



Fire Management Board

FMB Memorandum No. 14-005

Date: 26 November 2014

TO: Jim Douglas, Co-Chair, Fire Executive Council
Tom Harbour, Co-Chair, Fire Executive Council

FROM: William Kaage, Chair, Fire Management Board

SUBJECT: Interagency Plan for a Wildland Fire Aviation Strategy

The attached Interagency Plan for a Wildland Fire Aviation Strategy is the initial response from the Fire Management Board (FMB) to the Fire Executive Council's (FEC) request of 30 July 2014, to address the U.S. Government Accountability Office (GAO) report titled *Wildland Fire Management: Improvements Needed in Information, Collaboration, and Planning to Enhance Federal Fire Aviation Program Success (GAO-13-684)*, by "managing the development of an updated interagency fire aviation strategy." Our Wildland Fire Aviation Strategy Task Group has developed a solid plan to meet the expectations of the GAO.

cc: FMB members, FMB Wildland Fire Aviation Strategy Task Group Chair

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Interagency Plan for a Wildland Fire Aviation Strategy

The US Government Accountability Office (GAO) reviewed Department of Interior (DOI) and U.S. Forest Service (USFS) studies and strategies to determine the adequacy of their firefighting aircraft fleet in response to decreasing airtanker availability. The GAO report, GAO-13-684 dated August 2013, concluded with recommending “that the Forest Service and Interior expand efforts to collect information on the performance and effectiveness of firefighting aircraft and enhance collaboration across agencies and the fire community.”

In September 2014, the Interagency Wildland Fire Aviation Strategy Task Group under the Fire Management Board (FMB), with representatives from USFS, DOI, and states, was assigned to address GAO-13-684 at the request of the Fire Executive Council. The task group has focused on the three recommendations in GAO-13-684 and developed a phased sequential approach to be improved and modified over a five year period.

This document presents the Fire Management Board’s plan to address GAO’s concerns.

A. GAO Recommendation 1: Performance and Effectiveness of Firefighting Aircraft:

Expand efforts to collect information on aircraft performance and effectiveness to include all types of firefighting aircraft in the federal fleet

Status: The DOI and USFS have very limited data collection efforts to measure effectiveness. Currently USFS is conducting the Aerial Firefighting Aircraft Use and Effectiveness (AFUE) study. AFUE is an integrated Forest Service study to develop processes, technology and/or metrics to document and analyze retardant and water dropping aircraft effectiveness in order to develop appropriate guidance on aircraft usage. The data gathered includes performance aspects such as airspeed, altitude, etc., as well as other aspects such as aircraft load monitoring and ground crew observations.

There are two components to useful performance metrics for aviation fire. Effectiveness is measuring the extent in which a service (aircraft) meets the organization’s objective (outcome). Effectiveness measures can be established to apply to 1) all types of firefighting aircraft and 2) each individual type of aircraft.

Efficiency measures the extent to which resources are used by an organization (output). Are the agencies applying aviation resources in such a way as to maximize their contribution to the organization’s output (wildland fire management) for DOI and USFS? The agencies currently collect some efficiency measures to include cost/acre and supply/demand modeling.

Way Ahead: The chartered purpose of the National Interagency Aviation Committee (NIAC) is “to serve as a body of aviation experts, assisting the National Wildfire Coordinating Group (NWCG) with realizing opportunities to enhance safety, effectiveness, and efficiency in aviation related operations, procedures, programs and coordination.” NIAC membership consists of representatives for the USFS, DOI (Bureau of Indian Affairs, Bureau of Land Management, US Fish and Wildlife Service, National Park Service, Office of Aircraft Services) and the National Association of State Foresters. FMB will work with the NWCG to task the NIAC with the following assignments:

1. Due March 30, 2015: A list of the items to monitor April-September 2015 with the intent of evaluating interagency airtanker aircraft from AFUE results and all other firefighting aircraft through NIAC's respective subcommittees.
2. Due March 30, 2015: A list of tools to use in the evaluation process such as a daily Fire Aircraft Data Report (similar to the British Columbia Forest Service airtanker data report). The actual data to be recorded would be determined by the NIAC subcommittees or task groups as well as the collection method and location for storage.
3. Due March 30, 2015: An implementation plan (including communication to appropriate identified groups) for initial data collection, planned for July – September 2015.
4. Due September 30, 2015: Identify metrics and tools to implement performance effectiveness in FY16 fire season to document results of using firefighting aircraft on wildfires to include identifying the objective per aircraft type (build a line of retardant, directly suppress fire, protect specific structure) and documenting if the objective was met (for example: was a line created; did the line prevent the fire from crossing; was there a change in size of the fire and if so, how much change from the time aircraft arrived; was the target protected).
5. Due September 30, 2015: Update the documentation/flow chart for the current DOI/USFS decision guide for the request of aircraft to a wildland fire. The output expected from this process will be a flow chart. It should begin with the identification of a wildfire resulting in a call for aircraft. The decision guide should present a step-by-step decision process for requesting and deploying aircraft in support of a wildfire.

B. GAO Recommendation 2: Enhanced Stakeholder collaboration:

Enhance collaboration between the agencies and with stakeholders in the fire aviation community to help ensure that agency efforts to identify the number and type of firefighting aircraft they need reflect the input of all stakeholders in the fire aviation community

Status: The Interagency Wildland Fire Aviation Strategy Task Group was tasked to develop the implementation plan in response to the referenced GAO report. Interagency cooperation has been foremost in their procedures and they have developed a protocol to ensure the input of all stakeholders in the fire aviation community is reflected in the product depicting the number and type of firefighting aircraft. Each task group will have stakeholders represented and the review process will include coordination with a representative organization of stakeholders.

Way Ahead: Each task group on Recommendation 1 will provide quarterly updates to the FMB outlining ongoing interagency collaboration. In addition:

1. Due March 30, 2015: The NIAC will develop alternatives to monitor, evaluate, and report Collaborative Efforts. This will be included in the Wildland Fire Management Annual Report.

C. GAO Recommendation 3: Update Agency Strategy Documents

Subsequent to the completion of the first two recommendations, update the agencies' strategy documents for providing a national firefighting aircraft fleet to include analysis based on information on aircraft performance and effectiveness and to reflect input from stakeholders throughout the fire aviation community.

Status: Results for the first two recommendations must be in place before updating the recommended numbers for the interagency strategy documents. However, work on other aspects of the Strategy can be prepared before completion of work on Recommendations 1 and 2. This includes items like mission, goals, and objectives, as well as any format changes desired from previous interagency aviation strategies.

Way Ahead:

1. Due March 30 2016: A Strategy. After gathering performance and effectiveness analytics from at least one season (or 3 month period) outlined in (A), begin reviewing current strategy documents. FMB will task an interagency group representing Forest Service, DOI fire bureaus (NPS, BLM, FWS, BIA), OAS, and state fire aviation programs to draft a cohesive wildland fire aviation strategy. The strategy will be for ten years initially to be reviewed and updated every year as the performance, effectiveness, and efficiency measures mature.
2. The Strategy should be viewed as a dynamic document for the number of aircraft involved. It should include the following key elements: a) aircraft types; b) basing options; c) acquisition models (to include strategically sourced sharing of aircraft assets amongst the representative land management agencies); d) suppression methods; and e) aircraft performance and effectiveness. The ten year plan development must include participation by stakeholders from the commercial aviation industry as we anticipate the industry may change its current environment of available aircraft due to the performance effectiveness metrics analyzed. The strategy should also include plans for annual reviews/updates and how to integrate future, emerging, and desired technologies including their performance and effectiveness in achieving the objectives. Firefighting aircraft strategies from other countries, such as Canada and Australia, should also be reviewed, as these countries frequently provide cooperative support to the United States with respect to wildland management.

In order to be effective, we recommend leadership from the USFS, BLM, BIA, FWS, NPS, OAS make these tasks/requirements and their respective due dates a priority for their NIAC representatives in FY15 and FY16.

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