



# SCIENCE ADVISORY BOARD

June 16, 2021

Ben Friedman  
Deputy Under Secretary for Operations,  
Performing the duties of Under Secretary of Commerce for  
Oceans and Atmosphere and NOAA Administrator  
Herbert C. Hoover Building, Room 6811  
14th Street & Constitution Avenue, NW  
Washington, DC 20230

Dear Mr. Friedman:

***Subject: Transmittal of the NOAA Science Advisory Board Statement Concerning the Ongoing NWS Data Dissemination Challenges***

On behalf of the NOAA Science Advisory Board (SAB), I am pleased to transmit the attached statement entitled "EISWG Statement Concerning the Ongoing NWS Data Dissemination Challenges." The SAB approved this statement at its June 11, 2021 virtual meeting.

This statement was crafted by the SAB's Environmental Information Services Working Group (EISWG) due to concerns that the National Weather Service information delivery infrastructure has not been able to keep pace with growing demands for its foundational weather data and severe weather warnings, creating challenges in particular around data dissemination, bandwidth resources, and internet service capabilities. Purpose of the statement is to raise awareness of the issues, provide initial recommendations, and to offer EISWG's support for future solutions. A summary of the recommendations in the statement is as follows:

**Recommendation 1:** *Design and implement an emergency response* – EISWG encourages NOAA leadership to explore and implement strategies leading to increased bandwidth and infrastructure modifications necessary for short-term relief. This may require deviation from the Integrated Dissemination Program (IDP).

**Recommendation 2:** *Strengthen engagement with the broader Weather Enterprise* – Expand the successful engagement with external partners in a public forum to identify immediate, short-term actions all parties can take to provide emergency improvements while the upgrading effort in (1) is underway. EISWG includes representatives across the Weather Enterprise and stands ready to help.

**Recommendation 3:** *Prioritize designing and moving to an appropriate scalable architecture* – The need for an adaptable, scalable architecture is critical as demand is expected to increase at a rate difficult to predict. EISWG encourages exploring options including:

- a) *Leverage Content Delivery Networks (CDN)* – Effectively move demand away from NOAA endpoints for data files that do not change once produced; and
- b) *Accelerate the migration to commercial cloud networks* – EISWG supports the IDP, particularly Phase 4, which will require new resources. EISWG also encourages the NWS to consider reprioritizing efforts to move foundational data produced to the cloud providers.

**Recommendation 4:** *Implement user management, product availability announcements, and training programs* – NWS Office of Dissemination should develop and distribute best practices for data access. This includes developing a real-time notification system for announcements such as product availability, so users are not continually requesting file lists from NWS servers. It would also be beneficial for NWS to institute methods that identify data users to eliminate challenges caused by their data acquisition methodologies and to address concerns with those individuals.

On behalf of the SAB and EISWG, I respectfully submit this statement to you for further action by NOAA. We are happy to offer our support to any efforts intended to increase the enterprise dialogue and co-design optimal short and long-term architectures. Please let me know if you have any questions, comments, or concerns about this report.

Very respectfully,



John Kreider  
Chair, NOAA Science Advisory Board

Attachment: EISWG Statement

CC: Karen Hyun  
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