DEPARTMENT OF THE NAVY
COMMANDER
NAVAL METEOROLOGY AND OCEANOGRAPHY COMMAND
1020 BALCH BOULEVARD
STENNIS SPACE CENTER, MS 39529-5005

NAVMETOCCOMINST 13950.1L
N5
12 OCT 2000

NAVMETOCCOM INSTRUCTION 13950.1L

From: Commander, Naval Meteorology and Oceanography Command

Subj: METEOROLOGICAL EQUIPMENT MANAGEMENT AND PLANNING POLICY

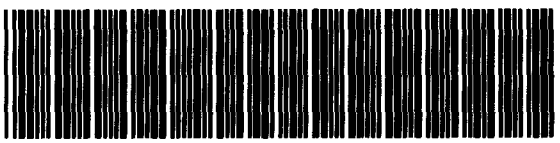
Ref: (a) OPNAVINST 4790.4C (Issue of Ship's Maintenance and Material Management (3M) Manual)
(b) MIL-P-24534 (NAVY) (Planned Maintenance System)
(c) NAVMETOCCOMINST 3140.1L (U.S. Navy Meteorological and Oceanographic Support System Manual)
(d) NAVMETOCCOMINST 4790.1E (General Purpose Electronic Test Equipment (GPETE) Management)
(e) OPNAVINST 11010.20F (Facilities Projects Manual)
(f) SPAWARINST 5200.28 (Policy and Procedures for Installation of Command, Control, Computers, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems at Shore Facilities)
(g) NWP 1-03.1 (Operational Reports)
(h) NAVMETOCCOMINST 4790.2A (Maintenance and Material Management (3-M) Systems Policies and Procedures)

Encl: (1) In-Service Engineering Agent (ISEA)
(2) Shore-base/Afloat Basic and Augmenting Meteorological Allowances
(3) NAVMETOCCOM Meteorological Equipment Plan
(4) Emerging Systems
(5) Casualty Reports (CASREPS)

1. Purpose. To provide policy and guidance for the planning and Life Cycle Management (LCM) (concept through disposal) of meteorological equipment. This instruction has been completely revised and should be reviewed in its entirety.

2. Cancellation. NAVMETOCCOMINST 13950.1K

3. Concurrence. This instruction has the concurrence of the Commandant of the Marine Corps. Marine Corps activities shall take those actions prescribed in this instruction, which are not contradictory to specifically expressed policies of the Commandant of the Marine Corps.



4. Background. The Meteorological and Oceanographic Equipment Program (MOEP) was established in the 1960's to provide the Naval Meteorology and Oceanography Command (NAVMETOCCOM) with trained personnel solely dedicated to support meteorological equipment. The program was very successful, but as personnel within the MOEP program acquired greater maintenance expertise, they gradually assumed a larger role in maintaining equipment that belonged to other commands. Even though equipment maintenance response time and services improved, provisioning and maintenance documentation suffered due to a lack of resources to perform these functions. In 1990, NAVMETOCCOM reduced the scope of the MOEP as these maintenance functions were integrated into the systems commands. The Commander, Space and Naval Warfare Systems Command (COMSPAWARSYSCOM) assumed full responsibility for LCM of all programmed meteorological equipment, and assigned COMSPAWARSYSCOM field activities to act as In-Service Engineering Agents (ISEA). The realignment was designed to ensure that all meteorological equipment was managed the same as other equipment and systems within the Navy. At that time, COMSPAWARSYSCOM also assigned Field Technical Representatives (FTR) to fill engineering technical requirements identified by COMSPAWARSYSCOM and NAVMETOCCOM. The FTRs were collocated at various NAVMETOCCOM activities around the world to provide training and technical assistance in installing, operating, and maintaining COMSPAWARSYSCOM and NAVMETOCCOM meteorological equipment at Navy and U.S. Marine Corps sites. The FTR program has been disestablished and has been replaced by the METOC Systems Knowledge Center (MSKC) in San Diego, CA. Information regarding the MSKC can be obtained at the following website: **https://mskc.spawar.navy.mil/**. The Commander, Naval Meteorology and Oceanography Command (COMNAVMETOCCOM) retains maintenance and logistics responsibilities for a few stand-alone systems (i.e., PC GFMPL, LPATS, MIDDS, etc.) purchased by NAVMETOCCOM, and for systems fielded by COMSPAWARSYSCOM that have reached their Material Support Date (MSD). The responsibility for a follow-on replacement for most COMNAVMETOCCOM sponsored systems is being transferred to COMSPAWARSYSCOM. However, NAVMETOCCOM anticipates that there will be a need to continue to purchase and field meteorological equipment as necessary to meet rapidly emerging requirements.

5. Information. Enclosure (1) identifies the ISEAs for both COMSPAWARSYSCOM and NAVMETOCCOM sponsored and managed equipment. The designated ISEAs for COMSPAWARSYSCOM sponsored and managed meteorological equipment are: Space and Naval Warfare Systems Center (SPAWARSYSCEN) San Diego, CA, SPAWARSYSCEN Charleston, SC

and Raytheon Systems Company Indianapolis, IN. The designated ISEAs for NAVMETOCCOM sponsored and managed meteorological equipment are: the Naval Oceanographic Office (NAVOCEANO) located at Stennis Space Center, MS, and the Fleet Numerical Meteorology and Oceanography Center (FLENUMMETOCCEN) in Monterey, CA. ISEAs are responsible for (1) promulgating policy, (2) providing operating forces procedures for requesting operator and maintenance training and (3) providing technical services and support. COMSPAWARSYSCOM has directed that all maintenance actions performed on COMSPAWARSYSCOM sponsored and managed meteorological equipment be reported in the Maintenance Data Collection System (MDCS) and that Planned Maintenance System (PMS) documentation be developed in accordance with references (a) and (b). Meteorological equipment allowances are assigned to an activity whenever a requirement emerges and is validated in accordance with Chapter 10 of reference (c). Activities submitting their emergent requirements must be cognizant of the fact that their validated allowance may not be filled immediately due to operational and/or budgetary constraints.

6. Equipment Administration and Management. Equipment administration and management functions are to be performed by Regional Centers for all subordinate commands within their designated Areas of Responsibility (AOR). Enclosure (2) is the current authorized allowance list. Enclosure (3) is provided to assist in planning and managing the equipment program. It includes equipment configurations, proposed replacements and an abbreviated consumables list.

COMNAVMETOCCOM and COMSPAWARSYSCOM (PMW-185) are currently working jointly to implement a new, consolidated configuration management system. The MSKC will act as the ISEA and data manager for this configuration management system.

7. Action.

a. **COMNAVMETOCCOM** is responsible for the following planning, programming and resource management functions:

(1) Conduct active liaison with NAVMETOCCOM and U.S. Marine Corps METOC activities to ensure their equipment allowances are adequate to meet their assigned missions. Enclosure (3) provides technical and logistical information on fielded equipment. Enclosure (4) provides information on planned equipment.

(2) Provide overall policy and procedural guidance for NAVMETOCCOM meteorological equipment.

(3) Provide guidance to staffs and other organizations outside the NAVMETOCCOM claimancy concerning their requirements for meteorological equipment.

(4) Provide CNO (N096) and COMSPAWARSYSCOM with meteorological equipment allowances after review, approval, disapproval, and prioritization of documented requirements.

(5) Approve/disapprove and fund Engineering Change Proposals (ECP) for NAVMETOCCOM sponsored and managed equipment. Review ECPs for COMSPAWARSYSCOM sponsored and managed equipment and forward to CNO (N096) and COMSPAWARSYSCOM (PMW-185).

b. **Headquarters, U.S. Marine Corps, Department of Aviation (ASL-37)** is responsible for the review, approval/disapproval and prioritization of all FMF and supporting establishment meteorological and oceanographic requirements, including equipment and ECPs.

c. **FLENUMMETOCCEN** is responsible for the following planning, programming and resource management functions:

(1) Exercise technical direction and/or provide life cycle support for designated meteorological equipment.

(2) Provide software support for designated METOC systems.

d. **NAVOCEANO** is responsible for the following planning, programming and resource management functions:

(1) Exercise technical direction and/or provide life cycle support for designated meteorological equipment.

(2) Provide technical assistance to NAVMETOCCOM and U.S. Marine Corps METOC activities with the planning for, installation of and relocation of meteorological equipment.

(3) Provide software support for designated METOC systems.

(4) Manage the NAVMETOCCOM General Purpose Electronic Test Equipment (GPETE) program in accordance with reference (d).

(5) Procure, install and provide training on COMNAVMETOCCOM sponsored and managed meteorological equipment as directed by NAVMETOCCOM.

(6) Develop, implement, and manage the NAVMETOCCOM Maintenance and Material Management (3-M) program in accordance with (IAW) reference (h), which is currently in revision.

e. **Regional and Sub-regional Equipment Managers** are responsible for the following planning, programming and resource management functions:

(1) Oversee and assist in the LCM of NAVMETOCCOM equipment.

(2) Upon request, provide technical assistance to the ISEA.

(3) Submit meteorological equipment ECPs on COMSPAWARSYSCOM sponsored equipment in accordance with reference (e).

(4) Manage the 3-M program for NAVMETOCCOM equipment IAW reference (h).

(5) Implement and document a continuing on-board operator/maintenance training program for all equipment in their AOR.

(6) Upon request, assist MSKC Personnel in coordinating support for activities possessing NAVMETOCCOM or COMSPAWARSYSCOM meteorological equipment.

f. **Commanding Officers and Officers/Chief Petty Officers/Petty Officers/Staff Noncommissioned Officers in Charge of NAVMETOCCOM and U.S. Marine Corps METOC activities** are responsible for:

(1) Ensuring METOC equipment is fully operational.

(2) Preventive maintenance on assigned and/or leased equipment.

8. Configuration Management/Configuration Control. In order to maintain system life cycle logistics support, strict configuration management/control is required. If equipment is expected to function within design specifications, **any**

modification must be approved, funded and properly documented. A modification is defined as any change to the existing form, fit or functional characteristic of the equipment or system. Modifications may be proposed by contractors, technicians or operators via an ECP, and/or a Value Engineering Change Proposal (VECP). COMSPAWARSYSCOM (PMW-185) and NAVMETOCCOM policy regarding configuration management control is that **"no modification shall be made without prior approval."** No modification shall also mean that equipment being returned to the ISEA for repair shall not be cannibalized.

9. Equipment Installation and Relocation. The installation and/or relocation of meteorological equipment is subject to the procedures contained in references (e) and (f). The systems command and/or the acquisition activity are responsible for funding and initiating action for the installation of new equipment, or for the relocation of existing equipment. The relocation of existing equipment must only be accomplished with the technical assistance of the ISEA. Installation of new meteorological equipment sponsored by COMSPAWARSYSCOM is normally accomplished through the ISEA IAW reference (f). Close coordination is essential for the timely and efficient completion of equipment installation. It is incumbent upon the NAVMETOCCOM activity to communicate with their host activity and cognizant ISEA. **NAVMETOCCOM and U.S. Marine Corps activities are encouraged to inform their respective chain of command on the progress and problems associated with new installations and/or relocations of equipment. If there is a need to relocate equipment, the respective ISEAs are available to provide engineering recommendations and guidance. If questions arise regarding the disposition of either legacy systems or infrequently used meteorological equipment, activities will request disposition instructions via their respective chain of command.** NAVMETOCCOM Regional and Sub-regional Equipment Managers are responsible for identifying conditions that may necessitate the relocation of existing equipment, and in planning for new meteorological equipment installations.

10. Equipment Casualty Reporting. The MSKC should always be the first point of contact in the event of an meteorological equipment casualty. Casualty Reports (CASREPS) for COMSPAWARSYSCOM and NAVMETOCCOM sponsored and managed equipment will be made in accordance with reference (g) and enclosure (6).

11. Maintenance and Material Management. Compliance with the NAVMETOCCOM 3-M Program will ensure that equipment is maintained and supported throughout its life cycle. The 3-M Program provides commands with:

a. The tools to plan, schedule, and control planned maintenance.

b. A means to report maintenance actions, including computer software fixes. Refer to reference (h) for 3-M policies and procedures.

LARRY WARRENFELTZ
Chief of Staff

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31H	Amphibious Assault Ship (LHA) (LPH)
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45V	Marine Expeditionary Unit
46Q	Marine Wing Support Group
46R	Marine Wing Support Squadrons and Detachments
46U	Aviation Weapons and Tactics Squadron
50A	Unified Commands
A3	Chief of Naval Operations (N096 only) (2 copies)
A6	Commandant of the Marine Corps (ASL-37 only) (2 copies)
C40	Shore Based Detachments, Meteorology and Oceanography (2 copies)
FA10	Submarine Base LANT
FB13	Submarine Base PAC
FD	Shore Activities Under the Command of COMNAVMETOCCOM (2 copies)
FF38	U.S. Naval Academy
FF38A	Naval Station Annapolis
FF42	Postgraduate School (Meteorology Department)
FKA1A	Air Systems Command
FKA1B	Space and Naval Warfare Systems Command (PMW-185 only)
FKA1B1	Space and Naval Warfare Systems Center, Facility, and Activity (Charleston (Code 318) and San Diego (Code D642/MSKC) (4 copies)
FKM14	Naval Inventory Control Point
FKR1A	Air Station Patuxent River
FKR6B	Air Warfare Center Weapons Division (Point Mugu (Code 521400E))
FT78	Naval Education and Training Professional Development And Technology Center

NAVMETOCCOMINST 13950.1L

12 OCT 2000

IN-SERVICE ENGINEERING AGENT (ISEA)

ENCLOSURE (1)

METEOROLOGICAL EQUIPMENT IN-SERVICE ENGINEERING AGENT (ISEA)

ITEMS	NAVOCEANO SSC, MS (CODE N643)	SPAWARSYSCEN SAN DIEGO (CODE D642)	SPAWARSYSCEN CHARLESTON (CODE 318)	RAYTHEON SYS Company INDIANAPOLIS	FNMOC MONTEREY (CODE N3)	NRL MONTEREY
ASOS			X			
ATCF						X
AN/FMQ-17(NSDS-E)				X		
AN/FPS-131(SWR)			X			
AN/GMQ-27 (WX VISION)			X			
AN/SMQ-11(SAT RCVR)				X		
AN/TMQ-44A (METMF(R)) (NOTE(S) 1/2)		X				
AN/UMK-4(NITES I/II)		X				
AN/UMQ-5(ANEMOMETER)			X			
AN/UMQ-12A(MRS)			X			
DAMPS					X	
ESID	X					
GFMPL NT WORKSTATIONS	X					
GVAR	X					
IMOSS	X					
INMARSAT	X					
JODI	X					
LPATS	X					
MIDDS	X					
MIDDS-T	X					
MODAS	X					
MOS	X					
PORTABLE PROJECTOR	X					
RAWS	X					
SMOOS		X				
TESS(NC) TRANSITION		X				
WSR-88D(PUP)			X			

NOTES: 1. AN/TMQ-44A METEOROLOGICAL MOBILE FACILITY (METMF(R)) CONTAINS A GRC-171 UHF TRANCEIVER. THE PICA FOR THIS ITEM IS THE MARINE CORPS LOGISTICS BASE ALBANY, GA AND THE SICA IS McCLELLAN AFB, CA. THE METMF(R) CONTAINS EQUIPPAGE THAT BOTH SSC SAN DIEGO AND SSC CHARLESTON ARE THE ISEA FOR.

2. ISEA PLAIN LANGUAGE ADDRESSESS ARE AS FOLLOWS:

NAVOCEANO:	NAVAL OCEANOGRAPHIC OFFICE STENNIS SPACE CENTER MS//N643//
SSC CHARLESTON:	SPAWARSYSCEN CHARLESTON SC//318//
SSC SAN DIEGO:	SPAWARSYSCEN SAN DIEGO CA//D642//
RAYTHEON SYS CO INDY:	RAYTHEON TECH SVCS CO INDIANAPOLIS IN//CNPB20//
FNMOC MONTEREY:	FLENUMMETOCCEN MONTEREY CA//N3//
NRL MONTEREY:	NRL DET MONTEREY CA//7543//

ENCLOSURE (1)

SHOREBASE/AFLOAT BASIC AND AUGMENTING METEOROLOGICAL ALLOWANCES

KEY:

NCMOC:	NAVAL CENTRAL METEOROLOGY AND OCEANOGRAPHY CENTER
NLMOC:	NAVAL ATLANTIC METEOROLOGY AND OCEANOGRAHY CENTER
NEMOC:	NAVAL EUROPEAN METEOROLOGY AND OCEANOGRAHY CENTER
NPMOC:	NAVAL PACIFIC METEOROLOGY AND OCEANOGRAPHY CENTER
NLMOF:	NAVAL ATLANTIC METEOROLOGY AND OCEANOGRAPHY FACILITY
NPMOF:	NAVAL PACIFIC METEOROLOGY AND OCEANOGRAPHY FACILITY
NTMOF:	NAVAL TRAINING METEOROLOGY AND OCEANOGRAPHY FACILITY
NLMOD:	NAVAL ATLANTIC METEOROLOGY AND OCEANOGRAPHY DETACHMENT
NPMOD:	NAVAL PACIFIC METEOROLOGY AND OCEANOGRAPHY DETACHMENT
NEMOD:	NAVAL EUROPEAN METEOROLOGY AND OCEANOGRAPHY DETACHMENT
FNMOD:	FLEET NUMERICAL METEOROLOGY AND OCEANOGRAPHY DETACHMENT
NCMOD:	NAVAL CENTRAL METEOROLOGY AND OCEANOGRAPHY DETACHMENT

NOTE: MET ALLOWANCES FOR MIDDS REFLECT SERVER AND WORKSTATION(S) CONFIGURATIONS.

PRODUCTION CENTER, REGIONAL CENTER, AND HOST ACTIVITIES BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

PRODUCTION CENTERS	BASIC	ASOS	ATCF	DAMPS	ESID	FMQ-17	GVAR	IMOSS	JODI	LPATS	MIDDS	MODAS	NITES V1	NITES V2	PUP	RAWS	SWR	UMQ-12A	UMQ-5
NAVOCEANO SSC MS	Q			1	1		1	3	1	1	2	1				1			
FLENUMMETOCCEN MONTERY CA	Q		1	2					1		2	1	1	1					

REGIONAL CENTERS																			
NAVCENTMETOCCEN BAHRAIN	Q			1		1			1		2	1	1	1				1	
NAVLANTMETOCCEN NORFOLK VA	D		1	1		1			1	1	1	1	1	1	1				
NAVMETOCPRODEVCEN MS								1		1	3								
NAVPACMETOCCEN YOKOSUKA		1	1	1		1			1			1	1	1			1		
NAVPACMETOCCEN SAN DIEGO CA	D					1			1		1	1	1	1					
NAS NORTH ISLAND CA		1		1											1				1
NAVPACMETOCCEN JTWC	D		1	1		1			1		1	1	1	1	1				
USNAVSTA ROTA SPAIN		1															1		2
NAVEURMETOCCEN ROTA SPAIN	D			1	1	1			1		2	1	1	1		1			

CLASSIFICATION OF BASIC ALLOWANCES OF METEOROLOGICAL MATERIAL ARE:

CLASS "A" BASIC ALLOWANCE: PROVIDES COMPLETE METEOROLOGICAL SERVICES (AFLOAT)
CLASS "D" BASIC ALLOWANCE: PROVIDES COMPLETE METEOROLOGICAL SERVICES (ASHORE)
CLASS "Q" BASIC ALLOWANCE: PROVIDES A TAILORED ALLOWANCE IN SUPPORT OF SPECIAL METEOROLOGICAL SERVICES.
CLASS "D" ALLOWANCE CONSISTS OF OFFICE CONSUMABLES AND THE FOLLOWING EQUIPMENT:

AN/PMQ-3 HAND HELD ANEMOMETER
ML-448/UM ANEROID BAROMETER
ML-450A/UM ELECTRIC PSYCHROMETER
ML-563A/UM MARINE MICROBAROGRAPH
ML-217 RAIN GAGE

AFTER RECIEPT OF INITIAL ALLOWANCE, COMMANDS ARE RESPONSIBLE FOR REPLACEMENT OF CLASS "A", "D" AND "Q" EQUIPMENT.

ENCLOSURE (2)

FACILITY AND HOST ACTIVITIES BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

ACTIVITY	BASIC	ASOS	ATCF	FMQ-17	LPATS	MIDDS	MODAS	PUP	RAWS	SMQ-11	SWR	UMQ-5
NAS JACKSONVILLE FL	D	1						1				1
NLMOF JACKSONVILLE FL			1	1	1	5	1					
USNSA NAPLES IT		1								1	1	
NEMOF NAPLES IT	D					3			1			
NAS PENSACOLA FL	D	1						1				1
NTMOF PENSACOLA FL					1	5						
NAS WHIDBEY IS WA		1						1		1		
NPMOF WHIDBEY IS WA	D				1	4						

DETACHMENT AND HOST ACTIVITIES BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

ACTIVITY	BASIC	ASOS	ESID	GVAR	LPATS	MIDDS	PUP	SMQ 11	SWR	UMQ 5	UMQ 12A
FNMOD ASHEVILLE NC	Q										
USNAS ATSUGI JA		1								1	
NPMOD ATSUGI JA	D					3					
SUBASE BANGOR WA										3	
NPMOF COMP BANGOR WA	D					2					
NAS BRUNSWICK ME		1					1			1	
NLMOD BRUNSWICK ME	D				1	4					
NAS CORPUS CHRISTI TX		1					1			1	
NTMOD CORPUS CHRISTI TX	D				1	4					
NPMOC YOKO CNM COMP			1								
USNSA DIEGO GARCIA BIOT		1						1	1	2	
NPMOD DIEGO GARCIA BIOT	D			2		3					1
NAF EL CENTRO CA		1								1	
NPMOD EL CENTRO CA	D					3					1
NAWC FALLON NV		1					1	1	1	1	1
NPMOD FALLON NV	D					4					
NAS FORT WORTH TX		1					1			1	
NTMOD FORT WORTH TX	D				1	3					
USNSA GUANTANAMO BAY CU		1							1	2	
NLMOD GUANTANAMO BAY CU	D					3					1
USNSA KADENA JA										1	
NPMOD KADENA JA	D		1			3					
USNSA KEFLAVIK IC		1						1	1	1	
NLMOD KEFLAVIK IC	D					3					2
NAS KEY WEST FL		1					1			1	

ENCLOSURE (2)

DETACHMENT AND HOST ACTIVITIES BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

ACTIVITY/LOCATION	BASIC	ASOS	ESID	LPATS	MIDDS	PUP	SMQ 11	UMQ 5	UMQ 12A
NLMOD KEY WEST FL	D			1	3				
SUBASE KINGS BAY GA		1						1	
NLMOD COMP KINGS BAY GA	D			1	2				
NAS KINGSVILLE TX		1				1		1	
NTMOD KINGSVILLE TX	D			1	3				
NAS LEMOORE CA		1				1		1	
NPMOD LEMOORE CA	D				4				1
NAVSTA MAYPORT FL		1				1		1	
NLMOD MAYPORT FL	D			1	3				
NAS MERIDIAN MS		2				1		3	
NTMOD MERIDIAN MS	D			1	3				
USNAF MISAWA JA								1	
NPMOD MISAWA JA	D		1		2				
NLMOD COMP NEW LONDON CT	Q			1	2				
NAS NEW ORLEANS LA		1				1		1	
NTMOD NEW ORLEANS LA	D			1	3				
NWC NEWPORT RI									
NETC NEWPORT RI								1	
NTMOD NEWPORT RI	D				2				
NAS NORFOLK		1				1		3	
NAS OCEANA VA		1				1		1	
NLMOD OCEANA VA	D			1	4				
NLMOD COMP OCEANA CHAMBERS FLD				1	3				
NAWC PATUXENT RIVER MD		1				1	1	3	1
NLMOD PATUXENT RIVER MD	D			1	4				

DETACHMENT AND HOST ACTIVITIES BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

ACTIVITY	BASIC	ASOS	LPATS	MIDDS	PUP	RAWS	SMQ-11	SWR	UMQ-5	UMQ-12A
NAS POINT MUGU CA		2			1		1		1	
NPMOD POINT MUGU CA	D			3						4
NAS ROOSEVELT ROADS PR		1			1		1		1	
NLMOD ROOSEVELT ROADS PR	D			3						1
NAVSTA SASEBO JA		1							1	
NPMOD SASEBO JA	D			2						
USNSA SIGONELLA IT		1					1	1	2	
NEMOD SIGONELLA IT	D			3						
USNSA SOUDA BAY GR		1						1	1	
NEMOD SOUDA BAY GR	D			3		1				1
FNMOD TINKER AFB OK	Q			2						
NAS WHITING FIELD (N)		1			1				2	
NAS WHITING FIELD (S)		1							1	
NTMOD WHITING FIELD FL	D		1	5						
NAS WILLOW GROVE PA		1			1				1	
NTMOD WILLOW GROVE PA	D		1	3						

ENCLOSURE (2)

OTHER SHORE ACTIVITIES
METEOROLOGICAL EQUIPMENT

ACTIVITY/LOCATION	BASIC	ASOS	ESID	IMOSS	JODI	LPATS	MIDDS	MIDDST	PUP	RAWS	UMQ 5	UMQ 12A
AUGUSTA BAY IT										1		
BOMBING RANGE PUTMAN											1	
BOMBING RANGE RODMAN											1	
BOMBING RANGE STEVENS LAKE											1	
BOMBING RANGE STUMPY POINT											1	
BT-11 BOMBING RANGE NC		1										
EW RANGE PINECASTLE FL		1									1	
GAETA IT										1		
JIATF EAST KEY WEST FL							1					
LAMADALANA IT										1		
McMULLEN TARGET SITE TX		1										
MSKC SAN DIEGO CA			1	1	1	1	1	1				
NALF GOLIAD		1										
NALF SAN CLEMENTE ISLAND CA		1										
NAVICE COMP CAMP DAVID MD												
NAVICE COMP PENTAGON							3					
NAVOCEANO LANT COMP VA				1								
NAVOCEANO PAC COMP CA				1								
NAVOCEANO TAMPA COMP FL	Q			1								
NAVSPECWAR CORONADO CA				1								
NAVSPECWAR LITTLE CREEK VA				1								
NAVSTA INGLESIDE TX		1										
NAWC BARKING SANDS HI		1									1	1
NAWC CHINA LAKE CA		1					3		1		21	2
NAWC LAKEHURST NJ		1										

OTHER SHORE ACTIVITIES
METEOROLOGICAL EQUIPMENT

ACTIVITY/LOCATION	BASIC	ASOS	ATCF	GNFTM PWLRK STA	IMOSS	LPATS	MIDDS	MODAS	SMQ 11	TMQ 44A	UMQ 5	UMQ 12A
NPGS MONTEREY CA							3		1			1
NRL MONTEREY CA			1						1			
NRL STENNIS MS								1				
NSWCCSC PANAMA CITY FL						1	2					
NTTU KEESLER AFB MS(MOAF)				1			1					
NTTU KEESLER AFB MS(METEM)					2		2			1		
NTTU KEESLER AFB MS(MCWO)	Q			1			1					
NTTU KEESLER AFB MS(AG)	Q	2		2			7		2			
NTTU KEESLER AFB MS (ET)	Q	1					1		2			2
NUSC DET ANDROS ISLAND											7	
OLF ATLANTIC FIELD NC		1										
OLF BARIN		1										
OLF CABANISS FIELD TX		1									1	
OLF CHOCTAW FL		1									1	
OLF COUPEVILLE WA		1										
OLF FENTRESS VA		1									3	
OLF IMPERIAL BEACH CA		1									1	
OLF ORANGE GROVE TX		1									1	
OLF SAN NICHOLAS IS CA		1										1
OLF SANTA ROSA CA											1	
OLF SPENCER											1	
OLF WALDRON FIELD TX		1										
OLF WEBSTER FIELD		1									1	
OLF WHITE HOUSE FIELD FL		1										
STRATCOM OFFUTT AFB NE												
MCMWTC BRIDGEPORT CA		1										
USNA ANNAPOLIS MD		1										

ENCLOSURE (2)

MOBILE ENVIRONMENTAL TEAM BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

ACTIVITY	BASIC	IMOSS	INMARSAT	IRSST	MIDDST	MOS	PROJECTOR	UMQ 12A
MET BAHRAIN	M	2	1	2	1	1	1	2
MET JACKSONVILLE	M	8	1	5	1	1	2	7
MET NORFOLK	M	10	1	5	1	1	2	7
MET PEARL HARBOR	M	6	1	5	1	1	2	5
MET ROTA	M	9	2	5	1	1	2	8
MET SAN DIEGO	M	12	2	5	1	1	2	6
MET YOKOSUKA	M	12	1	5	1	1	2	7
MET WHIDBEY	M	3	1	3		1	2	3
MET PENSACOLA	M	3	1	3		1	2	3

MARINE CORPS AIR STATIONS AND FACILITIES (MCAS/MCAF) BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

ACTIVITY	BASIC	ASOS	FPS 131	GNFTM PWLRK STA	IMOSS	LPATS	MIDDS	PUP	UMQ 12A
MCAS BEAUFORT SC	D	1		1		1	1	1	
MCAS CAMP PENDLETON CA	D	1		1		1	1	1	
MCAS CHERRY POINT NC	D	2		1		1	1	1	
MCAS FUTENMA JA	D	1		1			1	1	
MCAS IWAKUNI JA	D	1	1	1			1		
MCAF KANEOHE BAY HI	D	1		1			1	1	1
MCAS MIRAMAR CA	D	1		1		1	1	1	
MCAS NEW RIVER NC	D	1		1		1	1	1	
MCAF QUANTICO VA	D	1		1		1	1	1	
MCAS YUMA AZ	D	1		1		1	1	1	1
MCALF BOGUE NC	D	1				1	1		
MCAGCC 29 PALMS CA	D	1		1		1	1		
ASL-37							1		
MAWTS-1 YUMA AZ					1		1		

ENCLOSURE (2)

FLEET MARINE FORCE (FMF)
AUGMENTING METEOROLOGICAL EQUIPMENT

ACTIVITY	IMOSS	MIDDST	TMQ 44A
FLEET MARINE FORCE, AVIATION			
I MEF CAMP PENDLETON CA		1	
II MEF CAMP LEJEUNE NC		1	
III MEF CAMP COURTNEY JA		1	
MWSG-17 CAMP FOSTER JA	1		
MWSG-27 CHERRY POINT NC	1		
MWSG-37 MIRAMAR CA	1		
MWSG-47 SELFRIDGE ANGB MI	1		
FLEET MARINE FORCE, METEOROLOGICAL MOBILE FACILITIES (METMF(R))			
MWSS-171 IWAKUNI JA	3		1
MWSS-172 FUTENMA JA	3		1
MWSS-271 BOGUE NC	3		1
MWSS-272 NEW RIVER NC	3		1
MWSS-273 BEAUFORT SC	3		1
MWSS-274 CHERRY POINT NC	3		1
MWSS-371 YUMA AZ	3		1
MWSS-372 CAMP PENDLETON CA	3		1
MWSS-373 MIRAMAR CA	3		1
MWSS-374 29 PALMS CA	3		1
MWSS-471 FORT WORTH TX	1		
MWSS-472 MARIETTA GA	1		
MWSS-473 MIRAMAR CA	1		
MWSS-474 WILLOW GROVE PA	1		
CBIRF INDIAN HEAD MD	1		

AFLOAT ACTIVITIES BASIC AND AUGMENTING METEOROLOGICAL EQUIPMENT ALLOWANCES

ACTIVITY		BASIC	NITES V1	NITES V2	SMOOS	SMQ 11	TESS NC TRANS	UMQ 12A
(AGF-3)	USS LASALLE	A	1	1	1	1	1	1
(AGF-11)	USS CORONADO	A	1	1	1	1	1	1
(CV-63)	USS KITTY HAWK	A	1	1	1	1	1	1
(CV-64)	USS CONSTELLATION	A	1	1	1	1	1	1
(CVN-65)	USS ENTERPRISE	A	1	1	1	1	1	1
(CV-67)	USS JOHN F. KENNEDY	A	1	1	1	1	1	1
(CVN-68)	USS NIMITZ	A	1	1	1	1	1	1
(CVN-69)	USS DWIGHT D. EISENHOWER	A	1	1	1	1	1	1
(CVN-70)	USS CARL VINSON	A	1	1	1	1	1	1
(CVN-71)	USS THEODORE ROOSEVELT	A	1	1	1	1	1	1
(CVN-72)	USS ABRAHAM LINCOLN	A	1	1	1	1	1	1
(CVN-73)	USS GEORGE WASHINGTON	A	1	1	1	1	1	1
(CVN-74)	USS JOHN C. STENNIS	A	1	1	1	1	1	1
(CVN-75)	USS HARRY S. TRUMAN	A	1	1	1	1	1	1
(LCC-19)	USS BLUE RIDGE	A	1	1	1	1	1	1
(LCC-20)	USS MOUNT WHITNEY	A	1	1	1	1	1	1
(LHA-1)	USS TARAWA	A	1	1	1	1	1	1
(LHA-2)	USS SAIPAN	A	1	1	1	1	1	1
(LHA-3)	USS BELLEAU WOOD	A	1	1	1	1	1	1
(LHA-4)	USS NASSAU	A	1	1	1	1	1	1
(LHA-5)	USS PELELIU	A	1	1	1	1	1	1
(LHD-1)	USS WASP	A	1	1	1	1	1	1
(LHD-2)	USS ESSEX	A	1	1	1	1	1	1
(LHD-3)	USS KEARSARGE	A	1	1	1	1	1	1
(LHD-4)	USS BOXER	A	1	1	1	1	1	1
(LHD-5)	USS BATAAN	A	1	1	1	1	1	1
(LHD-6)	USS BONHOMME RICHARD	A	1	1	1	1	1	1
(MCS-12)	USS INCHON	A	1	1	1	1	1	1

ENCLOSURE (2)

NAVMETOCCOM METEOROLOGICAL EQUIPMENT PLAN

ENCLOSURE (3)

Acronym: **(ASOS)** AUTOMATED SURFACE OBSERVING SYSTEM

Equipment/System: Automated Receiver/Processor/Display Set
Purpose: Provide automatic surface weather observations.
Program Manager: COMSPAWARSYSCOM (PMW-185)http://c4iweb.spawar.navy.mil/185/

ISEA: SPAWARSYSCEN CHARLESTON (318)
P.O. Box 190022
N. Charleston, SC 29419-9022
http://www-chas.spawar.navy.mil/CHAS/Codes/30/atc_txt.html

POC: Wayne Knight 318WK
DSN: 588-4818
COM: 843-218-4818 (5441fax)
e-mail: knightw@spawar.navy.mil

Vendor: Systems Management Corporation http://www.awi-smi.com/main.html
Number of Systems: 72
Cost per System: $100K

ACU: Weight/Height/Width/Length/Cubic Feet: 630lbs/72in/24in/32in/16
VDU: Weight/Height/Width/Length/Cubic Feet: 31lbs/13in/13in/13.5in/1.4
OID: Weight/Height/Width/Length/Cubic Feet: 35lbs/16.5in/33in/24in/7
OND: Weight/Height/Width/Length/Cubic Feet: 5lbs/4in/ / /.5

Power Requirements: 115 VAC, 20A
System Operation: Automatic
Self-Test Capability: Yes
Consumables: None
Operator Training: NAVTECHTRAU Keesler AFB MS
Maintenance Concept: O-level LRU replacement
Maintenance Training: NAVTECHTRAU Keesler AFB MS

Planned Replacement: None identified. The following sensors are currently being evaluated for possible implementation into future ASOS upgrades: A ceilometer that is capable of measuring ceiling heights up to 25 KFT, an ultrasonic wind direction and speed sensor with no moving parts, an improved temperature and humidity sensor, and a T-storm sensor.

Remarks: Communication interfaces at either 410.075MHz or 410.950MHz. ISEA will provide informal training upon request. UPS will provide power for approximately one hour.

Environmental Element Sensed/Range/Accuracy:

Temperature	-80F to +130F	+/- 1 Deg F
Wind Speed	0 to 125 Knots	+/- 2 Knots Or 5% (whichever is greater)
Wind Direction	0 to 359 Deg	+/- 5 Deg when wind speed is 5 Knots or greater
Barometric Pressure	16.9 to 31.6 HG	+/- .02 HG
Dew Point	-30 Deg F to +86 Deg F	+/- 2 Deg F
Precipitation Accumulation	0 to 10" per hour	+/- .02" per hour or 4% of total hourly accumulation
Cloud Height	0 to 12,000Ft	+/- 100ft or 5% (whichever is greater)
Visibility	0 to 10 Miles	+/- .25 Miles for 0 to 1.5 Miles
Precipitation Identification	Light, Moderate and Heavy Rain and Snow	99% detected, 90% correctly classified
Occurrence of Freezing Rain	Over .01" per Hour	99% Registration (Rate as low as .05" per hour)

Key: ACU = Acquisition Control Unit / VDU = Video Display Unit / OID = Operator Interface Device / OND = Operator Notification Device

Acronym: **(ATCF)** AUTOMATED TROPICAL CYCLONE FORECAST SYSTEM

Equipment/System: Receiver/Processor/Data Base/ Data Dissemination/Visualization System
Purpose: To serve as a forecast automation tool for tropical cyclone forecasters
Program Manager: NAVAL RESEARCH LABORATORY MONTEREY **http://www.nrlmry.navy.mil**

ISEA: Naval Research Laboratory
7 Grace Hopper Ave, Stop 2
Monterey, CA 93943-5501
http://www.nrlmry.navy.mil/

POC: Buck Sampson
DSN: 878-4714
COM: 831-656-4714
e-mail: **sampson@nrlmry.navy.mil**

Vendors: Hewlett Packard
Number of Systems: 11 ATCF (9 HP 9712s, 1 J210, 1 C200)
Cost per System: Varies from $1800 for 712 to $18K for C200

Power Requirements: All systems: three 15 amp 110V NEMA 5-15R receptacles
System Operation: Automatic
Self-Test Capability: Yes
Consumables: Printer paper, plotter paper
Operator Training: Upon Installation/OJT
Maintenance Concept: Through warranty replacement as directed by the program manager. Support provided by NRL.
Maintenance Training: None

Planned Replacement: INTEL Pentium III Desktop Computers in FY02 or FY03

Remarks: Physical dimensions not provided due to size variations of different configurations.

Acronym: **AN/FMQ-17(NSDS-E)** NAVAL SATELLITE DISPLAY SYSTEM - ENHANCED

Equipment/System: Receiver/Processor/Recorder Set
Purpose: Receive, record, and disseminate high resolution METOC information from polar orbiting and geo-stationary satellites.
Program Manager: COMSPAWARSYSCOM(PMW-185) http://c4iweb.spawar.navy.mil/185/

ISEA: RAYTHEON SYSTEMS COMPANY
6125 East 21st Street
Indianapolis, IN 46219-2058

POC: Arthur Bowman
DSN: 369-4261
COM: 317-306-4261 (7294 fax)
e-mail: bowmana@indy.navy.mil

Vendor: SeaSpace Corporation http://www.seaspace.com/
Number of Systems: 7
Cost per System: $280K

CPU:	Weight/Height/Width/Length/Cubic Feet:	150lbs/72in/19in/22in/17.4
3.5 Meter Dish:	Weight/Height/Width/Length/Cubic Feet:	323lbs/180in/132in/132In/1815
Polar Orbiter ANT:	Weight/Height/Width/Length/Cubic Feet:	85lbs/72in/30in/30in/37.5
DMSP ANT:	Weight/Height/Width/Length/Cubic Feet:	90lbs/72in/30in/30in/37.5

Note: Also included are a 21" monitor with keyboard and mouse.

Power Requirements: 2.3KVA, (120VAC), 20A, 23.KW
System Operation: Requires Operator/System Administrator
Self-Test Capability: Yes
Consumables: See below
Operator Training: Vendor Provides as directed by the ISEA.
Maintenance Concept: Vendor Provides as directed by the ISEA.
Maintenance Training: Vendor Provides as directed by the ISEA.

Planned Replacement: This system is under the Life Cycle Management control of COMSPAWARSYSCOM (PMW-185). A follow-on system should be identified during FY01/02.

Remarks: SeaSpace Corporation provides full maintenance support, maintenance training and operator training as directed by the program manager ISEA. The program manager is currently working on inserting "LRU" components in the Navy's Integrated Logistics Support System.

Environmental Element Sensed/Range/Accuracy:

DMSP OLS	VIS/IR	0.56KM Fine (2 DEG C)
		2.78KM Smooth (0.5 DEG C)
TIROS AVHRR HRPT	VIS/IR	1.1KM (0.125 DEG C)
GOES/GMS/METEOSAT	VIS/IR	1KM Vis/4KM IR/8KM WV

Consumables:

Printer paper (case)	7530-01-335-2623
Toner Cartridge (Black)	PN 016 1536-00
Toner Cartridge (Cyan)	PN 016 1537-00
Toner Cartridge (Magenta)	PN 016 1538-00
Toner Cartridge (Yellow)	PN 016 1539-00

Acronym: **AN/FPS-131 / AN/TPS-76** SUPPLEMENTAL WEATHER RADAR **(SWR)**

Equipment/System: Emitter/Receiver/Processor/Display Set
Purpose: Detect bearing, range, height and movement of potentially threatening weather phenomena.
Program Manager: COMSPAWARSYSCOM (PMW-185) http://c4iweb.spawar.navy.mil/185/

ISEA: SPAWARSYSCEN CHARLESTON (318)
P.O. Box 190022
N. Charleston, SC 29419-9022
http://www-chas.spawar.navy.mil/CHAS/Codes/30/atc txt.html

POC: Elizabeth Dawsey 344D
DSN: 588-4835
COM: 843-974-4835 (5441fax) e-mail: dawseye@spawar.navy.mil

Vendor: Enterprise Electronics Corporation http://www.eecradar.com/
Number of Systems: 10
Cost per System: $525K

COMPUTER:	Weight/Height/Width/Length/Cubic Feet:	35lbs/18in/19in/6in/1.2
MONITOR:	Weight/Height/Width/Length/Cubic Feet:	40lbs/16in/16in/18in/2.5
PROCESSOR:	Weight/Height/Width/Length/Cubic Feet:	42lbs/18in/18in/9in/1.7
RCVR/TRANS/SERVO:	Weight/Height/Width/Length/Cubic Feet:	470lbs/30in/24in/70in/29
ANTENNA:	Weight/Height/Width/Length/Cubic Feet:	1850lbs/173in/150in/176in/2646
RADOME:	Weight/Height/Width/Length/Cubic Feet:	1100lbs/216in/216in/199in/5378
COLOR PRINTER:	Weight/Height/Width/Length/Cubic Feet:	25lbs/24in/15in/20in/4.3
MOTOR/GENERATOR:	Weight/Height/Width/Length/Cubic Feet:	700lbs/25in/37in/33in/17.9

Power Requirements: 120 VAC 50/60 Hz
System Operation: Requires Operator
Self-Test Capability: Yes
Consumables: See below
Operator Training: Upon installation and at NAVTECHTRAU Keesler AFB, MS
Maintenance Concept: "O" level LRU replacement.
Maintenance Training: NAVTECHTRAU Keesler AFB, MS

Planned Replacement: This system is under the Life Cycle Management control of COMSPAWARSYSCOM (PMW-185). A follow-on system should be identified during FY02.

Remarks: The AN/FPS-131 and AN/TPS-76 are Doppler Weather Radars that operate in the "C" Band. They are commonly referred to as the DWSR-2500C in the commercial sector. A future upgrade to this system will provide an export capability of digital navigable radar images into MIDDS/NITES III. **This system is incorporated into the AN/TMQ-44A(V) (METMF(R)) and is known as the AN/TPS-76. System capabilities/limitations information can be found at:** http://www.eecradar.com/dwsr2500c/index.html

Consumables:

Printer paper	(case)	7530-01-335-2623
Toner Cartridge	(Black)	PN 016 1536-00
Toner Cartridge	(Cyan)	PN 016 1537-00
Toner Cartridge	(Magenta)	PN 016 1538-00
Toner Cartridge	(Yellow)	PN 016 1539-00

Acronym: **AN/SMQ-11,-11A(V1),-11A(V2),-11B,-11C** SATELLITE RECEIVER

Equipment/System: Receiver/Processor/Recorder Set
Purpose: Receive and record high resolution METOC information from polar orbiting and geo-stationary satellites.
Program Manager: COMSPAWARSYSCOM (PMW-185 http://c4iweb.spawar.navy.mil/185/

ISEA: RAYTHEON SYSTEMS COMPANY
6125 East 21st Street
Indianapolis, IN 46219-2058

POC: Arthur Bowman
DSN: 369-4261
COM: 317-306-4261 (7294 fax)
e-mail: smqhelp@indy.navy.mil or bowmana@indy.navy.mil

Vendor: Raytheon Systems Company, Indianapolis, IN
Number of Systems: 74
Cost per System: $1.3M

AN/SMQ-11,-11A(V1)/(V2) CONTROL GROUP:	Weight/Height/Width/Length/Cubic Feet:	850lbs/68in/23in/26in/48
AN/SMQ-11,-11A(V1)/(V2) CONSOLE:	Weight/Height/Width/Length/Cubic Feet:	780lbs/68in/23in/26in/48
AN/SMQ-11(B),(C) PROCESSOR GROUP:	Weight/Height/Width/Length/Cubic Feet:	662lbs/68in/23in/26in/45
AN/SMQ-11(B),(C) CONSOLE:	Weight/Height/Width/Length/Cubic Feet:	814lbs/68in/23in/26in/45

Power Requirements: 115 VAC Single Phase and 115VAC Three-Phase Delta
System Operation: Semi-Automatic
Self-Test Capability: Yes
Consumables: See below
Operator Training: NAVTECHTRAU Keesler AFB MS
Maintenance Concept: "O" level LRU replacement.
Maintenance Training: NAVTECHTRAU Keesler AFB, MS

Planned Replacement: AN/FMQ-17(NSDS-E), and specific upgrades to stand-alone systems at specified remote locations during FY00/01/02.

Remarks: Interfaces with TESS (NC) Transition System.

Environmental Element Sensed/Range/Accuracy:

DMSP OLS	VIS/IR	0.56KM Fine (2 DEG C) 2.78KM Smooth (0.5 DEG C)
TIROS AVHRR HRPT	VIS/IR	1.1KM (0.125 DEG C)
GOES WEFAX	VIS/IR	1KM Vis/4KM IR/8KM WV

Consumables:

Photo Dry Paper Silver Type 7772/78-6577-7202-2 (AN/SMQ-11,-11A(V1)/(V2)	6750-01-036-2843
AN/SMQ-11 (B)/(C) Toner Cartridge 1382100	7045-01-429-3695
AN/SMQ-11 (B)/(C) Toner Cartridge 1382150	7045-01-421-2361
Printer paper	Standard 8 ½" x 11" plain paper

Acronym: **AN/UMK-4 (NITES)** NAVAL INTEGRATED TACTICAL ENVIRONMENTAL SUB-SYSTEM **(Variants I/II)**

Equipment/System: Processor/Display Set
Purpose: Provide in-situ METOC support to warfare commanders.
Program Manager: **COMSPAWARSYSCOM (PMW-185)** http://c4iweb.spawar.navy.mil/185/

ISEA: SPAWARSYSCEN SAN DIEGO (D642)
53560 HULL ST
San Diego, CA 92152-5001
http://www.spawar.navy.mil/sandiego/cgi/welcome

POC: METOC Systems Knowledge Center (MSKC)
DSN: 524-3888
COM: 619-524-3888
e-mail: metoc@spawar.navy.mil

Vendor: Various vendors have been drawn upon to outfit NITES I including: Hewlett Packard, Harris, RAID, VME, Cisco, Dell, etc.
Number of Systems: 6
Cost per System: $400k

NITES I is composed of three or more dual-Pentium NT servers, two to four NT workstations, two or more UNIX servers, and two or more UNIX workstations.
NITES II is composed of the TDA software segment that resides on NITES I hardware.

Power Requirements: 120 VAC at 60 Hz
System Operation: Manual/Semi-Automatic for some functions
Self-Test Capability: Yes
Consumables: See below
Operator Training: ISEA Provides
Maintenance Concept: Through warranty and depot level support as directed by the program manager.
Maintenance Training: None

Planned Replacement: This system is under the Life Cycle Management control of COMSPAWARSYSCOM (PMW-185). A follow-on system should be identified in FY02/03.

Remarks: Physical dimensions not provided due to size variations of different configurations.

Consumables:

Printer paper	Standard 8 ½ x 11' plain paper
Printer cartridge	HP 51629A(Black)/HP 5164A (Color)

Acronym: **AN/TMQ-44A**(V) METEOROLOGICAL MOBILE FACILITY (REPLACEMENT) **(METMF(R))**

Equipment/System: Receiver/Processor/Display/Dissemination System
Purpose: Provide Tactical Meteorological Support to the Marine Air-Ground Task Force (MAGTF).
Program Manager: COMSPAWARSYSCOM (PMW-185) http://c4iweb.spawar.navy.mil/185/

ISEA: SPAWARSYSCEN SAN DIEGO (D642)
53560 HULL ST
San Diego, CA 92152-5001
http://www.spawar.navy.mil/sandiego/cgi/welcome

POC: GySgt Gjerulff
DSN: 524-3191
COM: 619-524-3191
e-mail: gjerulff@spawar.navy.mil

Vendor: Shelter (Brunswick Shelter Systems) / Internal Equipage (Various Government and Commercial Suppliers)
Number of Systems: 14 (Proposed)
Cost per System: $2.1M

Shelter:	Weight/Height/Width/Length/Cubic Feet:	14,000lbs/96in/96in/240in/1280
Ecu Skid Assy:	Weight/Height/Width/Length/Cubic Feet: (2 Per System):	750lbs/68in/46in/74in/134
Joining Corridor:	Weight/Height/Width/Length/Cubic Feet:	660lbs/18in/96in/133in/133 (Collapsed)

Power Requirements: 208 VAC, 60Hz, Five Wire, Three Phase Wye
System Operation: Requires Operator
Self-Test Capability: Yes
Consumables: See below
Operator Training: NAVTECHTRAU Keesler AFB, MS
Maintenance Concept: "O" level LRU replacement
Maintenance Training: NAVTECHTRAU Keesler AFB, MS

Planned Replacement: This system is under the Life Cycle Management control of COMSPAWARSYSCOM (PMW-185). A follow-on system should be identified during FY02.

Remarks: The TMQ-44A(V) METMF(R) Van incorporates the following subsystems: AN/TPS-76 Doppler WX radar, local and remote MET sensors, polar orbiting and geo-stationary satellite display set, AN/UMQ-12A Mini-Rawinsonde upper-air set, an HF, VHF, and UHF secure/non-secure communications suite and miscellaneous processors for the manipulation and dissemination of METOC data.

Consumables:

Balloon, Meteorological, 300Gram	6660-00-515-4214
Balloon, Meteorological, 30Gram (Blue)	6660-00-526-6041
Balloon, Meteorological, 30Gram (Tan)	6660-00-663-8158
Balloon, Meteorological, 30Gram (Red)	6660-00-663-8159
Battery, 9 Volt	6135-01-383-9204
Battery, 6.5 Volt	6135-01-214-6441
Battery, 6 Volt	6135-00-383-9195
Battery, 1.5 Volt	6135-00-826-4798
Color Stick, Cyan	9160-01-442-1276
Color Stick, Magenta	9160-01-442-1278
Color Stick, Yellow	9160-01-442-1277
Helium, Non-Technical	6830-00-660-0027
Grease, Aircraf	9150-00-944-8953

Acronym: **AN/UMQ-5** WIND MEASURING SYSTEM

Equipment/System: Processor/Display Set
Purpose: Measure and record wind direction and speed
Program Manager: COMSPAWARSYSCOM (PMW-185) http://c4iweb.spawar.navy.mil/185/

ISEA: SPAWARSYSCEN CHARLESTON (318)
P.O. Box 190022
N. Charleston, SC 29419-9022
http://www-chas.spawar.navy.mil/CHAS/Codes/30/atc txt.html

POC: Dan Turner 344DT
DSN: 588-4831
COM: 843-218-4831 (5441fax)
e-mail: turnerd@spawar.navy.mil

Vendor: Frieze Instrument Division, Bendix Aviation, Inc.
Number of Systems: 167
Cost per System: $35K

Power Requirements: 115 VAC, 60Hz
System Operation: Automatic
Self-Test Capability: No
Consumables: See below
Operator Training: OJT
Maintenance Concept: O-level LRU replacement
Maintenance Training: None

Planned Replacement: MORIAH in FY02/03

Remarks: System can support up to six remote recorders/indicators. Physical dimensions not provided due to size variations of different models.

Environmental Element Sensed/Range/Accuracy:

Wind Speed	0.5 kt	0 to 120 kts
Wind Direction	1 °	1 to 360 °

Consumables:

Recording Ink (RD-108/UMQ-5) A6500	6660-00-075-8327	
Recorder Pen/Arm (RD-108/UMQ-5) P516911-1	6660-00-590-8365	
Pen Point 72264-8LC	6660-00-308-5816	
Chart (RD-108/UMQ-5) 23677-S51699REV N	6660-00-781-1003	Chart, Recording, Instrument
Cleaver, Pen Wire 054043	6660-00-676-5752	

Acronym: **AN/UMQ-12A** MINI-RAWIN SYSTEM **(MRS)**

Equipment/System: Surface Receiver/Processor Set
Purpose: Collect pressure, temperature, humidity and wind data from balloon-borne radiosonde and generate WMO-formatted report.
Program Manager: COMSPAWARSYSCOM (PMW-185) http://c4iweb.spawar.navy.mil/185/

ISEA: SPAWARSYSCEN CHARLESTON (318)
P.O. Box 190022
N. Charleston, SC 29419-9022
http://www-chas.spawar.navy.mil/CHAS/Codes/30/atc txt.html

POC: Steve Woods, 344SW
DSN: 588-4322
COM: 843-218-4322 (5441 fax)
e-mail: swoods@spawar.navy.mil

Vendor: Vaisala Inc; Boston MA; http://www.vaisala.com/
Number of Systems: 120
Cost per System: $85K (DLA replacement cost including antennas)

CPU: Weight/Height/Width/Length/Cubic Feet: 66lbs/16in/23in/16in/3.4
Power Requirements: 130W 115/230VAC 50/60Hz with 2 minute battery backup
System Operation: Semi-automatic (manual launch, automatic sounding)
Self-Test Capability: Yes
Consumables: See below
Operator Training: OJT
Maintenance Concept: BIT-directed "O" level LRU replacement with "D" level repair
Maintenance Training: NAVTECHTRAU KEESLER AFB, MS

Planned Replacement: Not yet identified by the program manager.

Remarks: Serial output often connected to IMOSS, TESS(NC) TRANS and UMK-4 V1. Embedded in TMQ-44 as RCS; Portable for use by METs; Requires external 400MHz telemetry and GPS Omni-directional antennas with preamplifiers. A few systems are configured to use LORAN-C radio-navigation signals for upper-wind-finding.

Environmental Element Sensed/Range/Accuracy:

Pressure	0.5h Pa	1060 to 3 hPa
Temperature	0.2 °C	+60 to -90 °C
Humidity	3% RH	0 to 100% RH
Wind Speed	0.5 m/s	0 to 180 m/s (350 knots)
Wind Direction	1 °	1 to 360 °

Consumables:

GPS Radiosonde: Vaisala RS80-15G	6660-01-425-2624
Radiosonde Timer (for EMCON) Vaisala RSK-11	6645-01-331-0765
100gram Meteorological Balloon ML-159A	6660-00-663-8154
200gram Meteorological Balloon Kaymont	6660-01-196-0368
300gram Meteorological Balloon ML-519/UM	6660-00-515-4215
Technical Helium BB-H-1168	6830-00-660-0027
K-type Helium Cylinder (217 cubic feet)	8120-00-244-6981

Acronym: **(DAMPS)** DISTIBUTED ATMOSPHERIC MODELING PREDICTION SYSTEM

Equipment/System: Receiver/Processor/Data Base/ Data Dissemination/Visualization System
Purpose: To collect, quality control, assimilate, predict, data base, and display atmospheric forecasts produced by the Coupled Ocean Atmosphere Mesoscale Prediction System (COAMPS)
Program Manager: COMNAVMETOCCOM **http://www.cnmoc.navy.mil**

ISEA: Fleet Numerical Meteorology and Oceanography Center (FNMOC)(N3)
7 Grace Hopper Ave, Stop 1
Monterey, CA 93943-5501
http://www.fnmoc.navy.mil

POC: Mr. John Garthner
DSN: 485-4431
COM: 831-656-4431
e-mail: **garthnerj@fnmoc.navy.mil**

Vendors: Silicon Graphics Inc (SGI) and Sun Micro-Systems
Number of Systems: 1 system per Regional Center - 8 systems total
Cost per System: $150K

DAMPS is comprised of three (3) high-end UNIX based systems.

Power Requirements: Origin 2000: 220V AC single phase, 20 A, 50/60 Hz, one NEMA L6-30R receptacle. SGI O2: Two 15 amp 110V NEMA 5-15R receptacles. Sun E250: Two 15 amp 110V NEMA 5-15R receptacles
System Operation: Automatic
Self-Test Capability: Yes
Consumables: None
Operator Training: Upon Installation/OJT
Maintenance Concept: Through warranty replacement as directed by the program manager. Support provided by METOC Systems Knowledge Center (MSKC).
Maintenance Training: None

Planned Replacement: None

Remarks: Physical dimensions not provided due to size variations of different configurations.

Acronym: **(GFMPL NT WORKSTATIONS)** P-200MHz DESKTOP COMPUTERS

Equipment/System: Processor/Display Set
Purpose: Provide environmental tactical decision aid software platforms in support of field operations.
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil/

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001 http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: EDS
Number of Systems: 11 EDS P-200MHz PCs
Cost per System: $2K

CPU:	Weight/Height/Width/Length/Cubic Feet:	40lbs/7in/20in/18in/1.5
Monitor:	Weight/Height/Width/Length/Cubic Feet:	30lbs/15in/15in/18in/2
Printer:	Weight/Height/Width/Length/Cubic Feet:	18lbs/6in/18in/12in/1

Power Requirements: 115 VAC, 60Hz
System Operation: Semi-Automatic
Self-Test Capability: Yes
Consumables: See below
Operator Training: NAVTECHTRAU KEESLER AFB, MS
Maintenance Concept: Through warranty replacement as directed by the program manager.
Maintenance Training: None

Planned Replacement: These GFMPL-NT Workstations were part of a one-time purchase and fielding. End user activities will assume full maintenance responsibilities once the ISEA's life cycle management responsibilities have expired in FY01.

Remarks: 11 systems procured for the U.S.M.C. Questions or technical assistance with PC GFMPL/GFMPL NT software should be directed to NAVOCEANO Code N641 via a software trouble report (STR) or by calling DSN: 485-5895 COMM: (228) 688-5895.

Consumables:
Printer paper - Tektronics 4693DX Transfer Roll 016-0898-00
Printer paper - HP 51630Q

Acronym: **(GVAR)** GOES VARIABLE RESOLUTION SATELLITE RECEPTION SYSTEM

Equipment/System: Automated Receiver/Processor/Display/Dissemination System
Purpose: Provide High-resolution Geo-stationary Satellite Data to MIDDS users via auto ingest.
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil/

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: MARTA Systems Inc. http://www.martasys.com/
Number of Systems: 2
Cost per System: $28K

PC: Weight/Height/Width/Length/Cubic Feet: 50lbs/24in/17in/24in/5.67
ANTENNA: Weight/Height/Width/Length/Cubic Feet: 120lbs/139in/139in/139in/144

Power Requirements: 115 VAC, 20A
System Operation: Automatic after initial user configuration
Self-Test Capability: Yes
Consumables: None
Operator Training: ISEA Provided
Maintenance Concept: Through warranty and depot level support as directed by the program manager.
Maintenance Training: ISEA Provided

Planned Replacement: GVAR was incorporated into AN/FMQ-17(NSDS-E) at selected locations in FY99/00. COMNAVMETOCCOM is currently assessing the need to continue providing support for systems at NTMOF Pensacola and NCMOD Diego Garcia.

Remarks: 12VDC is provided to antenna down converter via RF combo cable. Down converter receives 1.694GHz signal, converts down to 137MHz.

Acronym: **(IMOSS)** INTERIM MOBILE OCEANOGRAPHIC SUPPORT SYSTEM

Equipment/System: Receiver/Processor/Recorder/Display Set
Purpose: To collect and analyze data from a variety of sources to assist in assessing and forecasting atmospheric parameters and their impact on various types of operations.
Program Manager: COMNAVMETOCCOM/COMSPAWARSYSCOM (PMW-185)
http://www.cnmoc.navy.mil or http://c4iweb.spawar.navy.mil/185/

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Various vendors have provided equipment for the IMOSS including: NEC, IBM, Drake Communications, Kenwood Communications, Quorum Communications, Perfect 10, Dymek, HP, 3COM, Megahertz, Weather fax, Microsoft, etc.
Number of Systems: 113
Cost per System: $25K

The IMOSS is composed of three notebook computers, a printer, an HF receiver, a satellite receiver/demodulator, various peripheral antennas and one or more carrying cases.

Power Requirements: 120 VAC, 60Hz
System Operation: Manual/Semi-Automatic for some functions
Self-Test Capability: Yes
Consumables: See below
Operator Training: ISEA Provides
Maintenance Concept: Through warranty and depot level support as directed by the program manager.
Maintenance Training: None

Planned Replacement: AN/UMK-4 NITES 2000 variant IV in FY03/04.

Remarks: Physical dimensions not provided due to size variations of different configurations.

Consumables:
Printer paper - Standard 8 ½" x 11" plain paper
Printer cartridge - HP 51629A (Black) / HP 51649A (Color)

Acronym: **(INMARSAT)** INTERNATIONAL MARITIME SATELLITE ORGANIZATION PORTABLE TELEPHONE SYSTEM

Equipment/System: Receiver/Transmitter/Display Set
Purpose: Provide remote communications via commercial satellite.
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil/

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001 http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: GMPCS Personal Communications Inc. http://www.gmpcs-us.com/
Number of Systems: 8
Cost per System: $20K

Portable Unit: Weight/Height/Width/Length/Cubic Feet: 39lbs/15in/11in/24in/2.3

Power Requirements: 115 VAC, 60Hz (Adaptable)
System Operation: Stand Alone
Self-Test Capability: Yes
Consumables: None
Operator Training: ISEA Provides
Maintenance Concept: Through warranty repair/replacement as directed by the program manager.
Maintenance Training: None

Planned Replacement: INMARSAT-B, NERA World-Communicator and/or Iridium hand-held voice/data sets in FY01/FY02.

Remarks: Provides near worldwide voice, data, fax and STU III communications capabilities.

Acronym: **(JODI)** JOINT OPERATIONAL DATA INTERFACE

Equipment/System: Processor/Data Bridge
Purpose: Provide Bridge between Unclassified and Classified Network(s)
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil/

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Hewlett Packard
Number of Systems: 9
Cost per System: $14K (includes hardware and software)

Workstation: Weight/Height/Width/Length/Cubic Feet: 7.52lbs/4in/25.6in/16.2in

Power Requirements: 120 VAC, 50/60 Hz, 12 watts, maximum input
System Operation: Automatic
Self-Test Capability: Yes
Consumables: None
Operator Training: Upon Installation/OJT
Maintenance Concept: Through warranty replacement as directed by the program manager.
Maintenance Training: None

Planned Replacement: Sun Solaris WS in FY02/03

Remarks:

Acronym: **(LPATS)** LIGHTNING POSITIONING AND TRACKING SYSTEM

Equipment/System: Automated Sensor/Processor/Display Set

Purpose: Display continuous cloud-to-ground lightning strike information over the Contiguous United States.

Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil/

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Global Atmospherics Inc. http://www.glatmos.com/
Number of Systems: 31
Cost per System: $15K

MTI Component: Weight/Height/Width/Length/Cubic Feet: 30lbs/7in/16in/16in/1.1

Power Requirements: 115 VAC, 60Hz
System Operation: VIS 6.3 Semi-Automatic
Self-Test Capability: No
Consumables: None
Operator Training: Upon Installation
Maintenance Concept: "O" Level LRU Replacement
Maintenance Training: None

Planned Replacement: The requirement for LPATS data continues and the data is currently integrated into MIDDS with an enhancement expected in FY99. LPATS is also planned to be incorporated into NITES 2000 variant III in FY02/03.

Remarks: LPATS is a satellite reception system. There are 105 sensors situated throughout the U.S. NAVOCEANO funds the monthly $310.00 cost for the data stream. LPATS data has been integrated into the MIDDS through MARTA software. Some activities prefer to employ stand-alone systems to display LPATS data.

Acronym: **(MIDDS)** METEOROLOGICAL INTEGRATED DATA DISPLAY SYSTEM

Equipment/System: Processor/Display Set
Purpose: Provide and display meteorological data to aviation support activities.
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil/

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Dell Computer Systems Inc http://www.dell.com/
Number of Systems: 74
Cost per System: $50K

Server:	Weight/Height/Width/Length/Cubic Feet:	40lbs/26.5in/12.5in/22in/4.2
21" Monitor:	Weight/Height/Width/Length/Cubic Feet:	29lbs/19in/20in/20in/4.4
Worksta #1:	Weight/Height/Width/Length/Cubic Feet:	12lbs/7in/17in/16.5in/1.1
17" Monitor:	Weight/Height/Width/Length/Cubic Feet:	22.6lbs/16in/16.5in/18.5/2.8
Worksta #2-X:	Weight/Height/Width/Length/Cubic Feet:	12.5lbs/6.5in/16.5in/16.5in/1
WOT:	Weight/Height/Width/Length/Cubic Feet:	12.5lbs/6.5in/16.5in/16.5in/1

Power Requirements: 120/240 VAC, 8/4A, 60/50Hz
System Operation: Semi-Automatic, utilizing Microsoft NT Server 4.0
Self-Test Capability: Yes
Consumables: See below
Operator Training: OJT
Maintenance Concept: Through warranty and depot level support as directed by the program manager.
Maintenance Training: None

Planned Replacement: This system has surpassed its programmed life cycle. MIDDS will become AN/UMK-4 NITES 2000 Variant III, as it transitions into a COMSPAWARSYSCOM (PMW-185) sponsored and managed program in FY02/03.

Remarks: System operates on Microsoft NT 4.0 A typical MIDDS system consists of a dual (Pentium 450MHz) server with 21" monitor. Workstation #1 consists of a CPU (Pentium 450MHz) with 17" monitor. Workstation #2-X consists of a CPU (Pentium 450MHz) with 17" monitor (if applicable). Wall of Thunder (Quad Video Display) consists of a CPU (Pentium 233MHz) with four 17" monitors. System consists of an HP5P or HP6P laser printer, as well as various other peripheral equipment items.

Consumables:

Printer paper	Standard 8 ½" x 11" plain paper
Printer cartridge	HP 51629A (Black)
Printer cartridge	HP 51649A (Color)

Acronym: **(MIDDS-T)** METOC INTEGRATED DATA DISPLAY SYSTEM - TACTICAL

Equipment/System: Receiver/Processor/Recorder/Display Set
Purpose: To collect, analyze, and display data from a variety of sources to assist in assessing and forecasting atmospheric parameters and their impact on various types of operations.
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Various vendors have been drawn upon to outfit MIDDS-T including: Panasonic, Hewlett Packard, Iomega, Nera, Quorum Communications, Cisco, Climatronics, Kenwood Communications, etc.
Number of Systems: 6
Cost per System: $70K

MIDDS-T is composed of three ruggedized notebook computers, a printer, a camera, an INMARSAT-B telephone, an HF receiver, a satellite receiver/modulator, various peripheral antennas, a portable weather observing station, a portable projector, and a smart-board projection screen.

Power Requirements: 120 VAC (Opt. 240 VAC), 50/60 Hz
System Operation: Manual/Semi-Automatic for some functions
Self-Test Capability: Yes
Consumables: See Below
Operator Training: ISEA Provides
Maintenance Concept: Through warranty and depot level support as directed by the program manager.
Maintenance Training: None

Planned Replacement: AN/UMK-4 NITES 2000 Variant IV in FY03/04.

Remarks: Physical dimensions not provided due to size variations of different configurations.

Consumables:
Printer paper -Standard 8 ½ x 11' plain paper
Printer cartridge -HP 51629A (Black)/HP 51649A (Color)

Acronym: **(MODAS)** MODULAR OCEAN DATA ASSIMILATION SYSTEM

Equipment/System:
Purpose:
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Sun Microsystems
Number of Systems: 9
Cost per System: $10K

MODAS is comprised of one (1) high-end UNIX based system.

Power Requirements: 120 VAC
System Operation: Automatic
Self-Test Capability: Yes
Consumables: None
Operator Training: Upon Installation/OJT
Maintenance Concept: Through warranty replacement as directed by the program manager.
Maintenance Training: None

Planned Replacement: MODAS will be integrated into NITES I/II in FY02.

Remarks: Physical dimensions not provided due to size variations of different configurations.

Acronym: **(MOS)** MOBILE OBSERVING SYSTEM

Equipment/System: Recorder/Processor/Display Set(s)
Purpose: To collect local WX data to assist in assessing and forecasting atmospheric parameters and their impact on various types of operations.
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Various vendors have been drawn upon to outfit the MOS including: Trimble Navigation, Dickson Labs, AIR, Kestrel, etc.
Number of Systems: 8
Cost per System: $3.3K

A MOS suite consists of a snow depth gauge, a rain gauge, a density altitude computer, a compass, a miniature anemometer, a hand-held barometer/altimeter, a temperature/dew-point probe, and a hand-held GPS receiver.

Power Requirements: AA batteries for some items
System Operation: Manual
Self-Test Capability: No
Consumables: See below
Operator Training: Upon delivery/OJT
Maintenance Concept: Through depot level support as directed by the program manager.
Maintenance Training: None

Planned Replacement: RMWS in FY01/02.

Remarks: Physical dimensions not provided due to size variations of different components.

Consumables:
Batteries - Standard AA alkaline

Acronym: **(PORTABLE PROJECTOR)** PROXIMA ULTRALITE DS-1

Equipment/System: Projection/Display Set
Purpose: Provide means to electronically present METOC briefings.
Program Manager: COMNAVMETOCCOM http://www.cnmoc.navy.mil

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: On-Site Solutions Inc. http://www.proxima.com
Number of Systems: 18
Cost per System: $5K

Projector: Weight/Height/Width/Length/Cubic Feet: 10lbs/4.7in/9.2in/12.8in/1

Power Requirements: 100-120/220-240 VAC, 60/50Hz Auto-switching
System Operation: Requires Operator
Self-Test Capability: Yes
Consumables: None
Operator Training: OJT
Maintenance Concept: Through warranty replacement as directed by the program manager.
Maintenance Training: None

Planned Replacement: This unit is a is a sub-component of the METOC Integrated Data Display System - Tactical or MIDDS-T. It will also be a sup-component of NITES 2000 variant IV in FY03/04.

Remarks: Each unit is provided with a spare metal halide 270W lamp that has an estimated life of 1,000 hours. Warranty provided through vendor and in effect through May 2000. Systems are currently covered by a one-year manufacturer warranty that includes on the road replacement, as well as an additional one-year warranty provided by the vendor that includes on the road replacement. **Note:** To users in countries where customs and duty fees are involved with shipments into the country including U.S., shipment of a failed unit to ISEA for warranty repair or replacement is authorized.

Consumables:
Projector Lamp Assembly Model L25

Acronym: **(PUP)** PRINCIPAL USER PROCESSOR WSR-88D http://www.osf.noaa.gov/

Equipment/System: Receiver/Processor/Display Set
Purpose: Display Doppler Radar information from selected WSR-88 Radar Product Generator (RPG) sites
Program Manager: COMSPAWARSYSCOM (PMW-185) http://c4iweb.spawar.navy.mil/185/

ISEA: SPAWARSYSCEN CHARLESTON (318)
P.O. Box 190022
N. Charleston, SC 29419-9022
http://www-chas.spawar.navy.mil/CHAS/Codes/30/atc txt.html

POC: Paul Kattawar, 318PK
DSN: 588-4826
COM: 843-218-4826 (5441fax)
e-mail: kattawar@spawar.navy.mil

Vendor: Lockheed, Inc.
Number of Systems: 33
Cost per System: $135K

Data Processor:	Weight/Height/Width/Length/Cubic Feet:	1,442 lbs/79in/48in/32in/71
System Console:	Weight/Height/Width/Length/Cubic Feet:	26lbs/14.5in/19in/14.5in/3.8
Work Station:	Weight/Height/Width/Length/Cubic Feet:	215lbs/27in/78in/33in/40
Color Printer:	Weight/Height/Width/Length/Cubic Feet:	99lbs/12.7in/35in/21in/6

Power Requirements: 120/208VAC Three-Phase WYE Configuration:
120 VAC Single Phase
System Operation: Requires operator
Self-Test Capability: Yes
Consumables: See below
Operator Training: Provided by 334th Training Squadron, Keesler AFB, MS
Maintenance Concept: O-level LRU replacement
Maintenance Training: Provided by 334th Training Squadron, Keesler AFB, MS

Planned Replacement: The Open Systems Architecture Principal User/Processor (OPUP) is currently under development by the OSF in Norman, OK. An assessment will be completed to determine its suitability for Navy use; fielding could occur in the FY02/03 time frame.

Remarks: Access to RPG sites accomplished via dial-in line. Technical and operator assistance provided by Operator Support Facility (OSF) Norman OK (1-800-643-3363) or COMM (405-366-6510) EXT 1305. Federal Meteorological Handbook 11 provides Doppler Weather Radar related information and operational concerns.

Consumables:
Printer paper - Tektronics 4693DX Transfer Roll 016-0898-00
Printer paper - HP 51630Q

Acronym: **(RAWS)** REMOTE AUTOMATED WEATHER SENSOR

Equipment/System: Automated Receiver/Processor/Display Set
Purpose: Provide automatic surface weather observations
Program Manager: COMNAVMETOCCOM http:www.cnmoc.navy.mil

ISEA: Naval Oceanographic Office (N643)
Meteorological Equipment Division
1002 Balch Blvd
Stennis Space Center, MS 39522-5001
http://www.navo.navy.mil/

POC: NAVOCEANO (N643) Help Desk
DSN: 485-5079
COM: 228-688-5079 (fax x5413)
e-mail: onscene@navo.navy.mil

Vendor: Global Atmospherics Inc. http://www.glatmos.com/
Number of Systems: 7
Cost per System: $12K

ACU: Weight/Height/Width/Length/Cubic Feet: 60lbs/72in/24in/32in/16
VDU: Weight/Height/Width/Length/Cubic Feet: 311lbs/13in/13in/13.5in/1.4
OID: Weight/Height/Width/Length/Cubic Feet: 35lbs/16.5in/33in/24in/7
OND: Weight/Height/Width/Length/Cubic Feet: 51lbs/4in/ / /.5

Power Requirements: 120 VAC 0.3A battery charge through transformer or 12VDC @ 12ma (7.0 AMP hr battery)
System Operation: Automatic
Self-Test Capability: Yes
Consumables: None
Operator Training: Upon Installation/OJT
Maintenance Concept: Through warranty replacement as directed by the program manager.
Maintenance Training: A replacement will be identified in FY03

Remarks:

Environmental Element Sensed/Range/Accuracy:

Temperature	-80 Deg F to +130 Deg F	+/- 1 Deg F
Wind Speed	0 to 125 Knots	+/- 2 Knots or 5% (whichever is greater)
Wind Direction	0 to 359 Deg F	+/- 5 Deg when wind speed is 5 Knots or greater
Barometric Pressure	16.9 to 31.6 HG	+/- .02 HG
Dew Point	-30 Deg F to +86 Deg F	+/- 2 Deg F

Acronym: **(SMOOS)** SHIPBOARD METEOROLOGICAL AND OCEANOGRAPHIC OBSERVING SYSTEM

Equipment/System: Sensor Set
Purpose: Collect and provide surface METOC parameters for ingestion into the TESS(NC) Transition System.
Program Manager: COMSPAWARSYSCOM(PMW-185) http://c4iweb.spawar.navy.mil/185

ISEA: SPAWARSYSCEN SAN DIEGO (D642)
53560 HULL ST
San Diego, CA 92152-5001
http://www.spawar.navy.mil/sandiego/cgi/welcome

POC: METOC Systems Knowledge Center (MSKC)
DSN: 524-3888
COM: 619-524-3888
e-mail: metoc@spawar.navy.mil

Vendor: Lockheed Data, Development, Dissemination (LD3)
Number of Systems: 35
Cost per System: $70K

TT/TD SENSOR:	Weight/Height/Width/Length/Cubic Feet:	30lbs/22in/20in/8in/2
CLOUD SENSOR:	Weight/Height/Width/Length/Cubic Feet:	87lbs/59in/15in/15in/5
SST SENSOR:	Weight/Height/Width/Length/Cubic Feet:	23lbs/11in/14in/11in/1
PRECIP SENSOR:	Weight/Height/Width/Length/Cubic Feet:	59lbs/20in/44in/6in/3
WIND SENSOR:	Weight/Height/Width/Length/Cubic Feet:	39lbs/18in/16in/8in/2
DISPLAY:	Weight/Height/Width/Length/Cubic Feet:	10lbs/14in/6in/12in/.6

Power Requirements: 115 VAC
System Operation: Automatic
Self-Test Capability: Yes
Consumables: None
Operator Training: NAVTECHTRAU Keesler AFB, MS
Maintenance Concept: "O" Level LRU Replacement
Maintenance Training: NAVTECHTRAU Keesler AFB, MS

Planned Replacement: MORIAH in FY02/03

Remarks: Interfaces with TESS(NC) Transition System.

Environmental Element Sensed/Range/Accuracy:

Temperature	-40 Deg F to +130 Deg F	+/- 1 Deg F
Dew Point	-40 Deg F to +100 Deg F	+/- 2 Deg F
Sea Surface Temperature	50 Deg F to 122 Deg F	+/- 20%
Visibility	.25NM to 8+ NM	+/- 1%
Precipitation	0 to 50mm per Hour	+/- 20%
Barometric Pressure	860Mb to 1080Mb	+/- 1Mb
Cloud Height	0 to 12,000Ft	+/- 100Ft < 5,000Ft/ +/- 200Ft Btwn 5.000Ft and 10.000Ft +/- 500Ft Above 10,000Ft

Consumables:

Sensor, Temp/Dew Point: ML-679/UM
Sensor, Sea Surface Temperature: ML-OC-17/UM
Sensor, Visibility/Precipitation: ML-679/UM
Sensor, Atmospheric Pressure: ML-80/UM
Sensor, Cloud Height: ML-680/UM or ML-677/UM
Interface, Wind Data: ML-678/UM
Display, Environmental Data: ID-252/UM

Acronym: **(TESS(NC) TRANS / AN/UMK-3(V))** AFLOAT TACTICAL ENVIRONMENTAL SUPPORT SYSTEM NEXT CENTURY (NC) TRANSITION

Equipment/System: Processor/Display Set
Purpose: Provide in-situ tactical METOC support to warfare commanders.
Program Manager: COMSPAWARSYSCOM(PMW-185) http://c4iweb.spawar.navy.mil/185

ISEA: SPAWARSYSCEN SAN DIEGO (D642)
53560 HULL ST
San Diego, CA 92152-5001
http://www.spawar.navy.mil/sandiego/cgi/welcome

POC: METOC Systems Knowledge Center (MSKC)
DSN: 524-3888
COM: 619-524-3888
e-mail: metoc@spawar.navy.mil

Vendor: Lockheed Data, Development and Dissemination (LD3)
Number of Systems: 28
Cost per System: $30k

HOST:	Weight/Height/Width/Length/Cubic Feet:	755lbs/65in/22in/39in/32
UPS:	Weight/Height/Width/Length/Cubic Feet:	1088lbs/63in/27in/35in/35
CABINET #1:	Weight/Height/Width/Length/Cubic Feet:	648lbs/63in/28in/35in/35
CABINET #2:	Weight/Height/Width/Length/Cubic Feet:	628lbs/63in/28in/35in/35

Power Requirements: 208 VAC, 60Hz, Three-Phase Delta
System Operation: Requires Operator
Self-Test Capability: Yes
Consumables:
Operator Training: NAVTECHTRAU Keesler AFB, MS
Maintenance Concept: "O" Level LRU Replacement
Maintenance Training: NAVTECHTRAU Keesler AFB, MS

Planned Replacement: NITES 2000 variants I and II in FY00/01/02.

Remarks: Interfaces with AN/SMQ-11, AN/UMQ-12A, SMOOS, Fleet Broadcast, JTRWS and Ship's UNCLAS/CLASS LAN/NIPRNET/SIPRNET.

Consumables:

Cartridge, Ink, Color, Hewlett-Packard	HP51641A
Cartridge, Ink, Black, Hewlett-Packard	HP51645A
Printer paper	Standard 8 ½" x 11" plain paper

EMERGING SYSTEMS

1. MORIAH: The MORIAH system will be the result of integrating the New Digital Wind Measuring and Indicating System (NDWMIS), the Shipboard Meteorological and Oceanographic Observing System Replacement **(SMOOS(R))**, and portions of the (AEGIS) Shipboard Environmental Assessment/Weapon System Performance (SEAWASP). Planned fielding of this system will be in the FY02/03 timeframe.

Detailed information on MORIAH can be found at:
http://c4iweb.spawar.navy.mil/185/

2. NITES 2000: NAVAL INTEGRATED TACTICAL ENVIRONMENTAL SUB-SYSTEM On 29 October 1996, the Chief of Naval Operations (N096) issued a TESS(3) Program Policy statement modifying the TESS(3) Program by calling for the following five seamless versions known as the **Naval Integrated Tactical Environmental Subsystem** (NITES) versions I-V. These five sub-systems will comprise what will be known as the AN/UMK-4(V) or NITES 2000:

The five NITES versions are:

(a) **NITES I:** The local data fusion center and principal Naval Meteorological and Oceanographic (METOC) analysis and forecast system.

(b) **NITES II:** The METOC software segment found on Joint Maritime Command Information System (JMCIS)/Global Command and Control System (GCCS).

(c) **NITES III:** The unclassified forecast, briefing and display system tailored to Naval METOC shore activities in support of aviation operations.

(d) **NITES IV:** The portable system tailored to Mobile METOC support to C4ISR.

(e) **NITES V:** Foreign Military Sales.

Planned fielding of these systems will be in the FY00 through FY06 timeframe.

Detailed info on NITES 2000 can be found at:
http://c4iweb.spawar.navy.mil/185/

3. OPUP: OPEN-SYSTEMS ARCHITECTURE PRINCIPAL USER PROCESSOR
The National Weather Service is engaged in a continuing Tri-Agency project with its Next Generation Weather Radar (NEXRAD) partners, the Department of Defense and the Federal Aviation Administration, to evolve the Weather Surveillance Radar - 1988 Doppler (WSR-88D) system.

The Open-Systems PUP will be a system based on industry and government accepted standards that are vendor independent, using "Contractor Off-The-Shelf" hardware items. The OPUP system will be interoperable, scalable to meet the users needs, and easily upgraded vice being replaced. Planned fielding of this system will be in the FY03/04 timeframe.

Information on Open Systems can be found at:
http://www.osf.noaa.gov/osteam/Orpggen.htm

4. RMWS: REMOTE MINIATURE WEATHER STATIONS
The Remote Miniature Weather Station (RMWS) is comprised of lightweight, automated sensors capable of measuring basic meteorological elements and reporting these elements via a Low Earth Orbit (LEO) satellite system in a near-real time manner. There are two main components of RMWS:

(a) A meteorological sensor, referred to as a Miniature Weather Station (MSW), which is a surface-based sensor accurately measuring wind speed/direction, horizontal visibility, surface pressure, air temperature and relative humidity.

(b) A ceilometer, referred to as a Miniature Ceilomenter Unit (MCU), which is a surface-based sensor accurately measuring the height and amount of up to three discreet cloud layers. The ceilometer also measures surface pressure and air temperature.

Both the MWS and MCU can be inserted via two methods: hand employed (HE) or air dropped (AD). Therefore, there are actually four different sensors under the RMWS system: HE MWS, HE MCU, AD MWS and AD MCU. Each variant of RMWS is unique, but these sensors also have several common characteristics. All are considered expendable, yet with limited refurbishment capability if retrieved. Additionally, all have an integral, low-power, two-way communications capability for remote access to the meteorological data. Command and Control System (CCS) software, hosted on a laptop computer or PC, enables the operator to display the sensor observations as well as to remotely program data collection times/reporting elements from numerous sensors simultaneously.

5. NERA World Communicator: INMARSAT's Global Area Network service (M4) has been introduced to meet the increasing demand for mobile data capacity. It enables its users to bring their home office environment, and applications requiring higher bandwidth, to nearly anywhere on earth. Nera's World Communicator is a data and voice communications system that uses the Global Area Network service (M4) and provides 64 KBPS/ISDN high speed data and low cost voice. The World Communicator is fast, compact, versatile, and easy to use. Planned fielding of this system is scheduled to be in FY01 as budgetary considerations permit.

Information on NERA's World Communicator can be found at: http://satcom.nera.no/terminals/ under the World Communicator Link...

6. NOAAPORT: The NOAAPORT satellite broadcast is operated by the U.S. Government to provide hydrological/meteorological data and information to over 150 NWS Weather Forecast Offices. NOAAPORT Ground-station users enjoy timely reception of meteorological data, the reliability of a satellite broadcast, and the unrestricted royalty free use of the data, after the one-time investment in the ground-station.

Hydrological/meteorological data and information from multiple sources are routed to the NOAAPort Network Control Facility and processed for transmission over the following four channels:

Channel #1: NCEP/NWSTG - Provides the National Centers for Environmental Prediction (NCEP) and National Weather Service Telecommunications Gateway (NWSTG) data and products. Includes NCEP model output of Gridded Binary Data (GRIB), Binary Universal Form for Data Representation (BUFR), "Red-book" graphics, and ASCII Free Text Data containing watches and warnings, observations, etc. (NWS Public Products, NWS Domestic Data and NWS International Data).

Channel #2: GOES East Weather Satellite imagery data consisting of visible, infrared and water vapor.

Channel #3: GOES West Weather Satellite imagery data consisting of visible, infrared and water vapor.

Channel #4: GMS & Meteosat Satellite imagery data consisting of visible, infrared and water vapor, and Data Collection Platform (DCP) products.

NEXRAD Radar Products: In late CY00, the NWS will begin broadcasting NEXRAD radar products via NOAAPORT.

Information on NOAAPORT can be found at:
http://www.martasys.com/noaaport.htm

CASUALTY REPORTS (CASREPS)

Enclosure (5)

FORMAT FOR SUBMITTING CASUALTY REPORTS

U.S.N. AND U.S.M.C. ORIGINATORS SHALL, AT A MINIMUM, INCLUDE THE FOLLOWING ACTION (TO) ADRESSES AND INFORMATION (INFO) ADDRESSES:

FM ORIGINATING ACTIVITY
TO SPAWARSYSCEN SAN DIEGO CA//MSKC//
(1) COGNIZANT IN SERVICE ENGINEERING AGENT (ISEA)
APPROPRIATE CHAIN OF COMMAND
HOST ACTIVITY
INFO CNO WASHINGTON DC//N096//(IF USN ACTIVITY ***AND*** IF CASUALTY IS CAT 3/4)
CMC WASHINGTON DC//ASL-37//(IF USMC ACTIVITY ***AND*** IF CASUALTY IS CAT 3/4)
NAVICP MECHANICSBURG PA//10112/1012/05832.34/05832.38/05611//
COMNAVMETOCCOM STENNIS SPACE CENTER MS//N512/N314//
COMSPAWARSYSCOM SAN DIEGO CA//PMW-185//
(2) SPAWARSYSCEN CHARLESTON SC//311//

NAVY AND MARINE CORPS ACTIVITIES PREPARING TO SUBMIT METEOROLOGICAL EQUIPMENT CASUALTY REPORT(S) *SHALL*, WHEN POSSIBLE, FIRST CONTACT THE METOC SYSTEMS KNOWLEDGE CENTER (MSKC) VIA ONE OF THE FOLLOWING METHODS:

A. NIPRNET/INTERNET E-MAIL: METOC@SPAWAR.NAVY.MIL
B. SIPRNET EMAIL: METOC@SPAWAR.NAVY.SMIL.MIL
C. WEBSITE: https://mskc.spawar.navy.mil/
D. FOR PHONE CONNECTIONS USE DSN: 524-3888 OR COMM: 619-524-3888. BOTH OF THESE PHONE NUMBERS HAVE STU-III CAPABILITIES FOR SECURE CONNECTIONS.
E. FOR CLASSIFIED IRC USE IRC SERVERS: MAKO.NPMOC.NAVY.SMIL.MIL AND IRC.ISMC.SGOV.GOV

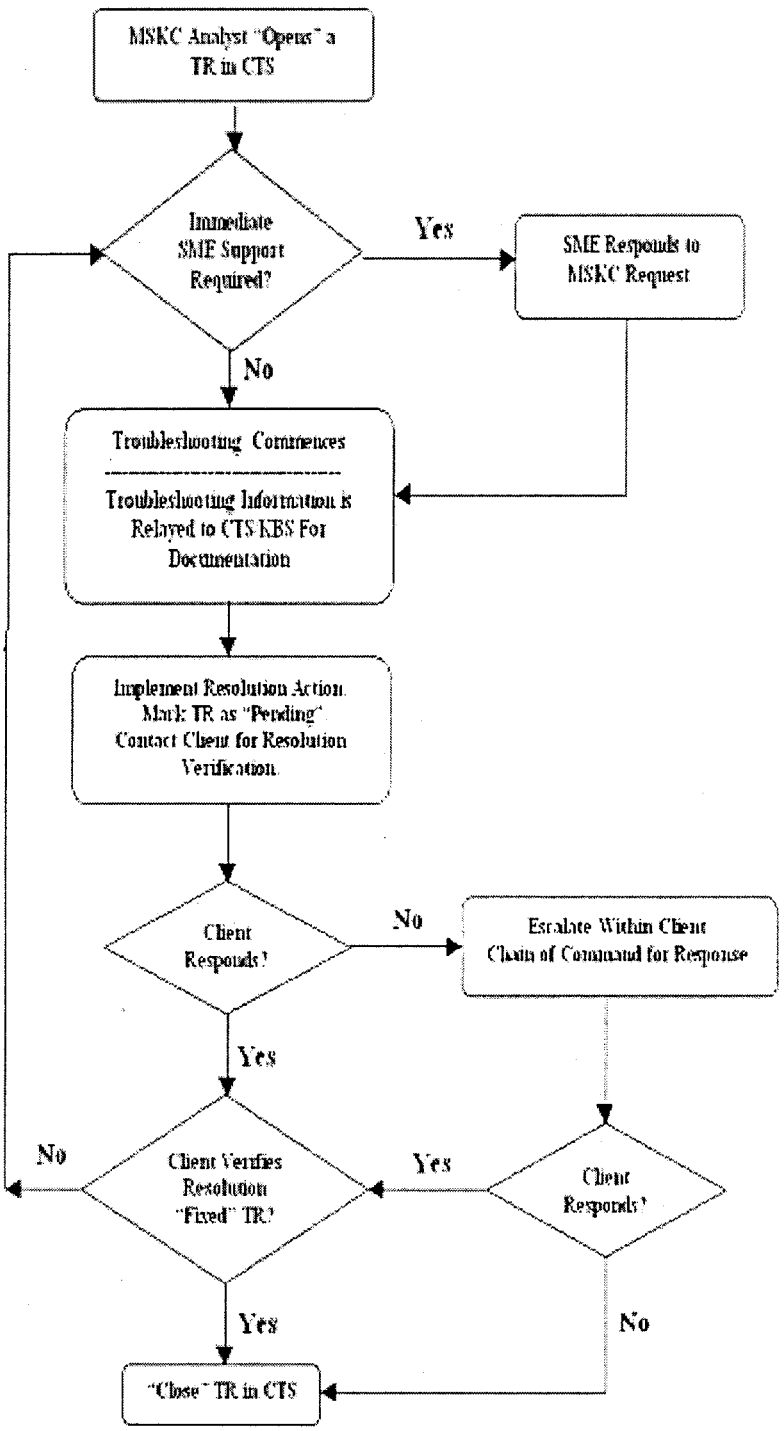
PAGE 3 OF THIS ENCLOSURE PROVIDES AN EXAMPLE OF HOW CASUALTY INFORMATION SHOULD FLOW BETWEEN USERS, THE ISEAs, AND THE MSKC.

NWP 1-03.1, CHAPTER TWO, AND PAGE FOUR OF THIS ENCLOSURE PROVIDES INSTRUCTIONS AND AN EXAMPLE TO ASSIST IN DRAFTING CASUALTY REPORTS ON METEOROLOGICAL EQUIPMENT.

NOTE: (1) REFER TO *ENCLOSURE* (1)
(2) FOR CASREP TRACKING PURPOSES ONLY

MSKC Information Flow Diagram

TR - Trouble Report / CTS - Call Tracking System / KBS - Knowledge Bridge System / SME - Subject Matter Expert



Enclosure (5)

EXAMPLE METEOROLOGICAL EQUIPMENT CASUALTY REPORT MESSAGE

ROUTINE
R 022200Z APR 98 ZYB PSN 618684J33
FM NAVPACMETOC DET WHIDBEY ISLAND WA//00//
TO SPAWARSYSCEN SAN DIEGO CA//MSKC//
NAVOCEANO STENNIS SPACE CENTER MS//N643//
NAVPACMETOCCEN SAN DIEGO CA//N3/N6//
INFO CNO WASHINGTON DC//N096//
COMNAVMETOCCOM STENNIS SPACE CENTER MS//N512/N314//
COMSPAWARSYSCOM SAN DIEGO CA//PMW-185//
NAVICP MECHANICSBURG PA//10112/1012/05832.34/05832.38/05611//
SPAWARSYSCEN CHARLESTON SC//311//
MSGID/CASREP/NPMOD WHIDBEY IS/01// FOR USE AS AN EXAMPLE ONLY!
POSIT/EXEMPT//
REF/A/TEL/011400ZAPR98//
AMPN/PHONCON AG1 DOE (NPMOD) AND MIDDS HARDWARE SUPPORT STAFF//
CASUALTY/MIDDS SERVER/CAT:3//
RMKS/1. MIDDS SERVER REPEATEDLY CRASHES WITH MEMORY PARITY ERRORS. POSSIBLE DAMAGED MEMORY PER REF A.
2. MISSION IMPACT: LOCAL ELECTRONIC AVIATION BRIEFS, SATELLITE SUPPORT, METOC HOMEPAGE SUPPORT, OPARS, NODDS, AND OTHER WEATHER CHARTS ARE DEPENDENT ON THE MIDDS SERVER. CAPABILITY TO SUPPORT AVIATION/AREA WEATHER FORECASTS IS SEVERELY LIMITED WHEN SERVER MALFUNCTIONS.
3. POC: AG1(NAC) DOE DSN XXX-XXXX/XXXX COMM (XXX) XXX-XXXX/XXXX.//
BT
NNNN

NOTE: Ensure that the following are included in the body of the remarks section:

(1) A description of the failure.
(2) A description of how the failure occurred.
(3) The manufacturer and name brand of the item (if known)
(4) The model and number of the item (if known)