



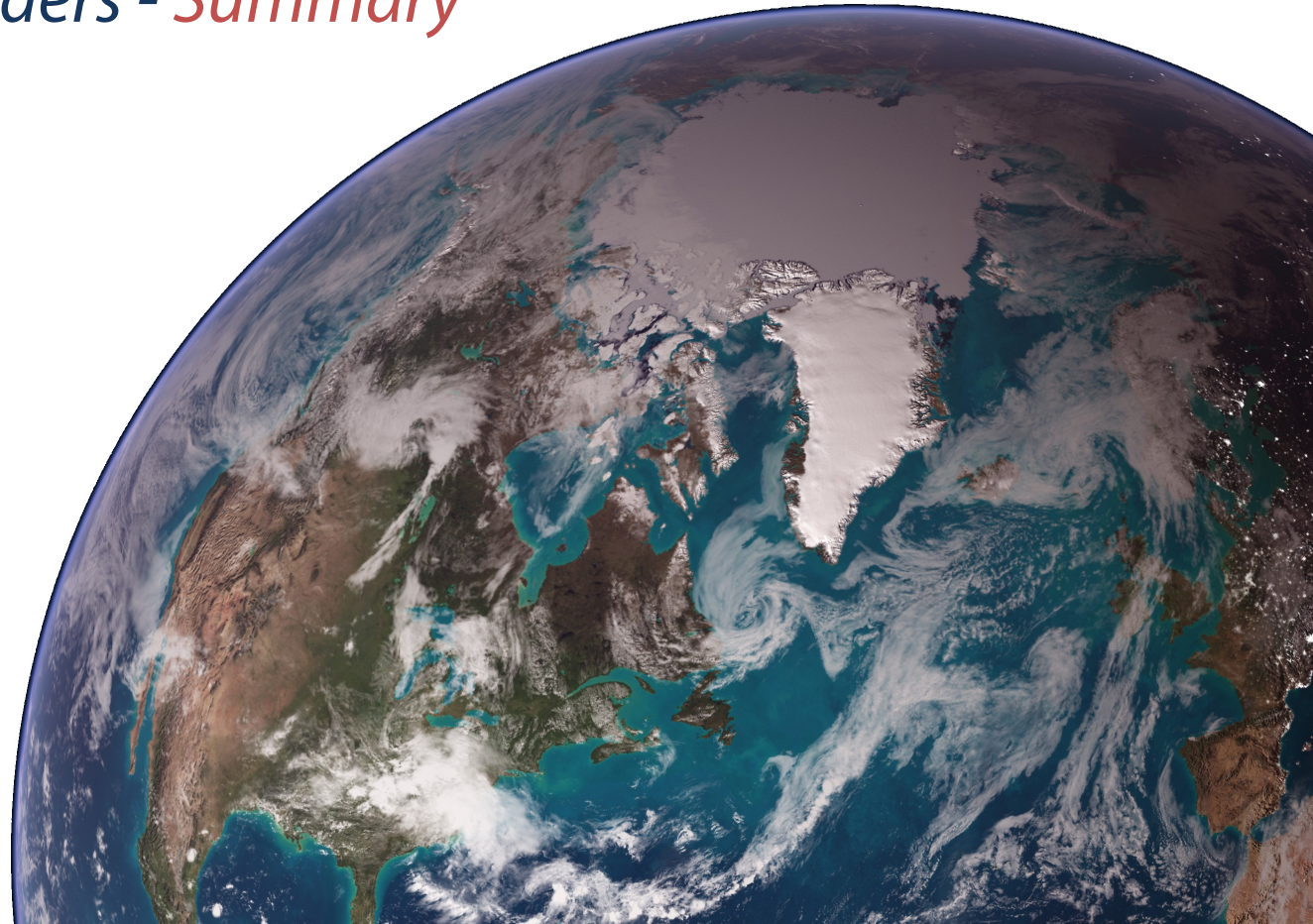
NOAA RESEARCH • ESRL • PHYSICAL SCIENCES DIVISION

Theme 4: Research to Applications, Operations and Services

Serving Stakeholders - Summary

Laura Bianco

Science Review
12-14 May 2015
Boulder, Colorado



Other presentations on R2X

- *Darren Jackson* – “Description and capabilities of an automated objective technique for identifying atmospheric rivers”
- *Katherine McCaffrey* – “XPIA: Development of remote sensing techniques for renewable energy applications”
- *Henry Winterbottom* – “High resolution ensemble data assimilation for operational hurricane prediction”
- *Michael Alexander* – “Impact of Climate Variability and Change on Marine Ecosystems”
- *Andrea Ray* – “Stakeholders interactions to improve the use of climate information”
- *Donald Murray* – “FACTS data access and visualization”
- *James Scott* – “The climate change web portal”
- *Catherine Smith* – “PSD web-based visualization and analysis tools” (*)

(*) *AMS Award*

PSD 2016-2020 Strategic Goals

- Rigorously **characterize** and **predict** weather, water, and climate **extremes** and their uncertainties to inform decision-making
- Develop **new processes understanding observational and modeling capabilities** to predict conditions associated with too much or too little water for improved early warnings and to inform preparedness and resource management decisions
- Develop new knowledge and capabilities to explain observed climate trends, variations, and extreme events and their impacts to **inform risk management and adaptation decisions**

Notable Successes

- **Long term institutional knowledge**
(seasonal forecast guidance for California precipitation since 2008)
- **Synergy between observations and models**
(observations used to evaluate NOAA's operational model products)
- **Risk tolerance**
(simulation and optimization approaches for water management)
- **Collaborations**
(field campaigns in partnership with other NOAA and external groups)
- **Quality, Relevance and responsiveness**
(new tools relevant to societal needs providing information when needed)
- **Technology transfer**
(advances transferable to other regions and to other regional problems and integrate well into national services and applications)

Future Directions

- **Understand, predict and prepare**

Science to inform climate change adaptation and mitigation

Rigorously characterize and predict weather, water, and climate extremes and their uncertainties to inform decision-making *Develop new methods to understand observational and modeling capabilities and better predict extreme conditions for improved early warnings and resource management*

- **Technology transfer**

Develop technology in partnership with others and make PSD's innovations transferable to other regions and other regional problems

- **Accessibility**

Make results from PSD R&D readily available to stakeholders and the public

What You Heard

James Wilczak: “The Wind Forecast Improvement Projects: WFIP and WFIP2”

Klaus Wolter: “Improving seasonal forecasts to help with drought planning in California”

Allen White: “Developing data tools and products in support of research to applications”

Lynn Johnson: “A "Sea to Summit to Sea" approach to improve management of water resources”