A Review of Existing Authorities and Procedures for Using Military Assets in Fighting Wildfires

Report by the Office of Management and Budget

Pursuant to Section 1058 of the Fiscal Year 2004 National Defense Authorization Act

May 17, 2004
Executive Summary

Section 1058 of the National Defense Authorization Act (the Act) for Fiscal Year 2004 (P.L. 108-136) requires the Director of the Office of Management and Budget (OMB) to conduct a review of existing authorities, including the Economy Act and the Stafford Disaster Relief and Emergency Assistance Act, regarding the use of Department of Defense (DOD) assets to fight wildfires. Based on this review, the OMB Director must determine whether existing authorities are being used, consistent with available DOD capabilities, in the most expeditious and efficacious way to minimize the risk to public safety.

Military assets, including military personnel and equipment, play an important role in wildland fire suppression. At the Federal level, military resources, including Modular Airborne Firefighting Systems (MAFFS), have been made available to wildland fire agencies of the Department of the Interior (DOI) and the Department of Agriculture’s (USDA) Forest Service (FS) on a regular and ongoing basis. For example, MAFFS have flown over 6,700 wildland fire suppression sorties to deliver nearly 18.3 million gallons of retardant since 1973. However, MAFFS are twice as expensive and provide half the coverage of comparable commercial airtankers.

Since 1975, military assets have been provided upon request of the wildland fire agencies through a process that has been established in an inter-agency Memorandum of Understanding (MOU) and reflected in agency mobilization guides, manuals, and operating plans. Military assets have been used in each of the past four years. States routinely use National Guard assets in responding to wildland fire incidents as well.

None of the agencies identified any significant burdens (e.g., costs or time constraints) to meet the requirements of the Economy Act. However, the 1975 MOU and agency guidance addressing inter-agency use of aviation resources state that the requesting agencies must determine that all commercial aviation resources are fully committed before requesting military assistance. This formulation is more stringent than what the Economy Act requires.

This language from the MOU and agency guidance appears to have been the source of miscommunication between agency staff and external parties, potentially including state aviation officials as well as congressional staff. This may also have led to some confusion within the agencies.

Based on these and other factors, the OMB Director has determined that no changes in the Economy Act or the Stafford Act are necessary to ensure that military resources are made available and are used, as necessary and appropriate, for wildland firefighting, and that existing authorities are being used in a manner consistent with the available capabilities of Department of Defense assets to fight wildfires in the most expeditious and efficacious way to minimize the risk to public safety. While no changes to existing statutory authorities are necessary, certain administrative procedures relied upon by the wildland firefighting agencies should be clarified to ensure efficiency and effectiveness is not inadvertently compromised.
I. Introduction and Background

Section 1058 of the National Defense Authorization Act (the Act) for Fiscal Year 2004 (P.L. 108-136) requires the Director of the Office of Management and Budget (OMB) to conduct a review of existing authorities regarding the use of Air Force and Air National Guard modular airborne firefighting system units and other Department of Defense (DOD) assets to fight wildfires to ensure that such assets are available in the most expeditious manner to fight wildfires on Federal or non-Federal lands at the request of a Federal agency or State government.

In conducting this review, the Act requires the Director to “specifically consider –

“(1) any adverse impact caused by the restrictions contained in section 1535(a)(4) of title 31, United States Code, or caused by the interpretation of such restrictions, on the ability of the USDA Forest Service and other Federal agencies to procure such firefighting services; and

“(2) whether the authorities under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.), including section 403(c) of such Act (42 U.S.C. 5170b), are being properly utilized to facilitate an expeditious Department of Defense response to State requests under, and consistent with, such Act for firefighting services.”

In the event that the OMB Director determines that existing authorities are adequate for the deployment of Department of Defense assets to fight wildfires, the Act requires the Director to develop and implement such modifications to the process for conducting the cost comparison required by the Economy Act (31 U.S.C. 1535) as the Director considers appropriate to further expedite the procurement of such firefighting services.

Alternatively, in the event that the OMB Director determines that current authorities are inadequate or can be improved, the Act requires the Director to develop and implement regulations, policies, or procedures as necessary to improve the ability of DOD to respond to requests of a Federal agency or a State for assistance in wildland firefighting.

The Act requires the OMB Director to submit a report to Congress on the results of the review and the planned policy revisions, including whether there is a need for legislative changes to further improve the procedures for using DOD assets to fight wildfires. Finally, the Act prohibits implementation of any revised policies until 30 days after the report is submitted to Congress.

This report is submitted in accordance with Section 1058 of the Act. The scope and methodology of this report are discussed in Appendix A.
II. Relevant Statutes

Section 1058 specifically requests that OMB evaluate aspects of the Economy Act and the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Following is a brief summary of these two statutes and how they are typically applied in the wildland fire program.

A. The Economy Act

The Economy Act, 31 U.S.C. §1535, provides general authority to Federal agencies to use the services of other agencies. The Economy Act authorizes an agency to obtain the services of another agency when:

- the ordering agency has the funds available to reimburse the performing agency;
- it is in the best interest of the government;
- the performing agency is able to provide or obtain by contract the ordered goods or services; and
- the resources cannot be provided by contract “as conveniently or cheaply by a commercial enterprise.”

The Economy Act is reprinted in Appendix B of this report.

In recent years, the Federal wildland firefighting agencies have used the Economy Act authority often to acquire firefighting resources from DOD when the agencies’ resources have been largely committed. The primary resources used have been Army and Marine personnel and Air Force or Air National Guard aviation resources.

B. Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5206, provides for support to State and local governments and their citizens when disasters overwhelm them. The Stafford Act establishes a process for requesting and obtaining a Presidential disaster declaration, defines the type and scope of assistance available from the Federal Government, and sets the conditions for obtaining that assistance. Those sections of the Stafford Act that are of particular relevance to wildland fire suppression are included as Appendix C.

In the case of wildland firefighting, the majority of assistance provided by the Department of Homeland Security’s Federal Emergency Management Agency (FEMA) is provided through a fire declaration pursuant to Section 420 of the Stafford Act. Such a declaration does not require Presidential authorization.
When FEMA provides assistance pursuant to a Section 420 fire declaration, it may upon request of the Governor and pursuant to Section 403 of the Stafford Act direct the Secretary of Defense to utilize DOD resources for work which is essential for the preservation of life and property if the incident may ultimately qualify for a declaration. However, for assistance provided pursuant to Section 420, FEMA does not order resources through DOD. Instead, all resource requests are coordinated through the National Interagency Fire Center (NIFC) using NIFC's authority to order resources, including DOD assets. Military resources activated under this authority are typically used for fire mop-up activities and post-disaster assistance to communities.

III. Use of Military Resources in Wildland Fire Management

A. Background

Section 1058 of the 2004 Defense Authorization Act specifically requests that OMB evaluate the use of Modular Airborne Firefighting System (MAFFS) units in wildland firefighting. This evaluation represents the major focus of this report.

MAFFS units are self-contained, reusable 3,000-gallon aerial fluid dispersal systems that allow Lockheed C-130 cargo/utility aircraft to be quickly converted to wildland firefighting airtankers. As discussed more fully in Appendix D, the use of MAFFS is a joint program with the Air National Guard, Air Force Reserve, and the United States Department of Agriculture (USDA) Forest Service; the system was developed for installation in a Lockheed C-130 Hercules plane equipped with the USAF 463L cargo-handling system. Under this arrangement, the fluid dispersal system is owned by USDA, while the aircraft are owned by DOD. Since 1973, MAFFS have flown over 6,700 sorties to deliver nearly 18.3 million gallons of retardant.

There are currently eight MAFFS units operating in four States: California, Colorado, Wyoming, and North Carolina. Two are each positioned in California, North Carolina and Wyoming, where MAFFS are associated with Air National Guard units. An additional two are positioned in Colorado with an Air Force Reserve unit. Governors of States where National Guard MAFFS units are stationed may activate MAFFS missions within their State boundaries when covered by a memorandum of understanding with the military authority and the Forest Service.

Other military resources that have been used in firefighting include ground personnel (e.g., Army, Marine) and certain helicopter crews and equipment.

B. Guidelines

1. 1975 Memorandum of Understanding
A Memorandum of Understanding (MOU) between the Department of Defense and the Departments of Agriculture and the Interior (DOI) signed in June 1975 is the most current agreement between the agencies for wildland firefighting. An amendment was signed in September 1990 between the Department of Army/DOD Executive Agent and the Boise Interagency Fire Center (BIFC)—the predecessor to the National Interagency Fire Center (NIFC)—that covers helicopter support to wildland firefighting.

According to the MOU, it is the policy of DOD to provide emergency assistance to Federal agencies in cases where a forest or grassland fire emergency is beyond the capabilities of the resources available. If military assets are available, DOD will provide assistance at the request of BIFC (now NIFC)—following a BIFC determination that military assistance is required and justified—or when a forest or grassland fire on State or private land is declared a major disaster by the President. The memorandum states that “Requests will include a statement to the effect that all available or suitable civilian resources have been committed and that requested support is not in competition with private enterprise.” The MOU is included in Appendix E of this review.

The Office of the Assistant Secretary of Defense for Homeland Defense (ASD (HD)), Civil Support Directorate, is currently staffing a new Memorandum of Understanding between DOD and NIFC that will clarify and update the general guidelines.


The National Interagency Mobilization Guide is considered to be the primary guide for procedures associated with the mobilization and demobilization of all fire suppression resources that are moved across geographic or jurisdictional boundaries. The guide consists of eight chapters that address objectives and policy, administrative procedures, organization, cooperators, overhead and crews, equipment and supplies, and aircraft.

Two sections of Chapter 20 (Administrative Procedures) provide guidance for military resource activation. Section 24.10.2 addresses the use of MAFFS units. This section begins by stating the primary objective of MAFFS activation is “[t]o provide emergency capability to supplement commercial airtankers on wildfires.” An included policy statement indicates that MAFFS units are used as a reinforcement measure when contract airtankers are committed or not readily available. The mobilization guide states:

“NIFC is responsible for ascertaining that all suitable commercial contract airtankers nationally are committed to wildfires, initial attack, or cannot meet time frames of requesting units. When this occurs, the Duty Coordinator will notify the USFS-Director, NIFC. The USFS-Director, NIFC, or in their absence, the USFS National Aviation Officer, or Fire & Aviation Management, Washington Office, or their acting is responsible for initiating a MAFFS mission. Once approval is given, the NICC (the National Interagency Coordination Center) Coordinator activates the request through proper military channels.”

The guide also indicates that Governors of California, North Carolina, and Wyoming, the States where the three National Guard Units with MAFFS are based, can activate MAFFS
but must first notify the USDA Forest Service. The notification process, ordering criteria and support requirements are outlined in the guide. MAFFS units in Colorado are associated with the Air Force Reserve and are not under the jurisdiction of the Governor. MAFFS are available to Colorado on the same basis as other States that do not have MAFFS assigned to Air National Guard units.

When the use of a MAFFS unit is considered, the final determination normally rests with the National Multi-Agency Coordinating Group (NMAC) at NIFC.

Section 27 is devoted to the “Mobilization Procedures for Military Assets and International Assignments.” The Military Use Handbook is the primary reference source used in the activation process. Section 27.1, “Established Resource Ordering Procedures,” outlines the general process for determining whether military resources are justified. The activation process begins with section 27.1.1, which states that “NICC will determine if all civilian resources are committed.” This is followed by general direction on how NICC determines what types of resources (e.g., crews or aircraft) are no longer available and thereby establishes that “military assets are the only available resources…” This leads to documentation of a request, via the resource order process, and a determination of where and when the military resources will be placed.

**3. Military Use Handbook and MAFFS Operating Plan**

The Military Use Handbook is an operational source of information once military resources have been activated. It is updated periodically by the National Interagency Fire Center. Although this is the parent guide for operations, the majority of MAFFS related information is provided in the MAFFS Operating Plan which is updated annually.

The 2003 MAFFS Operating Plan restates the objectives and policy are restated from the National Interagency Mobilization Guide. The responsibilities of key officials, for the purposes of this review, include the following:

- Regional Foresters are responsible for ascertaining that all suitable commercial airtankers under contract within a region are assigned to incidents or pledged to initial attack before placing a specific request for a MAFFS mission to the National Interagency Coordination Center (NICC).
- NICC is responsible for ascertaining whether all suitable commercial airtankers are committed nationally.
- The USFS-Director, NIFC, or in their absence, the USFS National Aviation Officer, or Fire & Aviation Management, Washington Office, or their acting is responsible for initiating a MAFFS mission. Once approval is given, the NICC Manager will activate the request through proper military channels.

In addition, the MAFFS Operating Plan includes a restatement of the ordering process that is outlined in the National Interagency Mobilization Guide; air base operation requirements; and pre-mission and mission support requirements. Many other operational, support or training related topics are also outlined.
4. DOD/JDOMS direction

Within the Department of Defense, support to civil authorities is evaluated by the ASD (HD). DOD support is contingent on the availability of Department resources and the impact their use would have on military readiness. The Joint Director of Military Support (JDOMS) determines what capability DOD has to fulfill the request, and the Secretary of Defense approves the order to deploy Defense resources. A discussion of recent DOD support of wildland firefighting is found in Appendix F. For example, military assets have been used in each of the past four years.

Imminently serious conditions resulting from any civil emergency or attack may require immediate action by military commanders to save lives, prevent human suffering, or to mitigate great property damage. When such conditions exist and time does not permit prior approval from higher headquarters, local military commanders and responsible officials of other DOD Components are authorized by DOD Directive 3025.1, Military Support to Civil Authorities, to take the necessary action to respond to requests of civil authorities. These actions are called “Immediate Response.”

All States may call on National Guard assets to support wildland firefighting efforts in a Non-Federal Status, also known as State Active Duty. In this status, the Army and Air National Guard are under the command and control of the Governor and the State Adjutant General. Resources are paid for with State funds on a compensation scale determined by the State.

There are also several types of mutual aid agreements between States in which they agree to assist one another upon request by furnishing personnel and equipment, including National Guard assets. One example is the Emergency Management Assistance Compact (EMAC), which is an interstate agreement that streamlines the procedures for assistance one Governor can lend another after a natural disaster or terrorist attack.

C. Requests for Assistance

1. NIFC/NICC Process

According to the National Interagency Mobilization Guide and the MAFFS Operating Plan, once NIFC has decided to initiate a MAFFS mission, the National Interagency Coordination Center (NICC) Manager will activate the request. The NICC process is outlined following the description of the National Interagency Mobilization Guide and somewhat restated by portions of the responsibilities outlined in the MAFFS Operating Plan.

NICC uses the Military Use Handbook as a primary reference source in the activation process. Section 27.1 of the Handbook, “Established Resource Ordering Procedures,” outlines the general process for determining whether military resources are justified. The activation process begins with section 27.1.1, “NICC will determine if all civilian resources are committed.” This is followed by general direction on how NICC determines what types of resources (i.e., crews or aircraft) it anticipates will be available.
and in turn establishes that “military assets are the only available resources…” Upon
DOD/JDOMS approval of the request, NICC determines where and when the military
resources will be placed through their standard documented resource order process.

Consistent with DOD/JDOMS guidance, the MAFFS Operating Plan used by NICC
states that the Governors of California, Wyoming and North Carolina may activate their
in-state MAFFS resources for within-state utilization at any time by simply notifying
NIFC prior to the activation. MAFFS are available to Colorado on the same basis as
other States that do not have MAFFS assigned to Air National Guard units.

2. DOD Process

Once DOD receives a request and it is evaluated by the ASD (HD), JDOMS will
determine which military assets will best fulfill the NIFC request. JDOMS will then
issue a Secretary of Defense-approved execution order to conduct the necessary support.
In most cases of domestic military support, NORTHCOM is the supported commander.

Deployment of MAFFS-equipped aircraft is usually directed when NIFC requests a
military airtanker capability. USNORTHCOM will direct U.S. Transportation Command
(USTRANSCOM) to provide the C-130 aircraft and MAFFS-trained crews necessary to
provide support in accordance with the needs of NIFC in an affected area. The support is
usually conducted on a reimbursable basis under the authority of the Economy Act of
1932. Most DOD resources used to support wildland firefighting are dual-use assets.
The MAFFS themselves are owned by the U.S. Forest Service and are loaded onto C-130
aircraft when needed. The aircraft are owned by DOD and perform other missions when
not MAFFS-equipped. They must be repainted with fluorescent numbers so they can be
identified through smoke before deployment to fight wildfires.

The deployment of other resources is contingent on the availability of assets and trained
personnel. Soldiers are not specifically trained to fight fires, as this is not their primary
mission. When NIFC requests ground units, it is responsible for training soldiers and
supplying them with firefighting equipment, which is a seven day process. Similarly, the
deployment of other DOD aerial assets is dependent on the availability of NIFC certified
crews—which, in some cases, must also be certified to meet State standards.

IV. Impact of the Economy Act’s Requirements

As described in section II, above, the Economy Act provides general authority to Federal
agencies to use the services of other agencies. The authority is available when:

- the ordering agency has the funds available to reimburse the performing agency;
- it is in the best interest of the government;
- the performing agency is able to provide or obtain by contract the ordered goods
  or services; and
The resources cannot be provided by contract “as conveniently or cheaply by a commercial enterprise.”

The Federal Acquisition Regulation (FAR) requires that the determinations of “convenience/economy” and “interest of the government” be documented in a determination and finding (D&F). See 48 CFR Chapter 1, Part 17.5. The requirement for a D&F helps to promote accountable use of the Economy Act.

The following subsections address each of the Economy Act's four requirements. During our review, particular attention was placed on the fourth requirement, which is the requirement that is specifically cited in Section 1058.

**A. Funds availability.**

The first condition of the Economy Act states that the ordering agency must have funds which are available for the contemplated purpose. Neither USDA nor DOI indicated any difficulty or confusion in meeting this prerequisite.

**B. Interest of the Government.**

The second condition of the Economy Act requires the head of the ordering activity to determine that the order is in the best interest of the government. NICC officials assess daily during the fire season the availability and assignment of fire suppression aviation resources and exercise their judgment in determining the interest of the government during their consideration of the formulation of a request for DOD resources.

**C. Resource Availability.**

The third condition of the Economy Act requires that the performing agency be in a position to provide the goods or services. Whether an agency is in a position to perform is primarily an agency determination.

With respect to using military assets in fighting wildfires, the Secretary of Defense must make a determination that the firefighting resources requested by DOI and USDA meet this criterion. DOD assets are, first and foremost, used to meet DOD mission requirements. In the case of the C-130s used in aerial firefighting, this primarily means transport of military assets, including requirements related to the ongoing efforts in Iraq and Afghanistan.

Because the primary use of these resources is to fulfill such requirements, these resources must first be available for such uses and cannot therefore be always “on call” and instantly activated for firefighting. It typically takes up to 24 hours to load a MAFFS unit into a C-130 and provide the other necessary preparations, such as repainting the aircraft with fluorescent numbers so that it can be identified in firefighting conditions.

Similarly, it takes time to mobilize Army or other military ground units for fire duty. In all cases, the Secretary of Defense must make a determination that the identified
resources are not needed for DOD mission requirements and can be released for use in firefighting.

D. Convenience and Economy.

The fourth condition imposed by the Economy Act requires the requesting agency to determine that ordered services cannot be provided by contract as conveniently or cheaply by a commercial enterprise. The FAR requires the requesting agency to complete a D&F that states that supplies or services cannot be obtained as "conveniently or economically" by contracting directly with a private source. This condition, in particular, has resulted in both DOI and USDA taking reasonable, common-sense steps to consider viable alternative sources in a reasonably expeditious manner before committing taxpayer resources to fight wildfires.

DOI and USDA advise that within the agencies’ ongoing determination of firefighting resource needs, they routinely look for commercial sources with capacity that can be evaluated and accessed in a timely manner. In fact, to facilitate a prompt comparison of sources, NIFC uses rates annually established by USDA and DOI for contracted commercial wildland fire suppression airtankers and military aviation rates established annually by DOD's Office of the Comptroller General. Agency data show that the cost of operating MAFFS units is roughly twice that of commercial aircraft with comparable retardant storage capacity. Table 1 compares the costs of two comparable military and civilian aircraft at a single base. Notwithstanding these higher costs, USDA and DOI have taken effective advantage of MAFFS to meet needs in a timely fashion when use of a commercial source was not convenient or economical under the circumstances. In short, the requirements of the Economy Act help to ensure that USDA and DOI make sensible, informed decisions.

Table 1. Comparison of single-location daily rates between comparable commercial airtankers and MAFFS used for wildland fire suppression.

<table>
<thead>
<tr>
<th>Commercial</th>
<th>MAFFS</th>
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<tbody>
<tr>
<td>Personnel and Aircraft (2 P-3s)</td>
<td>$10,844</td>
</tr>
<tr>
<td>$10,844</td>
<td>Personnel and Aircraft (2 C-130 MAFFS)</td>
</tr>
</tbody>
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None of the agencies identified any significant burdens (e.g., costs or time constraints) to this (or any other) condition of the Economy Act and agreed that the Act provides reasonable discretion.

However, the 1975 MOU and agency guidance addressing inter-agency use of aviation resources – as reflected in both the National Mobilization Guide and the Military Use Handbook – state that the requesting agencies must determine that all commercial aviation resources are fully committed before requesting military assistance. This formulation is more stringent than what the Economy Act requires.

1 Because these activities are generally addressing surge requirements and are not recurring commercial activities, they are not subject to the public-private requirements of OMB Circular A-76.
This language from the MOU, the Guide and Handbook appears to have been the source of miscommunication between agency staff and external parties, potentially including State aviation officials as well as congressional staff. This may also have led to some confusion within the agencies.

While the language should be clarified to avoid any further miscommunication, we have no reason to believe that the relevant decision-makers have been applying this language in a strict sense when making decisions on whether mobilizing military resources is necessary and appropriate. In addition, this language has had no apparent effect upon the ability of the Governors of those States that have MAFFS assigned to Air National Guard units (California, Wyoming and North Carolina) to activate their in-state MAFFS resources for within-state utilization where the state is responsible for the costs of suppression associated with use of the resources.\(^2\) According to USDA and interviewed states, no Governor has ever been denied this ability to activate these resources since the inception of MAFFS. (However, there is a complex relationship between ownership of the airframes and the MAFFS, State utilization of in-state resources, and the process of Federal activation of MAFFS. As a result, there may be value in consolidating ownership of both the airframes and the MAFFS at the State level.)

**E. Other Considerations**

1. **Effectiveness**

In requesting and activating military resources, the wildland firefighting agencies must also take into consideration the likely effectiveness of the resources to be used. Interviews with State wildfire personnel underscored the importance of effectiveness. For aviation resources, the type of aircraft determines, to a large extent, its effectiveness in firefighting, both in general, and in the specific types of conditions where the resource is best suited.

Because C-130s were not designed with firefighting in mind, current MAFFS units are a retrofit technology with limited effectiveness. MAFFS units “spray” retardant as a continuous stream out the back of the aircraft, whereas commercial tankers used for firefighting typically “drop” retardant in a more concentrated area. Both independent research studies and agency experience have shown that MAFFS units are not very effective in heavy fuels conditions, but can be of service in lighter fuels. Standardized testing of retardant coverage developed by the Forest Service Technology and Development Center compared MAFFS with commercial airtankers on the basis of drop height, general winds, aerial dynamics of liquid dispersal, fuel penetration, ideal coverage levels and moisture retention due to evaporation. This testing indicated that the amount of coverage provided by MAFFS (“coverage level 4”) is half that provided by commercial airtankers (“coverage level 8”). State wildfire personnel confirmed that the coverage level of MAFFS was an important factor when considering their use. Research continues into improving MAFFS effectiveness, but current technology is a limiting factor. (See Appendix D for more detail on MAFFS technology.)

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\(^2\) As indicated previously, MAFFS are available to Colorado on the same basis as other states that do not have MAFFS assigned to Air National Guard units.
Compounding the issue of effectiveness is that of cost. As previously discussed, current MAFFS units are roughly twice as expensive as commercial airtankers for a given level of retardant storage capacity. This means that from a cost effectiveness perspective, current MAFFS units may cost as much as four times more than commercial resources for a given level of firefighting capability.

2. State Use of Air National Guard Resources

It is also important to keep in mind that the Air National Guard resources, such as the C-130 airframes used for firefighting in California, Wyoming and North Carolina are owned by the State in question and may be activated for use in wildland firefighting at any time by the Governor of such State. If activated by a State, the State is responsible for the costs of suppression associated with use of the resources. California and North Carolina wildland fire management officials confirmed with OMB staff that they have used State activation of MAFFS for wildfire suppression.

To determine whether to use MAFFS under the Governor’s authority, the States report that wildfire professionals consider several factors in applying their professional judgment. State personnel reported they consider the overall fire conditions, demand on fire and fiscal resources, and the values at risk. They also cited the availability, timeliness, cost and effectiveness of the MAFFS as critical considerations used in their exercise of professional judgment. The decision process used by the States appears in these respects to be very similar to the determination and finding required of Federal agencies under the Economy Act and FAR to utilize MAFFS.

V. Use of the Robert T. Stafford Disaster Relief and Emergency Assistance Act

When a disaster or emergency overwhelms a State, the Governor may request Federal assistance. FEMA can provide support under a number of different programs, depending on the nature and severity of the disaster. If the assistance or expertise of one or more Federal agencies is required, they are assigned a role in the disaster response under the Initial National Response Plan structure.

The Initial National Response Plan describes the responsibilities of Federal government agencies and the American Red Cross in responding to domestic incidents.

Currently, the Department of Homeland Security is leading the effort to design a final National Response Plan (NRP) that will replace the Initial National Response Plan. The NRP will encompass the earlier Federal Response Plan, as well as other plans the Government has in place for response and recovery after an incident. The NRP seeks to

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3 Please see footnote 2, pg. 11.
incorporate all aspects of emergency and incident management, which include preparedness, mitigation, response and recovery.

As with requests under the Economy Act, requests for DOD resources under the Stafford Act authorities are evaluated by the ASD (HD), and support is contingent on the availability of Department resources. The Secretary of Defense signs the orders approving the use of DOD resources.

In the course of this review, no problems were identified with the process by which DOD resources are utilized under the Stafford Act. As previously stated, in the case of wildland firefighting, the Stafford Act authority is generally invoked by a Presidential disaster declaration after the wildfire event has subsided, and subsequent work is coordinated and tasked through a single Federal agency (FEMA) to ensure the most expeditious and efficacious response possible. By contrast, most actual firefighting response work is coordinated through NIFC under the authority of the Economy Act.

According to the agencies and the State wildfire personnel interviewed, the invocation of the Stafford Act does not require any additional finding and determination as required by the Economy Act and FAR. Nor does it have any impact on the Economy Act procedures that are used to make determinations about the availability of commercial airtankers prior to MAFFS activation.

## VI. Determination

Existing authorities and policies for using military resources to fight wildland fires have generally worked well and continue to be appropriate. No changes in the Economy Act or the Stafford Act are necessary to ensure that military resources are made available and are used, as necessary and appropriate, for wildland firefighting, and existing authorities are being used in a manner consistent with the available capabilities of Department of Defense assets to fight wildfires in the most expeditious and efficacious way to minimize the risk to public safety.

The Economy Act permits an agency to place an order with another agency after deciding, in particular, that the requirement cannot be provided by contract as conveniently or cheaply by a commercial enterprise. This language of the Economy Act is sufficiently broad to allow the use of MAFFS resources in situations where doing so is reasonable under the circumstances. Moreover, the Economy Act has not created a barrier to efficient contracting for fire suppression resources. To the contrary, the Economy Act provides important criteria to prevent inefficient or wasteful agency spending while providing sufficient flexibility to allow agency managers to identify the most effective means of acquiring suppression resources.

For example, under the Economy Act, the agencies are able to factor into their decisions such things as subtle differences in aircraft capability. Therefore, if agency officials determine that MAFFS can best meet the agency's needs in a particular situation, MAFFS
could be utilized even if they were more expensive than private sector counterparts. The Economy Act simply requires that the agency head make an appropriate determination prior to utilizing MAFFS resources. State personnel have indicated that the Economy Act does not bar reasonable or timely access to MAFFS. Finally, the Economy Act has had no effect upon the ability of the Governors of California, Wyoming, and North Carolina to activate their in-state MAFFS resources for within-state utilization paid by State funds.

While no changes to existing statutory authorities are necessary, certain administrative procedures relied upon by the wildland firefighting agencies should be clarified to ensure efficiency and effectiveness is not inadvertently compromised. USDA, DOI, DOD, and OMB have agreed upon a series of actions to further refine and strengthen processes used to support interagency firefighting activities. These actions are described in the next section.

**VII. Agency Actions**

USDA, DOI, DOD, and OMB have agreed upon the following actions to further refine and strengthen processes used to support interagency firefighting activities:

- Written guidance in the National Mobilization Guide, the Military Use Handbook, and the MAFFS Operations Guide will be clarified to assure that they conform with the Economy Act and FAR and to improve transparency and prevent any possible miscommunication.
- Current efforts to update the 1975 MOU between DOD and USDA/DOI will be completed prior to the start of the 2005 fire season to: (1) update references to current statutory authority as well as changes to organizational and command structures; (2) indicate applicable roles and responsibilities; (3) reflect current administration policy in the areas of procurement, intergovernmental relations, and wildland fire management policy; (4) reflect enactment of the Stafford Act; and (5) assure consistency with the Economy Act and FAR.
- DOI and USDA will work with the relevant Federal and State agencies to enhance training of select Federal, military, National Guard, and State personnel on the requirements, appropriate interpretation, and implementation of the Economy Act.
- USDA, DOI and DOD will explore the possibility of transferring or assigning, under existing authorities, title of the MAFFS tanks and distribution systems to the relevant States.
Appendix A. Scope and Methodology

To conduct a review of existing authorities regarding the use of Air Force and Air National Guard modular airborne firefighting system (MAFFS) units and other Department of Defense (DOD) assets to fight wildfires, OMB personnel interviewed personnel of the Office of the Assistant Secretary of Defense for Homeland Defense within DOD, the USDA Forest Service, and the Department of the Interior. OMB staff also interviewed state wildfire personnel in California, Colorado, and North Carolina, three of the four states within which MAFFS units are based. OMB staff was unable to complete interviews with state wildfire personnel in Wyoming, the fourth state that has a MAFFS base.

The Office of the Assistant Secretary of Defense for Homeland Defense is responsible for coordinating DOD support of civil authorities in disaster response and the DOD response to requests for assistance from the Federal wildland fire suppression agencies. These agencies, the USDA Forest Service and the Department of the Interior (DOI), are responsible for wildland fire suppression on Federal lands and, in cooperation and partnership with the States, on non-Federal lands. OMB staff interviewed these personnel about the processes relating to requesting DOD firefighting resources and agency views on compliance with the Economy Act in making use of DOD resources to fight wildfires.

In addition to these interviews, conducted both in person and via conference calls, OMB staff reviewed the Economy Act, the Robert T. Stafford Disaster Relief and Emergency Assistance Act, relevant sections of the Federal Acquisition Regulation (FAR), and applicable guidance to agencies. OMB staff also reviewed USDA and DOI aviation manuals, operating procedure memoranda and handbooks, as well as an interagency Memorandum of Understanding between DOD and the wildland fire agencies.

In addition, OMB staff conducted an extensive review of documents relating to the National Interagency Fire Center’s (NIFC) policies and procedures governing the request and use of military resources. This included review of the Military Use Manual (NFES # 2175); the National Interagency Mobilization Guide (including section 24.10.2, MODULAR AIRBORNE FIREFIGHTING SYSTEMS (MAFFS) and Chapter 23, PLANNED AIRTANKERS--2003); the 2003 Airtanker Contract; the MAFFS Operating Plan; and the Interagency Airtanker Base Operations Guide (NFES # 2271).

Finally, OMB consulted with USDA and DOI personnel concerning Federal Aircraft Management Information Systems (FAMIS) reports and General Services Administration aviation reports, including Forms 3549, 3550, 3551, and 3552.

These reviews were conducted in February and March, 2004 in a manner consistent with OMB general processes relating to interactions with agencies.
Appendix B: The Economy Act, 31 U.S.C. 1535

Sec. 1535. Agency agreements
(a) The head of an agency or major organizational unit within an agency may place an order with a major organizational unit within the same agency or another agency for goods or services if –
   (1) amounts are available;
   (2) the head of the ordering agency or unit decides the order is in the best interest of the United States Government;
   (3) the agency or unit to fill the order is able to provide or get by contract the ordered goods or services; and
   (4) the head of the agency decides ordered goods or services cannot be provided by contract as conveniently or cheaply by a commercial enterprise.
(b) Payment shall be made promptly by check on the written request of the agency or unit filling the order. Payment may be in advance or on providing the goods or services ordered and shall be for any part of the estimated or actual cost as determined by the agency or unit filling the order. A bill submitted or a request for payment is not subject to audit or certification in advance of payment. Proper adjustment of amounts paid in advance shall be made as agreed to by the heads of the agencies or units on the basis of the actual cost of goods or services provided.
(c) A condition or limitation applicable to amounts for procurement of an agency or unit placing an order or making a contract under this section applies to the placing of the order or the making of the contract.
(d) An order placed or agreement made under this section obligates an appropriation of the ordering agency or unit. The amount obligated is deobligated to the extent that the agency or unit filling the order has not incurred obligations, before the end of the period of availability of the appropriation, in -
   (1) providing goods or services; or
   (2) making an authorized contract with another person to provide the requested goods or services.
(e) This section does not -
   (1) authorize orders to be placed for goods or services to be provided by convict labor; or
   (2) affect other laws about working funds.


SUBCHAPTER IV--MAJOR DISASTER ASSISTANCE PROGRAMS

Sec. 420. Fire Management Assistance

(a) In General.
   The President is authorized to provide assistance, including grants, equipment, supplies, and personnel, to any State or local government for the mitigation, management, and control of any fire on public or private forest land or grassland that threatens such destruction as would constitute a major disaster.

(b) Coordination With State and Tribal Departments of Forestry.
   In providing assistance under this section, the President shall coordinate with State and tribal departments of forestry.

(c) Essential Assistance.
   In providing assistance under this section, the President may use the authority provided under section 403.

(d) Rules and Regulations.
   The President shall prescribe such rules and regulations as are necessary to carry out this section.


Sec. 403. Essential Assistance.

(a) In general
   Federal agencies may on the direction of the President, provide assistance essential to meeting immediate threats to life and property resulting from a major disaster, as follows:
   (1) Federal resources, generally
      Utilizing, lending, or donating to State and local governments Federal equipment, supplies, facilities, personnel, and other resources, other than the extension of credit, for use or distribution by such governments in accordance with the purposes of this chapter.
   (2) Medicine, food, and other consumables
      Distributing or rendering through State and local governments, the American National Red Cross, the Salvation Army, the Mennonite Disaster Service, and
other relief and disaster assistance organizations medicine, food, and other consumable supplies, and other services and assistance to disaster victims.

(3) Work and services to save lives and protect property
Performing on public or private lands or waters any work or services essential to saving lives and protecting and preserving property or public health and safety, including –
(A) debris removal;
(B) search and rescue, emergency medical care, emergency mass care, emergency shelter, and provision of food, water, medicine, and other essential needs, including movement of supplies or persons;
(C) clearance of roads and construction of temporary bridges necessary to the performance of emergency tasks and essential community services;
(D) provision of temporary facilities for schools and other essential community services;
(E) demolition of unsafe structures which endanger the public;
(F) warning of further risks and hazards;
(G) dissemination of public information and assistance regarding health and safety measures;
(H) provision of technical advice to State and local governments on disaster management and control; and
(I) reduction of immediate threats to life, property, and public health and safety.

(4) Contributions
Making contributions to State or local governments or owners or operators of private nonprofit facilities for the purpose of carrying out the provisions of this subsection.

(b) Federal share
The Federal share of assistance under this section shall be not less than 75 percent of the eligible cost of such assistance.

(c) Utilization of DOD resources
(1) General rule
During the immediate aftermath of an incident which may ultimately qualify for assistance under this subchapter or subchapter IV-A of this chapter, the Governor of the State in which such incident occurred may request the President to direct the Secretary of Defense to utilize the resources of the Department of Defense for the purpose of performing on public and private lands any emergency work which is made necessary by such incident and which is essential for the preservation of life and property. If the President determines that such work is essential for the preservation of life and property, the President shall grant such request to the extent the President determines practicable. Such emergency work may only be carried out for a period not to exceed 10 days.

(2) Rules applicable to debris removal
Any removal of debris and wreckage carried out under this subsection shall be subject to section 5173(b) of this title, relating to unconditional authorization and indemnification for debris removal.

(3) Expenditures out of disaster relief funds
The cost of any assistance provided pursuant to this subsection shall be reimbursed out of funds made available to carry out this chapter.

(4) Federal share
   The Federal share of assistance under this subsection shall be not less than 75 percent.

(5) Guidelines
   Not later than 180 days after November 23, 1988, the President shall issue guidelines for carrying out this subsection. Such guidelines shall consider any likely effect assistance under this subsection will have on the availability of other forms of assistance under this chapter.

(6) Definitions
   For purposes of this section -
   (A) Department of Defense
       The term “Department of Defense” has the meaning the term “department” has under section 101 of title 10.
   (B) Emergency work
       The term “emergency work” includes clearance and removal of debris and wreckage and temporary restoration of essential public facilities and services.

(Pub. L. 93-288, title IV, Sec. 403, as added Pub. L. 100-707, title I, Sec. 106(a)(3), Nov. 23, 1988, 102 Stat. 4697.)
Appendix D. Modular Airborne Firefighting System (MAFFS)

MAFFS is a self-contained, reusable 3000-gallon aerial fluid dispersal system that allows Lockheed C-130 cargo/utility aircraft to be converted to wildland firefighting airtankers. The system has been used in the U.S., Europe, Africa, and Indonesia. The system is pneumatically powered and includes tank modules, a control module, and a dissemination module. Electrical power is provided by the aircraft or by a 24-volt battery on the control module.

The MAFFS use is a joint program with the Air National Guard, Air Force Reserve, and the U.S. Forest Service; the system was developed for installation in a Lockheed C-130 Hercules plane equipped with the USAF 463L cargo-handling system. Personnel using MAFFS can make variable drops over the fire, with flow rate preselected at the control module. At maximum flow rate, a MAFFS-equipped C-130 can discharge its entire load in under five seconds. Unlike a gravity system in which the aircraft’s center of gravity moves aft as the retardant flows to the rear to exit, MAFFS discharges the retardant alternately from a series of tanks to keep the center of gravity within limits. MAFFS-equipped tankers can be re-loaded and flight-ready in less than eight minutes.

In 1970, a number of catastrophic forest fires burned across Southern California, overwhelming the airtanker fleet’s ability to respond. Congress requested that the USAF assist the Forest Service by making military aircraft available as a back-up measure—which prompted the development of MAFFS. The system was originally designed and developed by the Food Machinery Corporation of California; since 1974, strategically located USAF Reserve and Air National Guard units have been equipped with MAFFS units produced by Aero Union.

Seven tank modules store the retardant under pressure; each module contains a pressure tank where compressed air is stored at 1200 psi. The control module includes the master control panel, the loadmaster’s seat, and discharge valves. An air compressor module
provides air pressure for charging the system; it stays at the airtanker base during air operations and is used to recharge the system between runs. Each unit weighs about 11,000 pounds, with a load capacity of 2700 gallons.

The units are loaded with either water or retardant—a chemical that inhibits the combustion potential of vegetation on the ground. The retardant contains a fertilizer and promotes regrowth over the burned area. While water is sometimes dropped directly on a fire, retardant is laid out ahead of the fire or at its edges to inhibit or retard the fire’s spread. This allows firefighters on the ground to rapidly take advantage of the retardant effect, which helps in fire line-building efforts. Its bright red or fuchsia color helps airtanker pilots observe the accuracy of their retardant drops on the edge of the fire.

When the MAFFS units are activated, the assigned MAFFS Liaison Officer (MLO) establishes a loading facility near the fire for incoming tankers. Many variables affect the air drops—including drop height, terrain, wind, fuels, and fire behavior—so the Forest Service has developed various “drop patterns” for the pilot to use during air operations. The drop pattern is determined prior to each run via close radio coordination with the air operations group.
Appendix E. Memorandum of Understanding between the Department of Defense and the Departments of Agriculture and the Interior

I. PURPOSE

This Memorandum of Understanding establishes general guidelines concerning the furnishing of assistance by Department of Defense (DOD) components at the request of Boise Interagency Fire Center (BIFC) in forest and grassland fire emergencies occurring within the continental United States (48 contiguous states).

II. RESPONSIBILITIES

A. This Memorandum of Understanding does not supersede or modify the existing mutual aid agreement procedures between individual military installations and States. The Forest Service (FS), Department of Agriculture, has statutory responsibility for protection of the National Forests from damage by wildfire and for cooperation with the States in the protection of forest and watershed lands from fire. FS at BIFC will provide national coordination and logistical support for interregional fire control action.

B. Agencies of the Department of the Interior [Bureau of Land Management (BLM), National Park Service (NPS), Bureau of Indian Affairs (BIA), and U.S. Fish and Wildlife Service (FWS)] have statutory responsibility for the protection of land under their respective administration from damage by wildfire. The Bureau of Land Management (BLM) at BIFC provides logistical support to the initial attack capabilities of its Districts including coordination of fire control efforts in the twelve; Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Wyoming, Washington; Western States. BLM at NIFC also provides logistical support in fire control to the National Park Service, Bureau of Indian Affairs, and U.S. Fish and Wildlife Service.

C. When Military assistance is furnished to BIFC in fire emergencies, such assistance will be deemed to have been furnished pursuant to section 601 of the Economy Act of 1932, as amended (31 U.S.C. 686).

1 A Federal interagency fire coordination center under control of the Departments of Agriculture and the Interior.
D. The BIFC is responsible for providing national coordination and logistical support for Federal interagency fire control actions.

1. BIFC is staffed by Federal interagency personnel whose facilities are collectively combined to carry out their parent Department’s fire responsibilities and who collaborate and cooperate in the solution of fire problems of mutual concern.

2. BIFC will act as liaison between Federal and, when requested, State agencies as regards their requirements for military assistance in suppressing forest or grassland concern.

3. BIFC shall establish and maintain contact with each CONUS Army headquarters to develop local procedures and to maintain information on military capabilities for emergency assistance.

E As outlined in DOD Directive 3025.1, the Secretary of the Army has been designated DOD Executive Agent for military support in disasters within the 50 States, the District of Columbia, Commonwealth of Puerto Rico, U.S. possessions and territories, or any political subdivision thereof. The Secretary enters into this memorandum of Understanding on behalf of the Department of the Army, Navy, Air Force, and DOD agencies, referred to hereafter as DOD Components, which may be requested to provide disaster assistance to Federal agencies and States through the BIFC.

F The Federal Disaster Assistance Administration (FDAA), Department of Housing and Urban Development, is responsible for coordination of all Federal disaster assistance provided under the authority of the Disaster Relief Act of 1974 (PL 93-288) and Executive Order 11795, 11 July 1974, (hereinafter referred to as the Act.)

III. POLICY

It is the policy of the DOD to provide emergency assistance to Federal agencies in the form of personnel, equipment, supplies, or fire protection services in cases where a forest or grassland fire emergency is beyond the capabilities of the resources available. There are two situations in which the DOD, consistent with Defense priorities, will provide such assistance:

A. At the request of the BIFC – When, in the determination of the BIFC, military assistance is required and justified in order to suppress wildfires. This includes requests for assistance for fires on Federal property as well as fires on State or private lands. Requests will include a statement to the effect that all available or suitable
civilian resources have been committed and that requested support is not in competition with private enterprise.

B. Pursuant to the Act – When a forest or grassland fire on State or private land is declared a major disaster or a determination for emergency assistance is made by the President and the required military support is requested by the Federal Coordinating Officer (FCO) or FDAA Regional Director. The Act is not normally invoked for incidents or related incidents occurring on Federal property.

IV. OPERATIONAL PROCEDURES AND FUNDING

A. The procedures set forth below will be followed when assistance is rendered under circumstances other than the Act.

1. All requests for forest or grassland fire assistance from Federal and State agencies should be submitted through the BIFC. BIFC will then submit the requests to the commander of the appropriate CONUS Army. However, when a fire emergency is so serious that adherence to normal request channels would significantly endanger life or result in great loss of property, Federal or State agencies may make requests for assistance directly to the commander of the nearest military installation. As soon as the situation permits, the BIFC will be notified and normal procedures established by the requesting agency.

2. Upon receipt of a request for assistance from the BIFC the CONUS Army Commander will provide the required support from either Army assets or from other DOD component assets, as required. Normal DOD disaster relief procedures will be followed and every effort will be made to expedite the provision of the requested support.

3. The Departments of Agriculture (FS) and the Interior (BLM, NPS, BIA, & FWS) will promptly reimburse the DOD for all costs incurred in furnishing the requested assistance as are in addition to the normal operating expenses of the personnel, equipment and resources involved without requirements of audit (see 31 U.S.C. 686 (a)O). Such costs will include additional personal services of military and civilian employees, travel and per diem expenses for military and civilian personnel, and other expenses to include transportation of supplies, materials, and equipment furnished and not returned or damaged beyond economical repair; and costs of repairing or reconditioning non-consumable items returned.

4. Each request submitted by BIFC will carry an appropriate identifying number (Fire Order Number), which will be utilized by the CONUS Army furnishing the assistance to maintain an accurate record of all expenses incurred in fulfilling that request. Billings attributable to each fire order
will be submitted on Standard form 1080 Voucher for Transfer between Appropriation and/or Funds.

5. Billings by DOD components for the cost of assistance furnished will be forwarded by the CONUS Army to the BIFC for distribution to the agency responsible for reimbursement. Primary responsibility for reimbursement rests with the Departments of Agriculture and the Interior. Payments, however, will be made directly to the appropriate CONUS Army, with a copy of the payment voucher or other suitable document being furnished to BIFC to indicate that payment has been made.

6. Charges for personal services, materials, and/or equipment furnished will be governed by applicable DOD directives and implementing regulations.

7. Charges will be made for costs incurred in withdrawing materials and equipment from and returning them to, depot stock. Damages to equipment will be charged on the basis of costs of repairing or reconditioning the equipment and placing it in as good a condition as when loaned. The DOD components concerned will furnish all needed repair material and perform all necessary repair and maintenance work. Charges for equipment destroyed will be on the basis of current replacement costs for an item in a condition similar to that immediately prior to destruction (30 Comptroller General 295 and Comptroller General B146588, 8/29/61).

8. In the event that the actual costs of furnishing requested assistance significantly differ from the standard costs or rates of charge specified in appropriate directives described in IV.A.6., above, it is mutually agreed that appropriate adjustments of charges will be made on the basis of actual costs. It is further agreed that where the extent of assistance provided requires an increase in the overall operating costs on the military agency involved, reimbursement will also cover these relevant increases in costs. Due consideration shall be given to the unusual costs involved in the expeditious transport of personnel, supplies, and equipment necessitated by emergency conditions (e.g., airlift, airdrop, ship-to-shore, float-in operations, etc.) and claims for the costs of such emergency operations shall be deemed valid and to constitute proper claims for reimbursement.

9. All charges for services or materials as specified above will be accumulated against appropriate reimbursable orders and cross-referenced to each Fire Order issued by BIFC. In the interest of convenience and economy, if the total accumulated charges for any single incident covered by one or more Fire Orders does not exceed $100, billing by the respective DOD components concerned will be waived.
a. The procedures set forth below will be followed when assistance is rendered pursuant to Public Law 93-288.

1. When requesting assistance in connection with fire emergencies for support to State or private lands that have been declared “major disasters” or emergencies, the State officials will submit their requests to the FDAA Regional Director/Federal Coordinating Officer.

2. The FDAA Regional Director/Federal Coordinating Officer should request military assistance from the appropriate CONUS Army Commander in accordance with existing procedures.

3. Military assistance will be provided in accordance with the policies and procedures established in DOD Directive 3025.1 and other appropriate directives.

4. Reimbursement to DOD for personnel, supplies, and services furnished will be made by FDAA pursuant to the provisions of Public Law 93-288 and the Code of Federal Regulations, Title 24, Chapter 13, Part 2205. This memorandum rescinds June 1971 Memorandum of Understanding between the Department of Defense and the Department of Agriculture.

V. SUPPLEMENTAL AGREEMENT

Subordinate components of DOD are authorized to enter into supplemental agreements with BIFC to implement provisions on this agreement. All such agreements will be documented on DD Forms 1144; and where such agreements involve recurring support, the participating DOD components will process such forms to the retail interservice support data bank in accordance with the applicable provisions of DOD Directive 4000.19-M.

VI. RESOLUTION OF DISAGREEMENTS

When disputes or unique situations produce stalemates, DOD components and the BIFC will promptly submit jointly signed statements of disagreement to the DOD Executive Agent for resolution.

VII. EFFECTIVE DATE

This memorandum is effective as of the date it is signed below and shall remain in effect until specifically rescinded; however, the provisions hereof relative to operational procedures and funding and financial procedures shall be reviewed biennially by designated representatives of the respective signatories to determine whether the agreements contained herein should be continued, modified, or terminated.
APPROVED FOR THE U.S. DEPARTMENT OF AGRICULTURE

By _/s/Earl L. Butz_______________________________ Date ___1/10/75_________

APPROVED FOR U.S. DEPARTMENT OF THE INTERIOR

By _/s/Stanley K Hathaway________________________ Date ___6/26/75_________

APPROVED FOR THE DEPARTMENT OF DEFENSE

By _/s/Howard H Calloway________________________ Date ___4/25/75_________
Appendix F. Recent History of Defense Support to Wildland Firefighting

2003
• Eight Air National Guard and Air Force Reserve MAFFS
• One Army battalion

2002
• Eight Air National Guard and Air Force Reserve MAFFS
• One Army battalion

2001
• Two Army battalions
• Eight Air National Guard and Air Force Reserve MAFFS

2000
• Four Army and one Marine Corps battalions

1996
• One Army battalion and one Marine Corps battalion
• Eight Air National Guard and Air Force Reserve MAFFS

1994
• Five Army battalions and two Marine Corps battalions

1990
• Four Army battalions
• Eight Air National Guard and Air Force Reserve MAFFS

1989
• Four Army battalions
• 19 helicopters
• Eight Air National Guard and Air Force Reserve MAFFS

1988
• Six Army battalions and two Marine Corps battalions
• 57 helicopters, including two OV-10 Mohawks with infrared scanners
• Eight Air National Guard and Air Force Reserve MAFFS