EISWG Statement Concerning Ongoing NWS Data Dissemination Challenges

11 June 2021

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Today’s Key Challenges ... faced by the National Weather Service (NWS):

- **Keeping Pace** with accelerating scientific and technological advancement
- **Meeting Expanding and Evolving User Needs** in an increasingly information-centric society
- **Partnering with an Increasingly Capable Enterprise** that has grown considerably


**Background**

**IDP Dissemination Sites:**
Boulder, CO, & College Park, MD

**Figure 4:** High Level Gantt chart of IDP Phase 1 - Phase 4
Overview and Overall Chronology

1. **Challenge**: Tremendous growth in demand combined with insufficient growth in delivery infrastructure have resulted in significant production system downtime.


3. **PNS, Nov 20, 2020**: The NWS proposes implementing a 60 cpm limit to >53 websites within IDP Applications, NOMADS, and FTPPRD.

4. **SCN, Mar 17, 2021**: The NWS announces reduced restrictions of 120 cpm limit to only 5 websites within NOMADS and FTPPRD (implemented ~21 April 2021).

5. **SAB, Apr 30, 2021**: EISWG presented initial statement; SAB provided helpful input and asked that we revise accordingly.

*NOMADS: National Operational Model Archive and Distribution System*
Specific SAB Concerns and \textit{EISWG Responses}:

**Concern 1:** Emergency response recommendation (#1) was too prescriptive around funding and resources.

\textit{Response:} Statements to obtain specific support, or to reprogram support, have been removed. New focus is on exploring and implementing strategies for short-term relief.

**Concern 2:** Original recommendations to leverage CDNs (#3) and prioritize IDP Phase 4 migration to cloud networks (#5) were viewed as simply candidate components of a broader architecture design.

\textit{Response:} New recommendation (#3) prioritizes co-design of the go-to architecture with CDNs and IDP Phase 4 as potential components.

**Concern 3:** EISWG endorsement of NWS IDP plan was unclear.

\textit{Response:} Clarifying wording was added to more strongly endorse overall plan; however, emphasis was also added to indicate a short-term fix may need to deviate from the IDP plan.

**Concern 4:** Endnote references to the Washington Post newspaper articles were not necessary.

\textit{Response:} Washington Post newspaper article references removed.
Recommendations (Revised)

1. **Design and implement an emergency response:** EISWG encourages NOAA leadership to explore and implement strategies that will lead to increased bandwidth and infrastructure modifications necessary to bring immediate short-term relief to this critical situation. This may need to deviate from the IDP.

2. **Strengthen engagement with the broader Weather Enterprise:** Expand successful engagement with external partners; EISWG is ready to help.

3. **Prioritize designing and moving to an appropriate scalable architecture:** Elements of the architecture can be collaboratively designed and may include:
   
   a. **Leverage Content Delivery Networks:** Effectively moves demand away from NOAA endpoints for data files that do not change once produced.
   
   b. **Accelerate migration to commercial cloud networks:** Fund and implement IDP Phase 4.

4. **Implement user management, product availability announcements, and training:** Distribute best practices for access, develop methods to identify and notify users.