

# NOAA's National Weather Service

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## *Voluntary Observing Ship (VOS) Program*

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*Paula Rychtar*

*Deputy Program Manager /Operations  
National Weather Service Headquarters  
Office of Observations*

***NTSB PIREP FORUM***

*June 21-22, 2016*

# Outline

- ✓ ***Overview of the Voluntary Observing Ship Program.***
  - ✓ **Our mission statement.**
  - ✓ **Our team.**
  - ✓ **VOS – What makes VOS essential?**
- ✓ ***VOS marine observations and PIREPS.***
  - ✓ **Both are essential data sets and both are obtained from voluntary participation.**
  - ✓ **Recruiting practices.**

# Voluntary Observing Ship Program



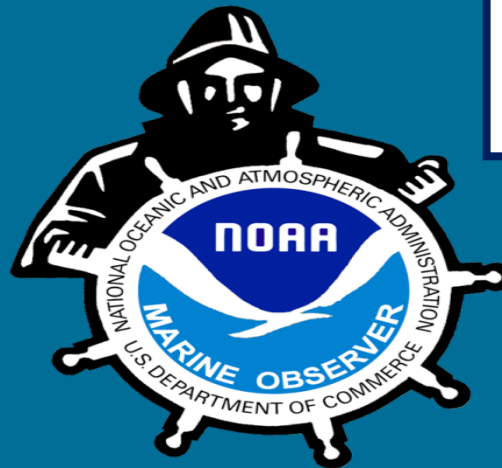
- *The mission of the Voluntary Observing Ship (VOS) project is two-fold:*
- *(1) to collect and disseminate critical real-time maritime weather observations through the recruitment and support of ships to fulfill National needs and International agreements supporting commerce, forecasts and warning programs, and the Safety Of Life At Sea (SOLAS) worldwide, and*
- *(2) to define the global climate and help measure extreme weather events, climate variability, and long-term climate changes.*

# Established in 1853...

- *Delegates from 10 maritime countries came together in a conference in Brussels on the initiative of Matthew F. Maury, then director of the US Navy Hydrographic Office, proposed to establish a practice of standardized collection of meteorological and oceanographic data.*
- *From the very beginning, ships' meteorological observations were recognized as being essential for the provision of safety related meteorological services for ships at sea, as well as for climatological purposes.*

# International effort...

- **VOS** is comprised of 24 member countries of the World Meteorological Organization (WMO) that recruit ships to take, record and transmit marine weather observations while at sea.
- **VOS** is one of the core observing programs within the Ship Observations Team (SOT) within JCOMM.



# Our Team...PMO's

12 full time PMO's

2 focal points

*\*Anchorage, AK  
Larry Hubble  
Focal Point*

*Seattle, WA  
Matt Thompson*

*San Francisco/Oakland, CA  
VACANT*

*Long Beach, CA  
Tim Harris*

*\*Honolulu, HI  
Derek Leeloy  
Focal Point*

*Duluth, MN  
Ron Williams*

*Houston, TX  
Chris Fakes*

*New Orleans, LA  
Rusty Albaral*

*Baltimore, MD  
Lori Evans*

*New York City, NY  
Jim Luciani*

*Norfolk, VA  
Pete Gibino*

*Charleston, SC  
Tim Kenefick*

*Jacksonville, FL  
Rob Niemeyer*

*Miami, FL  
David Dellinger*



# Port Meteorological Officers (PMO)

*PMO's are NOAA's National Weather Services representatives and liaisons to the marine community.*

- *Vital to the VOS program! Their engagement with the marine community contributes directly to the effectiveness and efficiency of the VOS Program.*
  - *Ship recruitment, training and retention of participants.*
  - *Monitoring participants data quality and timeliness; providing feedback and encouragement.*
  - *Instrumentation, installation and adjustments.*
  - *Collection of metadata.*
- *Without their dedication, enthusiasm, knowledge and support, the quality and quantity of reported meteorological and oceanographic data from ships would be adversely affected.*



# What makes VOS essential?

VOS observations provide ground truth for Satellite derived data as well as Buoys.

- VOS data validates modeling and forecasting products.
- Ship observations provide the ability to monitor our global assessment of climate change.

**Over 70% of the Earth's surface is covered with water, about 97% of the water is oceans. 2% of the Earth's Water is frozen in glaciers and ice caps.**



# Marine observations and PIREPS

- **Marine observations and PIREPS are data in “real time” which is essential to our programs.**
- Real time data obtained from the sea or air is key for safety and forecast validation.
- As with Marine Weather Observations, PIREPS are used to verify or amend conditions contained in forecasts and advisories. Ground truth...

**PIREP FORM**  
Pilot Weather Report  
3-Letter SA Identifier

1. UA → Routine Report → UUA

2. /OV → Location:

3. /TM → Time:

4. /FL → Altitude/Flight Level:

5. /TP → Aircraft Type:

Items 1 through 5 are mandatory for all PIREPs

6. /SK → Sky Cover:

7. /WX → Flight Visibility and Weather:

8. /TA → Temperature (Celsius):

9. /WV → Wind:

10. /TB → Turbulence: / 22 8//// 22215 00250 203

11. /IC → Icing:

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WLMQ 16123 99331 11361 41/96 /2528 10260 20231 40030 56///  
325// 40604 80240  
16-16 WLMQ 16063 99321 11334 41297 82221 10250 20250 40032 56/// 76262 887// 22214 00254 203  
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20 80250  
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20 80260  
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# Successful Recruitment and Retention efforts...

- Recruitment...

- *Strategies have changed...we recruit from the top down.*

- **CARNIVAL CRUISE LINES:**

- *Holland American*      *Aida*      *Cunard*
- *Costa*      *Seabourn*
- *P&O*      *Princess Cruises*

- **APL**

- **Hapag-Lloyd**

- **CROWLEY**

- **NYK (Nippon Yusen Kaisha)**

- **Evergreen**

- **MAERSK**

# Educate Shipping companies high level executives...get them involved...

**WORLD MARITIME NEWS**

HOME NEWS BY TOPIC REGIONAL NEWS IN DEPTH EVENTS

ABOUT CONTACT REPORT YOUR NEWS ADVERTISING

## USA: NOAA Recognizes Crowley Maritime for Highly Accurate Weather Observations



Crowley Maritime Corporation has been selected as a 2011 Company Award winner for the United States National Oceanic and Atmospheric Administration (NOAA)'s Voluntary Observing Ship (VOS) program.

The selection was based on Crowley's 48 vessels providing 204,430 highly accurate and timely weather observations for the U.S. VOS program in 2011. Particularly impressive was Crowley's St. Louis Express, a cargo vessel contributing 4,926 observations in 2011, ranking her the second-

highest reporting vessel in the entire U.S. program.



Big companies like big acknowledgments!

# Provide industries/corporations with information that give them incentive....

- **Better forecasts save lives, property and commerce!**
- **Marine weather observations are used to produce the daily weather forecasts, charts, warnings, coastal-marine warnings and tropical-prediction forecasts which are distributed by NOAA's National Weather Service forecast offices, including the Tropical Analysis and Forecast branch, the Storm Prediction Center and the National Hurricane Center.**
- **Maritime Commerce: *millions* of dollars each year are lost due to adverse weather conditions at sea.**
- **Becoming a Weather Ready Nation Ambassador for NOAA, unifying efforts to provide quality data sources across our oceans.**
- **Maritime Corporations can insist their Captains participate and that will influence the Captains dedication.**

# Feedback...

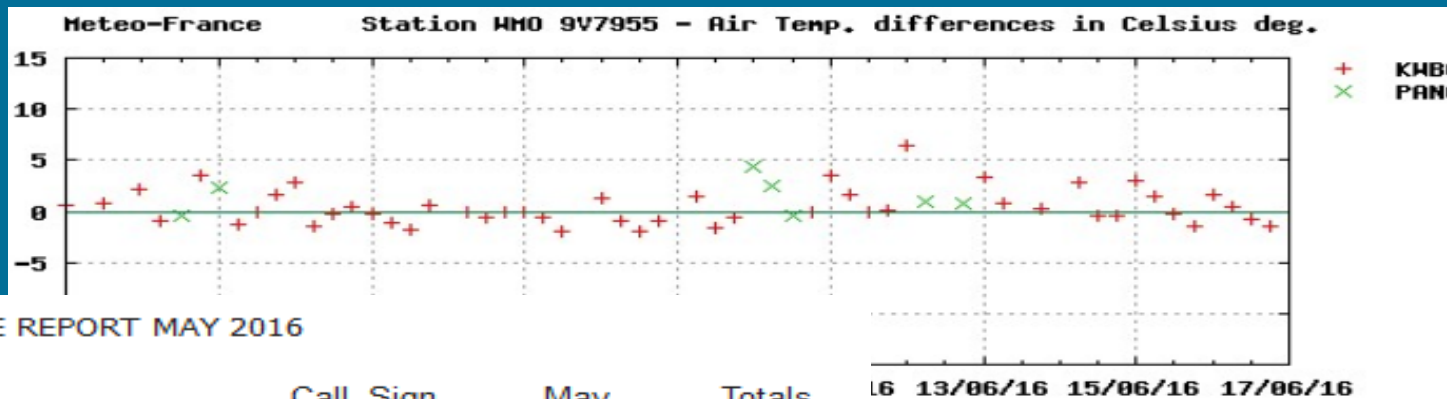
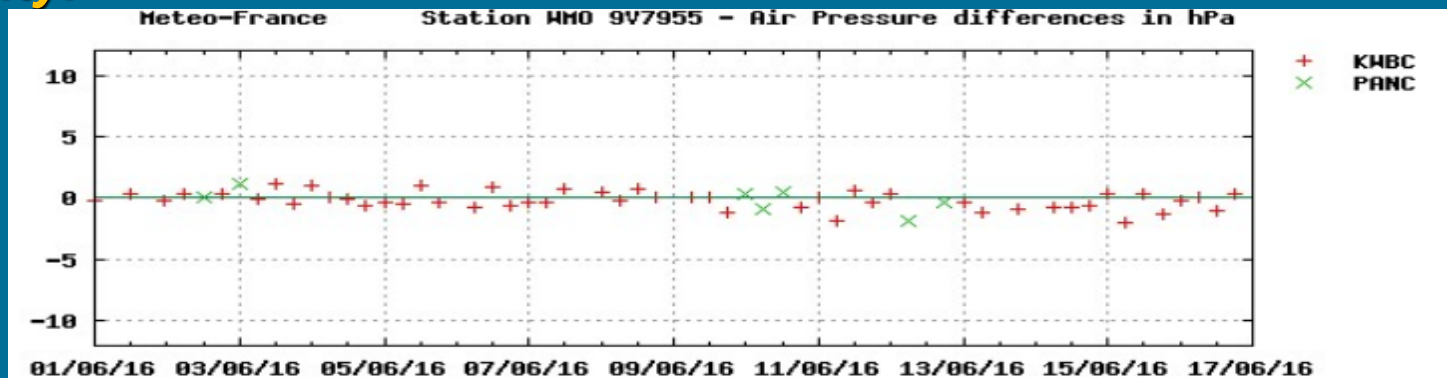
- **Monthly League Reports....**
- **Creates competition and accountability!**
- **Data Quality Reports**

## EVERGREEN LEAGUE REPORT MAY 2016

Ship_Name	Call_Sign	May	Totals
EVER DIADEM	9V7955	93	268
EVER UNITY	3FCD9	60	318
EVER LEGACY	9V9290	36	151
EVER LEADING	2FRK8	34	116
EVER DEVELOP	3FLF8	24	58
EVER UNION	3FFG7	22	161
EVER DELIGHT	3FCB8	22	47
EVER DECENT	9V7952	21	290
EVER UBERTY	9V7960	15	27
EVER DAINTY	9V7951	13	92
EVER DEVOTE	9V7954	10	16
EVER SALUTE	3ENU5	6	6
EVER URSULA	3FCB9	2	-
EVER DIAMOND	3FQS8	1	-
EVER ULYSSES	9V7962	0	-
EVER ETHIC	VQFS4	0	-
EVER UTILE	3FZA9	0	-
EVER DYNAMIC	3FUB8	0	-
EVER UNIFIC	9V7961	0	-
EVER USEFUL	3FCC9	0	-

## DISNEY LEAGUE REPORT MAY 2016

Ship_Name	Call_Sign	May	Totals
DISNEY DREAM	C6YR6	77	237
DISNEY MAGIC	C6PT7	30	133
DISNEY WONDER	C6QM8	27	108
DISNEY FANTASY	C6ZL6	0	25



# AWARDS and Acknowledgement for superior participation!



## Mariners Weather Log

Vol.53 No. 3  
December 2009



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### Ship Awards

Click on image for more details.



A VOS Award was presented to the *Discoverer Deep Seas* marine crew. From left to right receiving the award are Captain/Master Doug Banfield, Senior DPO/Third Mate Scott Beck, DPO/Third Mate Jamie Taylor, Senior DPO Greg Stanfield, and Offshore Installation Manager Clayton Ballard.



### Integrity

Integrity received a 2008 VOS Award  
Captain Jerome Thomas, PMO Timothy Kenefick and the Second Mate Russell Philbrick.  
Not pictured: James Hook, James Kearns, Adam Lucas, Randy Diaz, Thomas McCandless and Kenneth Weippert.



# AWARDS and Acknowledgement for superior participation!

- *5 year pennants for 5 consecutive years of award winning participation.*

DEPARTMENT OF COMMERCE  
UNITED STATES OF AMERICA

## Mariners Weather Log

Vol.54 No. 3 December 2010

NOAA  
NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION  
U.S. DEPARTMENT OF COMMERCE

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### Sustained Observing Excellence Awards

Click on image for more details.









Got Weather?  
Report it!!!  
ONLY YOU KNOW THE WEATHER!



# Pride and enthusiasm



# Promotional Incentive items...

- *Hats*
- *Key Chains*
- *Mouse pads*
- *Flashlights*
- *Safety straps for hats*
- *Pens*
- *Coffee mugs*
- *Water bottles*



# Mariners Weather Log

Vol.54 No. 2



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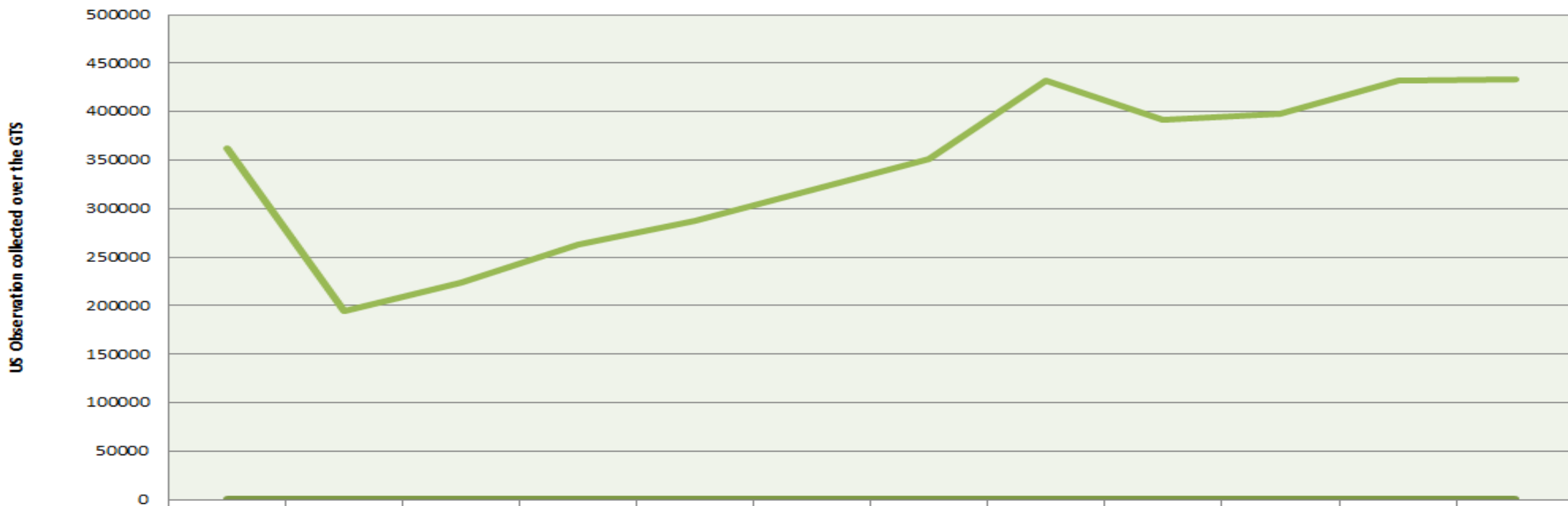
Showcasing companies and the observers...Brag on them!!!



**Port Meteorological Officers  
across the globe.**

# ...Results are good

## VOS Observations



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Active VOS Ships	775	716	793	824	840	900	958	736	816	774	965	762
Obs US Fleet	361,909	193,964	223,517	262,935	287,694	319,241	350,789	432,496	392,299	398,288	432,718	432,752

# Questions?

