



# National Weather Service

## Alaska Aviation Weather Unit

## Anchorage Center Weather Service Unit

**Virtual Tour**  
**Welcome!!**

Carrie Haisley  
Anchorage Center Weather Service Unit  
Meteorologist-in-Charge



# Anchorage Forecast Facility





# National Weather Service Alaska Mission Statement

- **Mission:**

NWS Alaska Region provides integrated environmental analysis and forecasts, leveraging a broad spectrum of partnerships that enable communities and stakeholders to make the best possible decisions.

- **Vision:**

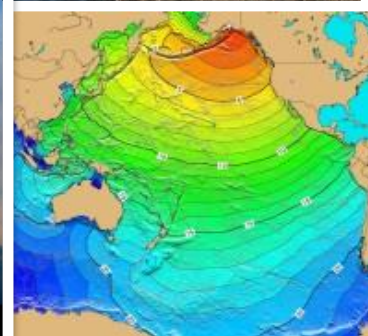
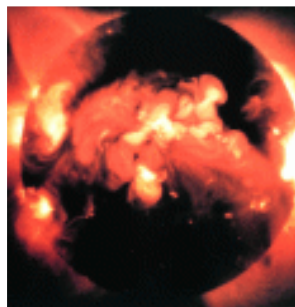
Alaska Region communities and stakeholders are ready, responsive, and resilient to environmental impacts: protecting lives and property, enhancing commerce, and safeguarding the "Last Frontier".





# Service Areas

- Aviation
- Climate
- Fire Weather
- Marine Weather & Sea Ice
- Public Forecasts and Warnings
- Rivers/Hydrology
- Space Weather
- Tsunami
- Volcanic Ash







# National Weather Service Alaska Region Facilities

## ▲ In Anchorage:

- Alaska Aviation Weather Unit
- Anchorage Volcanic Ash Advisory Center
- Anchorage Center Weather Service Unit
- Weather Forecast Office
- River Forecast Center

★ Weather Forecast Offices

● Weather Service Offices

T National Tsunami Warning Center

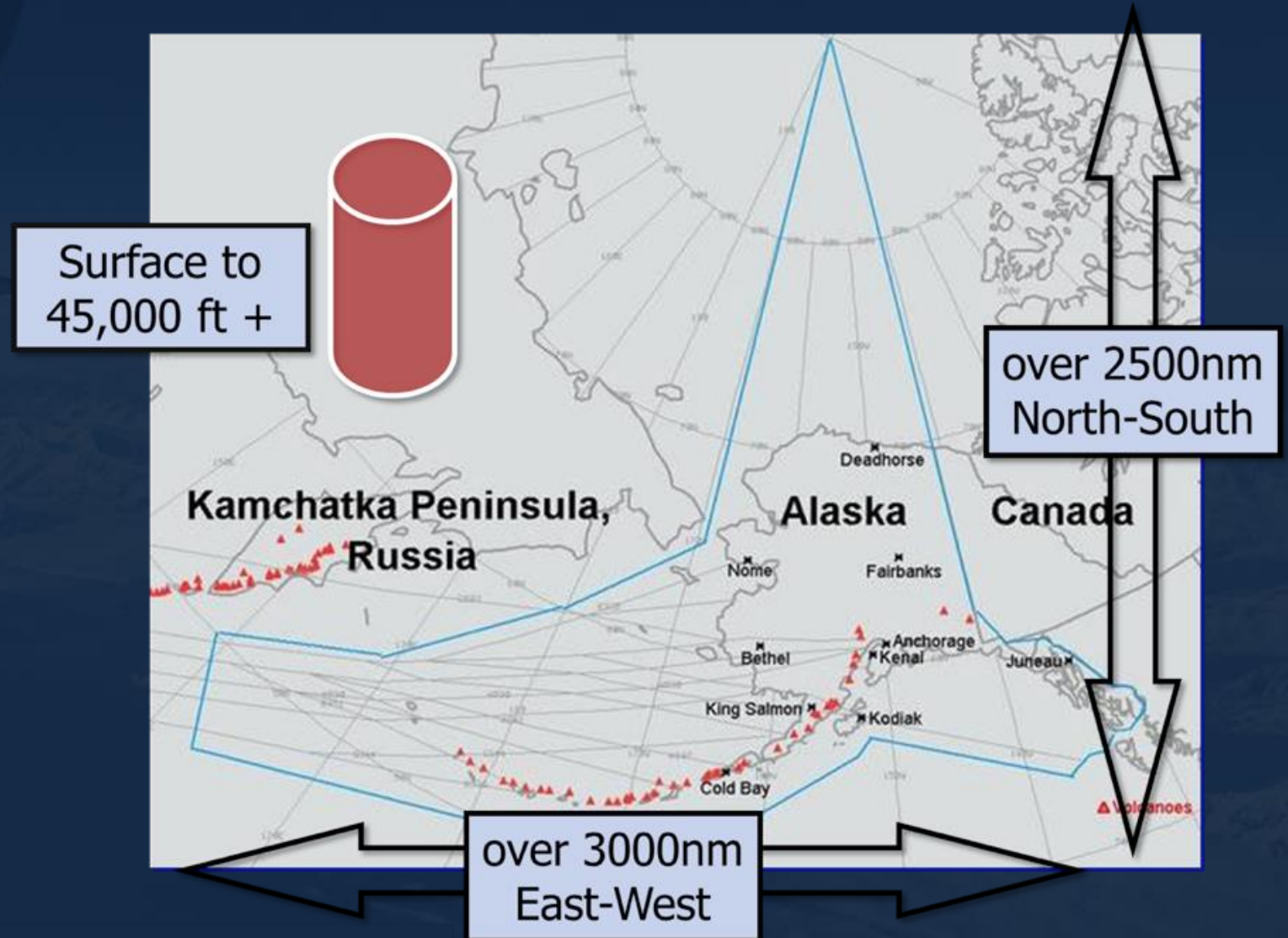






# Alaska Aviation Weather Unit (AAWU)

- Forecasts for over 2.4 million sq. miles of airspace
  - Graphics, Area Forecasts, AIRMETs, and SIGMETs
  - Flight Category, Icing, Turbulence, Convection, Surface Analyses, and Volcanic Ash
- Need for a strong internal collaborative forecast process
- Close partnerships with FAA, industry, and formal associations to help guide services





# Alaska Aviation Weather Unit (AAWU)



- **Forecast Staff:**  
(2 always on duty)
  - 5 Lead Forecasters
  - 6 Journey Forecasters
- **Support Staff**
  - 1 Meteorologist-in-Charge
  - 1 Science & Operations Officer
  - 1 IT System Administrator
  - 1 Administrative Support Assistant



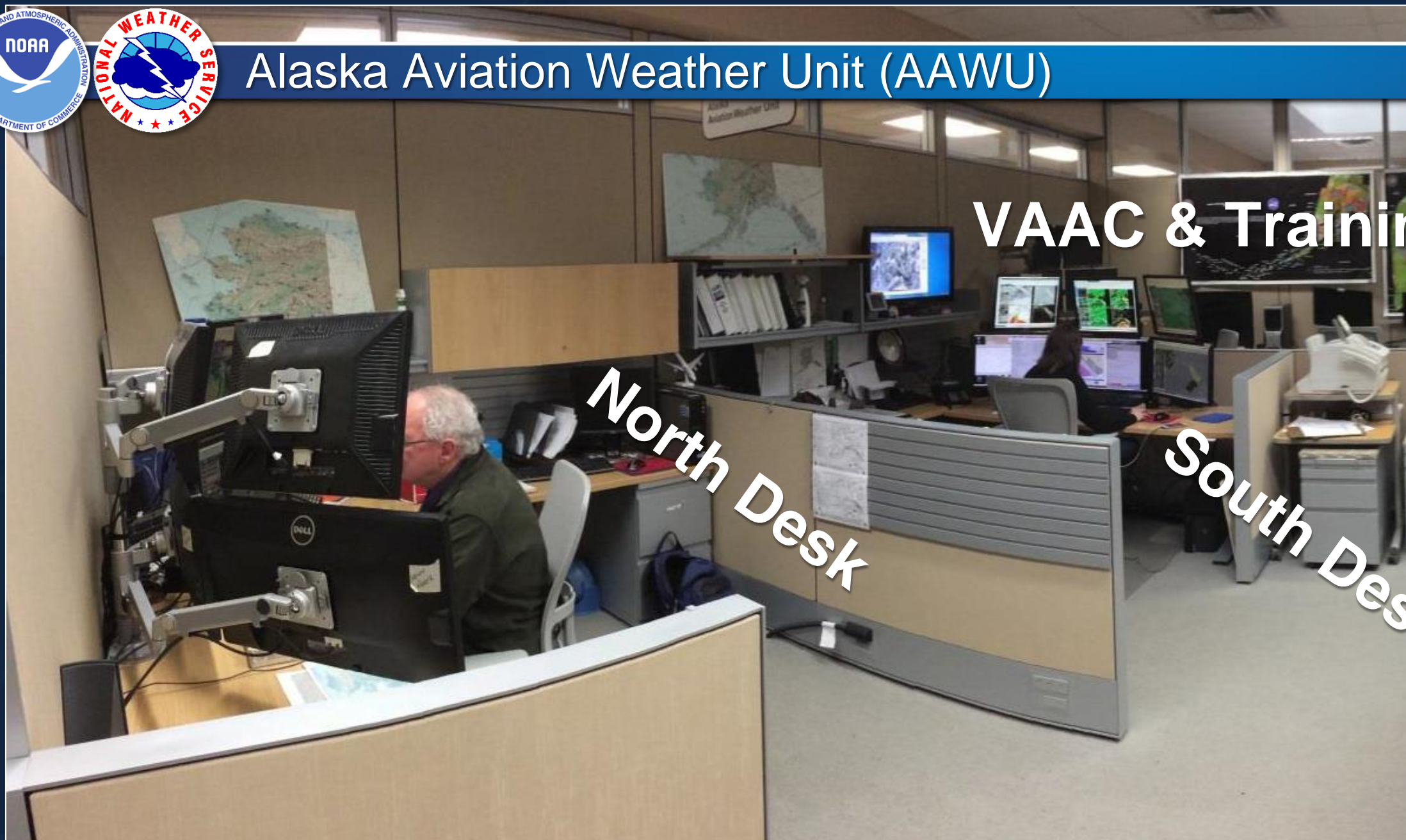


# Alaska Aviation Weather Unit (AAWU)

VAAC & Training

North Desk

South Desk







# Alaska Aviation Weather Unit (AAWU)

## North Desk:

- 12 Area Forecasts
- Freezing Levels
- Icing
- Convection
- Flight Category

## South Desk:

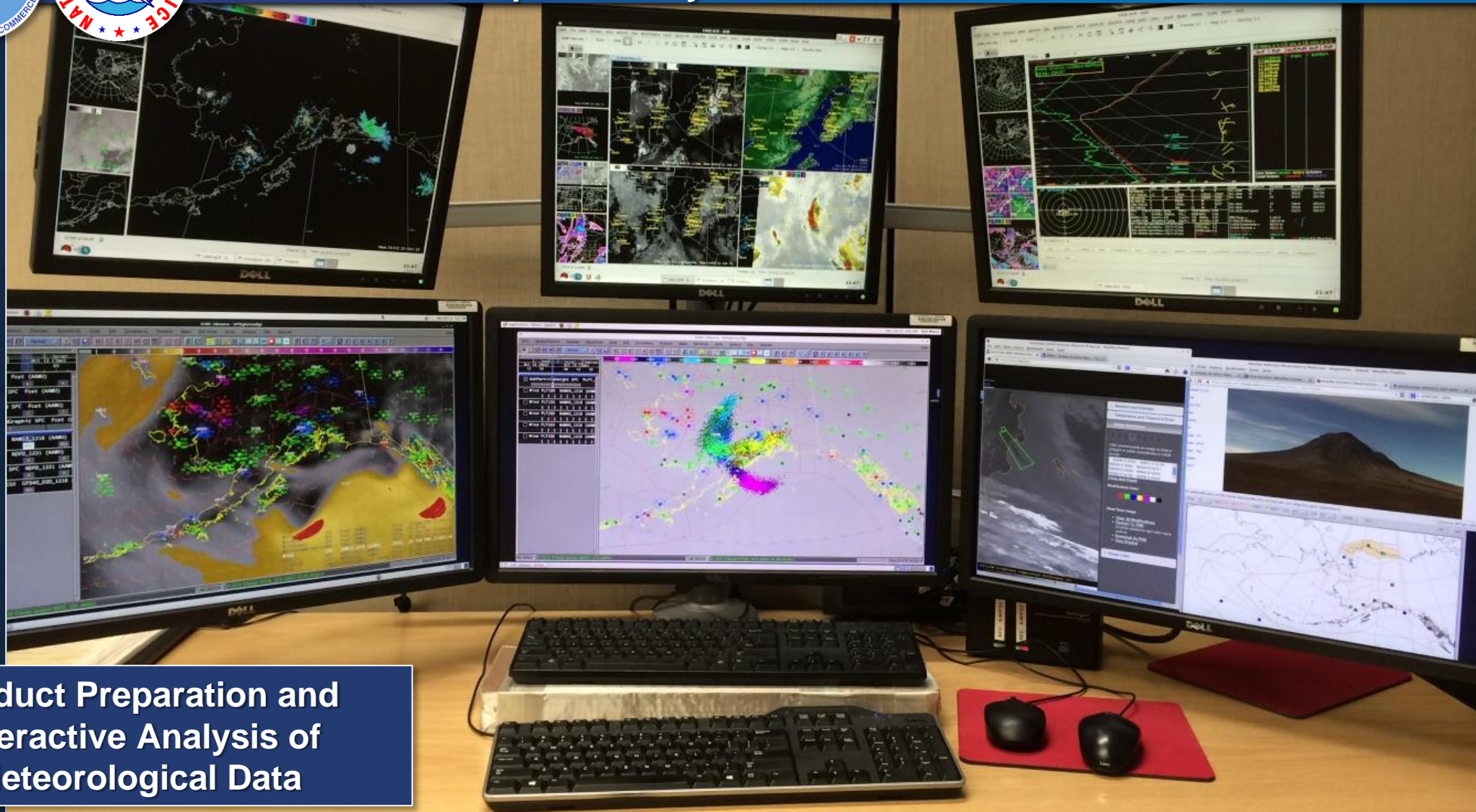
- 13 Area Forecasts
- Surface wind
- Low-level Turbulence
- High-level Turbulence
- Surface Analysis







# AAWU Computer Systems



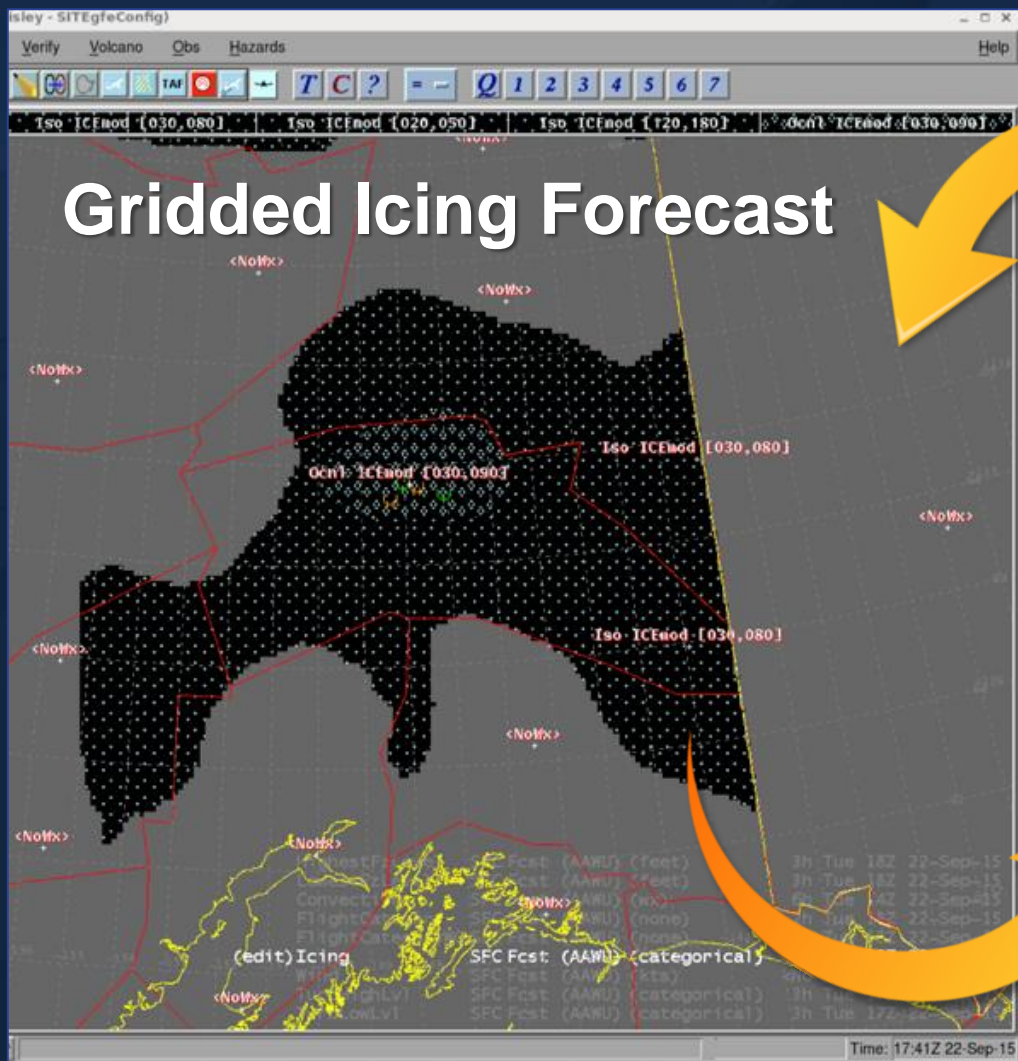
Product Preparation and  
Interactive Analysis of  
Meteorological Data



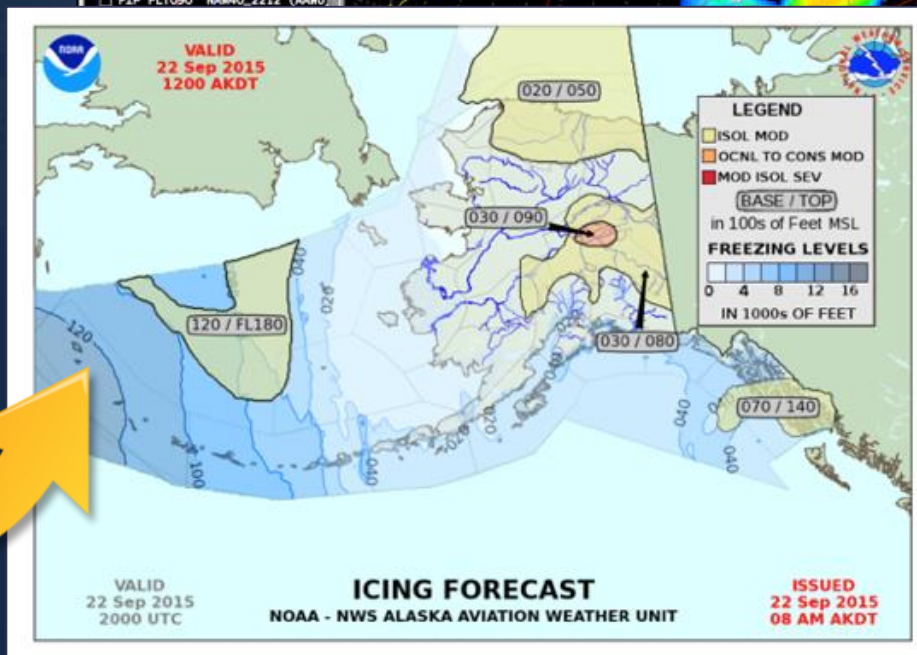
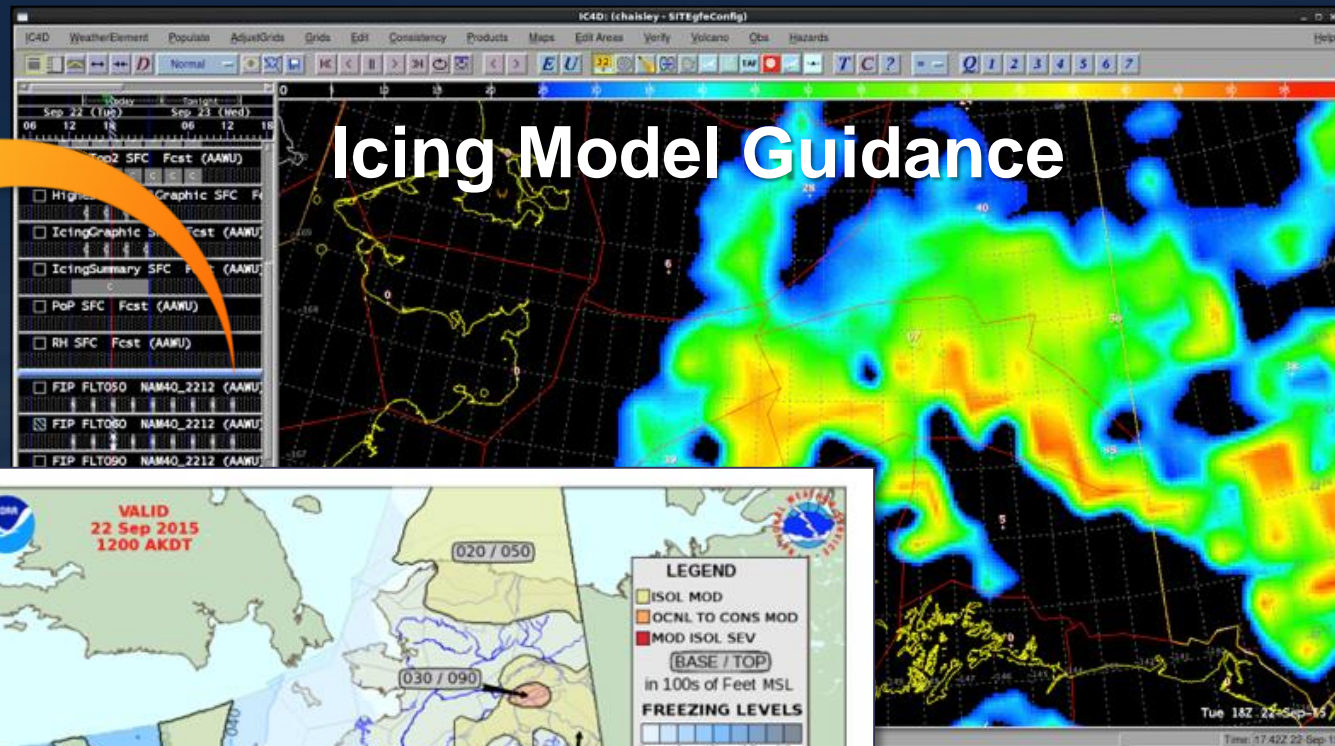


# AAWU Forecast Process

## Gridded Icing Forecast



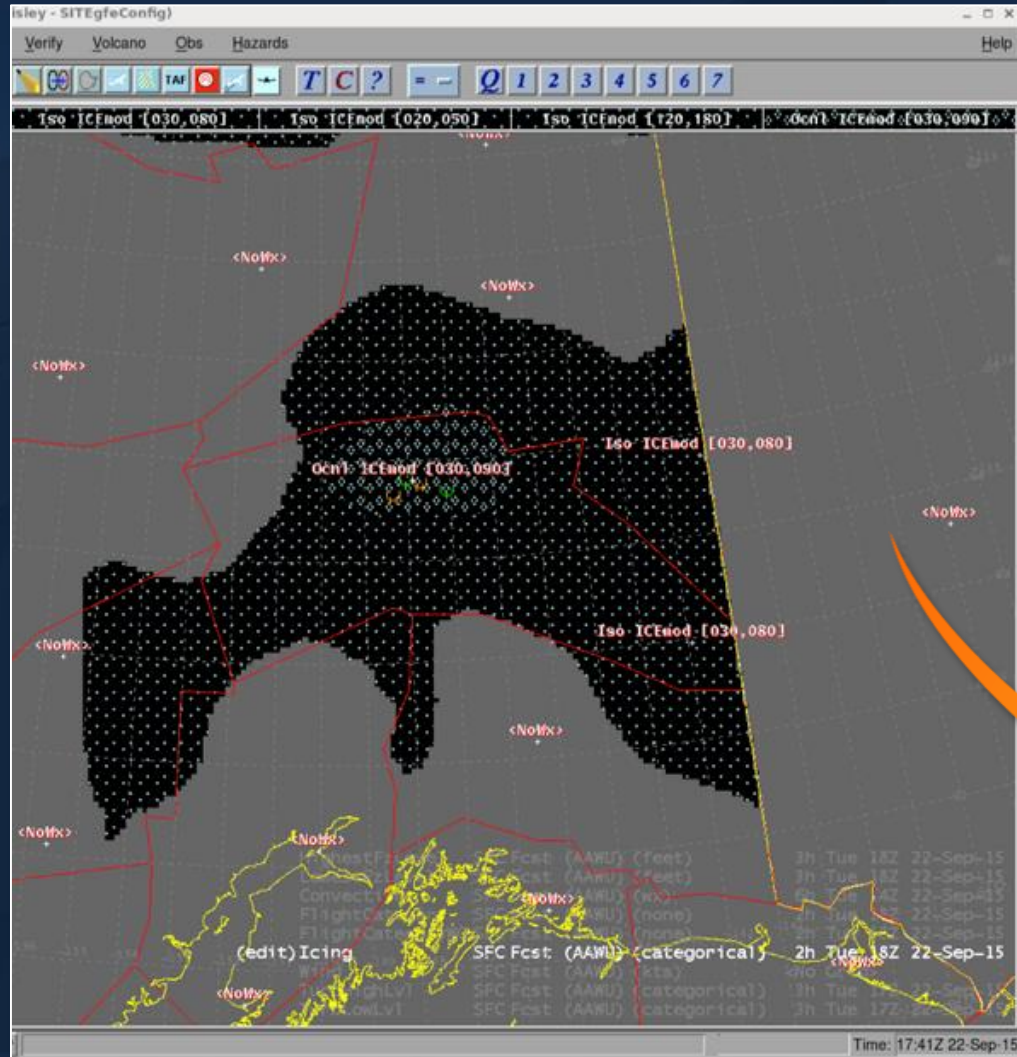
## Icing Model Guidance







# AAWU Forecast Process

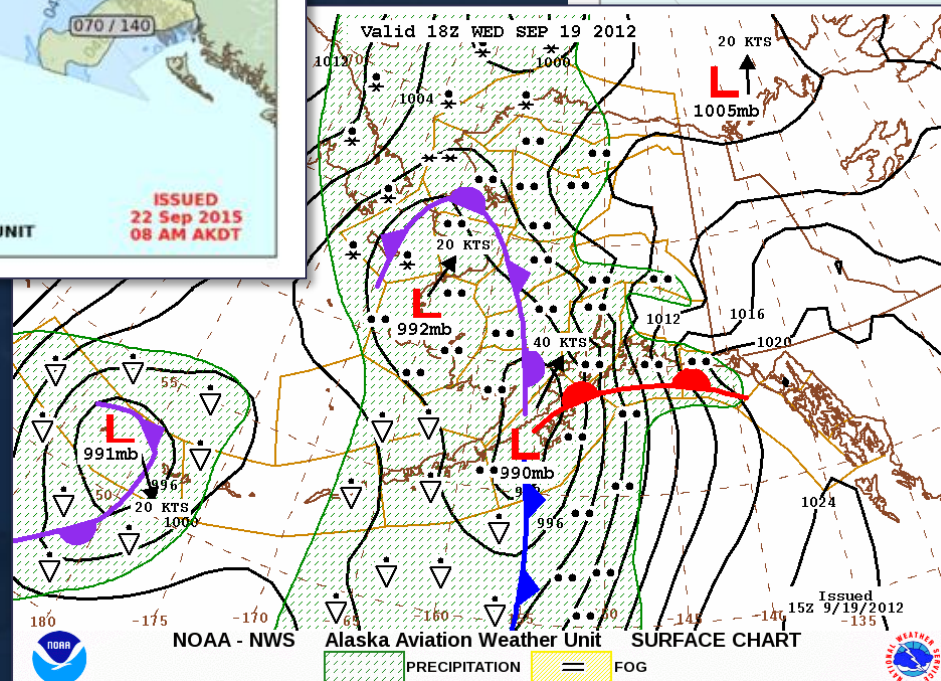
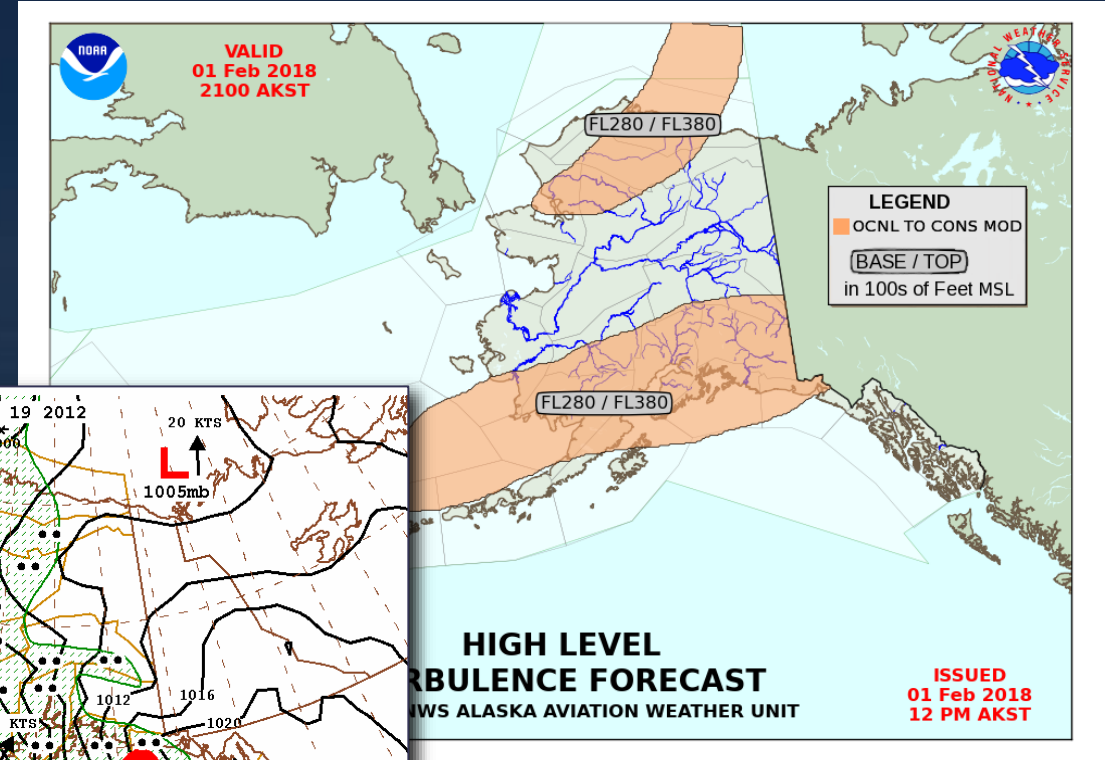
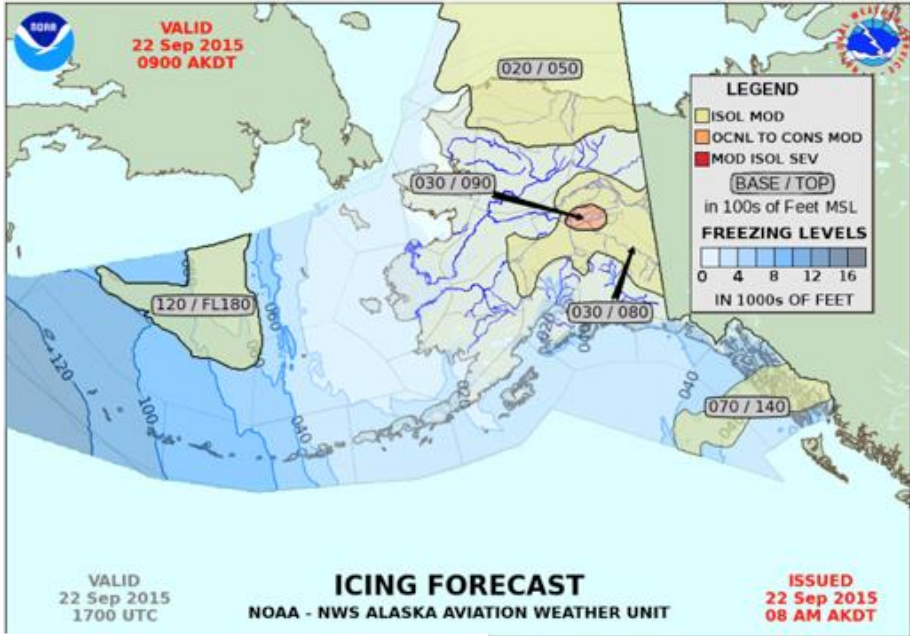


- Text is generated from the gridded database.





# AAWU Forecast Graphics



- Icing
- Turbulence
- Flight Categories
- Convection
- Surface Analysis and Forecasts



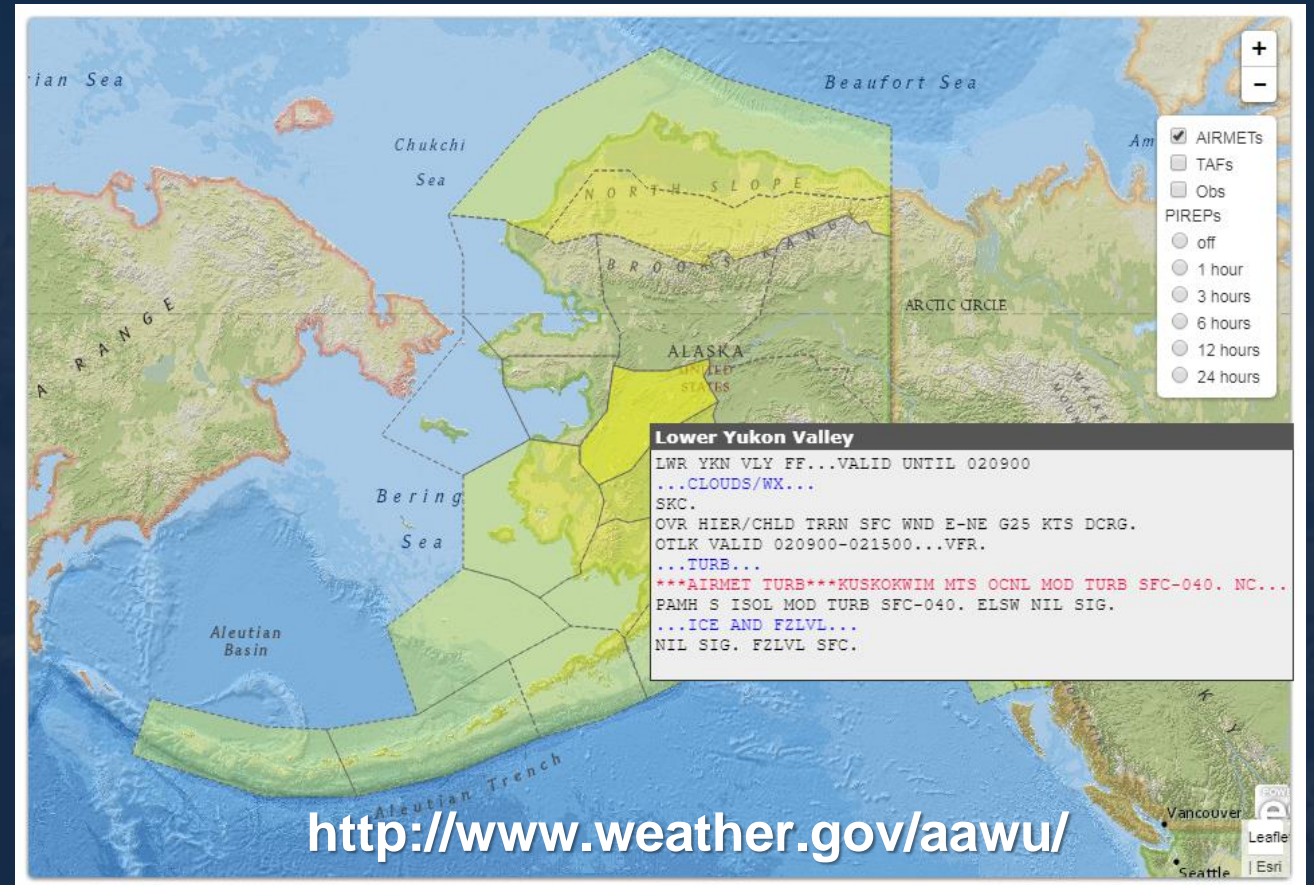
# AAWU Area Forecasts

- Issued three times per day and are valid for 12 hours

- 4:15am, 12:15pm, and 8:15 pm

- Contains these elements:

- Synopsis
- Clouds and weather
- Wind (if gusts are 25 kts or greater)
- Turbulence forecast
- Icing forecast
- Freezing level
- Pass forecasts (if applicable)
- Outlook for hours 12 to 18







# AAWU AIRMETs and SIGMETs

- **AIRMET (\*3000 sq miles or greater) or occasional or prevailing conditions:**

- **Instrument Flight Rule conditions (IFR)**
- **Mountain Obscuration**
- **Moderate Icing**
  - May describe isolated severe
- **Moderate Turbulence**
  - May describe isolated severe
- **Low Level Wind Shear (LLWS)**
  - Shear below 2000 ft exceeding 10 kts/100 feet
- **Strong Surface Winds**
  - Sustained 30kts or greater

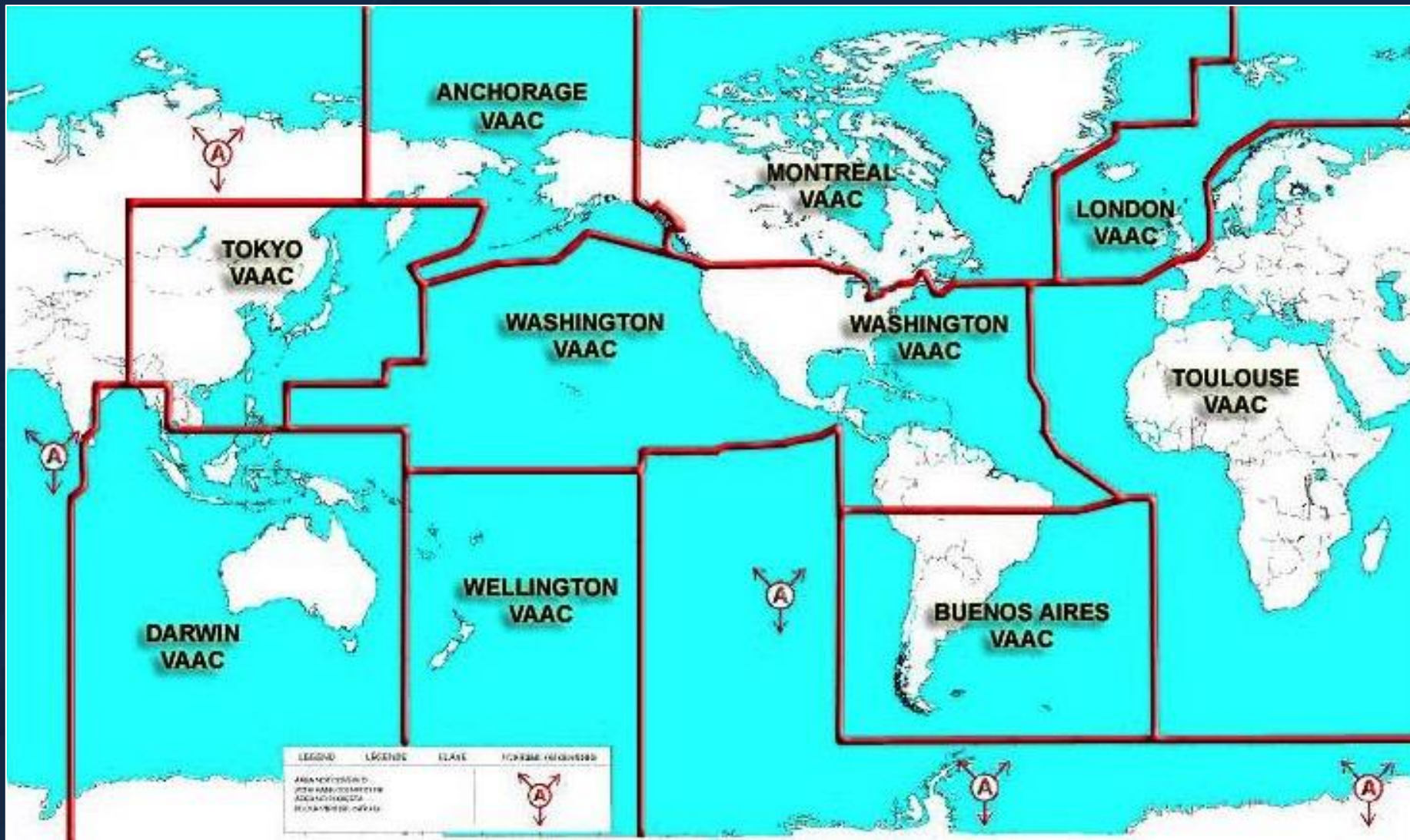
- **SIGMET (\*3000 sq miles or greater) for occasional or prevailing conditions:**

- **Severe Icing**
- **Severe Turbulence**
- **Convection**
  - Scattered coverage of storms
  - Storms obscured by stratus
  - Isolated severe storms (1" hail and/or winds > 58 mph)
- **Volcanic Ash**

**\* Or in high traffic areas under 3000 sq miles with significant impacts expected.**



# Anchorage Volcanic Ash Advisory Center (VAAC)

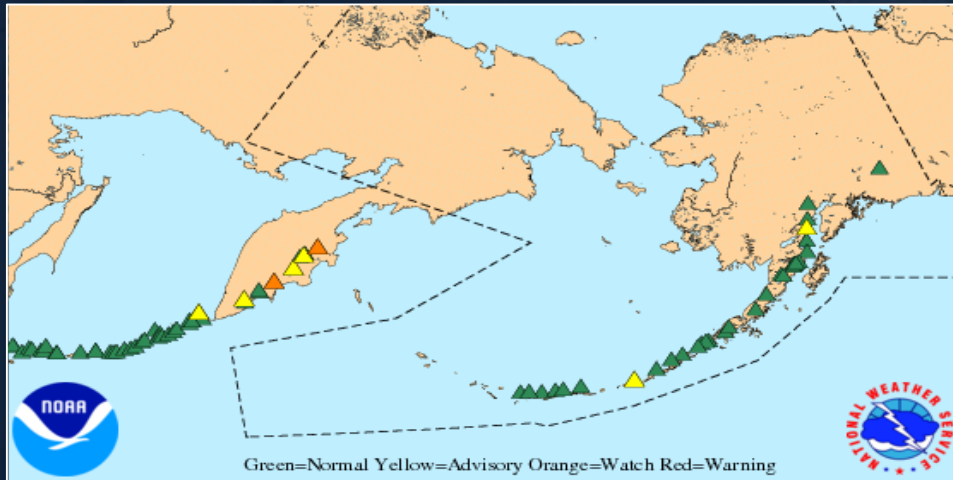




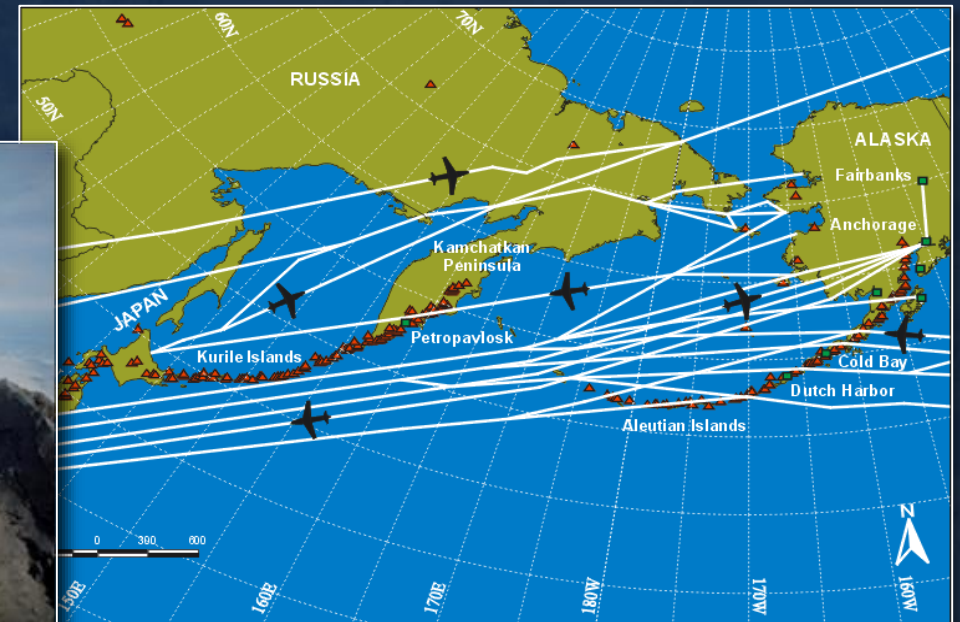


# Anchorage Volcanic Ash Advisory Center (VAAC)

- Detect and track volcanic ash for >50 active volcanoes in Alaska
- Develop interagency plans for responding to volcanic ash fall and related hazards
- Leading role in international coordination, planning, and policy issues

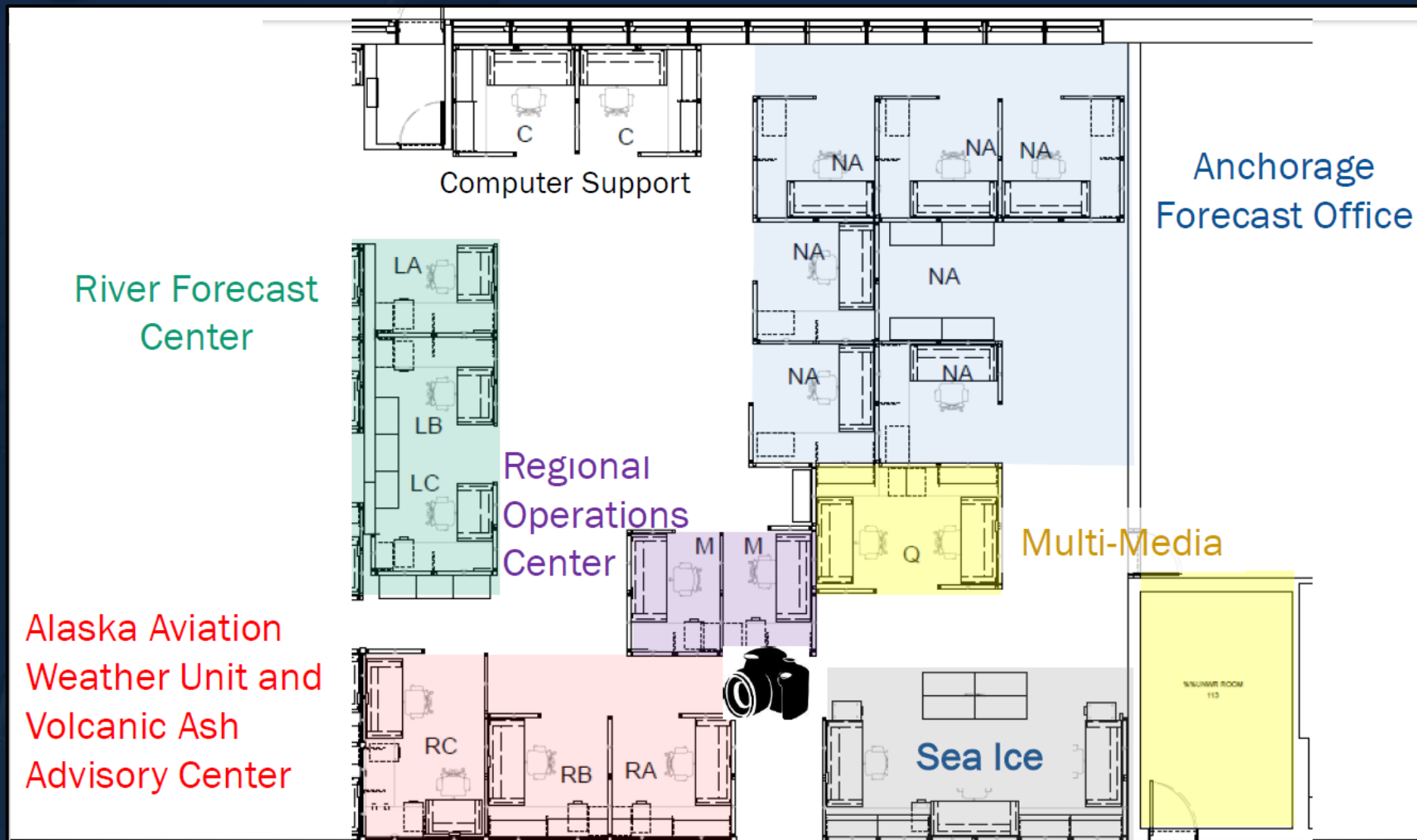


Mt. Redoubt – March, 2009





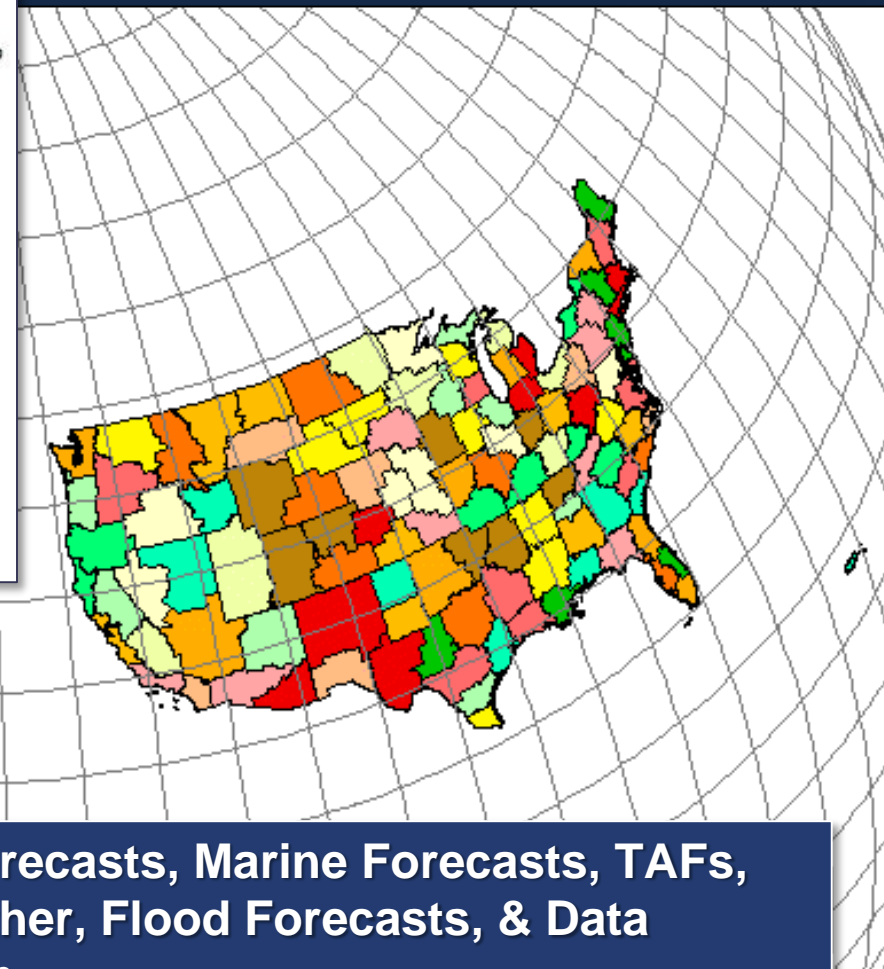
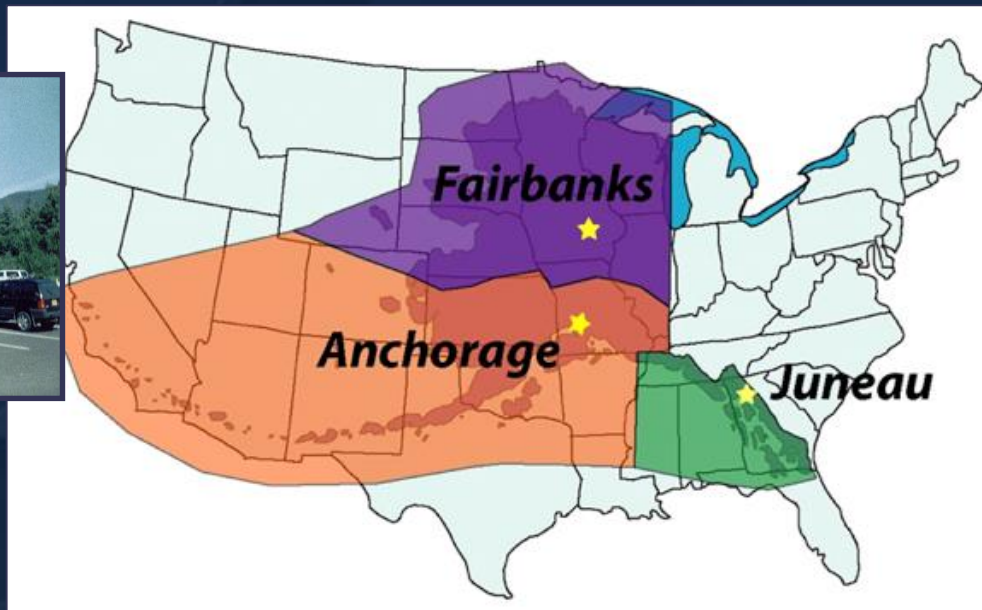
# Anchorage Forecast Facility







# Weather Forecast Offices (WFOs)



- Public Forecasts, Marine Forecasts, TAFs, Fire Weather, Flood Forecasts, & Data Collection
- **Anchorage Only:** Sea Ice & TV

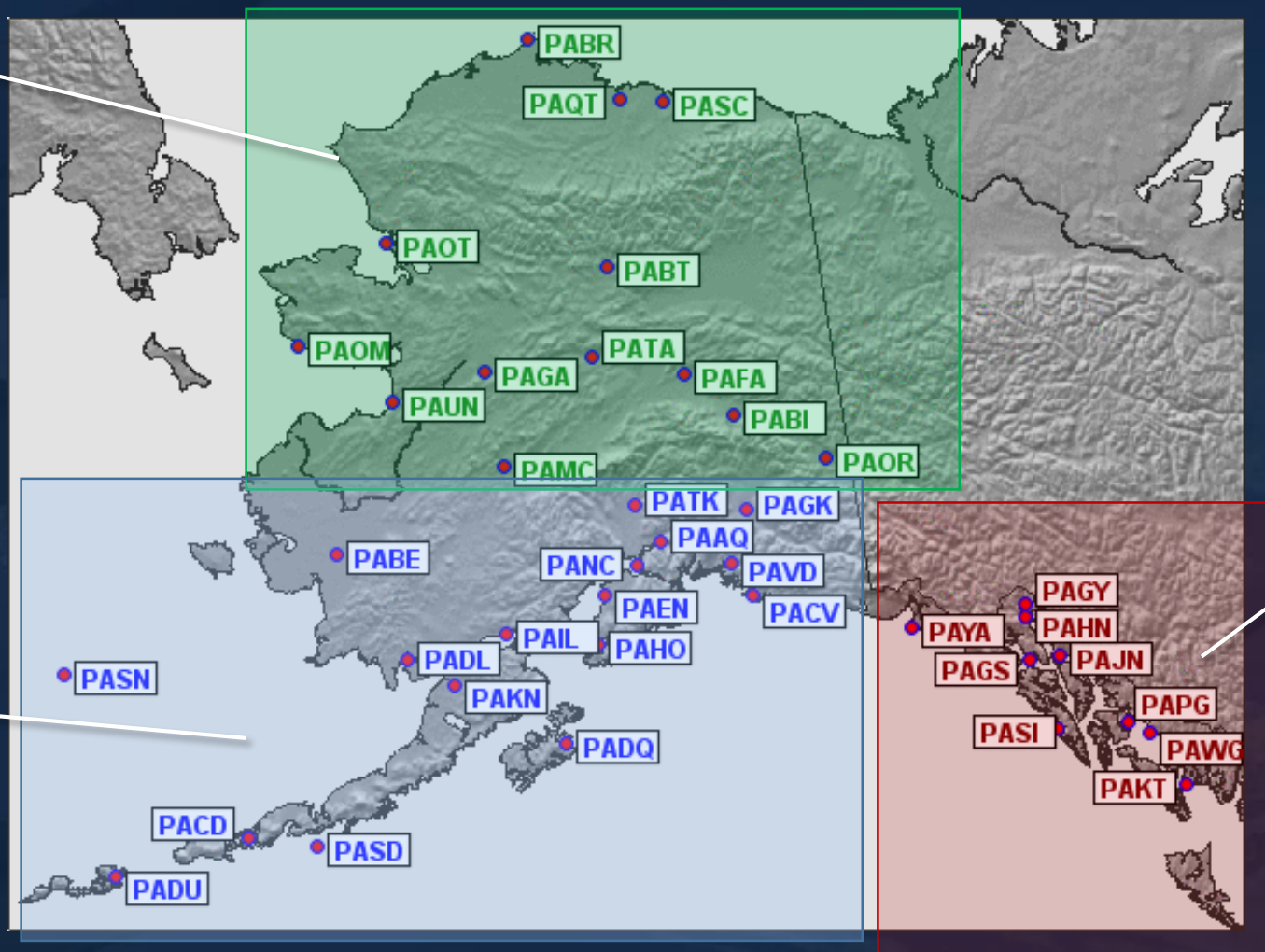


# Weather Forecast Offices (WFOs)

Fairbanks WFO

Anchorage WFO

Juneau WFO







# Anchorage Center Weather Service Unit (CWSU)



Anchorage Air Route Traffic Control Center





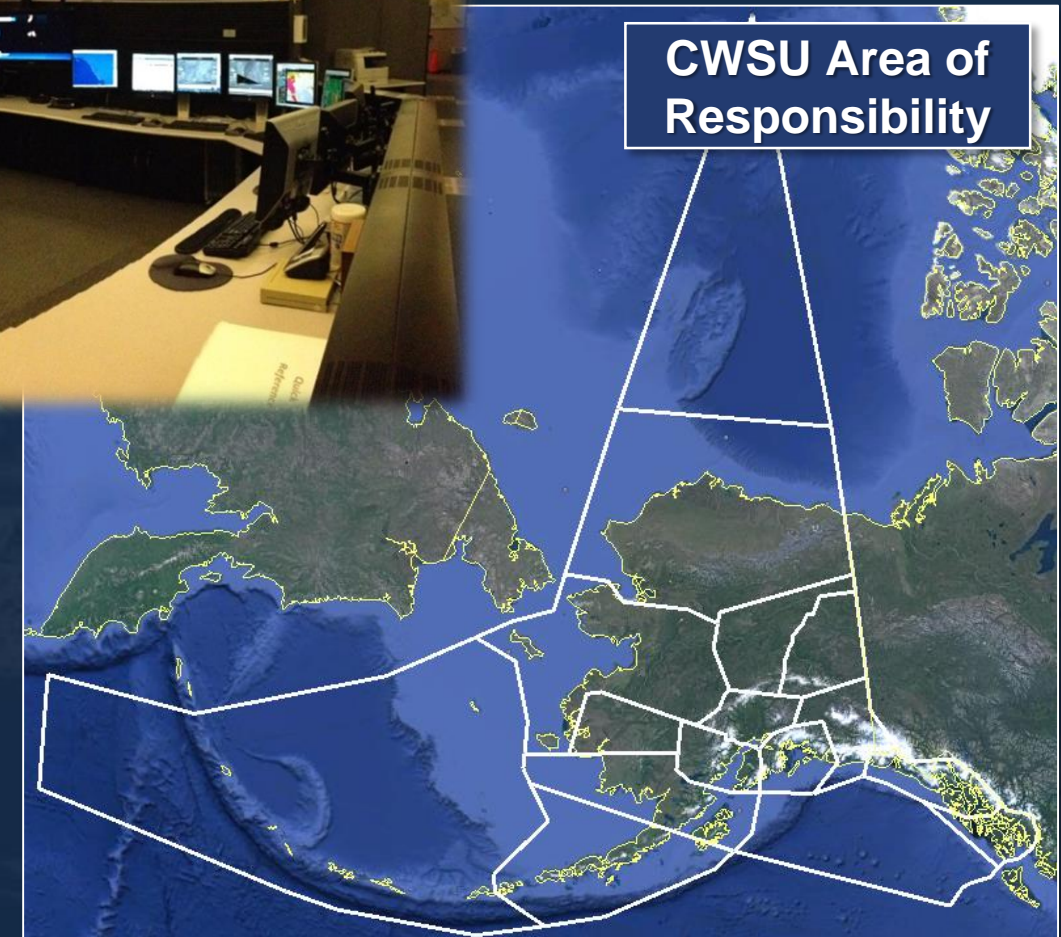


# Anchorage Center Weather Service Unit (CWSU)



**CWSU Operations Area**

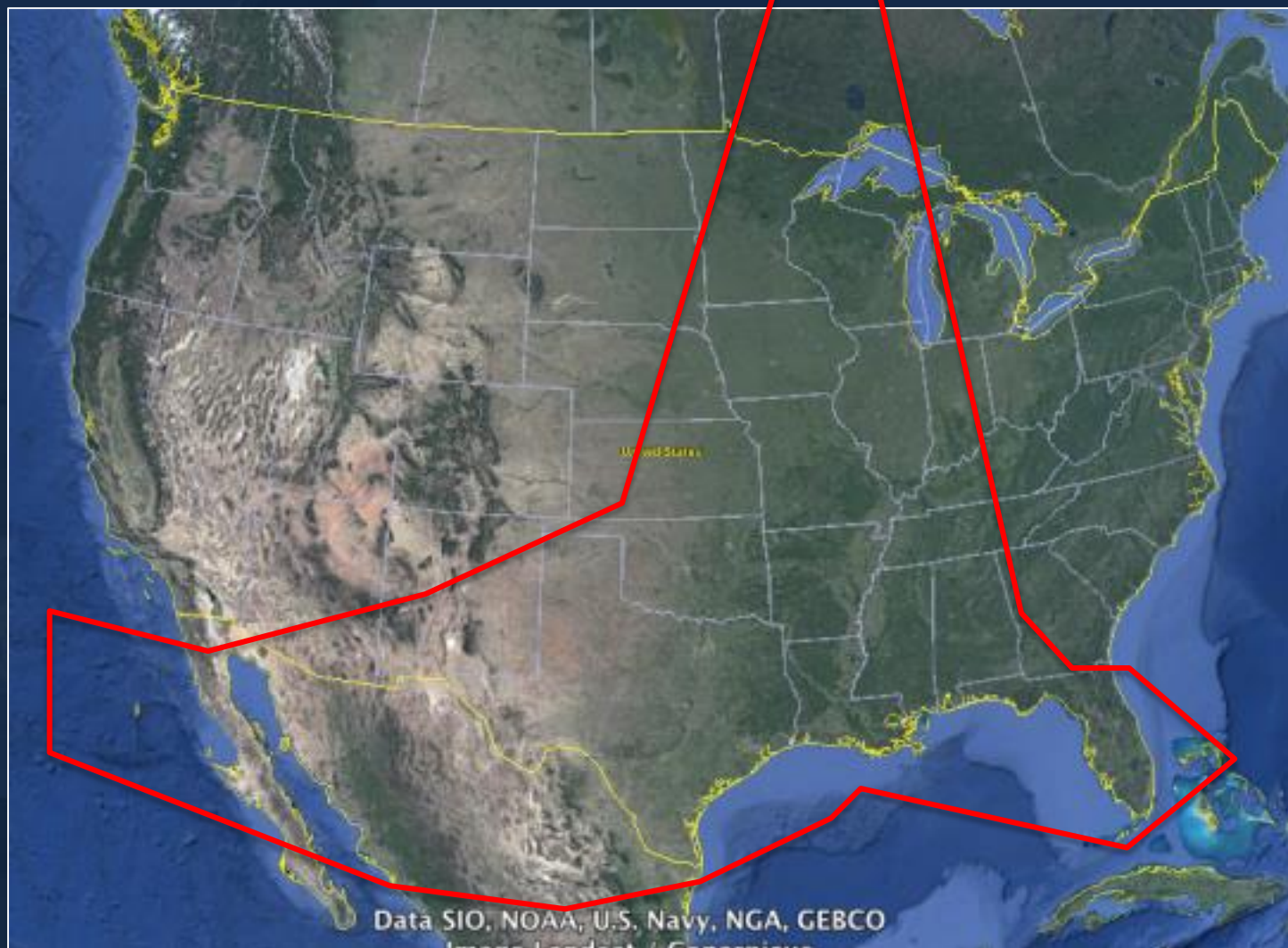
- Located in the Air Route Traffic Control Center and staffed by NWS meteorologists between 5am and 9pm daily.
- Provide meteorological consultation, forecasts, and advice to managers and staff within the ARTCC and other Federal Aviation Administration supported facilities.
- Collaborate with other NWS offices and solicit pilot reports.







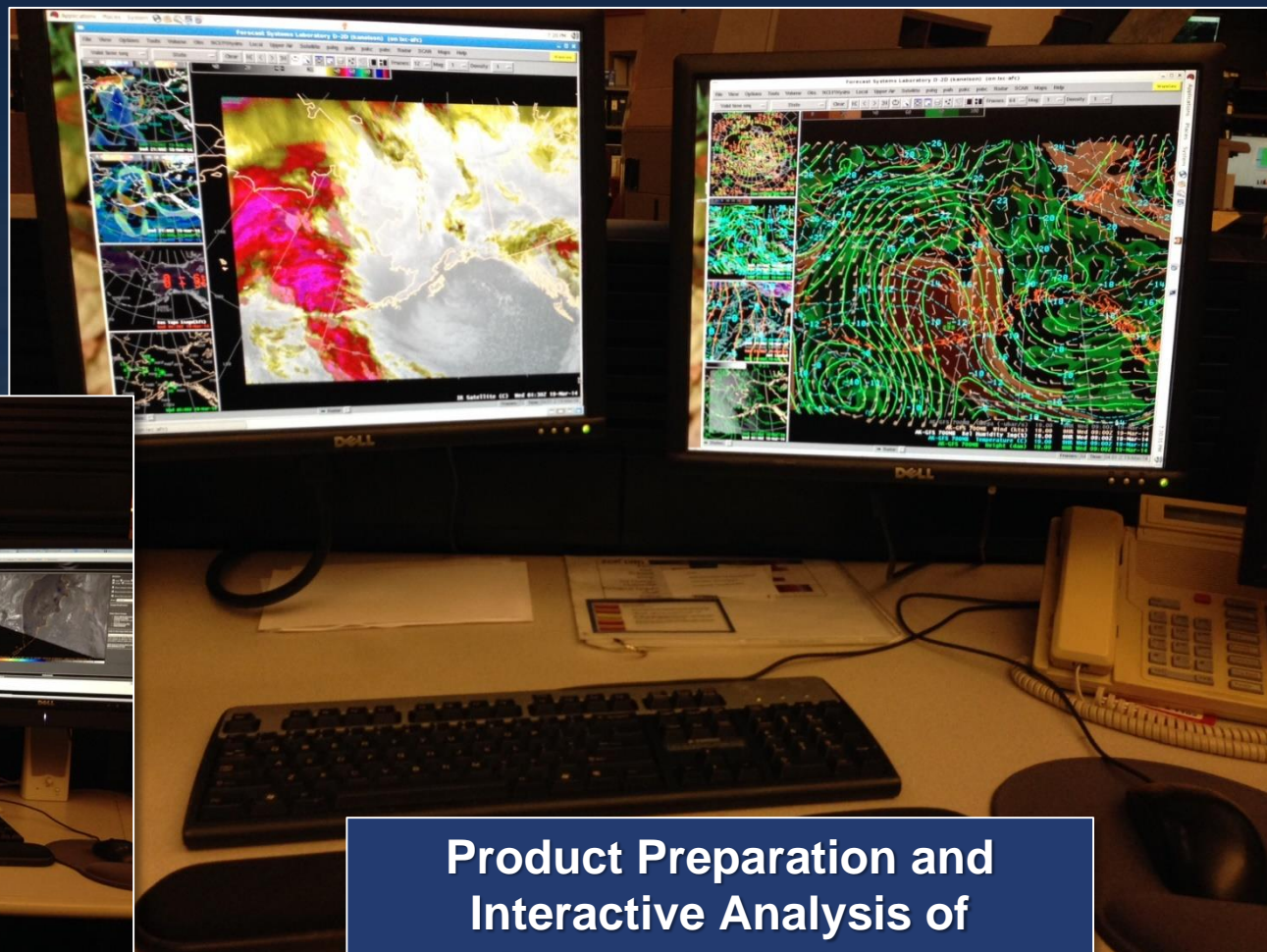
# CWSU Area of Responsibility







# CWSU Operations Area



**Product Preparation and  
Interactive Analysis of  
Meteorological Data**





# CWSU Support to FAA Facilities

- **Daily Stand-up Briefings**

- 7:30am and 3:00pm
- Graphics made in Power Point

- **Recorded Video Briefings for Controllers**

- 7am, 1pm, and 9pm

- **Focus on weather that could impact air traffic:**

- SIGMETs/CWAs/MISs
- Volcano Information
- Icing
- Turbulence/LLWS
- Flight-level Winds
- Convection
- Required PIREPs
- Flight Category for 10 Hubs

Required PIREPs (Ceiling $\leq$ 050 and/or Visibility $\leq$ 5SM) <small>*This chart is only valid at time of issuance.*</small>						
NORTH		HIGH		SOUTH		
• SCC	• BIG	• DUT	• SNP	• ILI	• TKA	• YAK
• FAI	• OME	• CDB	• PBV	• HOM	• ORT	• SGY
• BRW	• UNK	• DLG	• ADK	• ENA	• GKN	• GST
• OTZ	• GAL	• AKN	• SYA	• ANC	• VDZ	• JNU
• BTT	• MCG	• ADQ		• PAQ	• CDV	• PSG
• TAL	• BET					• WRG
						• KTN
						• SIT

Intended for use by air traffic control personnel only. All current and forecast information is subject to change.

HUB Terminal Forecasts									
	F Cat	Tempo	Wx	W Gst		F Cat	Tempo	Wx	W Gst
SCC:	MVFR	IFR	-SN BR	--	ADQ:	VFR	--	--	G25 KTS
FAI:	VFR	--	--	--	CDB:	MVFR	--	--	G30 KTS
OME:	VFR	--	--	--	ANC:	VFR	--	--	--
BET:	VFR	--	--	--	ENA:	VFR	--	--	--
AKN:	VFR	--	--	G25 KTS	JNU:	VFR	--	--	--

Issued: 12:15pm 30 Jan 2018

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Thank you!

# Questions?

**Jeff Osiensky**

**Meteorologist-in-Charge**  
**Alaska Aviation Weather Unit**  
**(907) 266-5116**  
**[jeffrey.osiensky@noaa.gov](mailto:jeffrey.osiensky@noaa.gov)**

**Carrie Haisley**

**Meteorologist-in-Charge**  
**Anchorage Center Weather Service Unit**  
**(907) 269-1245**  
**[carrie.haisley@noaa.gov](mailto:carrie.haisley@noaa.gov)**