EVALUATION REPORT

Evaluation of NWS Staffing Impacts on Operational Response to High-Impact Weather Events

REPORT NO. OIG-27-004-I

November 4, 2026

U.S. Department of Commerce
Office of Inspector General
Office of Audit and Evaluation

UNITED STATES DEPARTMENT OF COMMERCE
Office of Inspector General
Office of Audit and Evaluation
Washington, DC 20230

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MEMORANDUM FOR: Dr. Neil Jacobs
Under Secretary of Commerce for Oceans and Atmosphere
and NOAA Administrator
National Oceanic and Atmospheric Administration

FROM: Arthur L. Scott Jr.
Assistant Inspector General for Audit and Evaluation

SUBJECT: *Evaluation of NWS Staffing Impacts on Operational Response to High-Impact Weather Events*
Report No. OIG-27-004-I

Attached is the final report on our evaluation of National Weather Service staffing in 2025. We will post the report on our website per the Inspector General Act of 1978, as amended (5 U.S.C. §§ 404, 420).

We appreciate your staff's cooperation and professionalism during this evaluation.

Attachment

Evaluation of NWS Staffing Impacts on Operational Response to High-Impact Weather Events

Evaluation Report OIG-27-004-I
November 4, 2026

➤ **What We Evaluated |** Our objective was to determine whether staffing levels, hiring limitations, and operational practices at National Weather Service (NWS) field offices have impacted the agency's ability to effectively respond to high-impact weather events through timely forecasts, warnings, and impact-based decision support services.

➤ **Why This Matters |** The U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) is responsible for science and stewardship activities related to weather, ocean, and coastal environments. NOAA's NWS provides data, forecasts, and impact-based decision support services to protect life and property. NWS has 122 weather forecast offices. In 2025, there were also 13 river forecast centers and 9 national centers, in addition to other specialized service offices. We refer to the centers, service offices, and weather forecast offices collectively as NWS field offices.

We identified challenges related to NWS staffing in our fiscal year (FY) 2024 *Top Management and Performance Challenges* report. We noted that NWS hiring had not kept pace with employee departures, leading to a vacancy rate of about 5 percent. Starting in January 2025, NWS staffing was further affected by a series of executive orders, memorandums, administration-directed separation programs, and termination of probationary employees. By the end of FY 2025, the NWS vacancy rate exceeded 16 percent.

➤ **What We Found |** We found that overall, staffing-related challenges did not have a measurable impact on NWS's ability to respond to high-impact weather events in FY 2025. NWS's performance forecasting and warning for high-impact weather events in FY 2025 was comparable to or better than performance for the prior 4 years. Our analysis showed no significant degradation in the mission-essential support provided by weather forecast offices, in terms of both the timeliness of warnings and the provision of impact-based decision support services. We observed that much of weather forecast offices' ability to respond to severe weather events was aided by operational adjustments made to mitigate their staffing challenges.

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Introduction

The U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) is responsible for science and stewardship activities related to weather, ocean, and coastal environments. NOAA's National Weather Service (NWS) provides data, forecasts, and impact-based decision support services (IDSS)[1] to protect life and property. NWS has 122 weather forecast offices (WFOs), each led by a meteorologist in charge (MIC) with a team of management staff, meteorologists, hydrologists, and maintenance technicians for electronic and information technology systems. In 2025, there were also 13 river forecast centers[2] and 9 national centers,[3] in addition to other specialized service offices. We refer to the centers, service offices, and WFOs collectively as NWS field offices.

WFOs generate forecast products for their local area, alert the public, and provide IDSS to national, state, and local core partners[4] in the emergency management community. Each WFO operates as part of a larger network within the NWS weather forecast process. They use analyses and forecasts produced by national centers and specialized offices, such as the National Hurricane Center or the Weather Prediction Center, to provide tailored products related to aviation, marine and space operations, flooding, hurricanes, and other weather events.

NWS meets the requirements of the Government Performance and Results Act (GPRA) by tracking and reporting metrics and goals for different types of forecasts and warnings. These metrics typically address timeliness or accuracy. For example, the GPRA metric for flash flood warning[5] lead time defines how far in advance a warning should be issued before a flash flood occurs. NWS's GPRA goal for this metric is 65 minutes.

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[1] IDSS provides information and interpretive services to inform core partners' decisions when weather, water, or climate directly affect life and property.

[2] River forecast centers provide river and flood forecasts and warnings as well as basic hydrologic information. *See* National Oceanic and Atmospheric Administration. "River Forecast Centers." Accessed March 31, 2026.

[3] National centers provide national and international weather guidance products. *See* NOAA. "National Centers for Environmental Prediction." Accessed March 30, 2026.

[4] NWS core partners are government and nongovernment entities that are directly involved in the preparation, dissemination, and discussion of weather, water, or climate information to support their decision-making.

[5] A flash flood is a rapid and extreme flow of high water into a normally dry area, or a rapid water level rise above a predetermined flood level, beginning within 6 hours of a trigger event like intense rainfall or dam failure. A flash flood warning indicates that flash flooding is in progress, imminent, or highly likely. *See* NOAA. "Flash Flood." Accessed March 30, 2026.

Staffing Challenges and 2025 Policy Changes

We identified challenges related to NWS staffing in our fiscal year (FY) 2024 *Top Management and Performance Challenges* report.[6] In that report, we noted that NWS hiring had not kept pace with employee departures,[7] leading to a vacancy rate of about 5 percent.

Starting in January 2025, a series of executive orders (EOs) and memorandums affected NWS employee retention and hiring:[8]

- Hiring freeze memorandum – Directed executive branch agencies to freeze hiring of civilian employees.[9]
- Office of Personnel Management (OPM) merit hiring memorandum – Directed agencies to implement selection criteria based on merit and competence. To comply with the merit hiring memorandum, NWS ceased hiring activities until the new criteria were developed.[10]

By April 2025, administration-directed separation programs[11] and terminations of probationary employees led to the departure of 541 employees, which was about 12 percent of NWS's workforce. Of the 541 departed employees, 263 were in positions that directly supported forecasting.[12] By the end of FY 2025, the NWS vacancy rate exceeded 16 percent.

NWS started FY 2025 (October 2024 – September 2025) with 4,380 full-time employees.[13] Figure 1 shows the decline in NWS staffing that began in early 2025.

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[6] Commerce OIG. October 12, 2023. *Top Management and Performance Challenges Facing the Department of Commerce in Fiscal Year 2024*, OIG-24-002, 20.

[7] Commerce OIG, *Top Management Challenges FY 2024*, 20.

[8] In addition, Executive Order 14343 terminated the employee collective bargaining agreement with NWS and effectively terminated the NWS federal employee union. *See* Executive Office of the President. August 28, 2025. Executive Order 14343: *Further Exclusions from the Federal Labor-Management Relations Program*. Based on our fieldwork, there was no evidence that this had a negative effect on NWS employees or operations.

[9] Office of Management and Budget and Office of Personnel Management. January 20, 2025. *Federal Civilian Hiring Freeze Guidance*.

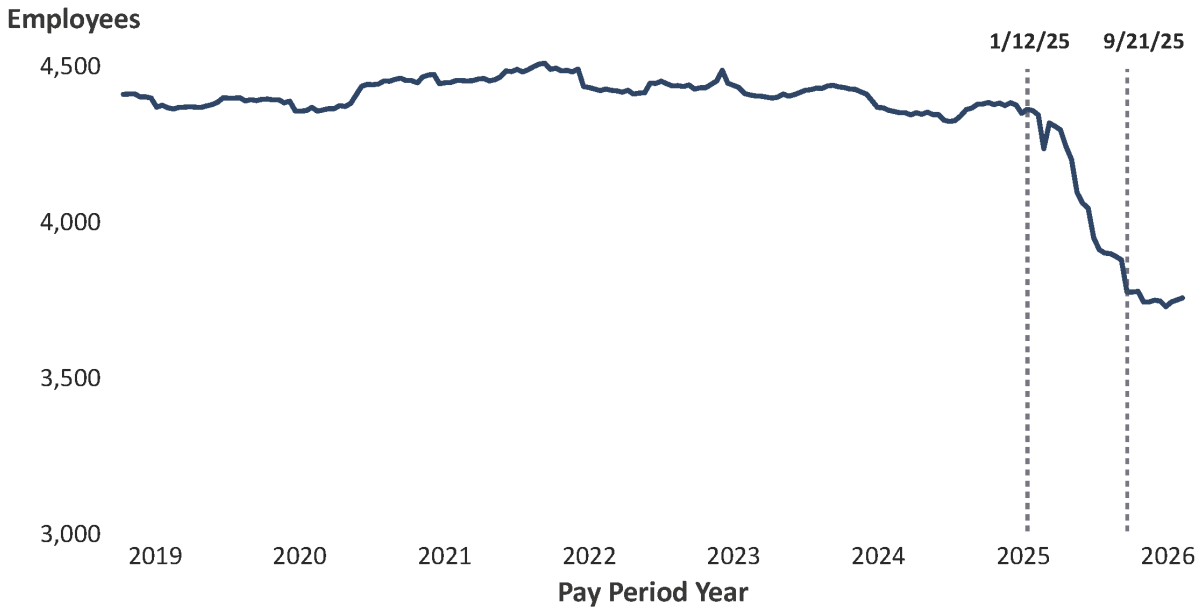
[10] OPM. May 29, 2025. *Merit Hiring Plan*.

[11] Deferred resignation, voluntary early retirement, and voluntary separation incentives were offered in many executive branch agencies in 2025, including NOAA.

[12] These positions included meteorologists, hydrologists, and physical scientists.

[13] Based on our analysis of National Finance Center data.

Figure 1. NWS Staff Reductions in 2025 Compared to Historical Levels



Source: OIG analysis of National Finance Center data

Note: The pay period year is the year in which the pay period falls.

NWS Actions to Mitigate Staff Reductions

Voluntary personnel moves and hiring to fill critical gaps

In April 2025, to maintain continuity of services at WFOs, NWS requested approval from NOAA leadership to (1) execute temporary duty assignments for employees willing to be detailed to another location, (2) advertise reassignment opportunity notices to fill 155 critical gaps, and (3) exempt 126 vacant mission-critical positions from the hiring freeze.

After receiving approval for these measures, NWS planned to advertise its job announcements. However, in May 2025, OPM issued merit hiring guidance that led NWS to rewrite the job announcements, develop new assessment questionnaires, and modify selection criteria. According to NWS officials, the posting of job announcements for mission-critical positions was further delayed due to process changes that required additional approval from OPM.

Following these approvals, NWS submitted a direct-hire authority request. In August 2025, OPM approved the request, which authorized NWS to hire up to 450 mission-critical employees. From January 28, 2025, through September 30, 2025, NWS hired no new personnel. Between October 1, 2025, and January 26, 2026, NWS hired 78 personnel.

Operational adjustments

In April 2025, NWS directed its WFOs to implement options to mitigate the impacts of staffing shortfalls, specifically with respect to the vacancy rates of forecasting staff. Among the options were:

- Reducing the number of shifts scheduled and filled per day.
- Reducing or canceling noncritical outreach, including social media posts and engagements such as guest presentations at schools.
- Shifting some core partner support to virtual instead of in-person.
- Adjusting weather balloon launch times to align with shift schedules. Reducing or eliminating balloon launches (normally two per day).[14]
- Reducing service operations: implementing a support network among WFOs in nearby locations to share the workload for some products and services, providing a stopgap during critical staffing times, or enhancing staffing during significant weather events.

These adjustments, which began in April 2025, authorized WFOs to close overnight, alter work hours, and modify shift assignments to ensure adequate coverage during high-impact weather events. According to NOAA documentation, this was the first time in at least 30 years that some WFOs were allowed to close when they lacked staff to sustain 24/7 coverage. NWS also used temporary assignments and permanent voluntary reassignments to move employees into field offices where shortfalls could potentially impact operations.

➤ Objective

Our objective was to determine whether staffing levels, hiring limitations, and operational practices at NWS field offices have impacted the agency's ability to effectively respond to high-impact[15] weather events through timely forecasts, warnings, and IDSS. To meet our objective, we examined NWS performance in FY 2025. Appendix 1 details our scope and methodology.

[14] Weather balloons, or radiosondes, provide upper-air data for weather forecasts, research, and historical climatology. They are launched from 92 stations in North America and the Pacific Islands. *See* National Weather Service. "Upper Air." Accessed June 3, 2026.

[15] A high-impact event is "any weather- or water-dependent event that significantly impacts safety, health, the environment, economic productivity, or homeland security." *See* NWS. "National Weather Service Policy Directive 10-24." Accessed July 21, 2026.

Finding

Summary: We found that overall, staffing-related challenges did not have a measurable impact on NWS's ability to respond to high-impact weather events in FY 2025. NWS's performance forecasting and warning for high-impact weather events in FY 2025 was comparable to or better than performance for the prior 4 years. For a judgmental sample of responses to high-impact weather events, our analysis showed no significant degradation in the mission-essential support provided by WFOs, in terms of both the timeliness of warnings and the provision of IDSS. We observed that much of WFOs' ability to respond to severe weather events was aided by operational adjustments made to mitigate their staffing challenges.

Staffing Challenges Did Not Have a Measurable Impact on NWS Performance in FY 2025

We reviewed NWS performance metrics related to forecasting and warning for high-impact events, assessed a judgmental selection of seven WFOs' responses to a specific high-impact weather event in 2025, and surveyed core partners' perspectives on the selected WFOs' provision of IDSS.

We found that NWS forecast or warning performance metrics were comparable to, or better than, prior years' performance. For the WFOs and high-impact weather events we selected, there were no significant impacts to the timeliness of warnings or provision of IDSS. We observed that operational adjustments WFOs made to address their staffing challenges likely contributed to this performance.

Forecast and Warning Performance in FY 2025

We reviewed selected GPRA metrics as reported by NWS for high-impact weather events. NWS GPRA metrics are nationwide averages of data for each warning metric. Overall, NWS's performance in FY 2025 was comparable to or better than performance for the prior 4 years. Its FY 2025 performance in 3 out of 7 metrics did not meet GPRA goals but was better than the previous 4 years.[16] Its performance exceeded GPRA goals for 3 out of 7

[16] These three metrics were tornado warning lead time, tornado warning accuracy, and winter storm warning accuracy.

metrics.[17] Its performance for 1 of the 7 metrics did not meet the GPRA goal but was better than 2 of the 4 previous years.[18] Table 1 provides the comparisons.

Table 1: NWS GPRA Metrics for High-Impact Weather Events

GPRA Metric	Standard or Goal	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Tornado warning lead time	13 minutes or higher	9	10	10	10	11
Tornado warning accuracy	72 percent or higher	62	63	63	65	70
Tornado warning false alarm ratio	71 percent or lower	72	66	70	69	68
Flash flood warning lead time	65 minutes or higher*	63	51	57	77	60
Flash flood warning accuracy	76 percent or higher	77	74	74	82	79
Winter storm warning lead time	20 hours or higher	22	23	24	22	27
Winter storm warning accuracy	90 percent or higher	84	83	81	77	85

Source: OIG analysis of NWS data

* The flash flood performance goal of 65 minutes is the average lead time for all flash flood warnings issued during an event, not a success metric for each individual warning. For two specific high-impact events below, we applied professional judgment in our analysis of WFOs' flash flood warning performance.

Performance for Specific High-Impact Events

To understand performance on a more granular level, we selected a judgmental sample of WFOs that had staffing shortages in 2025. We then assessed WFO performance for a specific high-impact weather event that commonly occurs at each WFO, like a stress test scenario. We reviewed data on the timeliness (i.e., lead time) of WFOs' forecasts and warnings and their provision of IDSS for the specific events. We also examined the adequacy of personnel supporting the event (whether on-site or virtual) and the use of

[17] These three metrics were tornado false alarm ratio, flash flood warning accuracy, and winter storm warning lead time.

[18] This metric was flash flood warning lead time.

overtime hours and mutual support provided by other WFOs through agreements. Table 2 summarizes our analysis of that information.

Table 2: Selected WFO High-Impact Weather Event Performance

WFO	Event Type	Date	Lead Time Metric Met?	IDSS Support Provided?	Adequate Personnel Supporting the Event?	Overtime Extended Hours or Mutual Support Used?
Anchorage, AK	Winter storm	Jan 2025	Yes	Yes	Yes	No*
Hanford, CA	Flash flood	Feb 2025	**No**†	Yes	**No**	Yes*
Gaylord, MI	Winter storm	Feb 2025	Yes	Yes	Yes	No*
Rapid City, SD	Severe thunderstorm outbreak with one tornado	April 2025	**No**‡	Yes	Yes	Yes
Bismarck, ND	Tornado outbreak	June 2025	**No**	Yes	Yes	Yes
Pendleton, OR	Fire weather support	June 2025	Yes§	Yes	Yes	No
Des Moines, IA	Flash flood	July 2025	**No**†	Yes	Yes	Yes

Source: OIG analysis of WFO data

* These cases preceded the NWS operational adjustments announced in April 2025.

† The GPRA flash flood performance goal of 65 minutes is the average lead time for all flash flood warnings, not a success metric for each individual warning.

‡ There is no lead time goal for severe thunderstorm warnings. The WFO did not issue a warning for the tornado; thus we assessed it did not meet its lead time goal for the event.

§ There is no GPRA goal for red flag warnings (a combination of a critical fire weather pattern and critically dry fuels), but NWS criteria for issuance is greater than 48 hours.

We found that four of the seven selected WFOs did not meet warning lead time goals for their selected high-impact weather event. One of the four (Rapid City) missed a tornado warning, but not due to staffing challenges (see discussion below). The WFOs were able to provide IDSS for their events. In all but one case, the WFOs managed to support the event with adequate personnel. This was accomplished by adjusting shift coverage to surge for the demands of the event and the use of overtime and mutual support from other WFOs.

A single event cannot be used as an indicator of performance beyond that event. However, these cases may provide insights into the impacts of reduced staffing and NWS's operational adjustments on a WFO's ability to adapt to demand surges during high-impact weather events.

Anchorage Forecast Office, Alaska – Winter Storm Warning

- Warning issued: 1 winter storm warning
- Forecaster staff: 29 meteorologists (30 funded)
- Total staff at time of event: 40 (48 funded) [19]
- Operational adjustments: No changes to staff schedules
- IDSS: accomplished from WFO

Event: Between January 11, 2025, and January 12, 2025, a strong low-pressure system moved into the eastern Bering Sea, peaking in strength as it moved up the Kuskokwim Delta. Damaging winds were observed across parts of the Turnagain Arm, Kenai Peninsula, Matanuska Valley, and Anchorage, Alaska. Snow fell in higher elevations, with multiple feet recorded in Thompson Pass.

Staffing and Operational Adjustments: In January 2025, the Anchorage WFO's staffing included 29 meteorologists compared with 30 funded meteorologist positions. For this event, it was reported that no changes to the staff schedules were needed during the days leading up to the storm. Additional staff that were either training or working on other projects were able to assist with operations as needed.

Performance: The Anchorage WFO issued one winter storm warning for snow and blowing snow at Thompson Pass. The lead time for the warning was 21.9 hours in advance of the winter storm. This exceeded the GPRA goal for winter storm warnings by 1.9 hours.

Hanford Forecast Office, California – Heavy Rain and Flash Flooding

- Warning issued: 1 flash flood warning
- Forecaster staff: 13 meteorologists (18 funded)
- Total staff at time of event: 14 (21 funded) [20]
- Operational adjustments: overtime, extended shifts, added coverage

[19] By September 2025, the Anchorage WFO's total staffing level dropped to 31 people.

[20] In July 2025, the Hanford WFO's total staffing level dropped to 9 people.

- IDSS: provided on site at the World Agricultural Expo and virtually to the Fresno, California, emergency operations center

Event: Between February 12, 2025, and February 14, 2025, a low-pressure system moved across California, bringing damaging wind gusts greater than 60 miles per hour (mph), downed trees and power lines, and large rain accumulations leading to flash flooding. The Kern River Valley received 1.5 to 2.5 inches of rainfall, while higher elevations in the area received 4 to 6 inches.

Staffing and Operational Adjustments: In February 2025, Hanford's staffing included 13 meteorologists compared with 18 funded meteorologist positions for the WFO. Due to leave and other factors, just 11 meteorologists were available for duty on the first day of the event. They included the Warning Coordination Meteorologist, who provided on-site IDSS at the World Agriculture Expo in Tulare, California, and provided IDSS virtually to the Fresno, California, emergency operations center for the duration of the event. On the second day, 10 meteorologists were available for duty. The WFO added another forecaster on the second day to assist with the workload and extended shifts, accruing a total of 27 hours of overtime during the event. There were no managers able to work at the WFO, which led us to conclude that there was inadequate personnel supporting the event.

Performance: The Hanford WFO issued one flash flood warning for West Central Mariposa County and Northeastern Merced County. The lead time for the warning was 29 minutes in advance of the flooding verified[21] on the Merced River. This fell short of the GPRA goal for flash flood warnings by 36 minutes.

Gaylord Forecast Office, Michigan – Winter Storm Warning

- Warning issued: 5 winter storm warnings
- Forecaster staff: 16 meteorologists (16 funded)
- Total staff at time of event: 21 (22 funded) [22]
- Operational adjustments: no changes to staff schedules
- IDSS: accomplished from WFO

Event: From February 15, 2025, to February 18, 2025, a weather boundary stretched across eastern Michigan, causing extended periods of snowfall. Northeasterly winds drew moisture from Lake Huron, resulting in increased snowfall across lower Michigan. As the

[21] Verification is the process of matching warnings, watches, and forecasts with corresponding weather observations by NWS's spotter network.

[22] By July 2025, the Gaylord WFO's total staffing level dropped to 17 people.

winds shifted to the Northwest, the heaviest snowfall occurred west of interstate 75. Over a 48-hour period, the region received 1 to 2 feet of snow, creating hazardous travel conditions.

Staffing and Operational Adjustments: In February 2025, the Gaylord WFO's staffing included 16 meteorologists compared with 16 funded meteorologist positions. The WFO handled the event with a typical staffing profile at the time, which was three forecasters on the day shift and two forecasters on the evening and overnight shifts.

Performance: The Gaylord WFO issued five winter storm warnings for snow and blowing snow for Antrim and Kalkaska counties. Three of them were verified, with an average lead time of 29 hours. This exceeded the GPRA goal for winter storm warning by 9 hours.

Rapid City Forecast Office, South Dakota – Severe Thunderstorm Outbreak

- Warnings issued: 11 severe thunderstorm warnings; no tornado warning issued
- Forecaster staff: 13 meteorologists (18 funded)
- Total staff at time of event: 17 (26 funded) [23]
- Operational adjustments: overtime, adjusted and extended shifts, resumption of weather balloon launches
- IDSS: accomplished from WFO

Event: Starting on April 27, 2025, a line of strong thunderstorms moved through south central South Dakota during the evening hours, producing severe weather, hail, damaging winds, and one tornado. The storms damaged a water supply center, storage facilities, and homes in Saint Francis, South Dakota, and Rosebud, South Dakota, with reports of six people injured. Local storm reports in the area indicated wind gusts over 65 mph. The tornado was later confirmed with a maximum wind speed of 98 mph.[24]

Staffing and Operational Adjustments: In April 2025, the Rapid City WFO's staffing included 13 meteorologists compared with 18 funded meteorologist positions. For this event, the MIC, in anticipation of a severe weather operations scenario, staffed critical positions for IDSS by extending evening shifts into overnight hours covering the storm event. No other staffing adjustments were needed. Also, because of staffing shortages, the WFO had stopped launching weather balloons to obtain upper air observations. However, due to the

[23] In November 2025, the Rapid City WFO's total staffing dropped to 13 people.

[24] NWS. "April 28, 2025 Saint Francis/Rosebud, SD Tornado." Accessed March 6, 2026.

anticipated severe weather threat, the WFO launched weather balloons at three different times on April 27—the only three it launched that month.

Performance: The Rapid City WFO issued 11 severe thunderstorm warnings[25] covering five counties. Five of the warnings were verified, with an average lead time of 25 minutes. These warnings were issued in accordance with NWS internal guidance, which does not specify a lead time performance goal for thunderstorms. While the WFO did not issue a tornado warning, one of its severe thunderstorm warnings indicated the possibility of a tornado. A tornado was later confirmed by post-storm analysis. We concluded that this was a missed tornado warning. However, we attribute this miss to the unique difficulties of this storm forecast: this was a fast-developing storm system and a mountain ridge line prevented complete weather radar coverage of the storm area, which made it difficult for forecasters to see the formation signature of the tornado. We did not find evidence that the WFO's staffing challenges contributed to the missed tornado warning.

Bismarck Forecast Office, North Dakota – Tornado Outbreak

- Warnings issued: 15 tornado warnings
- Forecaster staff: 15 meteorologists (17 funded)
- Total staff at time of event: 19 (24 funded) [26]
- Operational adjustments: overtime, extended shifts, recalled forecaster
- IDSS: accomplished from WFO

Event: On June 20, 2025, late afternoon and evening thunderstorms brought extreme winds, large hail, and multiple tornadoes across southern North Dakota. By early evening, strong wind gusts began, including one measured at 94 mph.

Staffing and Operational Adjustments: In June 2025, Bismarck's staffing included 15 meteorologists compared with 17 funded meteorologist positions for the WFO. On the day of the event, the WFO surged its on-duty staff as severe weather developed. It extended some shifts with overtime and recalled a forecaster from a scheduled day off. In total, nine shifts started early or were extended. The MIC worked a total of 14.5 hours, and another forecaster worked 17 hours that day.

Performance: The Bismarck WFO issued 15 tornado warnings for this event. Seven of them were verified, with an average lead time of 11.5 minutes. This exceeded NWS's national

[25] NWS issuance criteria for severe thunderstorm warnings include the indication of wind gust equal to or greater than 50 knots, hail size of one inch in diameter or larger, and/or the potential for tornado development. *See* NWS. "National Weather Service Instruction 10-511." Accessed August 3, 2026.

[26] By the end of December 2025, the Bismarck WFO's total staffing dropped to 15 people.

average of 11 minutes in FY 2025. However, the WFO fell short of the GPRA goal for tornado warning lead time by 1.5 minutes.[27]

Pendleton Forecast Office, Oregon – Fire Weather Support

- Warnings issued: red-flag warning and spot forecast
- Forecaster staff: 13 meteorologists (19 funded)
- Total staff at time of event: 17 (26 funded) [28]
- Operational adjustments: no changes to staff schedules
- IDSS: fire weather briefing held with core partners

Event: On June 11, 2025, a wildfire started near Rowena, Oregon, and quickly spread uphill towards The Dalles, Oregon. Dry, warm, and breezy conditions assisted the wildfire's spread. The fire caused numerous evacuations in and around Rowena, Oregon, and Chenowith, Oregon. A total of 56 residential structures and 91 additional structures, including sheds, barns, and shops, were destroyed by the fire. The fire also caused all lanes of Interstate 84 between mile posts 64 and 82 to be closed overnight.

Staffing and Operational Adjustments: In June 2025, Pendleton's staffing included 13 meteorologists compared with 19 funded meteorologist positions for the WFO. Due to its reduced staff, the WFO was closed from 12:15 a.m. to 6:00 a.m. and ran three shifts thereafter. On June 11, the Seattle WFO provided mutual aid during the closed hours, and on June 12, the Portland WFO provided support during the closed hours. The Pendleton WFO reported no staffing changes to its shifts in response to the fire.

Performance: The Pendleton WFO issued a red-flag warning on June 8, three days before the event. IDSS consisted of a fire weather briefing held with core partners on June 10. A spot weather forecast[29] was also produced on June 11 for the Oregon State Fire Marshal. This nonroutine, near-term forecast provided targeted, actionable information to support incident management.

[27] Additionally, the Bismarck WFO's warning accuracy for this event was reported to be 75 percent, which exceeded the 72 percent GPRA goal. Its 53 percent false alarm ratio for this event was significantly better than the GPRA goal (less than 71 percent) and NWS's average false alarm rate (68 percent) in FY 2025.

[28] By the end of September 2025, the Pendleton WFO's total staffing level dropped to 15 people.

[29] "The spot weather forecast supports wildfire and prescribed fire operations, natural resource management, marine incidents, search, and rescue operations, hazardous materials incidents, and other threats to public safety." *See* National Wildfire Coordinating Group. "NWCG Guide to Fire Weather Forecasts: Types of Fire Weather Forecasts." Accessed July 10, 2026.

Des Moines Forecast Office, Iowa – Flash Flooding

- Warnings issued: 5 flash flood warnings
- Forecaster staff: 11 meteorologists (16 funded)
- Total staff at time of event: 15 (22 funded) [30]
- Operational adjustments: overtime, extended shifts, mutual aid agreement
- IDSS: accomplished from WFO

Event: In the late evening of July 19, 2025, thunderstorms brought damaging winds and sustained rainfall of up to 3 inches per hour. Downpours overwhelmed drainage systems, leading to flash flooding in multiple areas. Rainfall subsided through the next morning, but a second round of slow-moving thunderstorms and heavy rainfall produced street and building flooding.

Staffing and Operational Adjustments: In July 2025, Des Moines's staffing included 11 meteorologists compared with 16 funded meteorologist positions for the WFO. The WFO extended or added seven duty shifts for the event. Seven employees worked overtime, and two shift periods were adjusted to have better personnel coverage. In accordance with the operational adjustments in April 2025, the WFO had agreements with the Duluth, Minnesota, WFO to share workload and responsibilities for products and services. During this event, the Duluth WFO generated and maintained one aviation forecast product on behalf of the Des Moines WFO.

Performance: The Des Moines WFO issued five flash flood warnings covering 10 counties. The average lead time for the three verified warnings was 29 minutes, which fell short of the GPRA goal by 36 minutes. The WFO also issued two tornado warnings, but because these phenomena were not verified, there were no official performance measures for them.

Survey of WFO IDSS Core Partners

Core partners are organizations that receive and use NWS weather, water, or climate information to support their decisions.[31] Examples of core partners are the Federal Emergency Management Agency, state and local government leadership, state and local emergency managers, law enforcement, and media.

We administered a nonstatistical survey to 28 core partners of the WFOs we selected in our sample discussed above. We asked them to rate their respective WFO's ability and

[30] In July 2025, Des Moines's total staffing level reached its lowest at 15 people just prior to the event and remained at 15 through the end of 2025.

[31] NWS. "National Weather Service Instruction 10-2401." Accessed May 14, 2026.

availability to provide IDSS, as well as the level and quality of IDSS provided to them in 2025. We received 18 responses and determined that:

- 12 out of 18 respondents stated that their WFO's ability to support significant weather events increased or stayed the same in 2025.
- 15 out of 18 respondents stated that their WFO's availability to support community events increased or stayed the same in 2025.
- 14 out of 18 respondents stated that their WFO's frequency of necessary updates and/or products and the quality of support increased or stayed the same in 2025.

These responses correlate with the selected WFO's provision of IDSS for *episodic* IDSS, which includes support services for high-impact weather events. Additionally, 9 of 18 respondents indicated that their respective WFO's availability to support outreach or education engagements (that is, *routine* IDSS) had decreased in 2025. The reduction of such support was one of the operational adjustments that NWS authorized in April 2025.[32]

➤ Conclusion

Nationwide, NWS forecast or warning performance metrics in 2025 were comparable to, or better than, prior years.

Three of the selected WFOs met their lead time performance goals for issuing warnings in response to the high-impact events we examined. For the four WFOs that did not meet lead time goals, two of the missed goals were warnings for flash floods from the Hanford, California, and Des Moines, Iowa, WFOs.

Hanford issued just one flash flood warning in response to its severe weather event. Des Moines issued five flash flood warnings. As we noted earlier, the flash flood GPRA goal is an average lead time for all flash flood warnings issued during an event, not a success metric for each individual warning. While we concluded that Hanford did not have adequate personnel supporting the event, we do not believe its single missed warning is a reliable indicator of the WFO's performance. For Des Moines, we did not find evidence that its staffing shortages were a causative factor for not meeting its average warning lead time goal for flash floods.

Rapid City, South Dakota, did not issue a warning for a tornado that was only verified via post-storm analysis. However, we concluded that this missed warning was due to the

[32] The survey also included an optional text response section for core partners to provide feedback on WFO support. See appendix 2 for a sample of those responses.

challenging nature of the weather event and a lack of radar coverage rather than staffing challenges.

Bismarck, North Dakota, was the other WFO that missed its GPRA goal for average tornado warning lead time. However, Bismarck's performance was still better than the NWS average nationwide. For all seven of the high-impact events we examined, we concluded that the WFOs were able to adequately provide IDSS to core partners.

We also surveyed WFO core partners, who depend on timely NWS products. Among surveyed partners, most reported that their WFO's support for significant weather events, community activities, and the frequency and quality of necessary updates either improved or remained the same in 2025. However, half of the surveyed partners indicated that availability for outreach and educational engagements decreased, reflecting the operational adjustments NWS authorized in April 2025.

While staffing levels and operational adjustments play a critical role in NWS's ability to respond to high-impact weather events, it is important to recognize that forecasting accuracy and effectiveness are influenced by a complex interplay of factors beyond staffing alone. Weather is inherently variable and shaped by dynamic atmospheric conditions. The quality of forecasts depends on timely access to model data, radar and satellite imagery, surface and upper-air observations, and the integration of local effects such as microscale phenomena and terrain features. The expertise of forecasters in interpreting these diverse inputs and the WFO's ability to make staffing and operational adjustments when the situation requires ensure that NWS can deliver reliable warnings and IDSS even when staffing challenges arise.

Overall, we could not directly link low staffing levels to WFOs' negative performance (to the extent that it occurred). However, we did observe that much of the WFOs' ability to respond to these severe weather events was aided by operational adjustments made in response to their staffing challenges.

Summary of Agency Response

NOAA provided technical comments on the draft report. We considered these comments and revised the report where appropriate.

Appendix 1. Scope and Methodology

Our evaluation objective was to determine whether staffing levels, hiring limitations, and operational practices at NWS field offices have impacted the agency's ability to effectively respond to high-impact weather events through timely forecasts, warnings, and IDSS. To accomplish our objective, we reviewed NWS performance metrics related to forecasting and warning for high-impact events nationwide, assessed a judgmental selection of seven high-impact weather events, and surveyed core partners' perspectives on the selected WFOs' provision of IDSS.

To review performance metrics, we:

- Reviewed benchmarks associated with GPRA, as amended, for significant reportable weather phenomena
- Reviewed annual staffing and overtime data
- Reviewed NWS metrics for significant reportable weather phenomena
- Interviewed the NWS deputy assistant administrator, regional directors, chief operating officer, chief financial officer, and future operating model implementation leader
- Reviewed policies related to staffing operations and agency actions

To assess the selected WFOs' responses to specific high-impact weather events, we:

- Analyzed National Finance Center timecard data to identify staffing-challenged WFOs
- Interviewed MICs at selected WFOs to understand unique geographic forecast challenges and operational staffing adjustments and to learn about IDSS challenges
- Selected WFO high-impact weather events from the NOAA severe storm database[33]
- Examined evidence of WFO performance and the provision of IDSS for the high-impact weather events

To learn about the perspectives of core partners, we:

- Reviewed applicable NWS policies for IDSS
- Developed and administered a nonstatistical survey of core partners to obtain perspectives on the selected WFOs' provision of IDSS

[33] National Centers for Environmental Information. "Storm Events Database." Accessed July 20, 2026.

We relied on computer-processed National Finance Center data to support our findings and conclusions. We assessed the reliability of the data by (1) performing electronic testing, (2) reviewing information about the data and the system that produced them, and (3) interviewing NWS officials with knowledge about the data. We found the data to be sufficiently reliable to support our findings and conclusions.

We conducted our evaluation from August 2025 through September 2026 under the authority of the Inspector General Act of 1978, as amended (5 U.S.C. §§ 401-424), and Department Organization Order 10-13, as amended October 21, 2020.

We conducted this evaluation in accordance with *Quality Standards for Inspection and Evaluation* (December 2020) issued by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that the evidence must sufficiently and appropriately support evaluation findings and provide a reasonable basis for conclusions and recommendations related to the objectives. We believe that the evidence obtained provides a reasonable basis for our finding and conclusion based on our review objective.

Appendix 2. Written Responses from the Core Partner Survey

Below is a sample of comments from core partners praising WFOs and expressing concern about IDSS changes. We removed identifying information and edited the comments for clarity and brevity.

Praise:

- We have a great relationship with the WFO.
- The WFO has been extremely valuable to us.
- The WFO team has been exceptional in responding to our requests and has visited our unit to provide detailed explanations of products they can provide.
- Everything we have asked for has been fulfilled.
- Our WFO is a phenomenal partner on our planning team.
- They have not been able to increase joint operations as was planned, but they have not denied any specific requests.
- The WFO has always been top notch and ensures it meets our needs even when funds or staffing are reduced.
- We have had a lot more interaction with the WFO the past year, with increasing quality of support.
- The WFO team has provided critical intel during recent weather events, giving our first responders and community partners opportunities to mitigate damages and losses resulting from weather events.
- Our WFO is and has been an integral part of our emergency management team and is a critical partner in our emergency response, planning, and mitigation efforts in our county.

Comments expressing concern:

- Many decision support services have become slightly delayed, but our WFO staff are fantastic in adapting to circumstances, although I suspect they would struggle to do so long-term.
- Area forecast discussions were curtailed to morning only, with no afternoon or evening update.

- Our partnership and reliance on our WFO remain strong, though our local preparedness and collaboration efforts were negatively impacted by the inability of WFO staff to attend key stakeholder meetings and assist in public education projects.
- Virtual partnering meeting was less beneficial and response time to inquiries has increased this past year.
- NWS staff worked in our state emergency operations center alongside our staff for the last 2 years but the WFO has had to reduce the time it spends here, which was not the plan.
- Participation in a recent tabletop exercise was affected by staffing in the office, as a representative could not attend.
- We are still hoping the WFO will work on location with our staff during normal business hours and during significant events. We remodeled an area and created a space specifically for them. When they were here it was a force multiplier. They make more of a difference for citizens when they are working alongside us.
- The reduction in frequency of items such as the area forecast discussion has decreased the amount of available information for use in making decisions more than once per day.
- Our office has attempted to prioritize event support for events with large outdoor populations, but several outreach and education events had to be canceled due to lack of staffing.

With limited exceptions, the quality of WFO support did not decrease in 2025, according to core partners' comments. However, the availability of their WFO personnel or product updates has at times been negatively impacted. Without exception, all core partners valued their WFO.

REPORT

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