

22 October 2008

VADM Conrad C. Lautenbacher  
National Oceanic and Atmospheric Administration  
Room 6811  
14th Street & Constitution Avenue, NW  
Washington, DC 20230

Dear VADM Lautenbacher:

On behalf of the NOAA Science Advisory Board (SAB), I am pleased to forward the report, *Fire Weather Research: A Burning Agenda for NOAA*. This report was prepared at the request of NOAA leadership in response to interest from the Western Governors' Association and others, and in recognition of the opportunity to supply technical research advice on this critical national issue. The SAB brought together experts in wildland fire science, fire weather modeling, and the management of wildland fire to comprise a Fire Weather Research Working Group (FWRWG). The FWRWG was charged with reviewing NOAA current research and operations and needs in fire weather services and making recommendations for improvements in light of the current state of the relevant science. NOAA leadership has been timely in recognizing the need for improving its services in support of the efforts of the several federal wildland management agencies to deal with fire in our nation's wildlands, particularly at the wildland-urban interface.

At its October 2008 meeting, the SAB accepted the final report of the FWRWG and unanimously endorsed forwarding it to you. The SAB chooses not to comment directly on any of the individual findings and recommendations in the report. However, SAB members raised several points in their review and discussion of this report that are presented below for your consideration.

- Detrimental health effects on a regional scale may result from smoke produced in wildland fires, but are often overlooked in discussions of fire weather. However, as illustrated by the impact of smoke from recent fires in northern California, such effects can lead to many individuals far from the fire scene seeking medical care. NOAA should work with EPA and other state and federal agencies to provide guidance to the population likely to be impacted by smoke.
- As indicated in the report, wildland fire is a national issue, though the details of the hazard vary somewhat by region. The report recommends that formal identification of a NOAA research (Ocean and Atmospheric Research) - operations (National Weather Service) tandem and (separately) a test bed to advance fire weather research and subsequent transfer of results to operations. Care should be taken to ensure that these entities address wildland fire from a national perspective and avoid becoming oriented on just one region.

- Some years ago, NOAA fire weather efforts were focused on support only to the federal wildland management agencies. As a consequence, private sector weather companies have come into being to provide fire weather services to state and local governments and the commercial forestry industry in situations where no federal agency is involved. The FWRWG did not examine the operational practices of these private companies. It is suggested that NOAA examine the operations of such companies for innovative ideas and good practices.
- Some of the research recommended in the report is clearly fundamental or basic research. Examples are experiments with laboratory models and experimental burns, noted as important sources of data to guide the development of numerical fire (combustion) and fire weather models. The National Science Foundation (NSF) should be made aware of the national need represented by wildland fire and urged to develop a program in partnership with NOAA to encourage research in this area. To this end, the SAB suggests that you forward a copy of the report to the NSF Director, while I forward one to the Chair of the National Science Board (NSB). In our cover letters we should note that the threat posed by wildland fire is analogous in many respects to hurricanes, on which the NSB recently released a major report. It would be ideal if the NSB were to undertake a similar study for wildland fire.
- The SAB suggests that copies of the report, with appropriate cover letters, be forwarded by NOAA to the following:
  - Senior leadership of the federal wildland management agencies (U.S. Department of Agriculture/U.S. Forest Service; U.S. Department of the Interior/Bureau of Land Management/Bureau of Indian Affairs/National Park Service; U.S. Department of Defense), the National Aeronautics and Space Administration, and the Environmental Protection Agency. The cover letters might suggest that NOAA is seeking closer working relationships with these agencies, leveraging and extending R&D work they are already doing, with the goal of providing better services in support of their fire operations.
  - The relevant committees in the House and Senate in the U.S. Congress.
  - The leadership of the Western Governors' Association (WGA) (see resolution by the WGA in Appendix D of the report).
  - The leadership of the National Association of State Foresters (NASF) (see resolution by the NASF in Appendix E of the report).
  - California State Senator Sheila James Kuehl, chair of the California Senate Natural Resources and Water Committee, and chief Committee consultant Bill Craven, c/o California Legislature, Senate Committee on Natural Resources and Water, State Capitol (Room 407), Sacramento, CA 95814. (In the FWRWG report, Section III.B.1, second paragraph, second sentence, there is reference to California Senate Concurrent Resolution No. 24, adopted in the California Senate on 11 April 2005 and in the California Assembly on 23 June 2005. The

Resolution urges the U.S. Congress to have NOAA undertake several fire-weather-related activities.)

The FWRWG Report provides NOAA a unique opportunity to develop a comprehensive R&D plan, leverage and extend R&D work already underway in the National Institute of Standards, U.S. Department of Energy laboratories, and the federal land management agencies. In so doing, NOAA could position itself to take a leading role in an area of research important to our Nation's environmental security.

The Board hopes that the report, *Fire Weather Research: A Burning Agenda for NOAA*, will be of value and guidance to NOAA in this area for the next few years.

Respectfully,

David Fluharty  
Chair, NOAA SAB

Cc:

SAB Members  
FWRWG Members