



SCIENCE ADVISORY BOARD

September 24, 2021

Dr. Richard W. Spinrad
Under Secretary of Commerce for Oceans and
Atmosphere & NOAA Administrator
Herbert C. Hoover Building, Room 6811
14th Street & Constitution Avenue, NW
Washington, DC 20230

Dear Dr. Spinrad:

Subject: SAB Review of the Draft Coastal Inundation at Climate Timescales White Paper

On behalf of the NOAA Science Advisory Board (SAB), I am pleased to transmit to you a SAB report on the “Review of the Draft Coastal Inundation at Climate Timescales White Paper.” The SAB approved this report at its August 25, 2021 virtual meeting. The SAB’s Climate Working Group (CWG) prepared this report. The purpose of the report was to review the White Paper developed by NOAA, under the purview of the Weather Water Climate Board, and provide substantive comments on its scope and detail.

The CWG and SAB agreed the authors drafted a thought-provoking White Paper. The SAB commends the authors for their hard work on this timely initiative given the urgent need established by disaster events along the Nation’s coasts, threatening public safety and critical infrastructure. The review report makes the following recommendations:

1. NOAA’s aspirational vision – Clearly state the aspirational vision at the beginning of the document. The statement should include the need, the type of tools to be developed, NOAA’s capacity, and how the initiative fits with the focus of several other federal agencies in planning for a more dynamic coast.
2. Scale-appropriate decision-making information – Include a research plan on developing multi-scale inundation products or user-accessible downscaling tools for translating proposed coastal inundation forecasts into scale-appropriate decision-making information.
3. Usability by underserved communities – Include a discussion of how the overall design of the suite of observations, models, tools, and products will provide off-the-shelf, public options that are sufficiently refined and tailored to be directly usable by under-resourced and underserved communities.
4. Coordination necessary for success – Consider including, and begin planning for, the extensive coordination necessary for this effort to be a success. This includes both internal, cross-line office coordination and external, interagency coordination.

The SAB accepted the report with no changes, but recognizes this is a complex issue and the SAB discussion raised a number of additional points that are provided here for NOAA to consider:

- This is an urgent topic that provides NOAA an excellent opportunity to exercise leadership in national security. It is critical for NOAA to collaborate successfully across the federal government, with state and local municipalities, and in other sectors to assist the Nation’s coastal communities to prepare, adapt, respond, and “build back better” in the face of climate change, sea level rise, and other factors that cause inundation.
- The White Paper did an excellent job of addressing water issues associated with inundation, but would benefit from the additional consideration of geomorphological and ecological responses caused by inundation and their consequences; this is a specific opportunity for the White Paper to address the broader interdependencies among federal agencies and clearly outline essential partnerships for the success of this initiative in addressing challenges caused by inundation.
- Success of this effort is contingent on NOAA’s leadership and broad participation of collaborating agencies and entities. It is critical that NOAA show this leadership by clearly defining the standards and requirements, stipulating that all relevant data be open and available through open Application Programming Interfaces, and that relevant software tools are open source for all its work in this area.
- The review could have benefitted from more directly linking the recommendations to the White Paper. For example, there are clear disconnects between the review report recommendation to provide scale-appropriate decision-making information and the “boots on the ground” approach described in the White Paper. Aligning the scale at which information is provided with the scale at which it is most useful to communities is a challenge that must be acknowledged and confronted.
- It is critical to continue including the Great Lakes when addressing coastal inundation issues, but it is important to recognize the Great Lakes face some different issues than seacoast communities.
- The SAB understands that the majority of the White Paper was developed during a period when addressing diversity, equity, and inclusion was less important than it is today. We support the current priority to ensure NOAA climate products and services will include a focus on underserved, unserved, and vulnerable populations.

The SAB values the advice and expertise of the CWG and appreciates its excellent work in taking on this review.

The SAB looks forward to hearing NOAA's response to these recommendations at the first opportunity. Please let me know if you have any questions, comments, or concerns.

Very Respectfully,

A handwritten signature in blue ink that reads "John R. Kreider". The signature is fluid and cursive, with the first name "John" being the most prominent.

John Kreider
Chair, NOAA Science Advisory Board

Attachment: SAB Final Report "Review of the Draft Coastal Inundation at Climate Timescales White Paper"

CC: Karen Hyun
Letise LaFeir
Michael Weiss
Craig McLean
Nicole LeBoeuf
Mark Osler
Wayne Higgins
Paul Hirschberg
Kirstin Dow
Joellen Russell
Adrian Mahoney
Cynthia Decker
Tiffany Atkinson
Courtney Edwards