



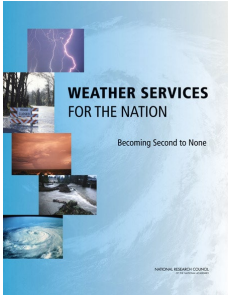
Science Advisory Board

EISWG Statement Concerning Ongoing NWS Data Dissemination Challenges

11 June 2021



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Background



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
- from *Weather Services for the Nation, Becoming Second to None*, The National Academies Press, 2012.

National Oceanic and Atmospheric Administration
National Weather Service

Future Needs of the
Integrated Dissemination Program:
An Implementation Plan

August 2020

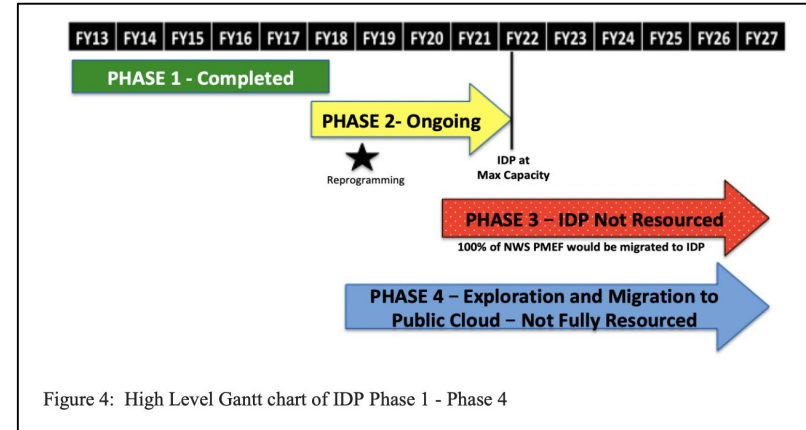
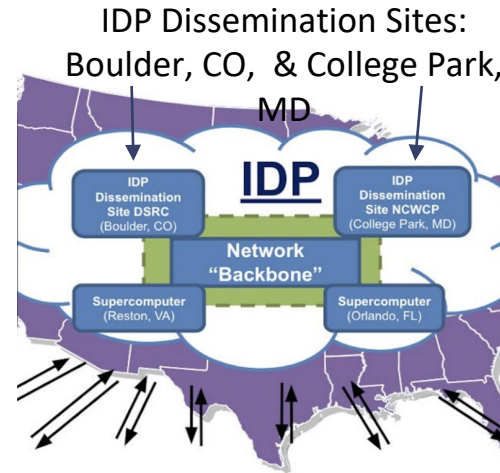


Figure 4: High Level Gantt chart of IDP Phase 1 - Phase 4

Overview and Overall Chronology

1. **Challenge:** Tremendous growth in demand combined with insufficient growth in delivery infrastructure have resulted in significant production system downtime
2. **NWS IDP Plan, Aug 2020:** The NWS issues their *Future Needs of the Integrated Dissemination Program: An Implementation Plan*
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

Specific SAB Concerns and *EISWG Responses*:

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

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.

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.

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.

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.