



APRIL 2020

NOAA's Office of Weather and Air Quality is now NOAA's Weather Program Office



VOL. 2





About WPO

The NOAA Weather Program Office supports world-class weather research to save lives, reduce property damage, and enhance the national economy. We are located at 1315 East-West Highway, 10th floor, Silver Spring, MD 20910 in NOAA's Office of Atmospheric Research.

VISION: A Weather-Ready Nation informed by world-class weather research.

MISSION: Finding, funding, and fostering collaborative weather and air quality research to discover, develop, and transition products, tools, and services for timely and accurate weather forecasts.



Ominous wall cloud portending possible violent weather.
Credit: Jerry Penry, Registered Land Surveyor (2010).





WEATHER PROGRAM OFFICE
National Oceanic and Atmospheric Research

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New Employees





Dr. Kandis Boyd
WPO Acting Director

Letter from the Acting Director

It's Official!



WEATHER PROGRAM OFFICE
National Oceanic and Atmospheric Research

NOAA's Office of Weather and Air Quality is now NOAA's Weather Program Office. Same people, same vision, and same mission to collaboratively transition world-class weather research into operations.

The name change is a part of the OAR realignment and signifies WPO's efforts in support of the entire weather enterprise. Over the last year, WPO has expanded its staff, enhanced both internal and external relationships, and developed a strategic vision to align our priorities with NOAA, OAR and the greater atmospheric science research community. This approach will assist WPO in learning how to address the uncertainties weather presents and to inform its engagement and communication with researchers and the public.

The WPO team has endured many challenges during FY2020, and the team exceeded several Annual Operating Plan (AOP) goals through the hardwork and dedication of the WPO Team. As we close the second quarter of the fiscal year, the team has excelled by releasing the EPIC Request for Proposals (RFP), co-hosted the 2020 Snow Workshop and onboarded five new WPO team members. In addition, WPO celebrates:



Joint Technology Transfer Initiative (JTTI) research projects successfully transferred into NWS operations.



Joint Technology Transfer Initiative (JTTI) research projects successfully increased to Research Level 8.



Joint Hurricane Testbeds projects successfully increased to Research Level 8.



Letter from the Acting Director



SAVE THE DATE **September 25th, 2020**

NOAA Weather Program Office
formerly the Office of Weather and Air Quality
Partners Meeting
Silver Spring Civic Center
1 Veterans Place
Silver Spring, MD 20910

The Partners Meeting is designed to bring researchers, academia, principal investigators, and operational forecasters together to help inform and prioritize WPO's initiatives for FY21-25 through:

**Breakout Sessions*

**Lightning Talks*

**Meet & Greet with our Programmatic Staff*

For more info visit: <http://bit.ly/326C1oC>

(Agenda forthcoming)



WEATHER PROGRAM OFFICE
National Oceanic and Atmospheric Research



Consider this your ***personal invitation*** to join WPO at our inaugural Partners Meeting in Silver Spring, MD on September 25, 2020. Participants will have the opportunity to help shape our FY21-25 strategic goals and hear from the WPO - an award-winning team of scientific and technical program managers that have spearheaded innovative programs and are leaders in atmospheric science.

As we continue on this journey of scientific discovery, I look forward to working with our partners, collaborators and the public to generate an unprecedented level of world-class weather research.

Kandis Boyd, PhD
Acting WPO Director

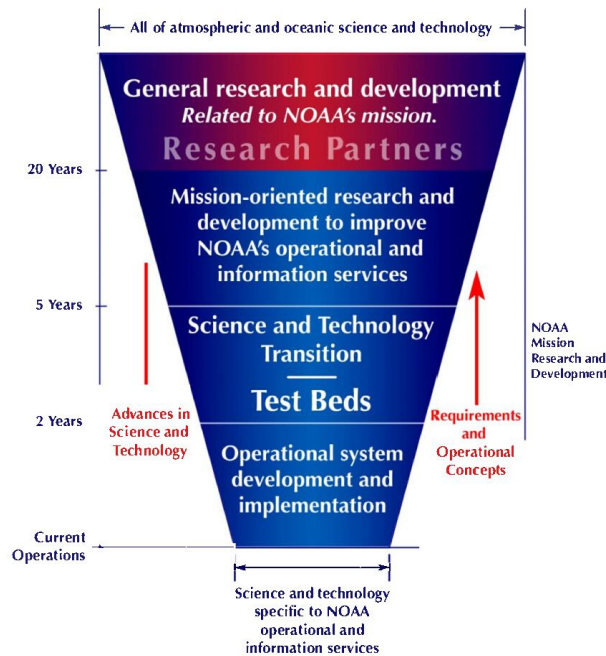
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[Supporting world-class weather research to save lives, reduce property damage, and enhance the national economy.]

Programmatic HIGHLIGHTS



NOAA Research and Development Funnel.

WPO Transitions 17 projects

During Quarter 2 (Q2), WPO delivered 12 projects to NWS at Readiness Level 8 (RL8), meaning that they are ready to transition into operations. This brings the Fiscal Year 2020 (FY20) annual total to 17 projects ready to transition. Halfway through Fiscal Year 2020 (FY20) this already surpasses **WPO's Annual Operation Plan goal of 10 projects** delivered for operational implementation. These accomplishments speaks to the excellence of our hard-working WPO team.

Of the 17 projects, three have successfully been implemented into operations, and five others are approved to become operational as part of upcoming model or observations upgrades.

The projects were supported by the Joint Technology Transfer Initiative (JTII), Joint Hurricane Testbed (JHT), Hydrometeorology Testbed (HMT), and Air Quality Research & Forecasting (AQRf) programs.

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Programmatic HIGHLIGHTS



- Published FY20 Request for Proposals (RFP) for EPIC Program.
- Completed EPIC program communications strategy document.
- Conducted quarterly OAR Cloud Tiger Team meetings.
- Completed EPIC program formulation strategy document.



- Coordinated with National Weather Service FACETs Program through regular meetings to inform program initiatives and objectives.
- Conducted two site visits to NOAA laboratory partners to advance strategies for FACETs program expansion.



- Held semi-annual JTII project reviews.
- Four Technology Transfer Initiative (JTII) research projects successfully transferred into NWS operations.
- Seven Joint Technology Transfer Initiative (JTII) research projects successfully increased to Research Level 8.



- Completed Social and Behavioral Sciences (SBS) R2O Workshop final report.
- Hosted a social, behavioral, economic sciences meet and greet between SBE researchers.
- Participated in semi-regular interagency SBE planning/collaboration meetings.

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Programmatic HIGHLIGHTS



- Convened two National Earth System Prediction Capability (ESPC)/Subseasonal to Seasonal (S2S)-sponsored sessions at national professional conferences.
- Hosted two Executive Steering Group meetings.
- Hosted workshop in collaboration with National Weather Service on snow analysis to support Climate Prediction Center (CPC).
- Published summary report from 2019 National ESPC workshop on Building an Interannual to Decadal Prediction and Projection Capability for Decision Support.



- Completed development of an online repository for NOAA Weather Act reports in collaboration with NOAA Library.
- Hosted Weather Act session at 2020 AMS Annual Meeting.
- Presented two summaries of OAR activities supporting the Weather Act to EISWG.



- Completed monthly reviews of WPO project transition plans in coordination with NWS' Office of Science and Technology Integration (OSTI).
- Provided at least two briefings to OAR and/or NWS on WPO-funded work and anticipated research transitions
- Released Annual Accomplishments report.

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EPIC HIGHLIGHTS

The Draft EPIC Strategic Plan

An updated version of the Draft EPIC Strategic Plan has been released on the WPO website (wpo.noaa.gov) and is available [here](#). This version reflects comments from the community, the Science Advisory Board's (SAB) Environmental Information Services Working Group (EISWG), and reviewers within NOAA line offices and NOAA headquarters.

EPIC Request for Proposals (RFP)

NOAA is seeking a technology partner to help design and build the Earth Prediction Innovation Center (EPIC). This extramural center will accelerate scientific research and engineering to create the world's most accurate and reliable operational weather forecast model. A brief overview is available in a NOAA Research [press release](#) and additional details are available at the link [here](#).



Members of the EPIC Team at AMS in Boston, MA.
From Left to right: Leah Dubots, DaNa Carlis, PhD, Cathy Lapenta, and Krishna Kumar, PhD.

EPIC Governance Principles

On Tuesday, February 25, 2020, representatives from across NOAA participated in the EPIC Governance Retreat. This retreat was structured as a small, focused tiger team discussion about the governance of EPIC. The conversations informed the provisional EPIC governance principles, which are available [here](#).





EPIC HIGHLIGHTS

Scientific review of the Unified Forecast System (UFS) Research to Operations (R2O) proposal



WPO Members at the UFS R2O Review (March 12-13). From left to right: Chandra Kondragunta (OAR WPO), Jim Kinter (George Mason University), Dorothy Koch (NWS OSTI), Jeff Whitaker (OAR PSL), Vijay Tallapragada (NCEP EMC), and DaNa Carlis (OAR WPO). WPO attendees not pictured: Kandis Boyd, Jessie Carmen, Krishna Kumar, and Daniel Melendez.

In collaboration with NWS' Office of Science and Technology Integration (OSTI), the Weather Program Office hosted a scientific review of the Unified Forecast System (UFS) Research to Operations (R2O) proposal on March 12 and 13, 2020. Several international reviewers were able to join remotely for the scientific review of the proposal which is for the 2-year development of the UFS at different spatial and time scales.

The EPIC Team (DaNa Carlis, PhD, Daniel Melendez, PhD, and Krishna Kumar, PhD), JTTI Program Manager (Chandra Kondragunta, PhD), and S2S and ESPC Program Manager (Jessie Carman, PhD) attended the meeting. Kandis Boyd, PhD, Acting WPO Director, provided opening remarks that highlighted WPO's great collaboration with the NWS OSTI team and continued strong support across WPO programs that have funded 59 projects related to the UFS.





EPIC HIGHLIGHTS

UFS Medium Range Weather Application Release Informational Session

Led by Mariana Vertenstein (NCAR), Louisa Nance (DTC), and Arun Chawla (NOAA/EMC), the Unified Forecast System (UFS) Community in coordination and collaboration with NOAA publically released the UFS Medium Range Weather Application v1.0 on Wednesday, March 11, 2020. This is a huge milestone for the UFS community and was done through the coordination of the following organizations: Developmental Testbed Center (DTC), Cooperative Institute for Research in Environmental Sciences (CIRES), Environmental Modeling Center (EMC), Geophysical Fluid Dynamics Laboratory (GFDL), George Mason University (GMU), Earth System Modeling Framework (ESMF), Earth Systems Research Laboratory (ESRL), National Center for Atmospheric Research (NCAR), and National Severe Storms Laboratory (NSSL).

An informational session with the release team including Mariana Vertenstein, Louisa Nance, and Arun Chawla facilitated by DaNa Carlis was held at 11:00 AM EST on April 1, 2020. The panelists highlighted the capabilities of the application along with what was included in the release. The webinar was recorded.





SOCIAL SCIENCE

HIGHLIGHTS

"Back to the Future: Transitioning Social and Behavioral Science into the Next 100 Years"



At AMS 2020, WPO's Social Science Program Manager Gina Eosco, PhD organized the panel "[Back to the Future: Transitioning Social and Behavioral Science into the Next 100 Years.](#)" Panelists included Craig McLean, Assistant Administrator, NOAA Office of Oceanic & Atmospheric Research; Ken Graham, Director of the NWS National Hurricane Center; John Ten Hoeve, PhD, Deputy Director for the NWS Office of Organizational Excellence; Kim Klockow, PhD, Research Scientist, CIMMS/NSSL Societal Impacts Group Team Lead; and Jen Henderson, PhD, Social & Research Scientist, CIRES.

From the early research on warnings to machine learning algorithms mining social media data, social and science integration into the weather enterprise has a long and meaningful history. This social science research can take many forms, such as developing a new end user software tool, to knowledge on risk communication message improvements. Both the concrete tools and knowledge are critically important in integrating social science into NOAA and empowering public response.

In this session, panelists outlined the need for social science within NOAA, challenges with social science integration, and how to best implement and integrate social science across the agency. Panelists also proposed and envisioned what social science research and integration may look like 100 years from now.



SOCIAL SCIENCE HIGHLIGHTS



Casey Ivanovich
@ccivanovich

Awesome presentation today by @LatinWx at #AMS2020 on the @NWSSPC Spanish Language Initiative!

Exciting efforts to ensure all communities understand severe weather threats in light of the range in dialects across the country.



Quinton Lawton
@LawtonQuinton

Great talk by @LatinWx about the @NWSSPC Spanish Language initiative. Really highlighted how important it is to effectively break language barriers when communicating urgent weather info! #AMS2020



Translating English Into Spanish during AMS

Gina Eosco, PhD, WPO Social Science Program Manager, learned in her prior work that there is no one translation for a 'watch' or 'warning' from the English to the Spanish language. By conducting focus groups across the country on the publics and emergency manager's understanding of NWS products, Dr. Eosco gathered data which showed that translation issues were of growing concern to both NOAA's NWS and broadcast meteorologists. Therefore, in January 2020, Dr. Eosco co-organized two sessions on translating Spanish into the English language at the American Meteorological Society (AMS) Annual Meeting in Boston.

Dr. Eosco partnered with University of Oklahoma (OU) graduate student and Cooperative Institute for Mesoscale Meteorological Studies (CIMMS) research assistant, Joseph Trujillo, who is researching communication topics as it relates to the Latinx community, and is also the chair of the inaugural AMS Latinx Committee. While there have been individual presentations closely related to Spanish translation concerns in the past, this was the first organized effort highlighting the topic.

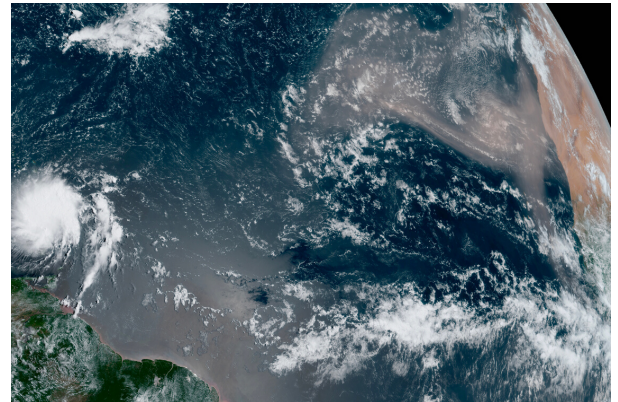
"These sessions were true game changers for the bilingual weather community," Trujillo said. "I came out of them inspired, knowing this is the beginning of many great initiatives."

Participants were greatly appreciative for their efforts. While Dr. Eosco does not speak Spanish, she was deeply moved by the experience, "Diversity and inclusion is vital especially in the topics and sessions brought forth at a national conference. The gratitude expressed by attendees was overwhelming and shows that everyone plays a part in elevating diverse topics."





TESTBEDS HIGHLIGHTS



NOAA GOES East visible satellite image of Tropical Storm Dorian on Aug. 27, 2019, as it moved over St. Lucia and into the eastern Caribbean

Successful R2O transition of five Joint Hurricane Testbed projects

Five WPO-funded Joint Hurricane Testbed (JHT) projects have been approved for operations by the National Hurricane Center (NHC), successfully fulfilling JHT's mission to transfer new technology, research results & observational advances from research groups to operational centers.

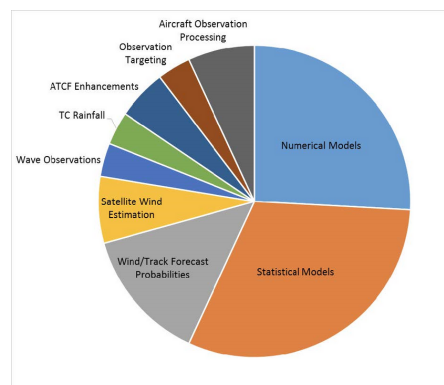
Taken together, these projects help the NHC hurricane specialists better assess which tropical disturbances are likely to develop into tropical cyclones (TC) and to better predict the intensity and evolution of existing TCs, as well as impacts such as storm surge.

The results of three transitioning JHT projects are already being used in operations: one developed an improved objective tool for identifying the 0-48hr and 0-120hr probability of TC genesis in the North Atlantic and Eastern North Pacific basins; another developed improvements to operational statistical TC intensity forecast models; a third upgraded the microwave imagery processing that is used in real time by the hurricane specialists in assessing the tropical cyclone structure.

Together, these projects help better assess the potential for a TS to become a hurricane and its potential track, for example, Tropical Storm (TS) Dorian in its early stages. The first satellite image of TS Dorian on August 27, 2019, showed it struggling to maintain its status with maximum sustained winds of only 50 mph as it moved into the eastern Caribbean Sea. Two days later, it became a Category 1 hurricane, as forecast by NHC.



TESTBEDS HIGHLIGHTS



JHT projects funded since 2001 have addressed a number of priorities jointly determined by scientists in research and operations.

Successful R2O transition of five Joint Hurricane Testbed projects continued

Two other projects approved for transition improve analyses and forecasts. One provides operational guidance to correct the maximum wind estimate based on a quantitative analysis of undersampling of winds in aircraft reconnaissance observations. The second improves NHC's operational storm surge model (SLOSH).

A sixth project, on forecasting eyewall replacement, has been deferred for decision because NHC does not yet have real-time feed of the necessary microwave radiance data and because another ongoing project is expected to further improve this upgrade to intensity forecasting. Four other projects from earlier funding cycles are also in deferral pending further testing.

Two projects on forecasting rapid intensification (RI) were declined because they either showed lack of skill during real time demonstration or did not consistently outperform operational models. While improving RI forecasting is a high priority, it remains a difficult challenge. The decision to approve for transfer to operations is based on testing during 1-3 hurricane seasons and a set of metrics including a favorable analysis of the benefit to forecast or analysis: neutral to favorable impacts on efficiency of the forecasting process, compatibility with NHC infrastructure, and sustainability of resources to operate, upgrade and/or provide support for the transition.

The JHT has had a very successful record over almost 20 years. Since beginning in 2001, 95 projects have been funded across a number of NHC priorities, of which 59 have transitioned to operations.



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WPO [SPOTLIGHT]

Here we celebrate members of our our award-winning scientific and technical team that continue to become leaders in the field of atmospheric science.

[NOAA Scientists are Inspiring Leaders in STEM](#)

Published: February 6, 2020

By: Lango Deen



[DaNa Carlis, PhD, Program Manager at NOAA's Weather Program Office, on the importance of asking questions, taking chances, and creating opportunities for others](#)

Published: February 21, 2020

By: NOAA Research



[#WOMENOFNOAA: Meet Segayle Thompson, PhD](#)

Published: March 20, 2020

By: Chantel Bivins





WEATHER PROGRAM OFFICE

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WPO [NEWS]

Events

DaNa Carlis, PhD provided a briefing at the NOAA AI Strategy Implementation Workshop

DaNa Carlis, PhD presented at the NOAA AI Strategy Implementation Workshop that occurred from Feb. 27-28, 2020. The purpose of this workshop is to develop the framework of the NOAA AI Strategy Implementation Plan and evaluate the synergies between the NOAA Data, Cloud, and Unmanned Systems (UxS), the Omics Strategy, and EPIC to determine how the NOAA AI Strategy Implementation Plan can be supported or support the NOAA Strategies.

NOAA's Weather Program Office hosts 2020 Tropical Cyclone Operations and Research Forum

WPO, in conjunction with the Office of the Federal Coordinator of Meteorology (OFCM) and the Atlantic Oceanographic and Meteorology Laboratory (AOML), sponsored the 2020 Tropical Cyclone Operations and Research Forum from February 25-27, 2020. The Forum was hosted by the NOAA Aircraft Operations Center in Lakeland, Florida, included a presentation by Gina Eosco, PhD, Social Science and FACETs Program Manager, as well as engaging contributions from the WPO Team.



WPO's Matthew Mahalik, R2O Coordinator; Gina Eosco, PhD, FACETS and Social Science Program Manager; Mark Vincent, PhD, Hurricane Supplemental and Weather Observations Program Manager; and Kandis Boyd, PhD, Acting WPO Director





WPO [NEWS]

Events

FACETs Program to host a meeting with the working group in the first week of June

WPO's FACETs Program will host a 100% virtual meeting the first week of June. The event is only open to those in the FACETs working group, which includes people from NWS, the OAR labs, and cooperative institutes. The meeting is designed to do multiple things: 1) inform and integrate the post-docs; 2) discuss the strategic implementation plan; 3) give PIs face time with one another and the program manager to brainstorm ideas, identify collaborators, and discuss other programmatic issues.



SAVE THE DATE *September 25th, 2020*

NOAA Weather Program Office
formerly the Office of Weather and Air Quality

Partners Meeting
Silver Spring Civic Center
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For more info visit: <http://bit.ly/326C1oC>

(Agenda forthcoming)



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National Oceanic and Atmospheric Research





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In Pictures: NOAA's Weather Program Office



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WELCOME TO THE TEAM



NEW EMPLOYEES



Alison Agather, PhD
FACETS Program Coordinator
Contractor



Maureen Brooks, PhD
Subseasonal to Seasonal (S2S) Program Coordinator
Contractor



Daniel Melendez, PhD
EPIC Senior Scientist
Detaillee



Crystal Murphy
Logistics Coordinator
Contractor



Ben Woods
Atmospheric Scientist
Supplemental Hurricane Coordinator
Contractor