



*National Weather Service
Employees Organization*

**Testimony of Richard J. Hirn
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before the Subcommittee on Energy and the Environment of the
Committee on Science and Technology
U. S. House of Representatives**

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Chairman Baird, Ranking Member Inglis, and Members of the Subcommittee.

Thank you for offering the National Weather Service Employees Organization the opportunity to present its views on the options for developing a National Climate Service. As you may be aware, NWSEO represents not only the forecasters and technicians at the National Weather Service, but employees throughout NOAA, including employees at OAR and NESDIS.

It is our view, and that of many in National Weather Service management, that the creation of a National Climate Service as a separate line office within NOAA would be an unnecessary expense because it would duplicate the historic and current mission, programs and services of the National Weather Service, and will inevitably result in a reduction of resources for the NWS.

Today, nearly 1,000 employees of the National Weather Service are performing Climate Service work as a key element of their jobs. The NWS already operates surface

and upper air observing systems, monitors climate variability in real time over a broad range of time scales, conducts applied climate prediction research, and issues an extensive array of climate products and information, including climate forecasts and outlooks. Moreover, the entire National Weather Service workforce has climate integrated into its current weather forecast and warnings activities. NWS Director Jack Hayes has said that the NWS is “at the forefront of climate service delivery to this nation” and “is critical to . . . advancing NOAA’s mission goal for a National Climate Service.”

Therefore, the new National Climate Service should be created as an entity *within* the National Weather Service, or the NWS should be re-chartered as the “National Weather and Climate Service,” which is in fact a better descriptor of its current mission.

The NWS is already the nation’s “National Climate Service”

According to *National Weather Service Policy Directive 10-10*, issued by NWS Director Jack Hayes on January 29, 2008:

Provision of climate services, in particular the monitoring of variations in climate and climate forecasting, is essential to mitigate the loss of life and property and to enhance the national economy. The NWS is the federal agency charged with delivering these services to the U.S., its territories, and, as appropriate, its interests abroad.

<http://www.weather.gov/directives/010/010.htm>

Much of what a National Climate Service would do is already being done by the **Climate Prediction Center (CPC)** in Camp Springs, Maryland which is part of the National Weather Service. The CPC performs global climate modeling, issues predictions of climate variability, and assessments of the origins of major climate anomalies. Among its many climate products are the Atlantic and Eastern Pacific hurricane outlooks; the seasonal drought outlooks disseminated by the National Integrated Drought Information System; and El Nino/La Nina climate forecasts. In January alone, over 30 million visitors obtained climate forecasts from the CPC's website.

The International Weather and Climate Monitoring Project at the CPC provides climate forecasts that assist the USAID with famine relief in Africa, Southeast Asia, South and Latin American and Afghanistan. The CPC's Africa Desk works with the governments of over 30 countries in sub-Saharan Africa by providing climate monitoring and predictions. The CPC trains twelve meteorologists a year from Africa in climatology during a four month residency program.

The CPC provides climate forecasts out to thirteen months, and with modest additional resources, it could produce climate outlooks covering decadal time frames. The CPC engages in applied climate research; makes assessments of climate variability and climate anomalies; and provides services to other Federal agencies such as the Departments of Agriculture and Energy, FEMA and the EPA, as well as foreign

governments, academia, and private sector agricultural, energy, construction, insurance, and leisure industries.

Climate services are also fully integrated within the NWS' field organization and forecasting offices across the nation, from acquiring national climatic data to producing and disseminating climate predictions.

The NWS Organic Act of 1890 charges the NWS with the responsibility for “the taking of such meteorological observations as may be necessary to establish and record the climatic conditions of the United States.” The nation’s official climate record is based largely on observations from the NWS’ Cooperative Observer Program. The COOP program consists of 11,400 observation stations that report daily minimum and maximum temperatures, precipitation, snowfall, snow depth or hydrological data. This network, along with about 1,000 Automated Surface Observation Stations, forms the Federal government’s weather and climate monitoring network. The data provided by this network is used for real time forecasting, management of water resources, prediction of crop yields, and the study of climate variability.

There is a “**Climate Services Program**” at each **NWS Regional Office**. For example, the NWS Alaska Region’s Climate Services Program centers around a number of indicators of climate change in Alaska and the Arctic: sea ice melt and retreat; glacier melt; warming temperatures; thawing permafrost with loss of infrastructure; precipitation pattern shifts, coastal erosion and flooding; ecosystem

shifts; and potential health epidemics. The Alaska Region's Climate Services Program is addressing observations, monitoring, and assessments with its partners and collaborators to provide new climate products for a changing climate and is making this information available to local and regional decision makers and the general public. As part of this effort, the NWS Alaska Region has partnered with the Alaska Center for Climate Assessment and Policy to provide monthly Alaska weather and climate highlights on a Web site.

The NWS Central Region's Climate Services Program covers agriculture, bio-energy, and drought impacts and planning. It disseminates information, including climate change, weather/climate data, water and drought planning information, through many entities, including extension services, state climate offices, various academic institutions, and other decision makers.

Each of the **122 Weather Forecast Offices** routinely issues climate products, including the "Supplementary Climate Data Report" every six hours, "Daily Climate Report" two or three times a day for several locations, a "Monthly Climatological Report" and National Drought Information Statements.

The Science Advisory Board's Report noted that the "NWS field offices are highly visible points-of-contact for a wide range of [climate] information requests." The National Weather Service has published a comprehensive plan or "Operations Document" for "Regional and Local Climate Service Delivery" (November 2007) which charges the staff at the Forecast Offices and other local NWS offices with the responsibility for

outreach and education in each office's area of responsibility on climate products, data and information.

<http://www.weather.gov/om/csd/graphics/content/about/Ops2.pdf> One of the forecasters at each WFO serves as a "Climate Services Focal Point," but other Forecast Office staff members respond to public climate information inquiries as well. Forecast Offices conduct workshops targeted to local audiences (media, agriculture sector, energy and weather risk management industries) to educate customers on the potential uses and availability of climate resources and to gather feedback on climate products and services. Local Forecast Offices are also charged with establishing and maintaining partnerships with other members of the climate community in the local area, including the Regional Integrated Science and Assessments (RISAs), universities, State Climate Offices and the Regional Climate Centers. Forecast Office staff are also charged with conducting climate analyses at scales important to local customers. Attached to this testimony is a sample page from the Tampa Forecast Office's website which illustrates some of the kinds of climatic information disseminated by local Forecast Offices.

In addition, the "Observational Program Leader" (OPL) and the Hydrometeorological Technicians at each Forecast Office manage the Cooperative Observer Program - a prime element in recording the nation's climate. The OPLs are charged with maintaining the climate observational equipment while also recruiting and training the thousands of observers who comprise the "citizen corps" of NWS climate observers. Each office maintains the Automated Surface Observation Systems in the

WFO's area of responsibility. Twice a day, specially trained and certified staff at 70 Forecast Offices launch instrumented weather balloon packages to collect current atmospheric data critical to atmospheric predictive modeling and to establish the earth's climate profile up through the stratosphere.

The **Anchorage Weather Forecast Office Sea Ice Desk** performs Sea Ice analysis, Sea Surface temperature analysis, and Sea Ice Forecasts for the North Pacific/Bering Sea and portions of the Arctic Ocean. The changes in Sea Ice coverage shown by these analyses are an important indicator of climate change.

The **18 smaller Weather Service Offices in Alaska and Pacific Regions** also launch and collect data from instrumented weather balloons and respond to public climate information inquiries. Some also daily issue climate products such as the Supplementary Climate Data Report and Daily Climate Report. Four WSOs in Alaska take sea-ice and sea surface temperature observations. The duration of open waters is very important to determining Arctic sea ice climate change.

The **13 NWS River Forecast Centers** collect and archive hydrological, snowfall, snowpack depth and rainfall data. Some offices have collected over 100 years of historical data. The River Forecast Centers are also responsible for Flood Climatology and Flood Frequency Program data collection and archiving vital for FEMA and flood insurance. The Alaska RFC collects and archives river and lake freeze-up dates and ice thickness measurements, which are important

indicators of climate change in the region where climate change is now occurring the fastest.

The **Climate Services Division** at the NWS headquarters acts as the portal for NOAA information on climate change and variability, oversees the NWS's operational climate services programs, identifies user requirements for climate data and products, and develops training on climate services for NWS field staff.

Other Federal agencies, such as the Department of Agriculture, use the aforementioned NWS generated climate data, products and services to administer and oversee nearly \$1 billion in pasture, rangeland, and forage insurance products. State and Federal Wildland Fire agencies use NWS climate forecasts for wildland fire planning purposes.

NWSEO agrees with many of the Recommendations and Findings of the NOAA Science Advisory Board

A number of the findings and recommendations contained in the NOAA Science Advisory Board's report, "Options for Developing A National Climate Service" (February 2009), lead to the conclusion that the National Climate Service must be imbedded in the National Weather Service. In evaluating the question of whether the National Weather Service should serve as the platform for a National Climate Service, the NOAA Science Advisory Board concluded that, **"from every practical standpoint, this option is the simplest to implement."** Therefore, rather than standing-up the National

Climate Service as a separate line office, NOAA should quickly consolidate the disparate climate programs in other NOAA line offices with the climate service programs already provided by the National Weather Service.

First among the SAB Report's recommendations is that an "internal reorganization of NOAA that enables greater connectivity of weather and climate functions is a necessary step for success." Also among the Report's findings is that "the current NOAA organization is not well-suited to the development of a unified climate services function. Greater connectivity between weather and climate functions . . . is required." The SAB "tiger team" that studied the National Weather Service recommended that three NOAA data centers (the National Climate Data Center, National Oceanographic Data Center and National Geophysical Data Center) be transferred from NESDIS to the NWS as part of a new "National Weather and Climate Service" to more fully integrate climate services in one agency. Consolidation of these data centers with the climate programs of the NWS would link the new Weather and Climate Service to the Regional Climate Centers and State Climatologists because of their existing ties to the NCDC. As the SAB "Tiger Team" explained, "[t]his organization simplifies the seamless distribution of information ranging from past history through present conditions to weather forecasts and forecasts of inter-seasonal to interannual." As noted earlier, with additional resources, the Climate Prediction Center can extend its predictions and assessments to the decadal time frame.

The SAB also concluded that "greater connectivity between . . . research, operations and users is required." Therefore, NWSEO suggests that the Climate

Program Office in NOAA's Office of Oceanic and Atmospheric Research also be transferred to the NWS. The CPO is already co-located with NWS headquarters in Silver Spring, MD. At a minimum, consideration should also be given to transferring the Climate Observations Division of OAR's Climate Program Office to the new Weather and Climate Service. This Division has three operational observing programs - Ocean Climate Observation, Arctic Research Program and Atmospheric Climate Observations. This would link these real-time weather and climate observation programs with the observation programs now maintained by the NWS, as well as the new observation network (the "Climate Reference Network") being spun-up by the NCDC.

The alternative - which has been proposed by NOAA leadership - is to sever weather from climate by some arbitrary temporal distinction between the two; or, worse yet, to duplicate services and programs already delivered by the National Weather Service. Not only would this be a waste of resources, but there would be no authoritative voice on climate matters. As the SAB noted in its findings, "the greatest strength of a . . . combined weather and climate service are an ability to speak with an authoritative voice, build quickly from existing components of a climate service . . . and an ability to ensure 'one-stop shopping' if weather and climate functions are integrated."

Further, it is not possible to transfer the ongoing climate services performed by the National Weather Service to another line agency, since they are so functionally integrated with the day-to-day operations of the National Weather Service and are widely dispersed through among over 150 NWS offices. Moreover, prediction of the climate cannot be

severed from prediction of the weather. Today's climate prediction will eventually become tomorrow's weather forecast; and come tomorrow, today's weather will be part of our climate history.

The SAB "Tiger Team" that studied the option of creating a new, not-for-profit National Climate Service noted that this option would create "potential competition with NWS offices" and would not be able to speak with an authoritative voice like the NWS. The Report failed to address the question of what would become of the climate services already performed by the National Weather Service - an issue which NOAA has also ignored in the development of its proposal to create the National Climate Service as a new line agency elsewhere in NOAA. We have, however, heard from NWS management that there are already proposals to transfer personnel and funding (specifically the personnel and funding that relate to the Historical Climatology Network) from the National Weather Service to NCDC as part of a plan to evolve NCDC into the new National Climate Service.

In short, the nation already has a "shovel-ready" Climate Service. With some additional resources, the National Weather Service can augment the panoply of climate services that it already provides in order to meet the nation's evolving needs for climate analysis and prediction. Thank you, Mr. Chairman, for allowing us to share our views with the Subcommittee on this important issue.

Local forecast by "City, St"

[NWS Home](#) > [Climate](#) > [NWS Tampa Bay Area](#) > [Climate Prediction](#)

CPC climate forecasts are provided, CDC climate information, as well as El Niño/La Niña, drought information and other climate pattern information.

- Current Hazards**
 - [West Central Florida National](#)
- Current Conditions**
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 - [Rivers/Lakes AHPs](#)
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- [Astronomical](#)
- [NOWData](#)

Climate Prediction and Variability

<p>Climate Prediction Long range forecasts across the U.S.</p> <div style="text-align: center; margin: 10px 0;">  <p>Local 3-Month Outlook</p> </div> <p>Climate Prediction Web Sites</p> <ul style="list-style-type: none"> Climate Prediction Center (CPC) Climate Diagnostics Center (CDC) <p>Week Two Forecasts (6-14 days)</p> <ul style="list-style-type: none"> 6-10 Day Temperature Forecast Map 6-10 Day Precipitation Forecast Map 8-14 Day Temperature Forecast Map 8-14 Day Precipitation Forecast Map 6-10 Day & 8-14 Day Forecast Discussions U.S. Hazards Assessment <p>Monthly (30 day) Outlooks</p> <ul style="list-style-type: none"> CPC Monthly Outlook Monthly Outlook Discussion Monthly & Seasonal Outlook Maps <p>Seasonal (90 day) Outlooks</p> <ul style="list-style-type: none"> CPC Seasonal Outlooks Seasonal Outlook Discussion Monthly & Seasonal Outlook Maps 	<p>Climate Variability Topics important to climate assessment and prediction</p> <p>Information on El Niño and La Niña</p> <ul style="list-style-type: none"> CPC's El Niño / La Niña Page El Niño Theme Page What is La Niña ENSO Diagnostic Discussion <p>Drought Information</p> <ul style="list-style-type: none"> U.S. Drought Assessment <p>Intraseasonal Oscillations</p> <ul style="list-style-type: none"> Monitoring Intraseasonal Oscillations Madden-Julian Oscillation Daily Indices <p>Teleconnections</p> <ul style="list-style-type: none"> Northern Hemisphere Teleconnections Daily Indices Forecasts of Teleconnection Indices
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