



Highlights from the 2015 AMS Washington Forum (AWF)

Shawn Miller

Tech Director, Earth and Space Observing Solutions,
Raytheon Company

Chair, AMS Board on Economic Development (BEED)

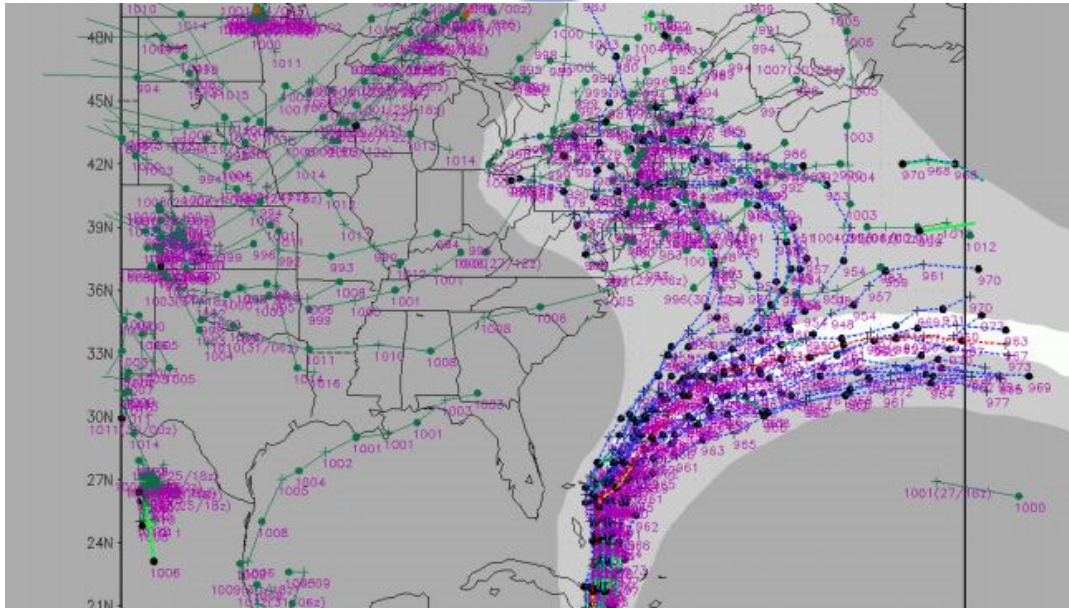
shawn_w_miller@raytheon.com

Thomas Fahy

Principal, Capitol Meteorologics

tfahy@capitolgr.com

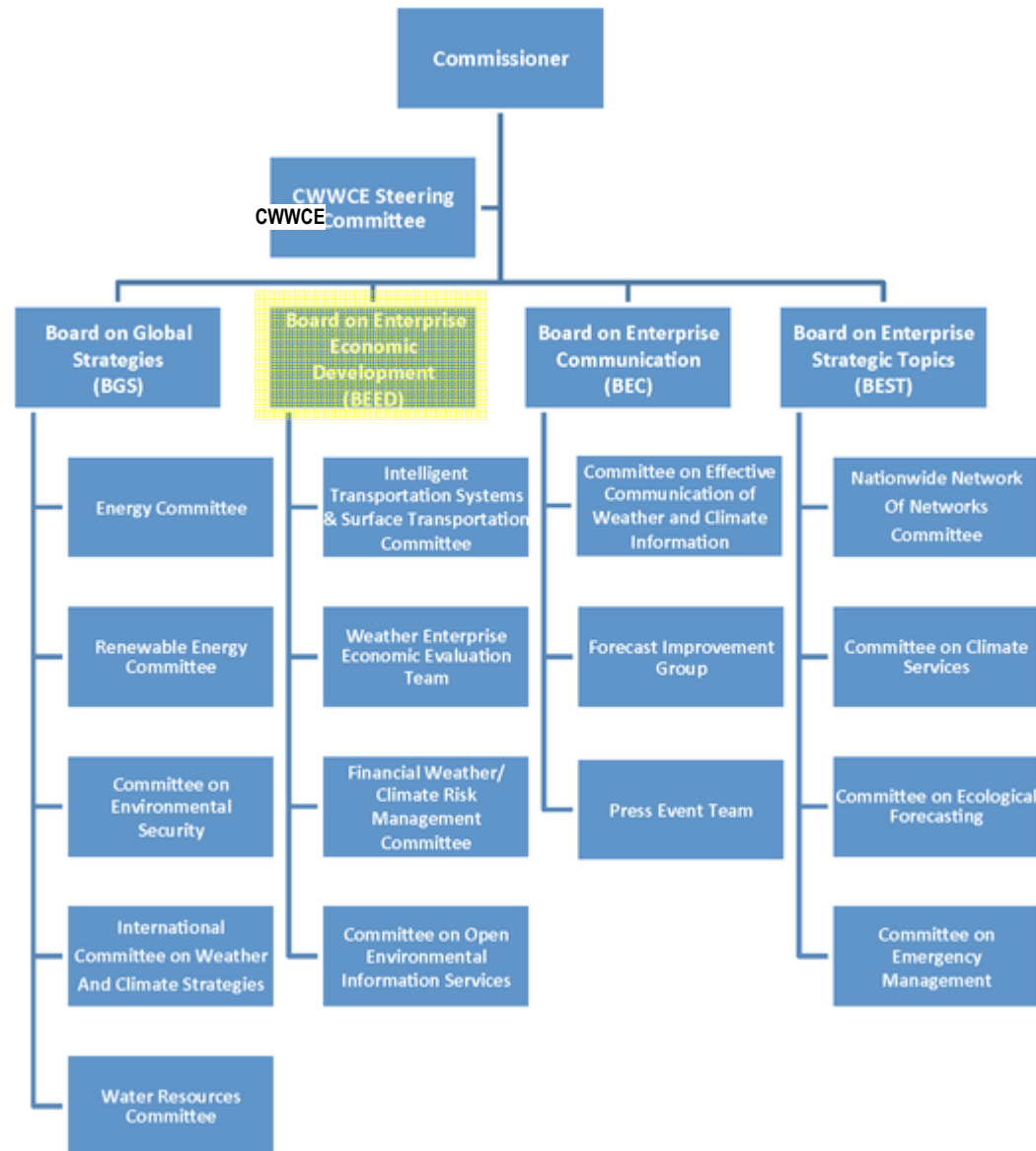
January 11, 2016



Agenda

- The AMS Board on Enterprise Economic Development (BEED)
- The AMS Washington Forum (AWF)
- Highlights from the 2015 AWF
- Preview of the 2016 AWF
- Summary/Questions

AMS Commission on the Weather, Water & Climate Enterprise (CWWCE)



AMS Board on Enterprise Economic Development (BEED)

- Purposes of the AMS BEED:
 - Promote growth in the economic base of the weather, water and climate enterprise
 - Promote quantification of the economic value of the enterprise, including risk

- The BEED fulfills these purposes by bringing together the providers and users of weather, water and climate data, technology and services

- Engagement among these stakeholders has multiple benefits:
 - Promotes understanding of user needs
 - Socializes current and future applicable technologies and trends
 - Matches solutions and services with user needs
 - Facilitates business opportunities

AMS BEED Membership and Major Activities

- The BEED typically consists of 10-12 members with 3-year rotations of service and representation across the major sectors (public, private, academia)
- Chairs of BEED committees also remain engaged with the board's activities as ex officio members
- BEED committees are charged with maintaining progress in their specific assigned areas and report status back to the board
- The largest activity of the BEED itself is planning and conducting the annual AMS Washington Forum

AMS Washington Forum (AWF): A 3-Day Event Each Spring

- Purpose:
 - To provide an opportunity for members of the weather, water, and climate community to meet with senior Federal agency officials, Congressional staff, and other community members to hear about the status of current programs, learn about new initiatives, discuss issues of interest to our community, identify business opportunities, and speak out about data and other needs

- Who Should Attend:
 - All members of the weather, water, and climate community are encouraged to attend, as well as end users of weather, water, and climate information

- The AWF runs under a modified Chatham House Rule:
 - Participants are free to use the information received at the AMS Washington Forum, but attribution of remarks of speakers (including panelists and attendees) by other people is not permitted
 - Away from the meeting, speakers are free to quote themselves
 - AMS will post the slide presentations to the AMS website after the event, for which the presenter must provide explicit approval to the AMS

2015 AMS Washington Forum

Applied Decision Support: Meeting User Needs

Session	Key Messages
Panel 1: Theme Session	<ul style="list-style-type: none"> • The public, private and academic sectors are all renewing their focus on data and services for decision support • Development and distribution of tools for discovering and exploiting data are just as important as the data themselves
Panel 2: Hospital Preparedness	<ul style="list-style-type: none"> • Resiliency to weather and climate events, and their impacts on infrastructure, power, water and sewage, is more critical than ever • Activities are underway and must continue to evaluate vulnerabilities and mitigate their impacts
Panel 3: Marine Transportation	<ul style="list-style-type: none"> • As sea levels change and traffic increases, technologies for delivering current and accurate weather data are becoming increasingly important • Small changes in water depth or vessel motion as a function of heading can have profound economic impacts
Panel 4: Congressional Staffers	<ul style="list-style-type: none"> • The weather, water and climate enterprise must continue to communicate scientific basis and needs to the Hill, especially with regard to the recent political dialogue on Earth Sciences • New weather bills are under consideration to help advance the enterprise and provide NOAA with both guidance and means to success

2015 AMS Washington Forum

Applied Decision Support: Meeting User Needs

Session	Key Messages
Panel 5: Rail and Trucking	<ul style="list-style-type: none"> • The broader community must learn from successes of privately owned railroads in quicker return to service after severe events • Consolidation, standardization and automation of tools are key for enabling the more efficient and consistent use of weather data to guide decisions
Panel 6: Water Resources	<ul style="list-style-type: none"> • Monitoring and management of water supplies is highly dependent on weather and climate forecasts • Different types of events drive decisions in different regions of the country, but all share the need for more effective data assimilation
Panel 7: Climate Resiliency	<ul style="list-style-type: none"> • The President's Climate Action Plan drives engagement and policy activating all three sectors to build tools for science and communication, which support end users in local government • The Climate Data Initiative supports these goals with emphasis on mitigation, adaptation, and international implications • Engagement of the insurance industry is a game-changer
Panel 8: Federal Agency Leads	<ul style="list-style-type: none"> • Common themes emerge across NOAA, NSF, DoE and NASA, including the need for interdisciplinary approaches, and increased societal urgency flowing into increased agency responsibility • Data sharing and proper allocation of weather/climate time scales across multiple agencies are key to ensuring resiliency in the future

2015 AMS Washington Forum: Additional Speakers and Events

■ Additional Speakers:

- Penny Pritzker, United States Secretary of Commerce formally announced the NOAA Big Data Project at our event!
- Congresswoman Suzanne Bonamici (Oregon) discussed the geographically diverse challenges in weather and climate and the need for a bipartisan response
- Stephen Volz (NOAA Assistant Administrator for Satellite Information Services) discussed the present and future for weather satellites
- Expert Witness Training Academy (Jim Hilbert, David Verardo, Joe Witte)
- Thomas Maddock (University of Arizona)
- Alexander (Sandy) MacDonald, Current AMS President
- Fred Carr, AMS President-Elect
- Student Presentations

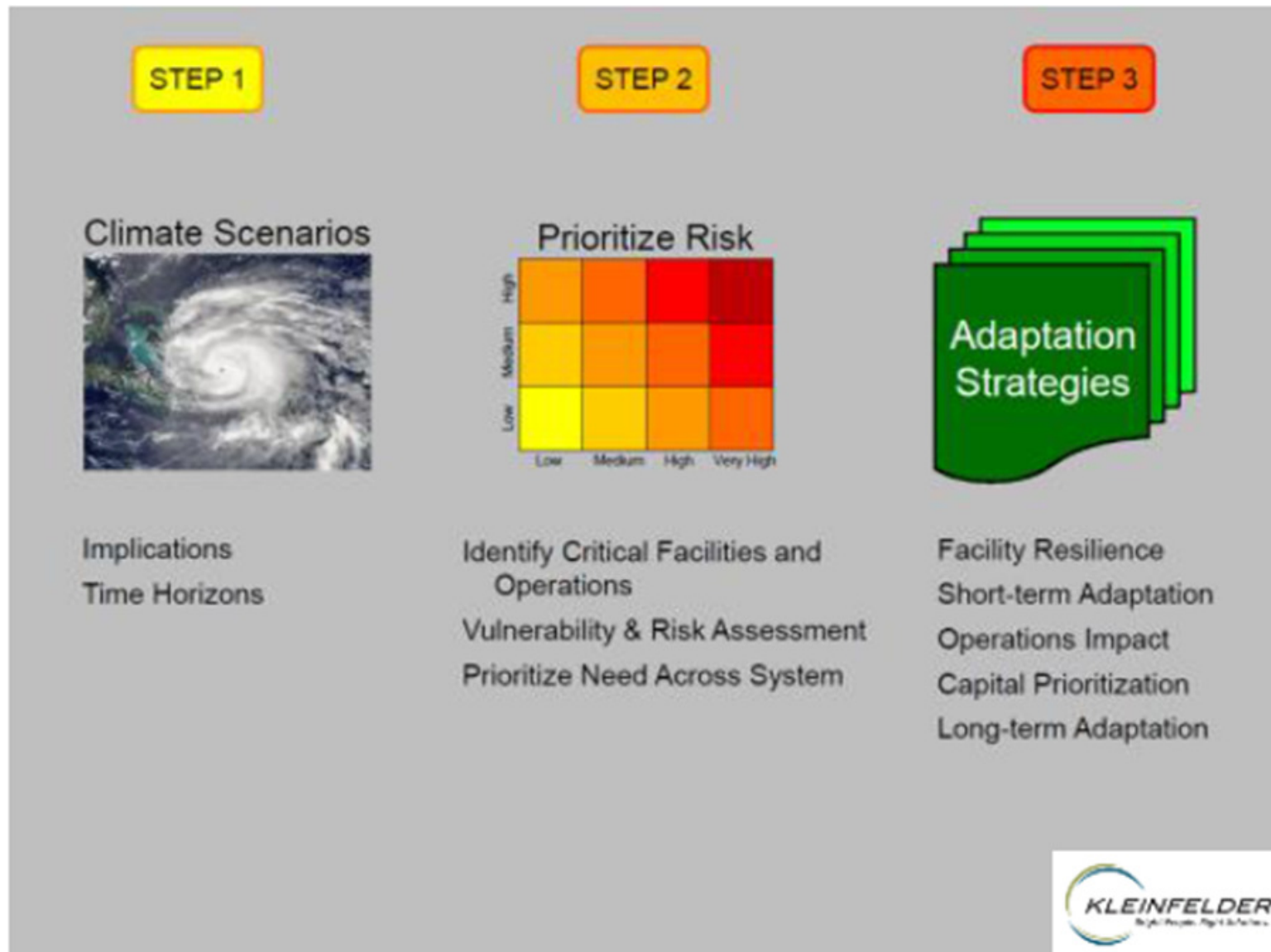
■ Other Events:

- Reception and Dinner (Congresswoman Bonamici was the dinner speaker)
- Student Dinner (~20 students from several universities in the DC vicinity)
- Book Signings (Bill Hooke and Bill Gail)

■ Website:

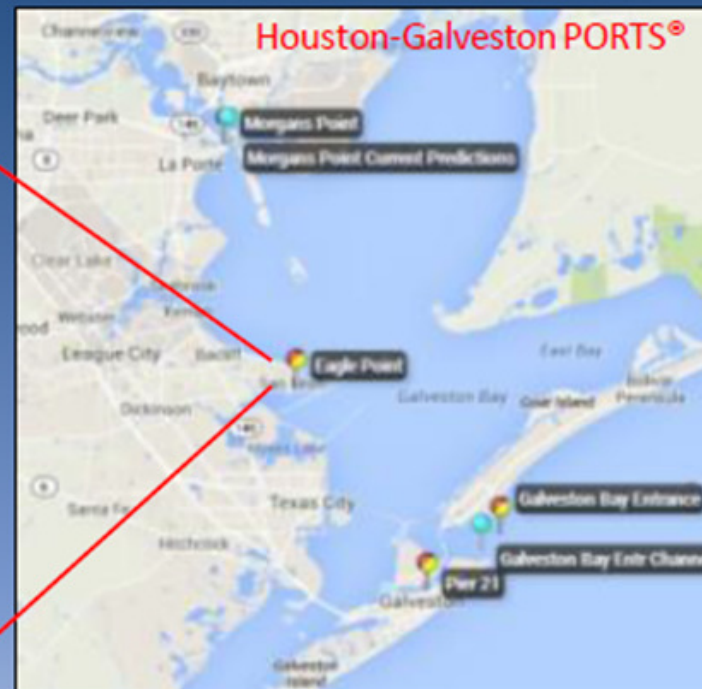
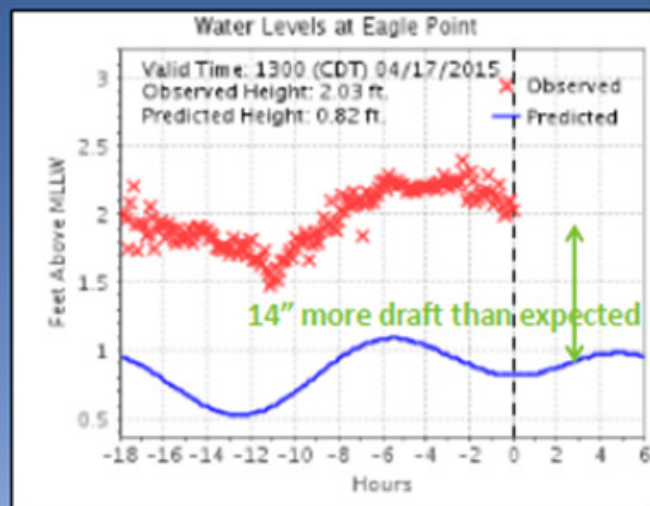
- <http://www.ametsoc.org/MEET/fainst/2015washingtonforum.html>
- Full report available at <http://www2.ametsoc.org/cwwce/index.cfm/boards/board-on-enterprise-economic-development/washington-forum-reports-and-documents/>

2015 AWF Sample Content: Hospital Preparedness



2015 AWF Sample Content: Marine Transportation

Port of Houston-Galveston: Value of an Inch

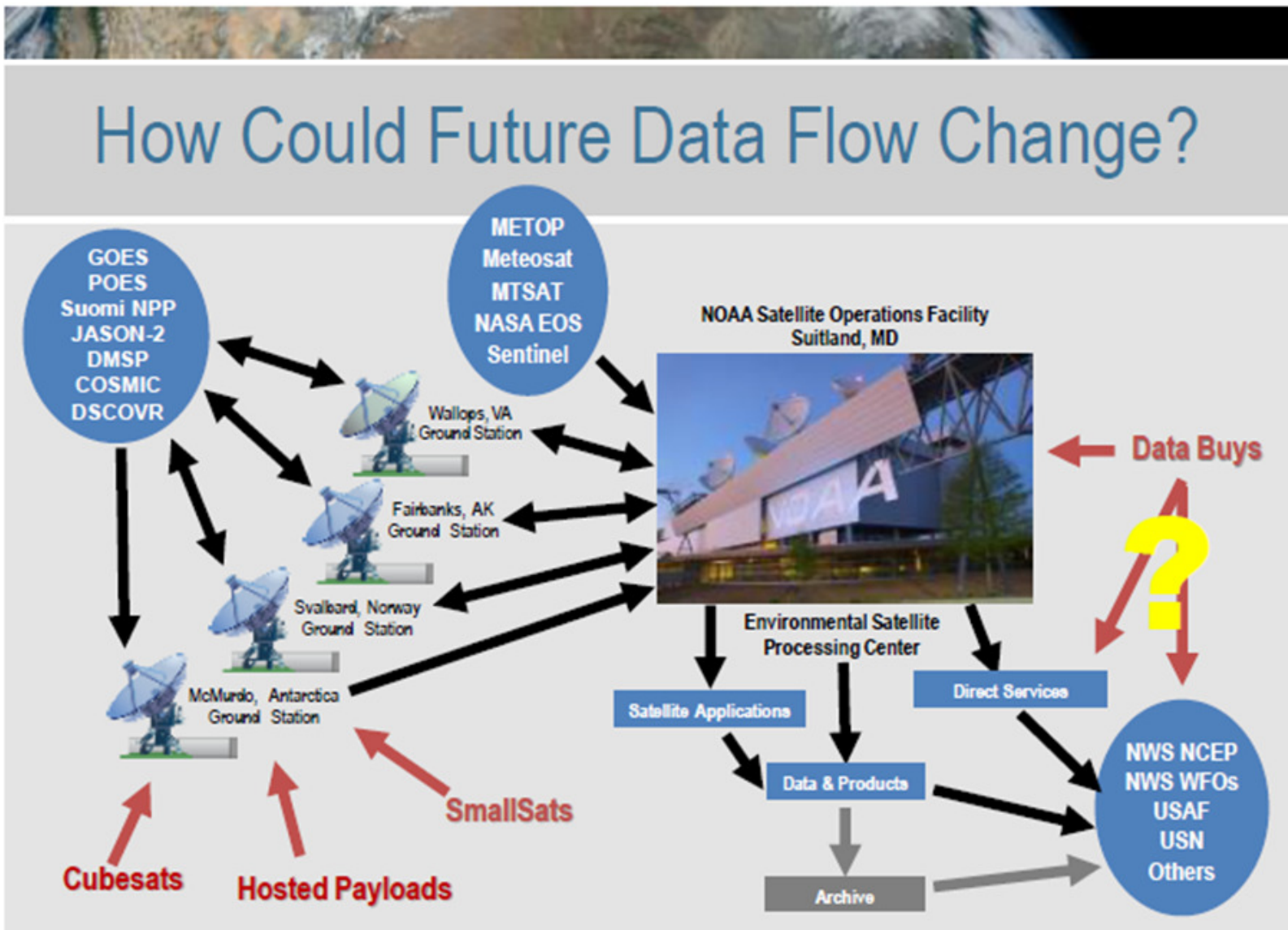


With one inch of additional draft, a ship could carry an additional:

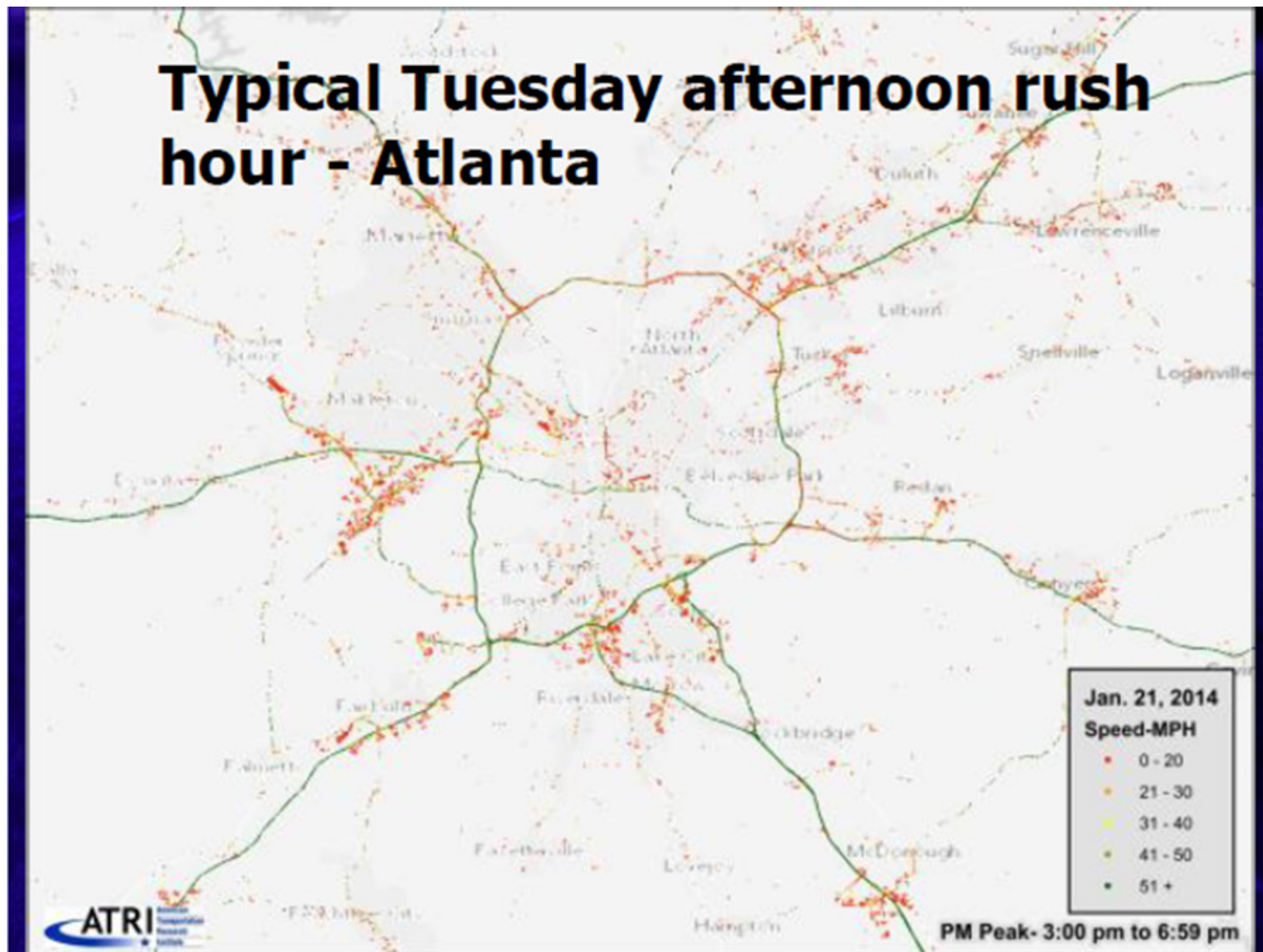
- 99 Chevy Volts, worth over \$4 million in sales;
- 36 John Deere tractors, worth \$2.4 million; OR
- 163 metric tons of U.S. beef, worth over \$500 thousand



2015 AWF Sample Content: NESDIS Present and Future

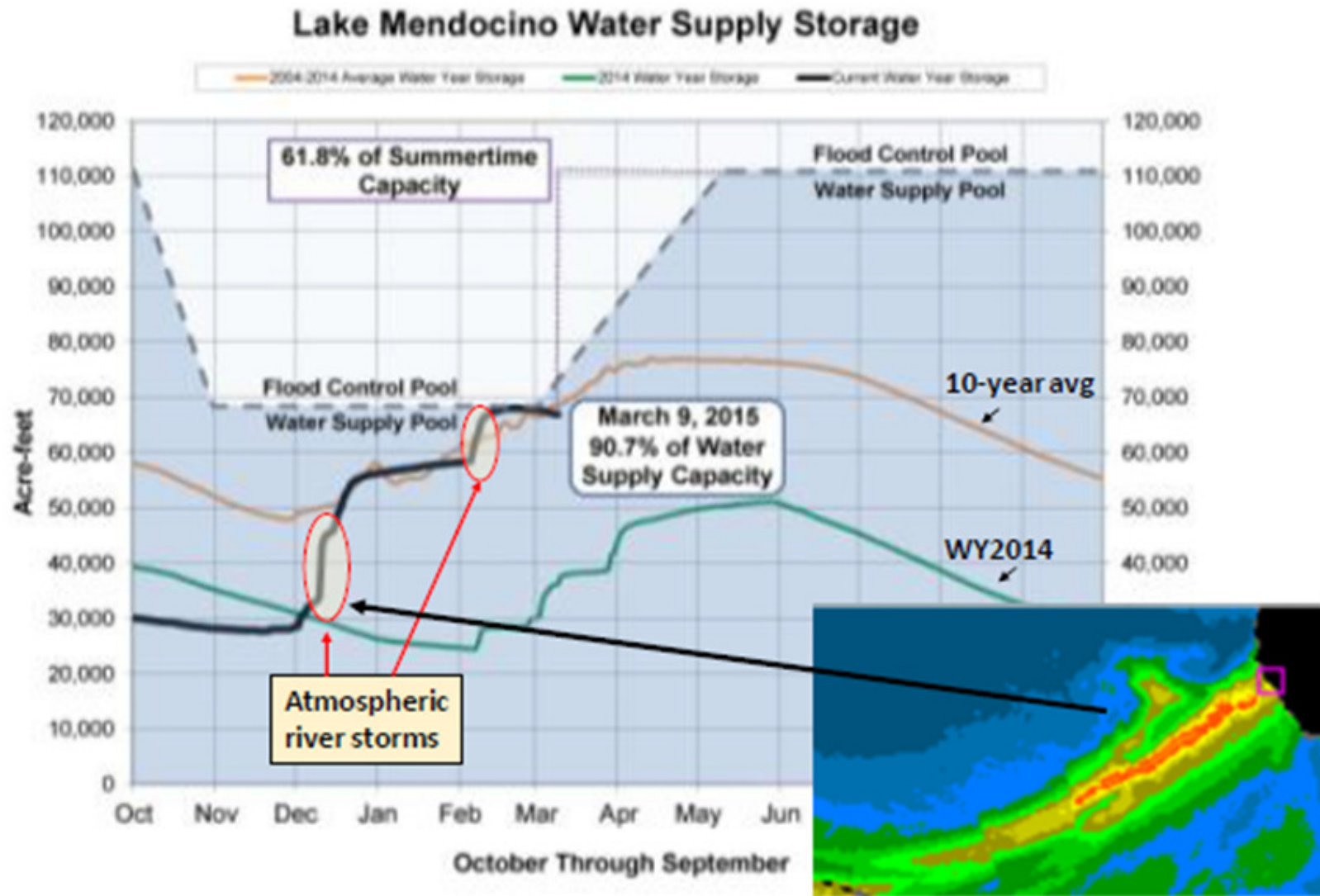


2015 AWF Sample Content: Road Transportation



Highlights from the 2015 AMS Washington Forum – January 11, 2016 – AMS 96th Annual Meeting – New Orleans, Louisiana

2015 AWF Sample Content: Water Resources



2015 AWF Sample Content: Federal Agency Leads

Samples of NOAA's Data & Services

	DAILY	WEEKLY	MONTHLY	SEASONAL- ANNUAL	DECADAL
LOCAL	Weather Forecasts	Regional Snowfall Index	Heating & Cooling Degree Days	Temperature & Precipitation Outlooks	Climate Norms
REGIONAL	Data Portals	Hurricane Tracks	Heat Wave Prediction	Drought Outlook	Extreme Detection & Attribution
NATIONAL AND GLOBAL	Water Level Network	Drought Monitor	Monthly State of the Climate Reports	Annual State of the Climate Reports	National Climate Assessment

Climate.data.gov

Toolkit.climate.gov



2015 AWF Sample Content: Student Presentations

Analysis

Regression Model: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k$

BUSINESS METRICS (PREDICTED VARIABLES)

- Customer-Controlled
 - Traffic
- Seller-Controlled
 - Conversion
 - ADS

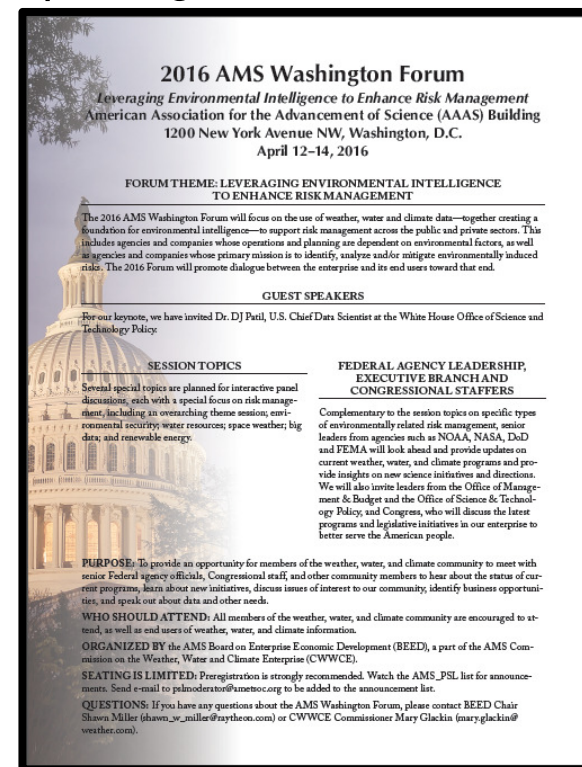
WEATHER PARAMETERS (PREDICTOR VARIABLES)

- CDD
- HDD
- Average Dew Point Temperature
- Average Humidity
- Average Wind Speed
- Average Visibility
- Total Liquid Precipitation Amount
- Total Snowfall Amount

(Tim Loftus, Millersville University)

Preview of the 2016 AWF

- The next AWF is April 12-14, 2015, at the American Association for the Advancement of Science (AAAS) Building, 1200 New York Avenue NW, Washington, D.C.
- The Chatham House Rule will be lifted for the opening theme session
- Theme:
 - Leveraging Environmental Intelligence to Enhance Risk Management
- Sessions/special topics planned:
 - Theme Session
 - Congressional and Executive Staffers
 - Federal Agency Leads
 - Space Weather
 - NOAA Big Data
 - Environmental Security
 - Renewable Energy
 - Water Resources
 - Impacts of COP21
 - Challenge.gov Program
- Look for the ad in BAMS each month →
- Website already active!



Thank You!

- Questions?
- You can also contact the Program Committee Chair at shawn.w.miller@raytheon.com