

**TESTIMONY OF
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**before the
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT
U.S. HOUSE OF REPRESENTATIVES**

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Chairman Broun, Ranking Member Tonko, and Members of the Subcommittee, thank you for inviting me to present the views of the National Weather Service Employees Organization and the 3,700 Weather Service employees it represents. Our members include the forecasters, hydrologists, technicians and other scientific and support personnel employed at 122 Forecast Offices, 13 River Forecast Centers, the various NWS national centers such as the Hurricane Prediction Center in Miami, the Severe Storms Prediction Center in Norman, Oklahoma, and the Climate Prediction Center in Suitland, Maryland, and at NWS headquarters in Silver Spring, Maryland.

The existence of a “structural shortfall” in the NWS budget is well documented.

For well over ten years, NWSEO’s President and other officers have been invited to participate in most of the meetings of the NWS “Corporate Board” - the agency’s senior leadership group comprised of the Director, Deputy Director, Chief Financial Officer, NWS Regional Directors and Division Chiefs. During these meetings, NWSEO has had first-hand access to and participated in discussions about the agency’s budget development and execution during the past decade. We have also worked with and testified before the House Commerce, Justice and Science Appropriations Subcommittee throughout the past decade on the Weather Service budget. As I will explain, the NWS budget shortfall should not have come as a surprise to the leadership of NOAA as it did earlier this year, when an emergency reprogramming request was submitted. Although the amount and cause of the NWS’ structural shortfall is an open question, its existence was common and public knowledge.

Materials provided to NWSEO by the NWS in September 2004 reveal that the agency anticipated an operating shortfall of \$36.4M in FY 05. Among the mitigation efforts that the NWS made that year was to increase “lapse labor” - which is an intentional delay in backfilling newly vacated positions. The structural shortfall was no agency secret. In a January 2005 briefing to the American Meteorological Society, NWS

Director David Johnson delivered a PowerPoint presentation that showed a cumulative funding gap beginning in FY01 that had grown to a \$37.1M shortfall. This presentation predicted a growing shortfall through FY10. An article in the January 25, 2005 edition of the *NWS Focus*, a newsletter from the NWS Communication Office, discussed the \$37.1M shortfall and the *ad hoc* ways the NWS was attempting to mitigate it.

In January, 2005 the NWS submitted a one page briefing paper to the NOAA Executive Council titled “Structural Deficit of NOAA’s National Weather Service.” In this paper, the NWS wrote that it “has absorbed 19.0M of \$56.1M structural deficit” and that a deficit of \$37.1M remains in FY 2005.” In commenting on this briefing paper, the Director of the NWS’s National Centers for Environmental Prediction (which includes the National Hurricane Center and the Severe Storms Prediction Center) wrote to the NWS’s Corporate Board that:

One item that does not come through loud and clear is that the increased lapse [labor] rate are [*sic*] now at record levels which is having the effect of freezing our workforce numbers. I cannot help but believe this is having an impact on operations, transition issues, etc that we are not showing.

In February, 2005 a source within NWS management anonymously provided NWSEO with an internal management analysis that concluded that under-funding of the NWS “will have a critical impact on its vital life-saving mission” and that “these impacts will be felt throughout the nation by deterioration in NWS performance measures.” The NWS Budget Director confirmed in the *Washington Post* that this memo was authentic, that “many of the problems stem from chronic under-funding” and that the agency had a cumulative shortfall of \$37M. NWSEO was told later that month that even if the President’s increased budget request for the NWS was approved that year, “our budget folks estimate” a structural deficit “at \$40mil.” Budget materials provided to NWSEO in February 2005 also showed that the estimated shortfall for FY07 was \$65M.

In a November 9, 2005 analysis of the Conference Mark for FY 06, the NWS wrote that the mark:

. . . perpetuates a cumulative deficit of \$40M+ requiring extensive cutbacks in operating expenses, and planned program improvements, and will require at a minimum an organization-wide personnel hiring-freeze and will potentially require adverse personnel actions including directed

reassignments and RIF in specific areas; all of which add risk to continuity of current weather and water warning and forecast services. . .

The conference mark provides no correction to the NWS structural deficit. The NWS is running out of mitigation options in the non-labor area and will need to shift its mitigation strategy to labor . . .

Accordingly, in early 2006, the NWS sought Voluntary Early Retirement Authority for the Office of Personnel Management, with the aim of reducing its workforce by an estimated 50 employees. The NWS Director told agency employees that “VERA is one of many actions we plan in FY06 to help mitigate the current budget shortfall.” The NWS subsequently withdrew its request for VERA authority due to political pressure. Instead, in April, 2006 the Department of Commerce submitted a reprogramming request of \$12.7M to Local Warnings and Forecast base “to sustain operations and avoid a nation-wide hiring freeze.”

In October 2006, the NWS developed an “integrated priority listing” for use in development of the agency’s budget request for FY09. The number one priority listed was an increase of \$30M in FY 09 and in each of the next four successive fiscal years to “restore the NWS sustained shortfall.”

By FY 2008, the NWS had increased its “lapsed labor” rate from 4% to nearly 5% in order to mitigate the shortfall. In other words, the NWS delayed filling all vacancies so that 5% of all NWS positions were vacant at any given time. This reduced the actual number of NWS employees on board from the authorized level of 4,629 to 4,400.

On December 3, 2008, I and other NWSEO representatives met with the newly appointed NOAA Transition Team for the incoming Administration. Both team members would later be appointed to senior leadership positions in NOAA. We discussed a number of outstanding issues with the Transition Team, but the first issue addressed as our number one priority was the NWS structural shortfall. We provided them with some of the documents on the shortfall we had been previously provided by the NWS, including a spreadsheet showing that the NWS anticipated an annual shortfall of \$30M through FY 13, and a document that says that \$15M was needed in FY09 to fully fund the cost of the NWS workforce. I handwrote on that document “has not been included in FY09 request. Should be added to FY10 request.” Thus, the incoming Administration was clearly told of a substantial financial problem left them by the outgoing Administration.

Regrettably, the agency's FY10 and FY 11 budget requests contained only a 2% adjustment to base, barely sufficient to cover new inflationary increases. The NWS's CFO presented a PowerPoint presentation to the NWS Corporate Board dated September 22, 2010 which began "NWS's Growing Budget Gap Could Threaten Operations - budget gaps have outpaced budget growth by an order of magnitude."

A November 19, 2010 analysis prepared by the NWS CFO projected that the anticipated shortfall for FY11 had grown to \$61.86M .

In her recent appearance before the Commerce, Justice and Science Appropriations Subcommittee, the Under Secretary testified that the NWS is not operating with insufficient funds. This assertion is refuted by nearly a decade's worth of evidence to the contrary.

The structural shortfall cannot be attributed primarily to labor costs.

The NWS and NOAA have unfairly attributed the structural shortfall to growing labor costs, which have ostensibly outstripped increases in agency appropriations. For example, in a November 5, 2010 memo the NWS CFO wrote:

Congress has approved Appropriations Report language preventing the NWS from closing field offices or reducing field office hours of work. At the same time, Congress has also under-funded NWS's labor costs by not fully funding yearly pay adjustment, associated benefits, and GS step increases. Yearly under-funding without authority to align labor with available funding has created a structural shortfall that adds to an increasing legacy of unrecoverable debt. In FY 11, OCFO is projecting the NWS structural shortfall at \$15M.

This conclusion is questionable. Between 2002 and 2012, the salary of most NWS employees rose 26.8%. However, during the same ten year period, the amount appropriated for NWS "Local Warnings and Forecast" base - the budget line from which the salaries of 90% of NWS employees are funded - rose by 30.6% (from \$483M to \$631M) and overall funding for NWS ORF rose by 34% (from \$672M to \$901M). In other words, General Schedule salary rates have *not* grown faster than funding for NWS operations. And employment levels within the NWS have been essentially flat since 2005, authorized at slightly over 4,600 employees.

An “execution outlook” prepared by the NWS for FY 2009, projected a labor shortfall of \$10M. Even the CFO’s memo of November 5, 2010, estimates that the FY 11 shortfall due to labor was estimated to be \$15M - far less than what the overall “structural shortfall” has been reported over the years.

In his September 22, 2010 PowerPoint presentation to the NWS Corporate Board, the NWS CFO noted that although OMB had approved the full cumulative total of \$2.64B in agency requests for labor funding during the five years ending 2010, OMB had approved only \$1.89B of a total of \$2.17B in non-labor funding during the same period.

A “FY 2011 Analysis of Shortfall” prepared by the NWS’s CFO on November 19, 2010 projected a total unmitigated shortfall of \$61.86M. However, of that amount, only \$13.5M was identified as a labor shortfall or ostensibly unfunded Federal pay increases.

**NWS staffing levels are already “efficient and cost-effective”
and cannot be reduced without further endangering the public.**

In her June 21, 2012 testimony to the House Commerce, Justice and Science Appropriations Subcommittee in support of the Administration’s reprogramming request, the Under Secretary stated that the NWS needs to “evolve” in “the most efficient and cost-effective manner” and that it needs to be more “cost-effective in the face of changing budgets.” This year, the Administration proposed to eliminate 122 personnel at local forecast offices as a first step - a proposal that was soundly rejected in a bipartisan fashion by both the House and Senate Appropriations Committees, who restored funding for these critical positions.

Not only is the NWS field structure already “efficient and cost-effective,” but staffing is at precariously dangerous levels. The 122 Forecast Offices operate 24/7, and most of the time have just two forecasters on duty, who are responsible for issuing forecasts and severe weather warnings for an average of nearly three million people. (The two forecasters at the Forecast Office in Sterling, Virginia near Dulles Airport have responsibility for the welfare of over nine million people who live in DC, Maryland, Delaware and Northern Virginia. The two forecasters on duty at the Atlanta Forecast Office have responsibility to protect nearly 8 million people in Northern Georgia).

Essentially, our forecast offices are only staffed for “fair weather.” An internal NWS management study of the April 2011 tornado outbreak in the southeastern United States concluded that there was a “significant staffing deficit” at seven forecast offices during this high impact event. Last year's National Research Council’s *Retrospective*

Assessment of the NWS Modernization and Restructuring recognized (at 60-61) that staffing at the NWS forecast offices are at a precarious level:

The quality of the NWS's warning capability corresponds with its capacity to muster an ample, fully trained local staff at its WFOs as severe weather unfolds. With its current staffing levels, there are always two people working on shift, 24 hours a days 7 days a week. Though this works fine in fair weather, it can become problematic during severe weather, particularly when events develop rapidly under seemingly benign conditions. While managers at individual WFOs generally plan ahead to add sufficient staff to cover forecasted dangerous weather situations, more innocuous weather scenarios that suddenly and unexpectedly "blow up" often lead to shortcomings that are directly attributed to having insufficient manpower. Several recent Service Assessments (e.g., NWS, 2003, 2009, 2010) illustrate the critical role that adequately enhanced staffing (or lack thereof) plays in the success (or weakness) of NWS performance during major events. Appropriate levels of staffing, beyond normal fair weather staffing, during major weather events, are critical for fulfilling the NWS's "protection of life" mission.

Staffing levels are continuing at dangerous levels because of lapsed labor. NOAA workforce management now delays filling vacant operational and "emergency-essential" positions for four months or more, leaving offices critically understaffed.

It is important to note that although the number of Federal employees has grown over the past decade, employment levels at the NWS have remained level. In fact, there are approximately 15% fewer NWS employees and half as many NWS offices than there were 20 years ago.

**Our views on the National Research Council's
*Weather Services for the Nation: Becoming Second to None***

The National Research Council's recent report recommends that "in light of evolving technology" the NWS "evaluate its function and structure." We agree with the Council that "a more flexible structure does not need to be viewed as a threat to staff or the National Weather Service Employees Organization." In fact, NWSEO has been urging the NWS to innovate in light of new technology and service demands.

Working with management, NWSEO has designed and the parties have recently implemented six new pilot projects at NWS headquarters, at the Southern Region headquarters, and at Forecast Offices in Tampa, New Orleans, Sterling, Virginia and Charleston, West Virginia. The pilot projects are developing and testing new service delivery models, such as integrating environmental data from other NOAA agencies into NWS products; providing enhanced, face-to-face decision support to state and local emergency management personnel; and developing new mesocale forecasting models and techniques that may enable the NWS to provide pinpoint, highly localized warnings of severe weather outbreaks hours in advance. As part of these pilot projects, the NWS created new positions called “Emergency Response Meteorologist.” Hurricane Isaac provided the first real-time test of the value of the new positions. Before and during the storm, these new “ER-Mets” were deployed from the new Southern Regional Operations Center and the Tampa and New Orleans Forecast Offices to 16 different FEMA, state and local Emergency Operations Centers, as well as to the Multi-agency Communications Center at the Republican National Convention, to supply face-to-face decision support service. An official from the Secret Service Intelligence Division wrote to the NWS that:

I found it very helpful to have someone on hand from the NWS to provide up to date information regarding the hurricane . . . It was invaluable to have you on the scene, when we all received a tornado warning on our Blackberries. You were able to say that we were in fact not in any danger because that particular storm was to the north of us.

These pilot projects build on the success of an aviation weather pilot project recently tested at New York, Chicago and Atlanta. By adding three additional forecasters at each location (one per shift) who were dedicated to providing additional weather support to the FAA, weather-related air traffic delays were reduced by 50% immediately.

We have agreed to alter traditional staffing models in order to conduct these pilot projects. But if these pilots are successful, the NWS will require more, not fewer, forecasters to provide these enhanced services nationwide.

One of the office realignment options that the Council recommended evaluating was to regionalize the preparation of the routine public forecasts. The Council wrote (at 55) that:

The most important benefit from the regionalization of the public weather forecast tasks is to diminish the chances of the local staff being

overwhelmed during severe weather outbreaks. The extra time at the local offices can be invested in the increasingly important role of communicating impact-weather decision support. More time would be available for training.

The Council noted (at 59) that such a restructuring “could open up positions for new hiring,” presumably at new regional forecast centers. However much NWSEO would welcome a lightening of the workload, more training time, and greater employment opportunities, we do not believe that regionalization of public forecast preparation is practical or would actually mitigate the local workload.

Under the Council’s suggestion, many products, such as marine and aviation forecasts, would continue to be produced at the local level. WFO forecasters do not forecast specific products, they forecast specific meteorological parameters. This one set of forecasted winds is then used by all forecast products, including marine, aviation or public forecasts. Therefore, having two entities forecast a parameter such as winds for the same area would take twice the work and lead to inconsistent forecasts. In addition, these forecast parameters are intertwined. For instance, forecasts of the winds will impact forecasts of temperatures or sky cover.

Furthermore, more than 80 percent of the workload of creating a forecast involves the forecaster orienting herself to the weather and developing an awareness of weather conditions. The forecaster in the local office will need to do this anyway whether they are doing local forecasting or preparing to issue severe weather warnings and advisories. Very little time is spent on actually adjusting model output or post editing text products. The ability of forecasters to maintain situational awareness and accurately identify and predict severe weather can be directly correlated to the significant number of man hours that are spent studying observational and remote sensing data, analyzing the synoptic weather scenario, and comparing numerical weather prediction models from varied sources, which is all a part of preparing the public forecast. Any savings from consolidated forecasting would be minimal, and would come at a risk of inconsistent forecasts.

The Council also suggested that regionalized forecasters “would easily be able to produce a forecast that is just as accurate as one produced locally.” (at 55). But this unsupported assumption is contradicted earlier on the same page when the Council correctly notes that “[l]ocal knowledge of phenomena, terrain and infrastructure is an important factor in forecasting, and needs to be accounted for in any potential regionalization of functions.”

Conclusion

Thank you for inviting the National Weather Service Employees Organization to participate in today's hearing. We hope the information we have provided in this testimony and previously assists the Subcommittee in ascertaining the true status of the NWS's financial health, and what the agency needs in the future to respond to maximize new science and technology and to respond to increasing societal demands for time critical weather information. The employees of the National Weather Service appreciate the bipartisan support that they have always received from the Members of the House Science Committee.