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**Approved by:** F. DALE ROBERTSON, Chief

**Date approved:**

**Responsible Staff:**

**NEW POSTING NOTICE:** This amendment is the first in a new numbering series corresponding to the year in which material was amended. Since this amendment replaces all text except Interim Directives (ID), do not check for the last transmittal received for this title. Replace the entire title text except ID's. Place this transmittal sheet at the front of the title and retain until the first transmittal of the next calendar year is received.

**Explanation of changes:**

1500 - Please read the new posting notice carefully. These directions apply to this transmittal only. Entire text, except ID's, is replaced. New text corresponds with text located in the National Information Center. The electronic document names are shown above for ease in accessing them from the National Information Center. Direction has not been changed. Some minor typographical and technical errors were corrected. Amendment numbers and dates noted above are listed for historical purposes only. All subsequent amendments will be issued by document.

## Table of Contents

<b>1533.2 - Department of the Army .....</b>	<b>3</b>
<b>1533.21 - Agreement on Managing Land and Water Resources .....</b>	<b>3</b>
<b>1533.23 - Memorandum of Understanding To Provide for Cooperation With Desert Test Center.....</b>	<b>7</b>
<b>1533.24 - Memorandum of Understanding to Provide for Cooperation With Test and Evaluation Command .....</b>	<b>9</b>
<b>1533.25 - Memorandum of Understanding to Provide Army Supplies and Munitions to Support Avalanche Control Programs .....</b>	<b>11</b>
<b>1533.26 - Supplement to Master DOD Memorandum of Understanding for U.S. Army Research and Development Program, Winds in Non-Uniform Domains (WIND) .....</b>	<b>15</b>

## **1533.2 - Department of the Army**

### **1533.21 - Agreement on Managing Land and Water Resources**

64-SIE-004

MEMORANDUM OF AGREEMENT BY THE SECRETARIES OF THE ARMY  
AND AGRICULTURE RELATIVE TO MANAGEMENT  
OF THE LAND AND WATER RESOURCES  
AT WATER DEVELOPMENT PROJECTS OF THE CORPS OF ENGINEERS  
LOCATED WITHIN OR PARTLY WITHIN THE NATIONAL FOREST SYSTEM

Purpose of this Memorandum is to establish and record agreed-upon principles and policies to govern the planning, development and management of water and land resources associated with water resource development projects constructed or to be constructed by the Corps of Engineers associated with units of the National Forest System (National Forests and Grasslands) and to establish procedures for the use of National Forest lands required for works of improvements related to these projects. This agreement supersedes that executed by the Secretaries of War and Agriculture as of December 16, 1946.

The Secretary of the Army is authorized by the Congress to provide for public access to and the recreational use of reservoirs and other water controlled projects constructed by the Corps of Engineers and to do this directly or through federal, state or local agencies. The Secretary of Agriculture is authorized to provide for the use and management of the National Forest System under multiple-use principles and practices, including the development and administration of outdoor recreation. The Secretaries of the military departments and the Secretary of Agriculture are authorized to interchange National Forest lands and lands controlled by the military departments within or adjacent to National Forests to facilitate land management and provide maximum use for authorized purposes. This agreement is intended to implement and facilitate achievement of these authorizations and responsibilities.

Accordingly, the use, development, and management of lands under the control of the Departments of the Army and Agriculture in and about water resource projects of the Corps of Engineers within or partly within the National Forest System will be subject to the following overall policies:

1. The Corps of Engineers and the Forest Service will cooperatively plan the development, use and management of water resource projects as they relate to land resources. Such cooperative planning will start with the preauthorization plans and continue through the successive planning stages. This planning will be pointed toward achieving the maximum public benefits from each project and will delineate the procurement of necessary lands to assure

meeting all foreseeable public needs for recreation, wildlife, and other uses compatible with the primary purposes of the water storage facility.

2. Water resource projects will be planned and operated to provide the greatest feasible public use for recreation, wildlife and fish propagation, conservation of scenic and esthetic values, and the harmonious use of timber and other commodities consistent with the other water control and use purposes. Programs of both agencies concerning land procurement, resource development and use, access facilities, roads and trails, on and adjacent to reservoirs and on the National Forest lands within the reservoir zones of influence will be correlated to the fullest possible extent.

3. The Department of the Army will determine, consistent with the land acquisition policy of the Secretary of the Army, the lands required for the construction, operation and maintenance of water resource projects of that Department for the purposes authorized by Congress. The Department of the Army after consultation and agreement with the Department of Agriculture will request from the Department of the Interior the withdrawal from entry under the general mining and public land laws of the National Forest land withdrawn from the public domain required for the use of the project; and will request from the Department of Agriculture, under comprehensive Memorandum of Understanding the use of all Forest Service administered lands (including Weeks Law lands) required for the use of the project. Following construction, Memoranda of Understanding for lands which will be administered by the Forest Service will be modified to cover only requirements of operation remaining under Corps jurisdiction.

Interchanges of land pursuant to Public Law 804, 84th Congress (16 USC 505a,b) will be undertaken in accordance with plans and agreements hereunder to transfer to the Department of the Army those lands of the Department of Agriculture which the Department of the Army requires for water resource projects and transfer to the Department of Agriculture lands under jurisdiction of the Department of the Army which are required for planning, developing and operation of water oriented recreation facilities or other resource management. The Department of the Army will retain in any transfer of land the rights of use necessary for unrestricted operation and maintenance of the water resource project, including the right to construct facilities or structures or to remove any facilities or structures which are inimical to the operation of the project. The Department of Agriculture likewise will retain such rights of use and access as are necessary to provide for required other uses of National Forest lands and access for National Forest purposes. All Memoranda of Understanding and transfers relating to land will be consummated as soon as practicable. At all water resource development projects, necessary lands, as determined by the Chief, Corps of Engineers, in the vicinity of major structures including but not limited to the dam and its approaches upstream and downstream will be under the sole jurisdiction of the Chief of Engineers.

4. Management of land and the use and development of resources, including water oriented recreation, will be assigned between the agencies in accordance with the following guidelines:

a. Where water storage projects are located within or substantially within the exterior boundaries of units of the National Forest System the management of project associated land and resources will be a function of the Forest Service unless the two Departments mutually agree otherwise.

b. Where water resource projects involve only minor areas within National Forests the development and administration of project associated lands and resources will be a function of the Corps of Engineers or other agencies as it may determine and provide for unless the two Departments mutually agree otherwise.

c. Where water resource projects are not in the foregoing categories, development and management of project associated land and resources will be undertaken by the Forest Service on those reaches of land adjoining the reservoir in which it has the predominant federal interest and by the Corps of Engineers in those reaches of adjoining lands in which the Corps has the predominant federal interest; provided that the two agencies may agree that in the interest of efficient public property management one or the other will undertake management of all such land and resources.

In the determination of the predominant federal interest in adjoining reaches of lands and resources, the following factors, individually and in combination, will be taken into account:

(1) The relative jurisdiction of lands required for the water resource project above the conservation pool;

(2) The proportion of the water resource project within National Forest boundaries;

(3) The impact of the water resource project on National Forest lands, programs and uses, including recreation generated thereby and project related roads and highways;

(4) The character and requirements of the resource management job to be done on the project associated lands and the need for correlation with that on adjacent lands;

(5) The capabilities of the agencies in terms of in-place related programs and organizations to assume the required functions, including the degree to which these programs and organizations can be extended to the project area;

(6) The desirability of single agency administration to avoid duplication of federal programs or organizations on relatively limited areas of federal lands.

Both agencies will seek resolution of jurisdiction at District Engineer-Forest Supervisor level during project formulation (Corps Survey Reports) or, for projects already authorized, as early as possible in the project planning or construction stages. Agreements reached at field level will be forwarded to the Chiefs of Services involved for confirmation. If irreconcilable differences develop, basic data will be referred without delay to the Chief of Engineers and Chief of the Forest Service for decision.

5. The Department of the Army will be responsible for the clearing of the reservoir area and for the construction, maintenance and operation of the water resource project except as otherwise provided herein and will have full use and administration of necessary lands for these purposes. Jurisdiction of National Forest System lands for other purposes will remain with the Secretary of Agriculture, including the sale of timber therefrom prior to clearing activities by the Department of the Army. Receipts from the sale of timber or use of National Forest System lands withdraw for or made available to the Department of the Army will be deposited into the National Forest Fund.

6. Improvements and structures of the Department of Agriculture which will be destroyed or rendered useless by reason of the water resource development and which are still needed by the Department of Agriculture will be removed or replaced by the Department of the Army at a location to be determined by the Department of Agriculture in such kind and quantity as will provide levels of service and/or access at least equivalent to those existing prior to the project construction, subject to interagency budgetary procedures.

7. In its construction activities, the Department of the Army will take all reasonable precautions to prevent and suppress forest fires on and prevent any unnecessary damage to lands and resources associated with the project construction and to this end will collaborate with the Department of Agriculture in formulation of fire prevention and control plans and programs, location of access roads and relocation of transportation facilities, land clearing standards, and other matters essential to the protection of resources and conservation of the scenic and esthetic aspects of the reservoir environment.

8. Under the legislative concept of Section 207, Public Law 87-874, approved October 23, 1962, (16 USC 460d) and under the project definition of the authorizing document (i.e., survey reports), the Corps of Engineers has certain obligations and commitments with respect to land management, including principally recreational development and use. Where the Forest Service elects to accept jurisdiction over land use and management of a water resource project under this agreement, it agrees to accept these obligations and commitments and to pursue them diligently in its programming and budgeting procedures with the general objective of meeting them to the same degree as they would have been met under corresponding programs of the Corps.

9. Memoranda of Understanding supplemental hereto will be entered into by the Chief of Engineers and Chief of the Forest Service for each water resource project within the purview of this Memorandum of Agreement for the purpose of implementing the principles and policies herein agreed to as they apply to the particular project. Action toward such supplemental agreements will be initiated as part of the project preauthorization planning processes or, as to projects authorized but not completed, at the earliest practicable date.

Signed the 13th day of August, 1964.

\_\_\_\_\_/s/\_\_\_\_\_  
Secretary of the Army

\_\_\_\_\_/s/\_\_\_\_\_  
Secretary of Agriculture

**1533.23 - Memorandum of Understanding To Provide for Cooperation With Desert Test Center**

73-SIE-001

MEMORANDUM OF UNDERSTANDING  
BETWEEN U.S. ARMY MATERIEL COMMAND  
AND THE U.S. FOREST SERVICE

I. PURPOSE

This Memorandum of Understanding (MOU) establishes general guidelines for conducting programs of mutual technical assistance between the U.S. Forest Service (USFS) and the U.S. Army Materiel Command (USAMC) and has been prepared to insure effective transfer of technology and mutual assistance between both agencies.

II. SCOPE

This MOU relates to all programs of mutual interests to the Desert Test Center (DTC) and the U.S. Forest Service (USFS). In particular, it provides the procedures for planning, funding and executing cooperative programs between USFS and DTC.

### III. PROCEDURES

a. The Secretary of the Forest Service Equipment Advisory Board will be the focal point for negotiating and coordinating USFS participation in joint projects.

b. The Commander, DTC, will be the focal point for negotiating and coordinating participation in projects covered by this agreement with the USFS.

c. For each project agreed upon, a supplemental agreement will be prepared and submitted for approval of the Commander, DTC, and the Chairman of the Forest Service Equipment Advisory Board.

As appropriate, each supplemental agreement should contain the following paragraphs:

- (1) Objectives
- (2) Expected Benefits (each agency)
- (3) Scope
- (4) Procedures
- (5) Support Requirements
- (6) Responsibilities
  - (a) Public Information
  - (b) Liaison with Landowners
  - (c) Impact Statements
  - (d) Safety
  - (e) Reports and Publications
- (7) Funding

### IV. FUNDING

Funding for each project will be agreed to by each agency in the supplemental agreement. Reimbursement of expenditures between the two agencies will be processed



under the authority of Section 601 of the Economy Act (31 U.S.C. 686) unless other legal authorities are cited in the supplemental agreement.

#### V. EFFECTIVE DATE

This MOU is effective as of the date it is signed below for the Commander, U.S. Army Materiel Command and for the Chief, U.S. Forest Service, and shall remain in effect until specifically rescinded.

/s/ John R. McGuire  
JOHN R. McGUIRE  
Chief, Forest Service  
U.S. Department  
of Agriculture

/s/ Henry A. Miley, Jr.  
HENRY A. MILEY, JR.  
General, United States  
Army Commanding General  
U.S. Army Materiel Command

Date: April 12, 1973

Date: April 2, 1973

### **1533.24 - Memorandum of Understanding to Provide for Cooperation With Test and Evaluation Command**

73-SIE-002

#### MEMORANDUM OF UNDERSTANDING BETWEEN U.S. ARMY MATERIEL COMMAND AND THE U.S. FOREST SERVICE

#### I. PURPOSE

This Memorandum of Understanding (MOU) establishes general guidelines for conducting programs of mutual technical assistance between the U.S. Forest Service (USFS) and the U.S. Army Materiel Command (USAMC) and has been prepared to insure effective transfer of technology and mutual assistance between both agencies.

#### II. SCOPE

This MOU relates to all programs of mutual interests to the U.S. ARMY Test and Evaluation Command (TECOM) and the U.S. Forest Service except those involving the Desert

Test Center (DTC). Cooperative programs with DTC are provided for in a separate MOU. In particular, this MOU provides the procedures for planning, funding and executing cooperative programs between USFS and TECOM (except DTC).

### III. PROCEDURES

a. The Secretary of the Forest Service Equipment Development and Test Board will be the focal point for negotiating and coordinating USFS participation in joint projects.

b. The Commander, TECOM, will be the focal point for negotiating and coordinating participation in projects covered by this agreement with the USFS.

c. For each project agreed upon, a supplemental agreement will be prepared and submitted for approval of the Commander, TECOM, and the Chairman of the Forest Service Equipment Development and Test Board.

As appropriate, each supplemental agreement should contain the following paragraphs:

- (1) Objectives
- (2) Expected Benefits (each agency)
- (3) Scope
- (4) Procedures
- (5) Support Requirements
- (6) Responsibilities
  - (a) Public Information
  - (b) Liaison with Landowners
  - (c) Impact Statements
  - (d) Safety
  - (e) Reports and Publications
- (7) Funding

### IV. FUNDING

Funding for each project will be agreed to by each agency in the supplemental agreement. Reimbursement of expenditures between the two agencies will be processed under the authority of

Section 601 of the Economy Act (31 U.S.C. 686) unless other legal authorities are cited in the supplemental agreement.

#### V. EFFECTIVE DATE

This MOU is effective as of the date it is signed below for the Commander, U.S. Army Materiel Command and for the Chief, U.S. Forest Service, and shall remain in effect until specifically rescinded.

/s/ JOHN R. McGUIRE  
Chief, Forest Service  
U.S. Department of  
Agriculture

/s/ HENRY A. MILEY, JR.  
General, United States  
Army Commanding General  
U.S. Army Materiel  
Command

Date: May 22, 1973

Date: June 6, 1973

### **1533.25 - Memorandum of Understanding to Provide Army Supplies and Munitions to Support Avalanche Control Programs**

No. 73-SIE-003

DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
Washington, D.C. 20310

#### MEMORANDUM OF UNDERSTANDING

I. PURPOSE AND SCOPE. This memorandum contains an understanding between the Forest Service of the United States Department of Agriculture (hereinafter "the Forest Service") and the Office of the Assistant Secretary of the Army for Installation and Logistics (hereinafter "the Army"). It establishes the nature of the support which can be made available by the Army to the Forest Service's avalanche control program, the procedures for requesting such support, the responsibilities of the Army and the Forest Service, and the requirements for reimbursement of the Army.

II. AUTHORITY. The authority for this understanding is the Economy Act, Title 31, United States Code, Section 686, and Chapter 10, Title 40, United States Code. To the extent that the Forest Service's avalanche control program may be deemed to protect public property, Title 10, United States Code, Section 4655 also authorizes this support.

### III. DEFINITIONS:

1. "Avalanche control program" means the actions required to protect users of land under Forest Service permit from foreseeable hazards relating to avalanches. Measures necessary to ensure safe conditions at ski areas are the responsibility of winter sports permittees through the Forest Service permit system and are funded by the permittee. Special use permits issued under the Acts of March 4, 1915, as amended; 16 U.S.C. 497 and June 4, 1897, as amended; and 16 U.S.C. 555 contain such terms and conditions necessary to accomplish the above. Cooperation with the winter sports permittees to finance Forest Service costs of administration and firing military hardware is accomplished under Section 5 of the Act of April 24, 1950, as amended (16 U.S.C. 572).
2. "Army Inventory Control Point" means, with reference to ammunition and weapons, the U.S. Army Armament Command, ATTN: AMSAR-MMV, Rock Island, Illinois 61201.
3. "Supplies" means each item for which the Army has inventory management responsibility under the Department of Defense (DOD) Supply System, which has an assigned Federal Stock Number (FSN), and which is centrally managed and procured by one of Army Inventory Control Points listed in subparagraph 2.
4. "Munitions" is used to describe the type of supply to which this understanding applied, and means ordnance, ammunition, and accouterments which are available in excess quantities within the supply system and which, consistent with DOD and Army regulations governing sensitive or closely controlled material, may be loaned (or in the case of ammunition, issued) without undue impact on military missions or programs. The Army may also, at its own discretion, temporarily lease or loan items to the Forest Service which are not excess.

### IV. RESPONSIBILITIES.

1. The Army, through the Army Material Command, will accept requisitions from the Forest Service for munitions supplies considered useful and appropriate by the Forest Service for its avalanche control program and requested by the Forest Service for that program, subject to the terms and conditions (including reimbursement) set out herein.
2. The Army, through the Army Material Command, will (when appropriate) provide the Forest Service at its Washington address with a current listing of suspended and restricted ammunition that will assist those responsible for storage, use, and transportation of ammunition. The Army will also provide disposition instructions for ammunition so identified.
3. The Army, through the Army Material Command, will answer questions from the Forest Service concerning general safety rules not covered by national safety codes or standards.
4. The Forest Service will train personnel who handle or use munitions supplies furnished hereunder with particular attention to safety and security. The Army may, on the basis of local arrangements not within the scope of this agreement, assist in the training of such personnel on a reimbursable basis.
5. The Forest Service assumes responsibility for the security and safe handling and use of munitions supplies furnished to it pursuant to this understanding and will provide custody and control of such

supplies until they are expended, returned to the Army, or otherwise disposed of in accordance with Army instructions.

6. The Forest Service undertakes to the the extent that the laws are applicable to insure compliance with the Gun Control Act of 1968 (PL 90-618) and any other Federal, State or local laws.

7. If any claim is filed by a third party for personal injury, death or property damage arising out of or resulting from the munitions and services furnished pursuant to this agreement or otherwise in connection with avalanche control or activities related thereto, the Forest Service and the Army will immediately coordinate to determine what action or assistance is required or may be furnished by either party. Normally, all such claims will be processed by the Forest Service under the Federal Tort Claims Act or other applicable laws and regulations. However, in the event that the parties agree, or if for any other reason, the Army is obligated to process such a claim arising hereunder, the Army will be reimbursed by the Forest Service for all reasonable costs incurred in the review, investigation, analysis or settlement of such claims unless otherwise prohibited by law or it is agreed to by the parties that responsibilities therefore vest in the Army. It is further agreed that any other administrative costs of investigative expenses arising or occurring to either party at the request of the other party in connection with a claim shall be on a reimbursable basis.

8. The Forest Service will return material which has been furnished to it hereunder but which is no longer needed for the avalanche control program to the appropriate Army Inventory Control Point, with credits and charges calculated under applicable Army regulations. The Forest Service will return any munitions supplies furnished to it under this understanding if the Army so requests.

9. The Forest Service will pay the charges assessed by the Army in accordance with the procedures set forth herein. The army, through the Army Material Command, will furnish the Forest Service the current SB 700-20 and subsequent changes thereto.

#### V. PROCEDURES AND REIMBURSEMENT.

1. The Army will attempt to provide to the Forest Service at least one year's advance notice as to when ammunition, weapons and spare parts will not be available for sale and/or loan to the Forest Service. The Forest Service will, in turn, continue to provide the Army with their five-year forecast of requirements to enable the Army to provide the aforementioned one-year's advance notice.

2. On or about 15 June of each year, the appropriate Forest Service representative(s) will submit by letter his requirements for munitions supplies for the avalanche control program for the following year to the Army Material Command (AMC), AMCSU-SC. The request will include the type of ammunition, quantity, destination of shipment, bill-to address, applicable appropriation citation and any special instructions.

3. The Forest Service will provide the Army with an annual inventory of weapons on loan. Loan agreements will be executed as required by AMC.

4. The appropriate Army Inventory Control Point will bill the Forest Service at the address designated in the ordering letter on a Standard Form 1080, and the Forest Service will pay at the rate or prices

specified in SB 700-20 (or successor regulation) where applicable, in accordance with the Economy Act and 10 U.S.C., 4655:

- a. Current prices for all ammunition (except DOD excess portions);
- b. Accessorial charges for packing, crating, and handling munitions in accordance with Army Regulation 37-8 or successor regulations;
- c. Transportation costs;
- d. The cost of the fuze and its installation in the case of ammunition which must be refuzed;
- e. Cost of renovation or repair, (components, supplies and labor) of damaged ordnance, and cost of munitions supplies lost or destroyed.
- f. Any other costs growing out of this support or otherwise incurred as a result of this understanding which are reimbursable under the Economy Act, 31 U.S.C. 686.

5. Except to the extent specifically modified by this understanding, the procedures set out in Chapter 13 of AR 725-1 or successor regulations will be followed:

#### VI. MODIFICATION AND TERMINATION.

This agreement may be modified at any time by mutual agreement of the Army and the Forest Service, and may be terminated at any time at the option of either party.

Done this \_\_\_\_ day of \_\_\_\_\_ 19\_\_\_\_ in the city of Washington:

FOR THE OFFICE OF THE ASSISTANT  
SECRETARY OF THE ARMY FOR  
INSTALLATIONS AND LOGISTICS

FOR THE UNITED STATES FOREST  
SERVICE

/s/ \_\_\_\_\_

/s/ \_\_\_\_\_

**1533.26 - Supplement to Master DOD Memorandum of Understanding for U.S. Army Research and Development Program, Winds in Non-Uniform Domains (WIND)**

See FSM 1533.08 for master agreement with Department of Defense.

83-SIE-020-01

SUPPLEMENTAL AGREEMENT TO THE MASTER MEMORANDUM OF UNDERSTANDING  
BETWEEN  
UNITED STATES DEPARTMENT OF DEFENSE  
AND  
UNITED STATES DEPARTMENT OF AGRICULTURE  
RELATIVE TO COOPERATION WITH RESPECT TO  
FOOD, AGRICULTURE, AND OTHER RESEARCH  
OF MUTUAL INTEREST

SUBJECT: USDA Forest Service and DOD U.S. Army Cooperative Meteorological R&D Program to evaluate mesoscale and microscale meteorological, air flow, dispersion and deposition models.

I. PURPOSE: The Supplemental Agreement outlines the terms of an agreement between the U.S. Department of Agriculture (USDA), Forest Service (FS) and the Department of Defense (DOD), U.S. Army (the Parties) for conducting a cooperative meteorological research and development program referred to by title of "Winds in Non-uniform Domains," (WIND). When executed by representatives of the Parties, the Agreement authorizes the Parties to proceed with the Program as outlined in this Agreement.

II. BACKGROUND: Many sophisticated mathematical models have been developed to describe and predict meteorological phenomena and processes. These models deal with airflow characteristics, dispersion and deposition of airborne materials, temperature, and humidity. They have been used routinely by USDA and DOD scientists and managers to predict meteorological conditions and processes. Most of these models have not had adequate field evaluation as there is a lack of environmental information in both the microscale and mesoscale that simultaneously includes wind flow over complex terrain, various vegetation types, and urban areas. An integrated, multiagency effort provides an opportunity to develop such information. A single organization lacks the required fiscal and personnel resources. Until cooperation between agencies is formalized, critical meteorological models may not be evaluated, refined, and implemented for operational use.

III. PROGRAM OBJECTIVE: The objective of the Program is to develop information on meteorology, and dispersion and deposition processes for the evaluation and improvement of models that describe wind, turbulence, temperature and humidity, and concentration and deposition of airborne materials over and within forests and complex terrain.

IV. TASKS: The tasks of this Program are to evaluate and improve:

A. Selected mesoscale meteorological models of turbulence, windspeed and direction, temperature, and humidity over complex terrain.

B. Selected microscale models of turbulence, windspeed and direction, temperature, and humidity above and within forest canopies.

C. Models that predict drift, dispersion, concentration and deposition of small particulates, droplets, and tracers and the penetration of these materials into forest canopies.

D. Model performance by identifying and investigating critical elements and processes of the selected models.

V. PROGRAM SCOPE: The scope of this Program includes the design, conduct, and analysis of meteorological, dispersion, and deposition field studies and the evaluation of meteorological, dispersion, and deposition models.

VI. PROCEDURE: The projected length of the field effort is 3 years (FY85-87). This agreement will be extended, rewritten or modified during FY87 if additional cooperation is warranted and agreed to by the Parties. The field exercise, will include three data collection events of several days each in the Sacramento Valley of California near Chico, CA and near Forest Hill, CA. Emphasis in the third year will be on data reduction, assessment, archiving, model evaluation and documentation and reporting.

The study will be conducted in an area approximately 200 x 200 km. This area contains forests and complex terrain. The USDA and DOD organizations, and their cooperators and contractors, will provide field equipment and instrumentation required for field measurements and data management. This cooperation will include the exchange of equipment for efficiency and economy. Job assignments will be shared by the Parties and their cooperators. All field work and resulting data will be unclassified and available for public release.

A composite Plan will be prepared that specifies the rationale, philosophy, scope and purpose of the Program. A Test Plan will be prepared covering the scientific approach, field procedures, and methods. An Operations Plan which will cover overall logistics, coordination, safety, etc. of the field operations also will be prepared. The basic organizational structure required to implement and manage the field study is shown in Figure 1.

This agreement may be modified or amended by bilateral agreement between the Parties. It may be terminated by either Party by providing a 60 day written notice to the other Parties of their intent of termination. Transfer of funds, as required, will be accomplished through individual funding agreements under authority of the Economy Act as revised (31 U.S.C. 1535) Public Law 97-332, October 15, 1982, 96 Statute 1622.



## VII. RESPONSIBILITIES:

**Policy Committee:** Composed of a chairman and one representative from each organization contributing resources to the study, this committee sets policy, arranges funding, and holds the Program Manager accountable for meeting the Program objective. The USDA will be represented by the Assistant Director of the USFS Forest Pest Management Office, Washington and participating FS Experiment Stations. DOD will be represented by the Director of the Research Division, Atmospheric Sciences Laboratory, White Sands Missile Range and participating Army Agencies.

**Program Manager:** Responsible for organizing, assembling, and managing the resources provided by USDA and DOD to meet program objectives, the Program Manager responds to policy received from the Chairman, Policy Committee. The Program Manager is responsible for coordinating field installation of equipment prior to the field study. The Program Manager is responsible for coordinating with land owners, cooperators, and overall Program safety. The Program Manager augments the basis organizational structure as required.

**Deputy Program Manager:** As designated, represents the Program Manager. Is responsible to the Program Manager for delivery and installation of all Government and contractor provided meteorological instrumentation and sampling equipment, coordinating testing schedules, preparing cost estimates, and other duties as assigned. He coordinates the installation of equipment prior to each field study. He will be on site during all field operations and will coordinate activities with the meteorology and dispersion leaders.

**Scientific and Technical Committee:** This committee, composed of principal USDA and DOD scientists participating in the Program, is responsible for recommending a design for the field study.

**Data Base Manager:** Is responsible to the Program Manager for designing, planning, and implementing a data management system for the field test and model evaluation. This system will synthesize the individual data acquisition such that all field and model evaluation participants can access and use all or part of the data base.

**Meteorology Project Leader:** Is responsible to the Program Manager for field operations and all meteorological data acquisition at the study sites, and in the coarse and fine mesoscale area during the study periods and for coordinating with project cooperators.

**Dispersion Project Leader:** Is responsible to the Program Manager for the field operations and data acquisition for the dispersion of tracers, particles, and droplets within and above forest and orchard canopies, and above complex terrain during the field study. He also is responsible for coordinating with cooperators.

**VIII. EXPECTED BENEFITS:** The Program will generate a unique comprehensive meteorological data base of high priority need to the Parties. DOD will use these data to evaluate and modify models that predict windspeed and direction, turbulence, airflow above and within forest canopies and complex terrain, and dispersion and deposition of particulates and aerosols that impair visibility or otherwise interface with or influence military operations.

The USDA will use these data to evaluate the utility of several existing models in fire suppression, smoke management, prescribed burning, predicting pesticide dispersal, pesticide drift, and deposition; air quality assessment; and predicting transport, dispersion and deposition of air pollutants.

Generation of this data base is logistically feasible only through the combined efforts of the Parties as neither has the resources to accomplish the tasks independently. By this agreement the Parties can evaluate models of complex meteorological processes through the efficient use of current resources, technology, and available personnel.

IX. SUPPORT REQUIREMENTS: The following support requirements are projected.

A. Personnel	(portion of man/year per FY)		
	FY 85	FY 86	FY 87
Program Manager (FS)	.75	.75	.75
Deputy Program Manager (ASL)	.75	.75	.75
Meteorology Project Leader (ASL)	.50	.50	.50
Dispersion Project Leader (FS)	.90	.90	.90
Data Base Manager (ASL)	.50	1.00	1.00
Field Technicians (ASL & FS)	Full time during each study		

B. Equipment. The required field equipment, and meteorological instrumentation, and dispersion sensors and collectors, will be identified and defined by the various working groups of the SAT Committee and by the Project Leaders. Coordination, schedules, and equipment will be identified in the respective Project Work Plans and in the Operations Plan.

X. SAFETY. A safety plan will be prepared by a safety engineer. The plan will become part of the Operations Plan.

XI. PUBLIC INFORMATION: The FS Office of Information will handle public inquiries. Any publications for public release will be coordinated between the parties. A Public Information Plan will be prepared and attached to the Operations Plan. The FS will coordinate with the Public Affairs Officer, White Sands Missile Range, New Mexico as required. The FS telephone number is (415) 556-1932. The US Army telephone number is (505) 678-1134.

APPROVED FOR THE UNITED STATES ARMY  
ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND

BY\_\_\_\_\_ DATE\_\_\_\_\_

APPROVED FOR THE UNITED STATES FOREST SERVICE

BY\_\_\_\_\_ DATE\_\_\_\_\_

BASIC ORGANIZATIONAL STRUCTURE  
U.S. FOREST SERVICE/U.S. ARMY COOPERATIVE  
METEOROLOGICAL R&D PROGRAM

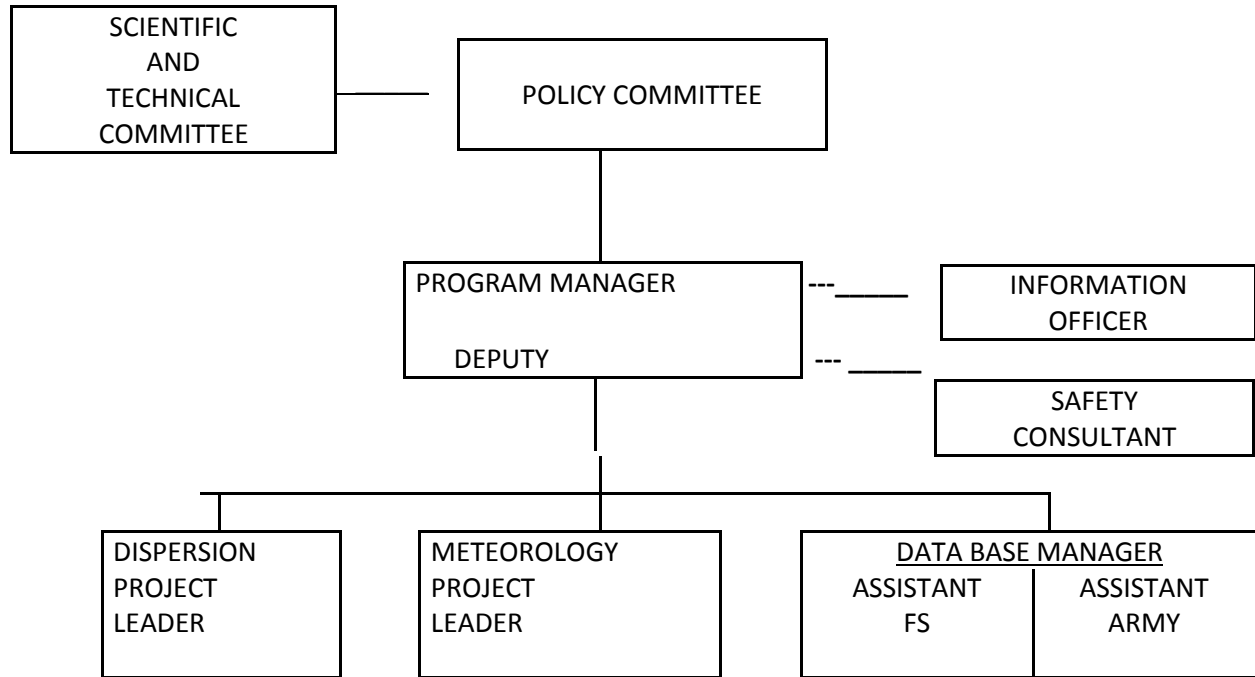


Figure 1