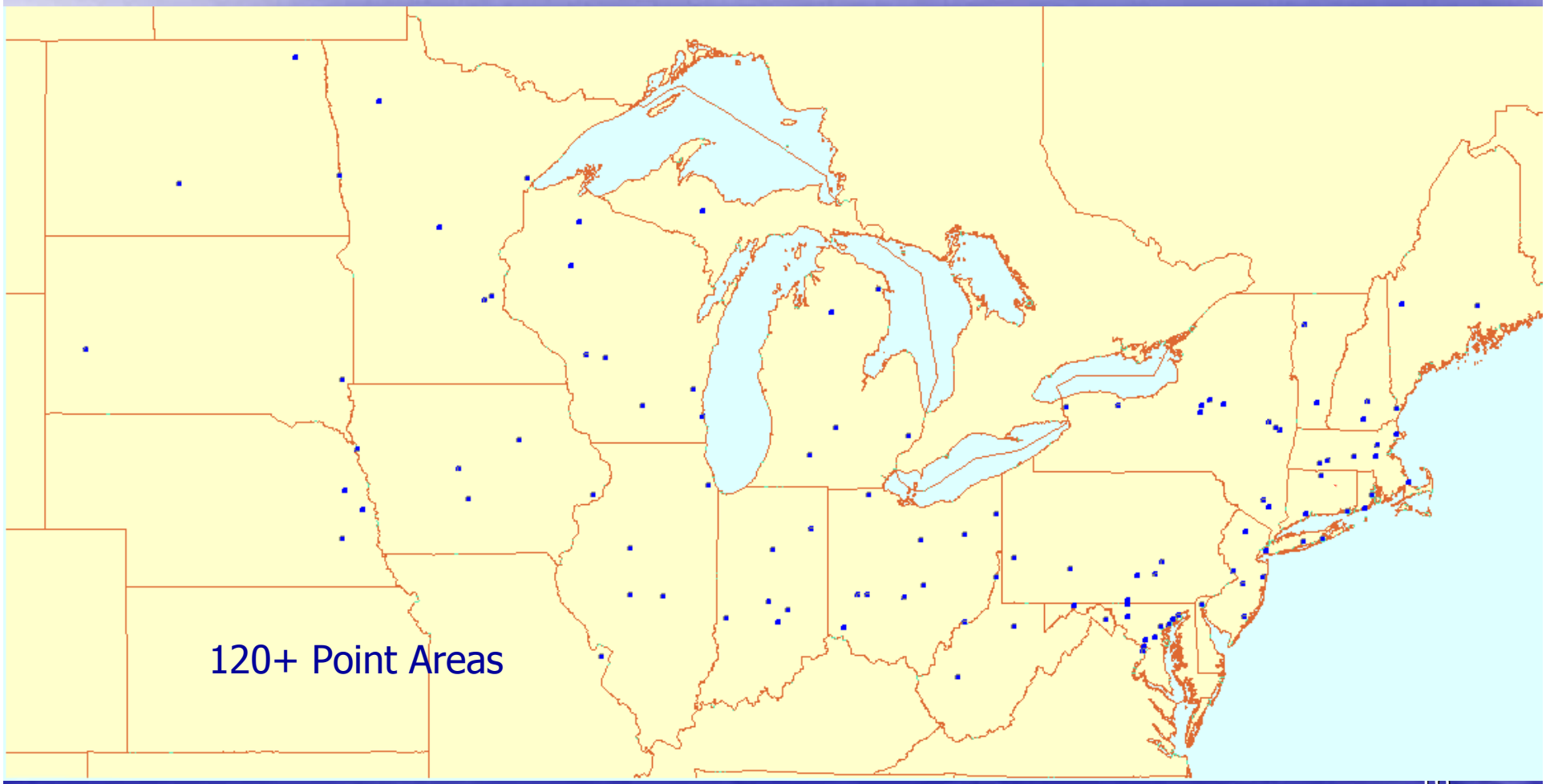
Active Duty Military Bases



Mission
Customer Demographics

- NE CONUS
  - 13 Active Duty Installations
  - AFOG Support
  - 2 AF Reserve Installations
  - 148 Guard and Reserve Flying Units--130 sorties daily
    - 22 Airlift, 23 Fighter, 12 Tanker, 80 Army, SAR, Special Ops
    - 1200+ aircraft supported
  - 25 Non-flying customers (i.e., radar sites, research facilities, etc.)
  - 126 DoD Customers
    - Point Warnings With Over $100 Billion in Assets/180,000 Personnel
  - 20 Guard Weather Flights

Northeast CONUS Warning Cell



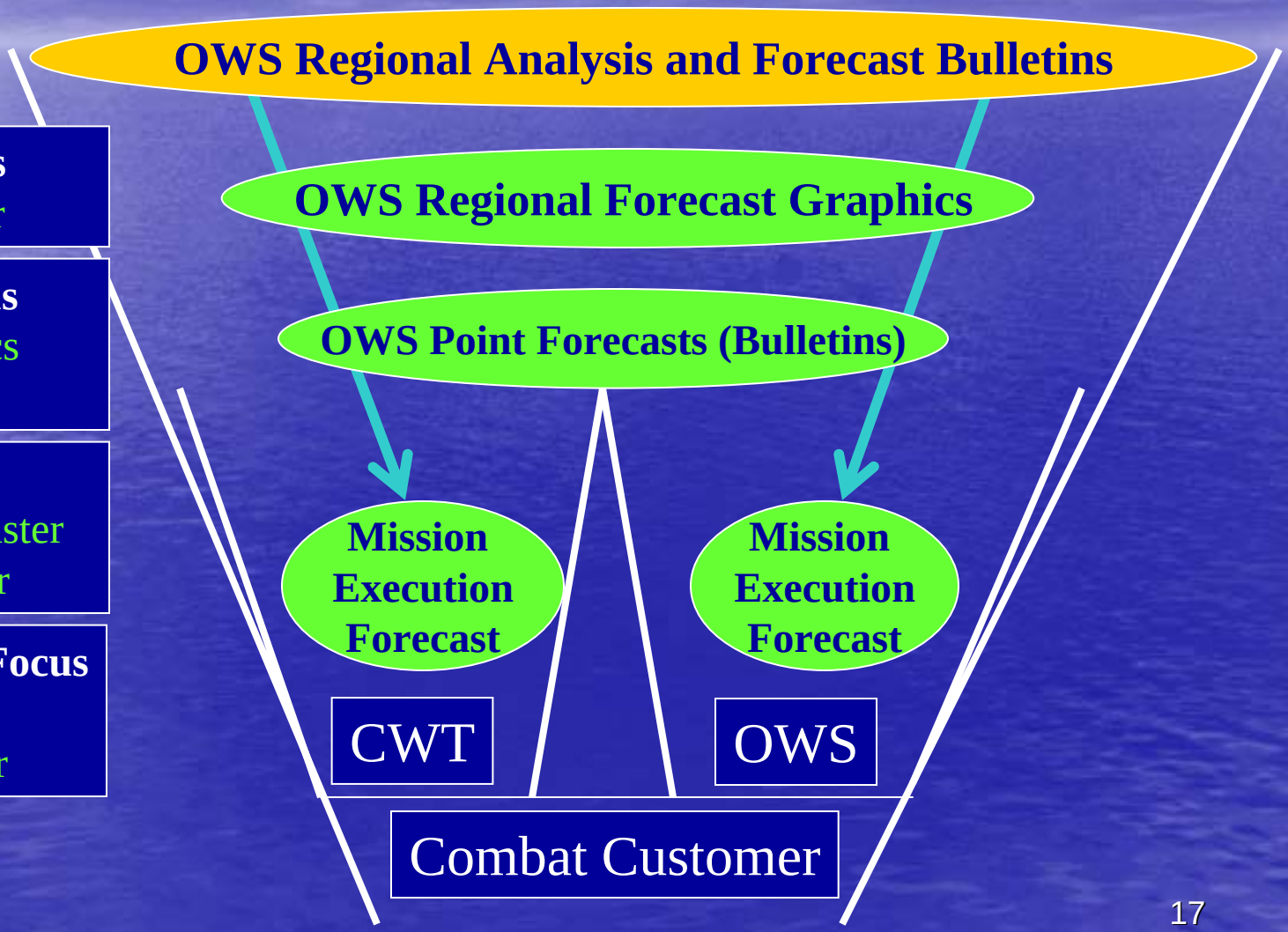
Forecast Funnel

Synoptic Focus
Lead Forecaster

Mesoscale Focus
Aircrew Graphics Forecaster

Local Focus
Sub-Region Forecaster
CWT Forecaster

Combat Operator Focus
OWS Briefer
CWT Forecaster



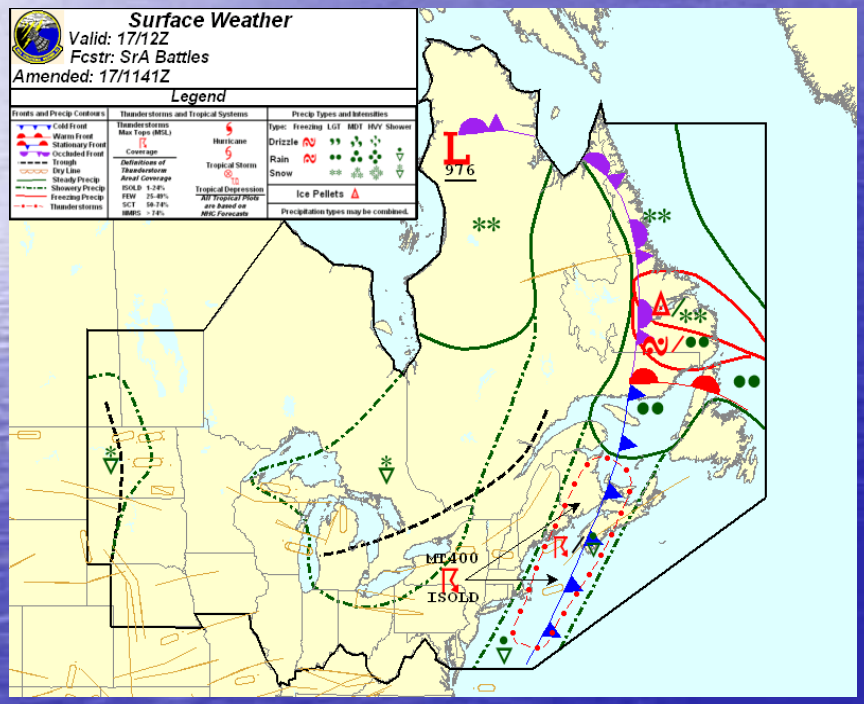
Lead Forecaster

- Kicks off regional analysis and forecast program
- Products form the basis for development of all forecast products on production floor
- Depends heavily on Regional forecasters for metwatch assistance, accurate forecast baselines, and advise.

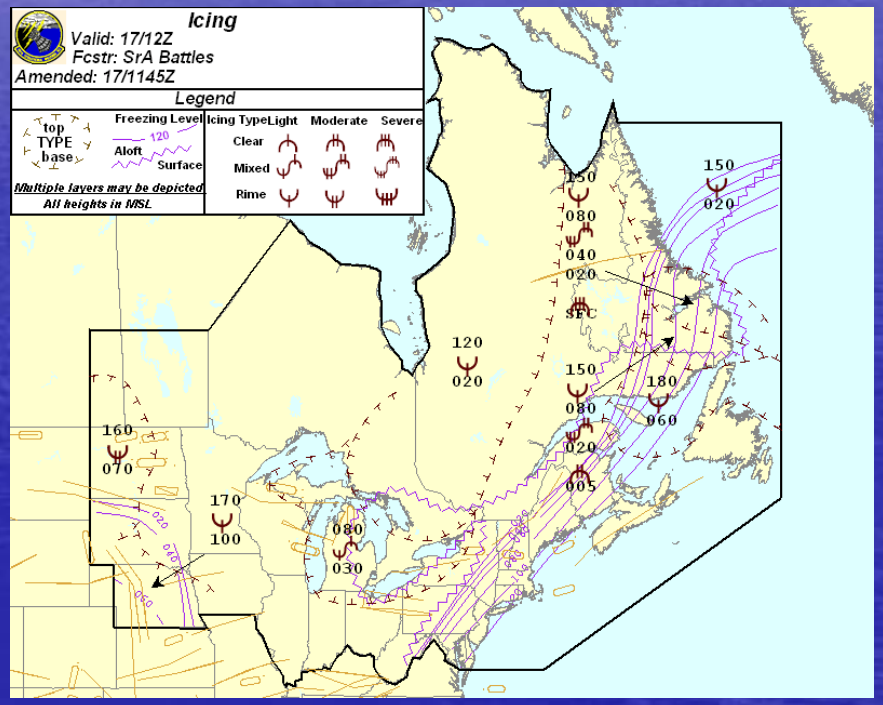
Aircrew Graphics

- Charged with focusing on weather at mesoscale level in close partnership with Lead Forecaster
- Produce a regional graphics product suite

15 OWS NE CONUS Situational Awareness Products



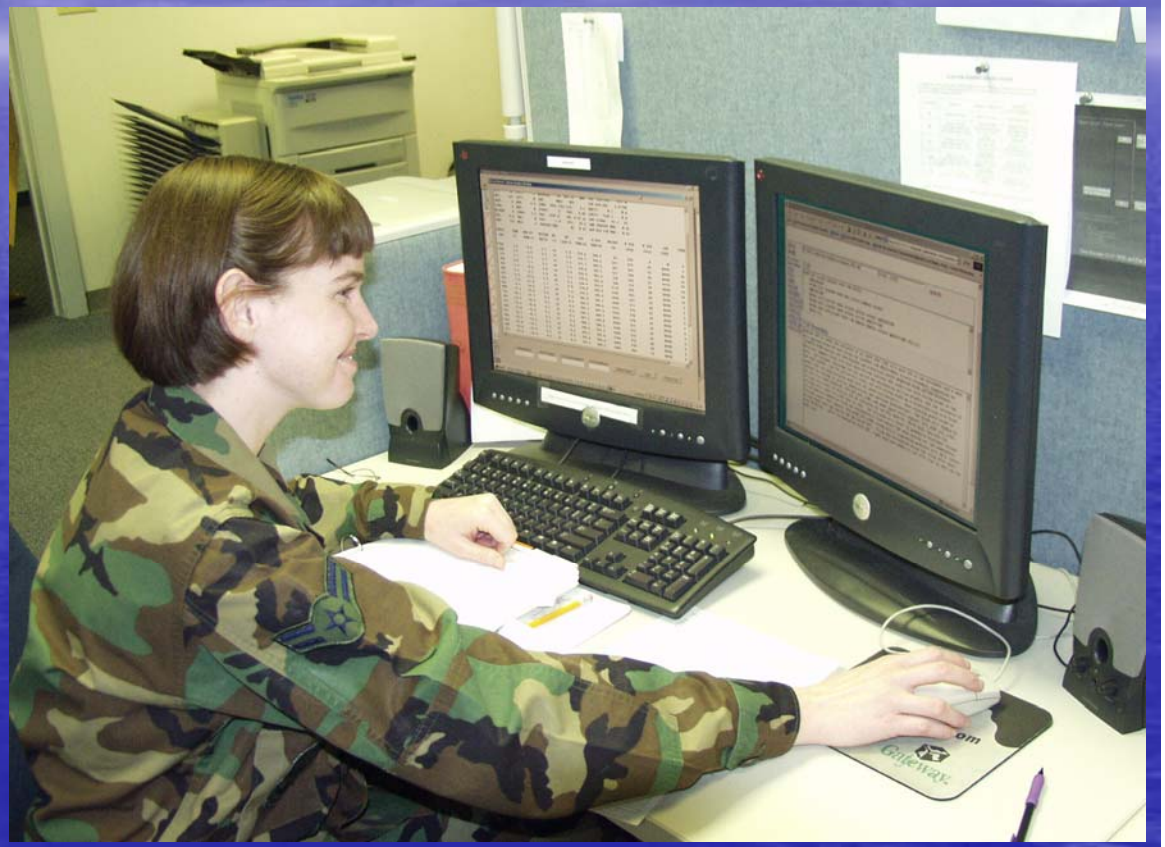
Surface Forecast Chart



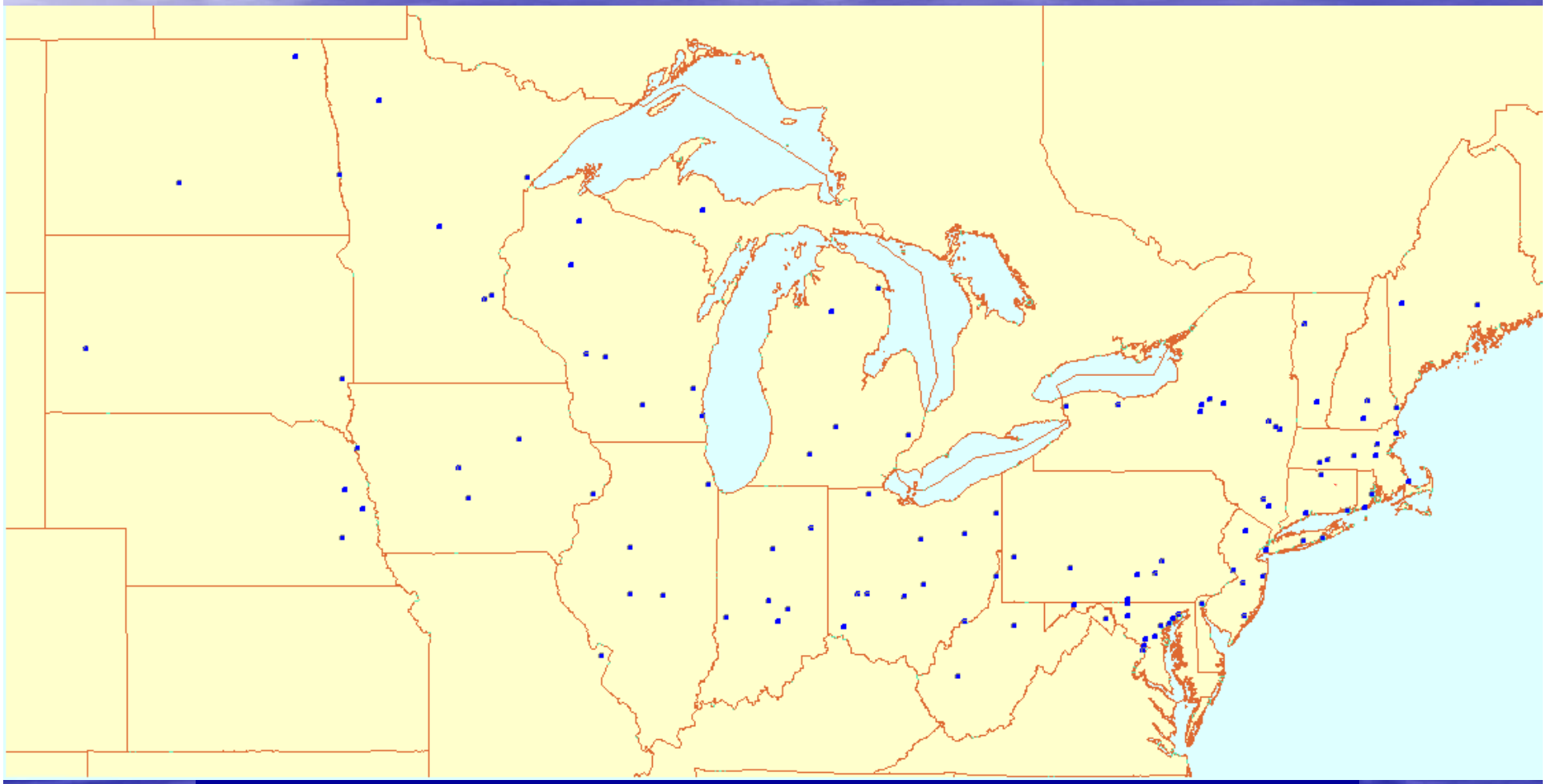
Icing Forecast Chart

The Sub-Region

- Sub-Region Supervisor
  - Training
  - Leadership
  - Supervision
- Sub-Region Forecaster
  - TAF/Discussion Rationale
  - Product and Checklist Links
  - Warnings
  - Advisories
  - Watches
  - Amendments

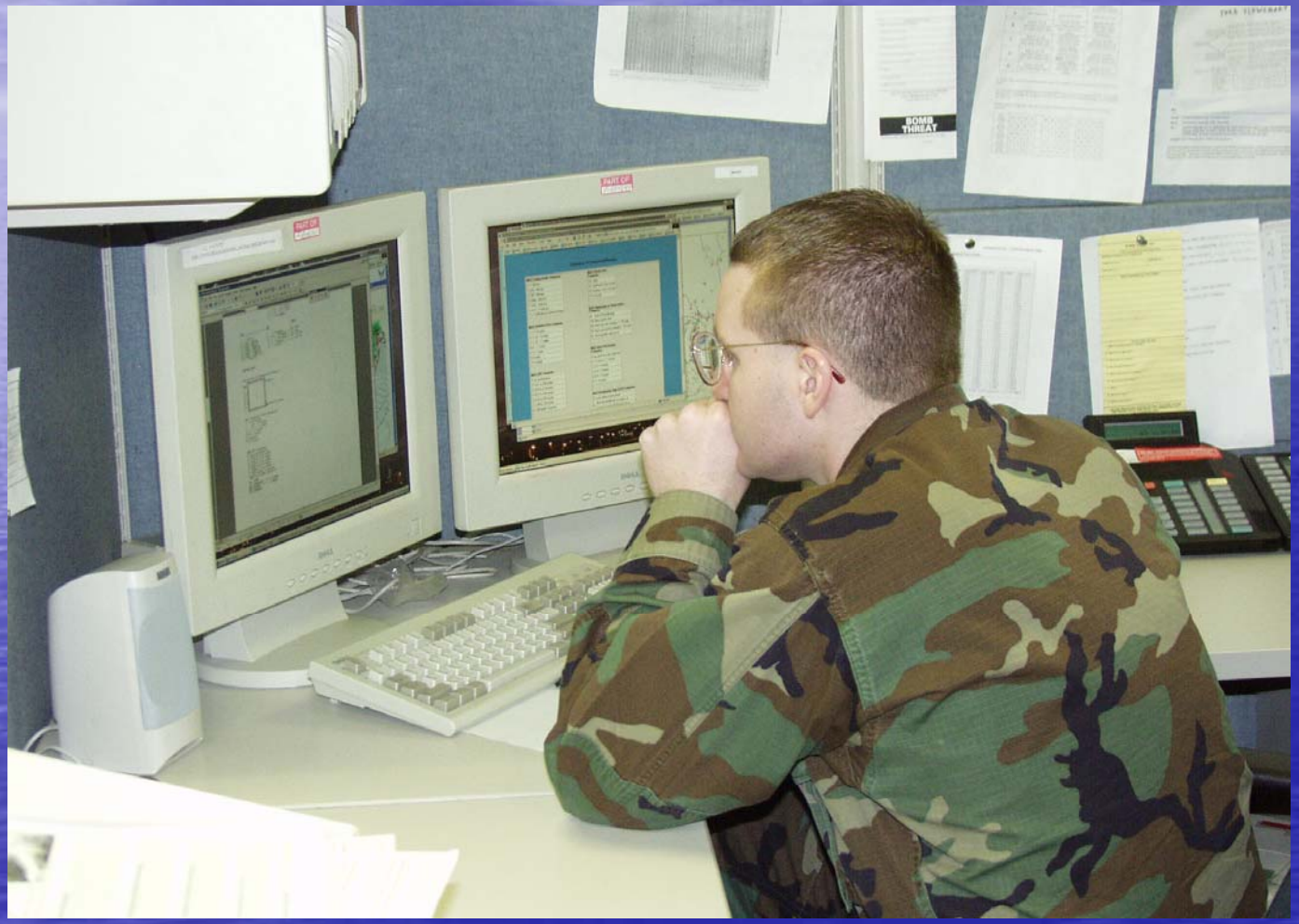


Point Weather Warning Forecaster



Warning Services for 120+ Customers With Over $100 Billion in Assets/180,000 Personnel

Aircrew Briefing Cell



Mission Forecasts for 250 - 300 Sorties Daily

Operations
Average Monthly Production
NE CONUS/TACC

Product Line	Number	Amendable	Requirement
Automated Products	600,000	No	Mission Execution/Planning/WF Guidance
Flight Weather Briefs	2,675	No	Mission Execution
Mission Graphics	6,500	Yes	Mission Execution--450 Sorties/Daily
Weather Analyses	1,150	No	Weather Flight Guidance
Aircrew/Controller Updates	1,500	No	Mission Planning/Flight Safety
Discussion Bulletins	820	No	Weather Flight Guidance
Installation TAFs	990	Yes	World Meteorological Organization
Point Warnings	1525	Yes	Resource Protection
AIREP Dissemination	120	No	Mission Planning/Flight Safety
Base Warnings/Advisories	500	Yes	Resource Protection
Total--Automated	600,000		
Total--Forecaster Developed	15,780		

Supported Aircraft

Supported Aircraft

Supported Aircraft

Supported Aircraft

Supported Aircraft

Supported Aircraft

Supported Aircraft

Supported Aircraft

Supported Aircraft

Supported Aircraft

White House

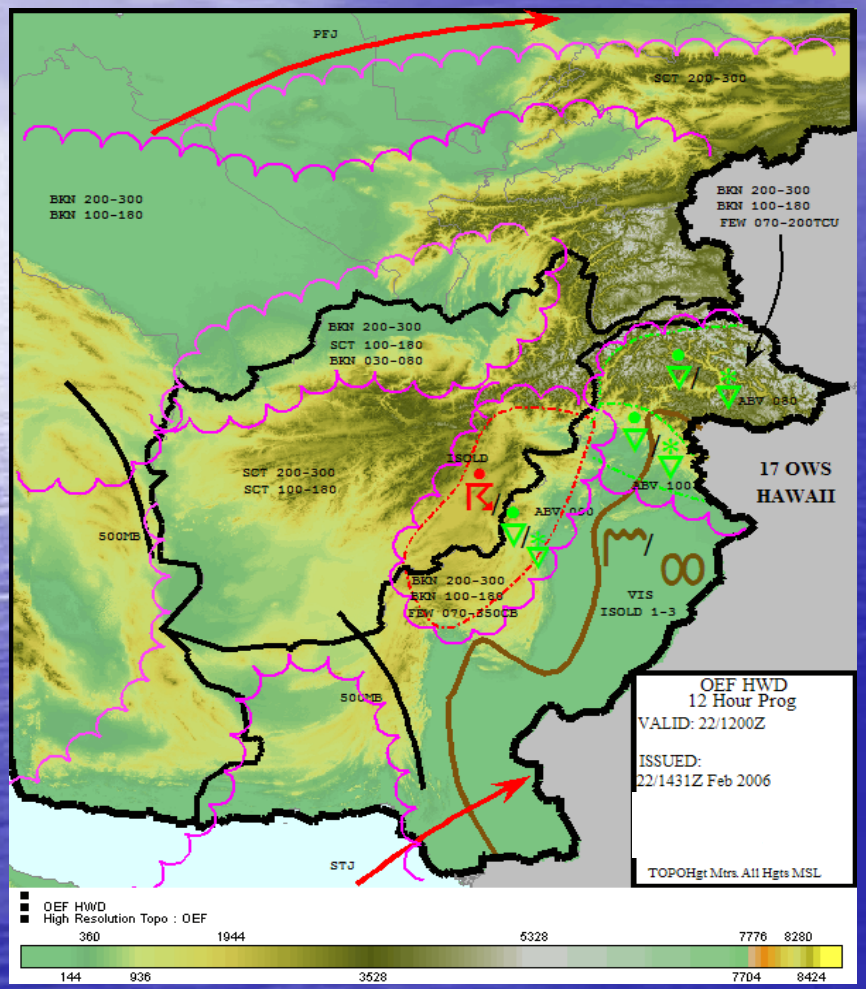
September 11, 2001

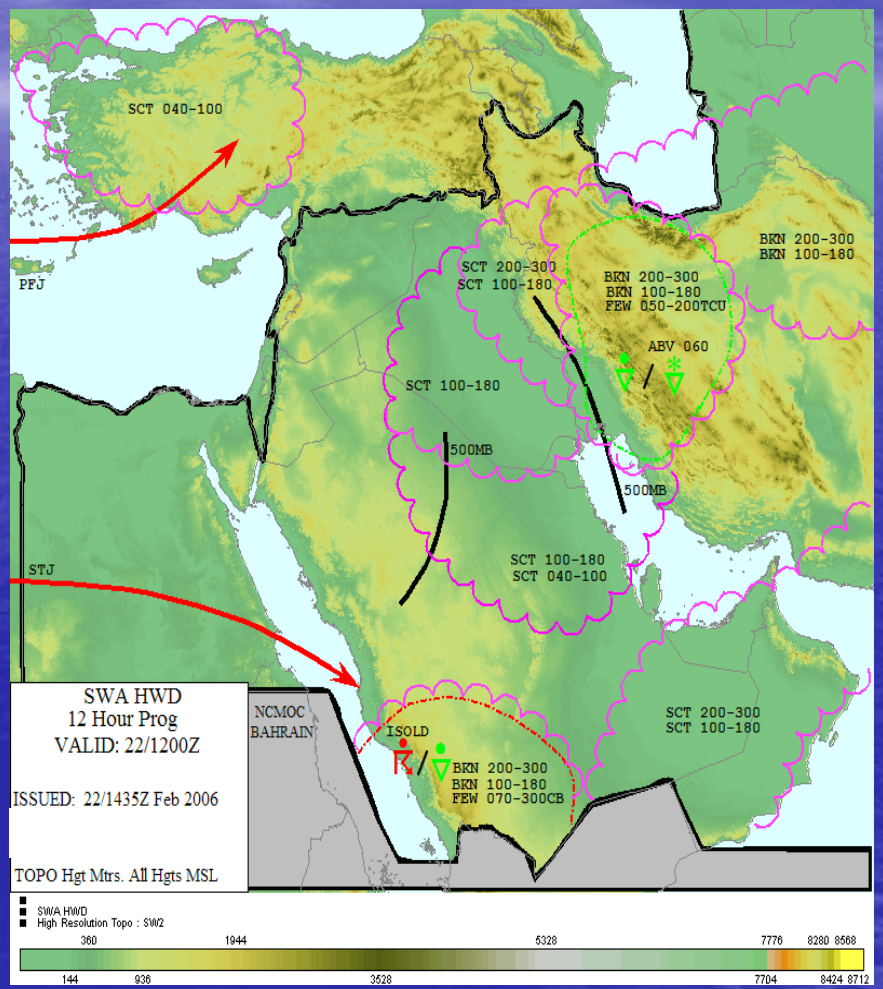
September 11, 2001

North Dakota ANG during a combat air patrol mission over Washington in support of Operation Noble Eagle.

Within 12 hours after the tragic events of September 11th, the 15th OWS had established a website that supplied weather and chemical fallout data for Rescue, Recovery, and Combat Air Patrol (CAP) missions across the Northeastern United States. Support lasted two years, until the CAP missions were suspended.

September 11, 2001





The 28th OWS (Shaw AFB) continues to support war operations in Afghanistan and Iraq.

Technical Training

- **Initial Skills Course – A 30-week course covering:**
  - Structure and Properties of the Atmosphere
  - Analysis and Prognosis
  - Weather Elements
  - Forecast/Meteorological Watch
  - Hydrology
  - Radar
  - Weather Codes
  - Space Environment
  - Weather Briefings
  - Meteorological Equipment
  - Combat Skills

In-house Training

- **12 weeks of enhanced training on:**
  - Structure and Properties of the Atmosphere
  - Surface and Upper Air Analysis
  - Model Analysis
  - Weather Elements
  - Convective and Non-convective Severe Weather
  - Forecast/Meteorological Watch
  - Radar Interrogation
  - Weather Codes
  - Space Environment
  - Meteorological Equipment
- **Two Career Development Courses**

Proposals for an Increased Collaborative Effort Between Agencies

- OWS's and SPC
  - Mesoscale Discussions
    - OWS's "listening in" during SPC Mesoscale Discussions with NWSFO's
    - Allows OWS's to have a "heads-up" on potential severe weather areas (for warning purposes).
- OWS's and NWS
  - Encourage crossfeed of information with local NWSFO's

(All proposals must be approved by Air Force Weather Agency)

Proposals for an Increased Collaborative Effort Between Agencies

- OWS's and Local Emergency Managers
  - Increased communication with local EM agencies
    - Storm Reports (severe or non-severe)
- OWS's and Academia ????????

(All proposals must be approved by Air Force Weather Agency)

Contact Information

For additional information, contact:

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Questions???