

NAVY TRAINING SYSTEM PLAN

FOR THE

VH-60N HELICOPTER

N88-NTSP-A-50-0008/D

DECEMBER 2000

VH-60N HELICOPTER
EXECUTIVE SUMMARY

This preliminary draft of the Navy Training Systems Plan provides an estimate of manpower, personnel, and training requirements to support the employment concepts currently in use for the VH-60N Helicopter, henceforth called VH-60N. The VH-60N has been in use for approximately 12 years and is a helicopter transport for the President of the United States, Vice President, and other visiting heads of state. It has seating provisions for 10 passengers and the aircrew consists of a pilot, co-pilot, crewchief, and a communication system operator. As an executive transport, it has an interior suitable for executive travel and receives extensive care and maintenance exceeding normal standards to keep the aircraft in superior condition. The VH-60N can be folded quickly, in less than two hours, for loading and storage onto an Air Force C-5A/B, and C-17, allowing for transport on short notice. It is also capable of being loaded onto an Air Force B, C-130, and C-141. Marine Helicopter Squadron One, henceforth referred to as HMX-1, is the sole helicopter support for executive transport throughout the United States and overseas.

VH-60N is in Phase III, Production, Deployment, and Operational Support phase of its life cycle. The VH-60N is expected to remain in service until the year 2015, after which a determination will be made whether it should undergo a Service Life Extension Program, which could potentially extend it's life to the year 2025. Naval Air System Command contracts for instruction of pilots, communication system operators, and maintenance personnel at the squadron in HMX-1 Quantico, Virginia for the VH-60N. No specific military aircrew or maintenance training exists for the VH-60N. On 26 November, 1995, the Secretary of Defense directed the Department of the Navy to procure a VH helicopter pilot simulator for HMX-1. A contract to procure the VH-60N Aircrew Proficiency Trainer was awarded in April 2000.

HMX-1 has an outstanding safety record. Increased operational tempo has made it a challenge to meet the training requirements of personnel and the decreased availability of aircraft for training purposes. Although the overall training program is sufficient in many areas, recommendations for improvement are noted in the Training Concept of this document. Particular attention is given to utilizing technology to allow modular lesson formats and Interactive Multimedia Instruction as well as providing a Composite Maintenance Training Device for hands on learning.

VH-60N HELICOPTER

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LIST OF ACRONYMS

ACT	Aircrew Coordination Training
APML	Assistant Program Manager for Logistics
APT	Aircrew Proficiency Trainer
APU	Auxiliary Power Unit
CNO	Chief of Naval Operations
COMM/NAV	Communication/Navigation
DSS	Department of Safety and Standardization
ECS	Environmental Control System
EPA	Environmental Protection Agency
HMX-1	Marine Helicopter Squadron One
IETM	Interactive Electronic Technical Manual
I Level	Intermediate Level Maintenance
MATMEP	Maintenance Training Management and Evaluation Program
MNS	Mission Needs Statement
MOS	Military Occupational Specialty
MRC	Maintenance Requirements Cards
NA	Not Applicable
NAS	Naval Air Station
NATOPS	Naval Air Training and Operating Procedures Standardization
NAVAIRSYSCOM	Naval Air Systems Command
NTSP	Navy Training System Plan
OEM	Original Equipment Manufacturer
OJT	On-the-Job-Training
OPNAVINST	Office of Chief of Naval Operations Instruction
OPS	Operations
PMA	Program Manager, Air
RFT	Ready For Training
SPAR	Special Progressive Aircraft Rework
TBD	To Be Decided
TC	Training Contractor
TD	Training Device
TMS	Type/Model/Series
TTE	Technical Training Equipment
USMC	United States Marine Corps

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LIST OF ACRONYMS

VATS

Vibration Analysis Test Set

VH-60N HELICOPTER

PREFACE

This is the first iteration of the Draft Navy Training Systems Plan (NTSP) is for the VH-60N. This NTSP has been developed to comply with guidelines set forth in the Navy Training Requirements Documentation Manual. This document summarizes the manpower and training required to operate the VH-60N. As a living document, updates are initiated through Program Manager, Air (PMA)-205-2B, in accordance to the above mentioned guidelines.

PART I TECHNICAL PROGRAM DATA

A. NOMENCLATURE-VH-60N Helicopter

1. **Nomenclature-Title-Acronym.** VH-60N
2. **Program Element.** 0901212M

B. SECURITY CLASSIFICATION

1. **System Characteristics** Unclassified
2. **Capabilities** Unclassified
3. **Functions**..... Unclassified

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

- OPNAV Principal Official (OPO) Program Sponsor..... CNO (N88)
- OPO Resource Sponsor CNO (N88)
- Marine Corps Program Sponsor..... HQMC (APW51)
- Developing Agency..... NAVAIRSYSCOM (PMA 2614)
- Training Agency CNET
- Training Support Agency..... NAVAIRSYSCOM (PMA 205-2B)
- Manpower and Personnel Mission Sponsor..... HQMC-Code M
- Director of Naval Training..... CNO (N7)
- Marine Corps Force Structure..... MCCDC (C53)

D. SYSTEM DESCRIPTION

1. Operational Uses. The VH-60N provides helicopter transportation for the President of the United States, Vice President of the United States, members of the President’s Cabinet, and foreign dignitaries as directed by the Director, White House Military Office. Mission detachments are completely self-contained and supported by dedicated aircrew, maintenance, technical representatives, security personnel and logistics for the duration of the event.

2. **Foreign Military Sales.** Not Applicable (NA)

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. All Developmental and Operational Testing were successfully completed prior to the development of this NTSP.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The VH-60N replaced the VH-1N in 1988.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The VH-60N is single main rotor, twin engine helicopter, designed as an executive transport and has been in use for over 12 years. The VH-60N aircraft systems, furnishings and equipment have been optimized for executive transport missions. The crew consists of a pilot, copilot, crewchief and communications systems operator. The main and tail rotor blades, stabilator, and tail rotor pylon can fold to reduce dimensions for air transportability or storage.

2. Physical Description

DIMENSIONS OF THE VH-60N		
Folded length (pylon flight position)	42 Feet	1 Inch
Rotor folded length (pylon flight position)	53 Feet	9 Inches
Length overall (rotors turning)	64 Feet	11 Inches
Fuselage length	50 Feet	11 Inches
Height	16 Feet	10 Inches
Fuselage width	7 Feet	9 Inches
Folded width	9 Feet	9 Inches
Main rotor diameter	53 Feet	8 Inches
Tail rotor diameter	11Feet	
Ground clearance fuselage	1 Foot	7 Inches
Minimum ground clearance (ALQ144)		8.5 Inches
Turning Radius	41 Feet	8 Inches
Clearance for 180 degree turn	84 Feet	

3. New Development Introduction. NA

4. Significant Interfaces. NA

5. New Features, Configurations, or Material. NA

H. CONCEPTS

1. Operational Concept. The VH-60N has been in operation for approximately 12 years and is designed as an executive transport. The aircrew consists of a pilot, co-pilot, communications system operator, and crewchief. When on a mission, the detachment is completely self-contained, supported by dedicated aircrew, maintenance, technical representatives, security personnel and logistics. In addition to its Executive air support role, it also provides support for emergency evacuation, development of new systems, and training of new helicopter tactics.

2. Maintenance Concept. The Maintenance Concept for the VH-60N is based on three levels of maintenance as stated in the Naval Maintenance Program Manual, Office of Chief of Naval Operations Instructions (OPNAVINST) 4790 series, organizational, intermediate, and depot.

Maintenance at Marine Helicopter Squadron One (HMX-1) is organized into two separate departments; the Executive Aircraft Maintenance and United States Marine Corps (USMC) Aircraft Maintenance. The Executive Aircraft Maintenance also known as the “Whiteside” or “Cage” maintenance will henceforth be referred to as the Whiteside in this document. The USMC Maintenance Aircraft Department, also known as the “Greenside” or “Stake” maintenance will henceforth be referred to as the Greenside in this document. The Whiteside maintenance department maintains the VH-60N.

a. Organizational. The organizational level maintenance consists of those maintenance actions normally performed by an operating activity in support of its day-to-day operations. Due to the highly structured missions of executive transport, aircraft configuration is tightly controlled.

(1) Preventive Maintenance. Preventive Maintenance consists of scheduled inspections and servicing at specific intervals as required by the applicable Maintenance Requirements Cards (MRC) procedures and is performed by the Squadron’s Flight Line, Airframe, and Avionics Maintenance personnel. For the VH-60N, these inspections are performed in four phases after every 150 hours of flight. Preventive actions performed on the aircraft include corrosion inspection, wiping down the outside of the aircraft by hand after each flight regardless of flight time, lubrication and servicing, and daily/turnaround and special inspections.

(2) Corrective Maintenance. Corrective Maintenance is unscheduled and consists of fault isolation, repair, and replacement of components when verified as faulty. Built-In Test or test sets are used on the appropriate systems to determine if certain parts or assemblies are in need of repair or replacement. The Squadron’s Flight Line, Airframe, and Avionics Maintenance Personnel perform these actions.

b. Intermediate. Intermediate level maintenance is performed on those Weapon Replacement Assemblies and Shop Replaceable Assemblies beyond the capability of the organizational maintenance level activity. These assemblies are more specialized and complex

requiring a higher level of skill to repair the faulty component. Limited Intermediate Level (I Level) maintenance support is provided for non-flight critical items. A local intermediate component repair list is published detailing components that are test and check, limited repair, repaired at the I Level. Facilities at Naval Air Station (NAS) Patuxent River, Maryland are used for selected VH-60N avionics. Component repairs beyond the capabilities of this facility are forwarded to the appropriate contracted Original Equipment Manufacturer (OEM). There is an I Level engine shop in the Whiteside facility that performs I Level functions on T-700 engines and T62 Auxiliary Power Unit (APU) and assists in Organizational Level tasks performed by other shops. Components and assemblies requiring maintenance above the capabilities of the squadron are sent to OEM facilities for repair. Replacement parts are acquired from contracted OEM. Special clearances and inspection processes are in place to maintain the security of VH components and the integrity of the closed loop VH supply system.

c. Depot. Depot level maintenance consists of major overhaul of the aircraft or the rebuilding, manufacture, and modification of parts, assemblies, and subassemblies beyond the capabilities of the Intermediate Maintenance Activity. Scheduled Depot maintenance occurs at the expiration of 28 months or 2,400 flight hours, whichever comes first, and is done by the OEM.

d. Interim Maintenance. NA

e. Life-Cycle Maintenance Plan. The plan requires that the VH-60N undergoes a Special Progressive Aircraft Rework (SPAR) every 1,600 hours flight time or 30 months, whichever comes first. SPAR is an enhanced version of the Standard Depot Level Maintenance and includes partial disassembly of the airframe, replacement of components, refurbishment of interior furnishings, and repainting the aircraft. The requirements are outlined in the revised SPAR Specification Manual in accordance with Naval Air Systems Command (NAVAIRSYSCOM) Instruction 4710.1. The VH-60N has a service life of 10,000 flight hours and will remain in service until approximately 2015. A determination will be made whether to place the VH-60N under Service Life Extension Program, which could extend the lifetime of the helicopter.

3. Manning Concept. HMX-1 is the largest permanently formed aircraft squadron in the Marine Corps. The major divisions within the unit encompass: Administration, Operations, Logistics, Department of Safety and Standardization (DSS), White House Liaison Office, Executive Alert Facility, Plans, Security, Communications, Fiscal, Aviation Supply, Operational Test & Evaluation, Whiteside, and Greenside.

Specific Military Occupational Specialties (MOSs) do not exist for the VH-60N since the training is done by a contractor, rather than the military. Personnel who are assigned to operate and maintain the VH-60N are selected from the population of marine forces aviation maintenance personnel and do not have any previous experience on the platform. Personnel are specifically recruited for HMX-1 and usually spend a year on the Greenside while intensive background investigations are conducted by appropriate Department of Defense agencies. Once personnel are given appropriate clearance and access, they are eligible for transfer to the Whiteside.

The number of detachments varies according to the number of missions. Each detachment is self-contained and supported by dedicated aircrew, maintenance, technical representatives, security personnel and logistics for the duration of the event in compliance with the Standard Operating Procedures in the Whiteside Trip Leader Manual.

4. Training Concept. There are no specific Navy Training Schools, “A”, “C”, or Fleet Replacement Enlistment Skills Training, in existence for the VH-60N maintenance shop personnel. The VH platform job familiarization process is heavily dependent upon On-the-Job-Training (OJT). All aircraft familiarization and mission training are handled on the squadron level, with the exception of the pilots, who may complete simulator training at NAS Jacksonville, Florida. HMX-1 currently contracts all initial and follow-on training of the VH-60N to an external Training Contractor (TC).

Pilot: Flight scheduling is a very involved process in a squadron that has 75 pilots on-hand and flies four different Type/Model/Series (TMS) helicopter. The TMS helicopters currently Primary Aircraft Authorization are the VH-3D, VH-60N, CH-53E, and CH-46E. Only the first two are flown for the “Whiteside.” The majority of pilots are qualified on three platforms.

The squadron does not have access to any aircraft simulators at HMX-1 Quantico, Virginia. The HMX-1 pilots use the Navy simulators located at NAS Jacksonville, Florida that belong to the Command Helicopter Anti-Submarine Wing Atlantic Fleet squadron. Pilots may receive training in standard fleet SH-60 and SH-3 simulators prior to commencing VH syllabus. After that, pilots receive only annual refresher training in both simulators. On 26 November 1995, the Secretary of Defense directed the Department of the “Navy to procure a VH helicopter pilot simulator for HMX-1. A contract to procure the VH-60N Aircrew Proficiency Trainer (APT) was awarded in April 2000.

Aircrew: Aircrew Coordination Training (ACT) is the Naval Aviation term for Crew Resource Management. Three officers implement the ACT program at HMX-1 after they receive ACT instructor designation by attending the Navy’s instructor’s course at NAS Pensacola, Florida.

Formal documented training is conducted at two safety stand-downs each year. The training includes lectures and videotapes in combined pilot and aircrew sessions. Pilots and aircrew are evaluated on ACT skills annually during instrument written exams and check flights.

The DSS and Operations (OPS) monitor and track all aircrew qualifications for the squadron. DSS publishes a monthly 30-60-90 day report that goes to OPS and the Commanding Officer for upcoming instrument and Naval Air Training and Operation Procedures Standardization (NATOPS) defined checkrides.

Maintenance: Maintenance training is provided at HMX-1 Quantico, Virginia and attended by approximately 183 personnel per year who have not had any prior experience on this specific platform, 25 % arriving directly from school after recruit training. Due to the operational requirements, missions, and scheduled depot maintenance events, training is impacted by not having aircraft available for OJT, and by disrupting the class schedule.

The Follow-on TC, in conjunction with HMX-1 directives, has designed and developed the curriculum content, classroom training aides, instructor guides and student manuals for traditional classroom familiarization training of pilots and maintenance personnel. The annual training schedule is set by the TC and modified by the squadron's mission load. Due to the squadron's mission requirements, rescheduling personnel for training is more the rule, rather than the exception. This environment of frequent mission requirements lends itself to a modular lesson format and Interactive Multimedia Instruction. Enhancing the training program would accomplish the following goals:

- Maximize squadron operational safety
- Ensure the rapid mastery of job tasks by pilot and maintainers
- Provide the highest level of aircraft availability and crew readiness

Future Training Environment Description: The areas of future training enhancements for the HMX-1 Squadron are:

- Initial Maintenance Training
- Initial Pilot Aircraft Systems Training
- Refresher Job Training
- Specialized Aircraft Systems Training (e.g. new systems, Engineering Change Proposal, Airframes Bulletin, Avionics Change, etc.)
- Deployable Training (e.g. Just-In-Time Training, virtual expert, remote support, etc.)

In addition, acquisition of the following Training Devices further supports the training goals.

Note: A contracted VH-60N Maintenance Trainer Specification was completed 14 Jan 00 for PMA 205, PMA-261, and HMX-1.

DEVICE	LOCATION	COMMENTS
VH-60N Maintenance Composite Trainer (Acquire)	To be located at HMX-1 Quantico, Virginia	Ideally would contain hydraulic and engine components. Mission Needs Statement (MNS) signed, planned FY04 procurement.
VH-60N Aircrew Cockpit Simulator (Acquire)	To be located at HMX-1 Quantico, Virginia	Fleet representative of both VH-3D and VH-60N in ASE, engines, cockpit, and Communication/Navigation (COMM/NAV) systems, capable of training aircrew and pilots on both the VH 3D and VH-60N helicopters MNS signed, planned FY04 procurement.
Environmental Control System (ECS) Trainer Pallet	HMX-1 Quantico, VA	Representative of system installed on helicopter. Serves as training aid for VH-60N ECS course

The following technology will improve the five areas of training and the associated goals:

- Enhanced classroom instruction to employ sophisticated Computer Assisted Instruction with supporting Interactive Multimedia Lecture System.
- Multimedia Training Facility to include use of self-paced Interactive Courseware.
- Flight simulators and maintenance composite trainers for both TMS aircraft to be used in conjunction with structured training.
- Tracking of all training records and student information via Computer Managed Instruction.
- Utilization of Simulators, Part-Task and Composite Trainers for the efficient development of OJT and systems training.
- Employ the use of Interactive Electronic Technical Manual (IETM), Personal Electronic Display Devices and Electronic Performance Support System for initial classroom, refresher and deployable training.
- Other deployable training resources could involve Compact Disc Read Only Memory, Digital Video Disc, laptop computers, Internet, Navy Wide Area Network, and Video Tele-Training

a. Initial Training. NA

b. Follow-on Training. Follow-on training for the VH-60N is provided to personnel selected to the Executive Transport from the core of personnel assigned to the squadron. These personnel are originally ordered into the command under the Rotary Wing Maintenance Personnel: CH-53E, CH-46, or H-1 MOSs. Once assigned to this department, contracted instructors give these personnel training. The following courses have been developed by TC instructors to provide the instruction for the VH-60N. Therefore, there are no assigned course numbers

(1) Pilot Training

Title **VH-60N System Familiarization**
Description This course provides qualified Marine Pilots familiarization with the VH-60N airframe and powerplant systems operation, controls and indications.
Location HMX-1 Quantico, Virginia
Length 4 days
RFT date Currently available
TTE/TD VH-60N Main Gearbox Quick Change Unit
Skill identifier MOSs 7562, 7563, 7564, 7565, 7566
Prerequisites All students must be qualified U.S. Government helicopter pilots.

Title **Pilot COMM/NAV System Familiarization**
Description This course provides the qualified Marine Pilots with familiarization of the VH-3D/VH-60N Communication, Navigation and Countermeasures systems.
Location HMX-1 Quantico, Virginia
Length 3 days
RFT date Currently available
TTE/TD Computer Based Training
Skill identifier MOSs 7562, 7563, 7564, 7565, 7566
Prerequisites All students must be qualified U.S. Government helicopter pilots and should have previously attended the VH-3D/VH-60N Pilot Systems courses.

(2) Maintenance Training. Maintenance personnel are comprised of Avionics, Flight Line, and Airframes divisions.

a. Avionics

Title **VH COMM/NAV Organizational Maintenance Course**

Description This course provides qualified technicians to perform operational checks, troubleshooting and maintenance to systems and components at the organizational level on the VH-60N.

Location HMX-1 Quantico, Virginia

Length 15 days

RFT date Currently available

TTE/TD None required

Skill Identifier MOSs 6322, 6323, 6324

Prerequisites Prior technical training and experience as a helicopter Navigation/Communication System technician, and have attended the VH-3D and VH-60N electrical systems maintenance courses.

Title **VH-60N Electrical Systems Maintenance Course**

Description This course provides qualified aircraft line maintenance technicians/crewchiefs to perform operational checkout, troubleshooting, component replacement, and adjustment of VH-60N systems and components at the organizational maintenance level.

Location HMX-1 Quantico, Virginia

Length 15 days

RFT date Currently available

TTE/TD Visual training aids only

Skill identifier MOSs 6322, 6323, 6324

Prerequisites Prior technical training and experience as helicopter electrical systems line maintenance technicians/crewchiefs.

Title **VH-60N Automatic Flight Control System Maintenance Course**

Description This course provides qualified Marine Helicopter Technicians with the skills and knowledge required for operating, testing, adjusting and maintaining the automatic stabilization equipment installed in the VH-60N.

Location HMX-1 Quantico, Virginia

Length 10 days

RFT date Currently available

TTE/TD VH-60N

Skill identifier MOSs 6322, 6323, 6324

Prerequisites Prior technical training and experience as a helicopter electrical systems line maintenance technician/crewchiefs, and have previously attended VH-60N Electrical Systems Maintenance Course.

b. Airframes and Flight Line

Title **VH-60N Vibration Analysis Maintenance Course**

Description This course provides qualified helicopter mechanic's with the skills and knowledge required to operate the standard United States Navy Vibration Analysis Test Set (VATS) in support of the VH-60N.

Location HMX-1 Quantico, Virginia

Length 2 days

RFT date Currently available

TTE/TD VATS

Skill identifier MOSs 6152, 6153, 6154, 6112, 6113, 6114, 6172, 6173, 6174

Prerequisites Must be qualified U.S. Government helicopter mechanics/technicians with prior technical training and experience as helicopter airframe and powertrain systems, line maintenance, technicians/crewchiefs.

Title **VH-60N Airframe and Powertrain Systems Course**

Description This course provides qualified Marine Helicopter Mechanic's with the skills and knowledge required to operate, test, and maintain the mechanical airframe and powerplant systems and components of the VH-60N.

Location HMX-1 Quantico, Virginia

Length 22 days

RFT date Currently available

TTE/TD T-700-GE-401 engine

Skill identifier MOSs 6152, 6153, 6154, 6112, 6113, 6114, 6172, 6173, 6174

Prerequisites Must be qualified U.S. Government helicopter mechanics/technicians with prior technical training and experience as helicopter airframe and powertrain systems, line maintenance technicians/crewchiefs.

c. Airframes only

Title **Composite Material Repair Course**

Description This course provides training in the repair techniques for rotor blades, kevlar, and other composite materials used on the CH-53E, VH-3D and VH-60N.

Location HMX-1 Quantico, Virginia

Length 10 days

RFT date Currently available

TTE/TD None required

Skill identifier MOSs 6152, 6153, 6154

Prerequisites Must be qualified U.S. Government helicopter mechanics/technicians with prior technical training and experience as helicopter airframe and powertrain systems, line maintenance technicians.

Title **Refrigerant Recycling Environmental Protection Agency (EPA) Certification Course**

Description This course provides qualified VH-60N mechanics with the knowledge required for successfully completing the EPA refrigerant recovery certification test under section 608 of the Clean Air Act of 1990.

Location HMX-1 Quantico, Virginia

Length 5 days

RFT date Currently available

TTE/TD VH-60N ECS pallet

Skill identifier MOSs 6152, 6153, 6154

Prerequisites Must be qualified U.S. Government helicopter mechanics/technicians with prior technical training and experience as helicopter airframe and powertrain systems, line maintenance technicians/crewchiefs.

d. Flight Line

Title **VH-60N Flight Control System Rigging Course**

Description This course provides qualified Marine Helicopter Mechanic's with the skills and knowledge required to rig the main and tail rotor systems of the VH-60N.

Location HMX-1 Quantico, Virginia

Length 4 days

RFT date Currently available

TTE/TD VH-60N flight control rigging and adjustment kit

Skill identifier MOSs 6112, 6113, 6114, 6172, 6173, 6174

Prerequisites Must be qualified U.S. Government helicopter mechanics/technicians with prior technical training and experience with helicopter flight controls.

Title **VH-60N Air Conditioning System Maintenance Course**

Description This course provides qualified Marine Helicopter mechanics and technicians with the skills and knowledge required to operate, test, inspect, and maintain the air conditioning systems and components of the VH-60N Helicopter.

Location HMX-1 Quantico, Virginia
 Length 2 days
 RFT date Currently available
 TTE/TD VH-60N ECS pallet
 Skill identifier MOSs 6112, 6113, 6114, 6172, 6173, 6174
 Prerequisites Must be qualified U.S. Government helicopter mechanics/technicians with prior technical training and experience as helicopter line maintenance technicians/crewchiefs.

c. Student Profiles. The following table shows the prerequisite skill requirements of personnel ordered into HMX-1.

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
MOSs 6112	<ul style="list-style-type: none"> ◦ M-601-2414 CH-46 Power Plants Trains and Rotors Organizational Maintenance Course ◦ C-600-3601, Communication Indoctrination Course ◦ C-600-9422, CH-46 Mechanical Organizational Maintenance Course
MOSs 6113	<ul style="list-style-type: none"> ◦ M-601-2720 CH-53E Power Plants and Related Systems Maintenance ◦ C-600-3601, Communication Indoctrination Course ◦ C-602-9456, CH-53 Mechanics Organizational Maintenance Course
MOSs 6114	<ul style="list-style-type: none"> ◦ M-601-2014 AH-1T/J and UH-1N Power Plants Power Trains and Rotors Maintenance ◦ C-600-3601, Communication Indoctrination Course ◦ C-601-9351, AH-1W Power Trains and Related Systems Course ◦ C-601-9352, H-1 Combination Maintenance Course ◦ C-600-9355, UH-1N Power Trains and Rotors and Related Navy Mechanics Course
MOSs 6152	<ul style="list-style-type: none"> ◦ M-602-2486 Helicopter Airframe Mechanic CH-46 ◦ C-600-3601, Communication Indoctrination Course

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
	<ul style="list-style-type: none"> ◦ C-600-3419, H-46 Fiberglass Rotor Blade Repair Organizational Maintenance Course ◦ C-603-3419, H46 Structure and Hydraulics Course
MOSs 6153	<ul style="list-style-type: none"> ◦ M-602-2781 Helicopter Airframe Mechanic CH-53 ◦ C-600-3601, Communication Indoctrination Course ◦ C-603-9444, CH-53 Airframes Systems Organizational Maintenance Course
MOSs 6154	<ul style="list-style-type: none"> ◦ M-602-2081 Helicopter Airframe Mechanic A/UH-1 ◦ C-600-3601, Communication Indoctrination Course ◦ C-600-9363, H1 Airframes Systems Organizational Maintenance Course
MOS 6172	<ul style="list-style-type: none"> ◦ PREREQUISITE IS MOSs 6112
MOS 6173	<ul style="list-style-type: none"> ◦ PREREQUISITE IS MOSs 6113
MOS 6174	<ul style="list-style-type: none"> ◦ PREREQUISITE IS MOSs 6114
MOS 6322	<ul style="list-style-type: none"> ◦ M-102-2424 CH-46 Communication Navigation Identification Systems Organizational Maintenance ◦ C-600-3601, Communication Indoctrination Course ◦ C-602-3421, H-46 Electrical and Instrument Course ◦ C-602-3428, H-46 Automatic Flight Control System Course ◦ C-102-3419, H-46 Electrical Counter Measures Course ◦ C-102-3416, H-46 Navigation/Communication and Identification Friend or Foe Course ◦ C-102-3421, H-46 Cockpit Communication/Navigation Systems Course ◦ C-198-3416, H-46 Night Vision Goggle/Heads Up Display Course
MOS 6323	<ul style="list-style-type: none"> ◦ M-102-2731 CH-53E Communications/Electrical System Organizational Maintenance ◦ C-600-3601, Communication Indoctrination Course ◦ C-602-9441, CH-53 Electrical Systems Course ◦ C-602-9451, CH-53E Automatic Flight Control System

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
	Course <ul style="list-style-type: none"> ◦ C-102-9945, CH-53A/D/E Communication/Navigation/Identification/Systems Organizational Maintenance Course
MOS 6324	<ul style="list-style-type: none"> ◦ M-102-2024 CH-46 Communication Navigation Identification Systems Organizational Maintenance ◦ C-600-3601, Communication Indoctrination Course ◦ C-102-9354, H-1 Communications, Navigation Systems Course ◦ C-602-9360, H-1 Electrical and Stabilization Control Augmentation System Course ◦ C-198-9351, AH-1 Tactically Operated Wire Guided Hellfire Missile System Course ◦ C-602-3357, H-1 Wire Bundle Repair Course
MOS 7562	◦ QUALIFIED IN CH-46E
MOS 7563	◦ QUALIFIED IN UH-1N
MOS 7564	◦ QUALIFIED IN CH-53D
MOS7565	◦ QUALIFIED IN AH-1W
MOS 7566	◦ QUALIFIED IN CH-53E

d. Training Pipelines. NA

I. ONBOARD (IN-SERVICE) TRAINING. Pilots and aircrew must comply with annual flight hour requirements set forth in OPNAVINST 3710.7 to assure an acceptable minimum level of readiness and to enhance aviation safety.

NAVAL AVIATOR (pilots with less than 20 years aviation experience)

	Semiannual	Annual (Fiscal Year)
Pilot Time	40	100
Night Time	6	12
Instrument Time	6	12

SPECIAL CREW (communication systems operators and crewchiefs)

	Semiannual	Annual (Fiscal Year)
Flight Time	25	50

1. Proficiency or Other Training Organic to the New Development. NA

2. Personnel Qualification Standards. NA

3. Other Onboard or In-Service Training Packages. Marine Corps onboard training is based on the current series of MCO P4790.12, Individual Training Standards System and Maintenance Training Management and Evaluation Program (MATMEP). This program is designed to meet Marine Corps, as well as Navy OPNAVINST 4790.2 series, maintenance training requirements. It is a performance-based, standardized, level-progressive, documentable, training management and evaluation program. It identifies and prioritizes task inventories by MOSs through a front-end analysis process that identifies task, skill, and knowledge requirements of each MOSs. MTIP questions coupled to MATMEP tasks will help identify training deficiencies that can be enhanced with refresher training. (MATMEP is planned to be replaced by Aviation Maintenance Continuum System.)

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00019-98-C0136	United Technologies Corporation, Sikorsky Aircraft Division	6900 Main Street Stratford, Connecticut, 06602

2. Program Documentation. The current Integrated Logistics Support Plan was approved 05 August 1998. The contractor provides the Integrated Logistic Support for the VH-60N SPAR effort.

3. Technical Data Plan. The following VH-60N technical manuals are required and currently available to support the VH-60N. No changes are required:

- Service Unique Flight Manuals (NATOPS)
- IETM

- Maintenance Instruction Manuals
- Structural Repair Publications
- Illustrated Parts Breakdown
- MRC
- VH-60N NATOPS Pilot’s Pocket Checklist

4. Test Sets, Tools, and Test Equipment. Unique requirements for special tools, test sets, and test equipment are provided for by the organization. The squadron maintains a document of materials that lists all required special and unique items. These materials are squadron assets and utilized by the training contractor to aid in training. Material items include aircraft test equipment, platform unique tools manufactured commercially, and platform unique tools. Some of these tools are manufactured locally.

5. Repair Parts. The VH-60N supply support is a “closed loop” system. Special avionics parts are managed by the Naval Air Warfare Center Aircraft Divisions Patuxent River, and Engines, APUs and their related parts are managed by the NAVAIRSYSCOM Assistant Program Manager for Logistics (APML). NAVAIRSYSCOM APML controls all parts. All components once repaired or overhauled are specifically identified and marked to be returned to the VH inventory for reissue on VH aircraft only.

6. Human Systems Integration. NA

K. SCHEDULES.

1. Installation and Delivery Schedules. NA

2. Ready For Operational Use Schedule. NA

3. Time Required to Install at Operational Sites. NA

4. Foreign Military Sales and Other Source Delivery Schedule. NA

5. Training Device and Technical Training Equipment Delivery Schedule.

TRAINING DEVICE	DELIVERY DATE	QUANTITY	LOCATION
APT	To Be Decided (TBD)	1	HMX-1 Quantico, Virginia
VH-60N Composite Maintenance Trainer	TBD	1	HMX-1 Quantico, Virginia

L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR-FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
Joint Training System Plan For the V-22 Osprey	N88-NTSP-A-508412D/A	PMA 275	Approved August 99
CH-53E Helicopter	A-50-7604F/D	CMC ALS-33	Draft April 95
Mission Needs Statement for VH-60N Maintenance Trainer	NO. AAS 72		19 Oct 99

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the VH-60N Helicopter and therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

II.A.2.a. Operational and Fleet Support Activity Deactivation Schedule

II.A.2.b. Billets to be Deleted in Operational and Fleet Support Activities

II.A.2.c. Total Billets to be Deleted in Operational and Fleet Support Activities

II.A.3. Training Activities Instructor and Support Billet Requirements

PART II - BILLET AND PERSONNEL REQUIREMENTS

II.A. BILLET REQUIREMENTS

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

SOURCE: PMA261

DATE: 12/1/99

ACTIVITY, UIC		PFYs	CFY01	FY02	FY03	FY04	FY05
OPERATIONAL ACTIVITIES - USMC							
HMX-1 Marine Corps Helicopter Squadron	55615	1	0	0	0	0	0
TOTAL:		1	0	0	0	0	0

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC / SNEC/ PMOS / SMOS
	OFF	ENL		
OPERATIONAL ACTIVITIES - USMC				
HMX-1 Marine Corps Helicopter Squadron, 55615				
USMC	45	0	CAPT	
	1	0	CWO3	
	17	0	MAJ	
	0	3	CPL	6046
	0	1	CPL	6060
	0	3	CPL	6072
	0	3	CPL	6152
	0	1	CPL	6153
	0	7	CPL	6154
	0	2	CPL	6172
	0	4	CPL	6173
	0	4	CPL	6323
	0	2	CPL	6324
	0	1	CPL	6531
	0	2	GYSGT	2537
	0	4	GYSGT	2549
	0	1	GYSGT	6047
	0	1	GYSGT	6060
	0	3	GYSGT	6113
	0	1	GYSGT	6124
	0	1	GYSGT	6153
	0	1	GYSGT	6174
	0	2	GYSGT	6323
	0	2	GYSGT	6324
	0	1	LCPL	6046
	0	4	LCPL	6113
	0	2	LCPL	6122
	0	3	LCPL	6153
	0	7	LCPL	6154
	0	4	LCPL	6173
	0	3	LCPL	6323
	0	3	LCPL	6324
	0	1	MGYSGT	2591
	0	1	MGYSGT	6391
	0	1	SGT	6042
	0	2	SGT	6047
	0	1	SGT	6060
	0	2	SGT	6072
	0	4	SGT	6112
	0	4	SGT	6113
	0	4	SGT	6153
	0	3	SGT	6172
	0	7	SGT	6173
	0	3	SGT	6322
	0	4	SGT	6323

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC / SNEC PMOS / SMOS
	OFF	ENL		
USMC	0	2	SGT	6324
	0	1	SGT	6531
	0	10	SSGT	2537
	0	4	SSGT	6113
	0	1	SSGT	6114
	0	2	SSGT	6122
	0	1	SSGT	6152
	0	2	SSGT	6153
	0	2	SSGT	6154
	0	2	SSGT	6172
	0	2	SSGT	6173
	0	2	SSGT	6322
	0	5	SSGT	6323
	ACTIVITY:	63	149	

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY01		FY02		FY03		FY04		FY05	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
USMC OPERATIONAL ACTIVITIES - USMC													
CAPT		45		0		0		0		0		0	
CWO3		1		0		0		0		0		0	
MAJ		17		0		0		0		0		0	
CPL	6046		3	0		0		0		0		0	
CPL	6060		1	0		0		0		0		0	
CPL	6072		3	0		0		0		0		0	
CPL	6152		3	0		0		0		0		0	
CPL	6153		1	0		0		0		0		0	
CPL	6154		7	0		0		0		0		0	
CPL	6172		2	0		0		0		0		0	
CPL	6173		4	0		0		0		0		0	
CPL	6323		4	0		0		0		0		0	
CPL	6324		2	0		0		0		0		0	
CPL	6531		1	0		0		0		0		0	
GYSGT	2537		2	0		0		0		0		0	
GYSGT	2549		4	0		0		0		0		0	
GYSGT	6047		1	0		0		0		0		0	
GYSGT	6060		1	0		0		0		0		0	
GYSGT	6113		3	0		0		0		0		0	
GYSGT	6124		1	0		0		0		0		0	
GYSGT	6153		1	0		0		0		0		0	
GYSGT	6174		1	0		0		0		0		0	
GYSGT	6323		2	0		0		0		0		0	
GYSGT	6324		2	0		0		0		0		0	
LCPL	6046		1	0		0		0		0		0	
LCPL	6113		4	0		0		0		0		0	
LCPL	6122		2	0		0		0		0		0	
LCPL	6153		3	0		0		0		0		0	
LCPL	6154		7	0		0		0		0		0	
LCPL	6173		4	0		0		0		0		0	
LCPL	6323		3	0		0		0		0		0	
LCPL	6324		3	0		0		0		0		0	
MGYSGT	2591		1	0		0		0		0		0	
MGYSGT	6391		1	0		0		0		0		0	
SGT	6042		1	0		0		0		0		0	
SGT	6047		2	0		0		0		0		0	
SGT	6060		1	0		0		0		0		0	
SGT	6072		2	0		0		0		0		0	
SGT	6112		4	0		0		0		0		0	
SGT	6113		4	0		0		0		0		0	
SGT	6153		4	0		0		0		0		0	
SGT	6172		3	0		0		0		0		0	
SGT	6173		7	0		0		0		0		0	
SGT	6322		3	0		0		0		0		0	
SGT	6323		4	0		0		0		0		0	

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY01		FY02		FY03		FY04		FY05	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
SGT	6324		2		0		0		0		0		0
SGT	6531		1		0		0		0		0		0
SSGT	2537		10		0		0		0		0		0
SSGT	6113		4		0		0		0		0		0
SSGT	6114		1		0		0		0		0		0
SSGT	6122		2		0		0		0		0		0
SSGT	6152		1		0		0		0		0		0
SSGT	6153		2		0		0		0		0		0
SSGT	6154		2		0		0		0		0		0
SSGT	6172		2		0		0		0		0		0
SSGT	6173		2		0		0		0		0		0
SSGT	6322		2		0		0		0		0		0
SSGT	6323		5		0		0		0		0		0

SUMMARY TOTALS

USMC OPERATIONAL ACTIVITIES - USMC

63 149 0 0 0 0 0 0 0 0 0 0 0 0

GRAND TOTALS

USMC - USMC

63 149 0 0 0 0 0 0 0 0 0 0 0 0

II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

ACTIVITY, LOCATION, UIC	USN/ USMC	PFYs		CFY01		FY02		FY03		FY04		FY05	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia, 55615	USMC	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4
SUMMARY TOTALS:													
	USMC	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4
GRAND TOTALS:													
		0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4	0.3	2.4

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/SNEC/ PNEC/SNEC	BILLET BASE	CFY01		FY02		FY03		FY04		FY05	
			+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM

a. OFFICER – USN NA

b. ENLISTED - USN NA

c. OFFICER - USMC

Operational Billets USMC and AR

CAPT		45	0	45	0	45	0	45	0	45	0	45
CWO3		1	0	1	0	1	0	1	0	1	0	1
MAJ		17	0	17	0	17	0	17	0	17	0	17

Chargeable Student Billets USMC and AR

		0	0	0	0	0	0	0	0	0	0	0
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TOTAL USMC OFFICER BILLETS:

Operational		63	0	63	0	63	0	63	0	63	0	63
Chargeable Student		0	0	0	0	0	0	0	0	0	0	0

d. ENLISTED - USMC

Operational Billets USMC and AR

CPL	6046	3	0	3	0	3	0	3	0	3	0	3
CPL	6060	1	0	1	0	1	0	1	0	1	0	1
CPL	6072	3	0	3	0	3	0	3	0	3	0	3
CPL	6152	3	0	3	0	3	0	3	0	3	0	3
CPL	6153	1	0	1	0	1	0	1	0	1	0	1
CPL	6154	7	0	7	0	7	0	7	0	7	0	7
CPL	6172	2	0	2	0	2	0	2	0	2	0	2
CPL	6173	4	0	4	0	4	0	4	0	4	0	4
CPL	6323	4	0	4	0	4	0	4	0	4	0	4
CPL	6324	2	0	2	0	2	0	2	0	2	0	2
CPL	6531	1	0	1	0	1	0	1	0	1	0	1
GYSGT	2537	2	0	2	0	2	0	2	0	2	0	2
GYSGT	2549	4	0	4	0	4	0	4	0	4	0	4
GYSGT	6047	1	0	1	0	1	0	1	0	1	0	1
GYSGT	6060	1	0	1	0	1	0	1	0	1	0	1
GYSGT	6113	3	0	3	0	3	0	3	0	3	0	3
GYSGT	6124	1	0	1	0	1	0	1	0	1	0	1

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY01		FY02		FY03		FY04		FY05	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
GYSGT	6153		1	0	1	0	1	0	1	0	1	0	1
GYSGT	6174		1	0	1	0	1	0	1	0	1	0	1
GYSGT	6323		2	0	2	0	2	0	2	0	2	0	2
GYSGT	6324		2	0	2	0	2	0	2	0	2	0	2
LCPL	6046		1	0	1	0	1	0	1	0	1	0	1
LCPL	6113		4	0	4	0	4	0	4	0	4	0	4
LCPL	6122		2	0	2	0	2	0	2	0	2	0	2
LCPL	6153		3	0	3	0	3	0	3	0	3	0	3
LCPL	6154		7	0	7	0	7	0	7	0	7	0	7
LCPL	6173		4	0	4	0	4	0	4	0	4	0	4
LCPL	6323		3	0	3	0	3	0	3	0	3	0	3
LCPL	6324		3	0	3	0	3	0	3	0	3	0	3
MGYSGT	2591		1	0	1	0	1	0	1	0	1	0	1
MGYSGT	6391		1	0	1	0	1	0	1	0	1	0	1
SGT	6042		1	0	1	0	1	0	1	0	1	0	1
SGT	6047		2	0	2	0	2	0	2	0	2	0	2
SGT	6060		1	0	1	0	1	0	1	0	1	0	1
SGT	6072		2	0	2	0	2	0	2	0	2	0	2
SGT	6112		4	0	4	0	4	0	4	0	4	0	4
SGT	6113		4	0	4	0	4	0	4	0	4	0	4
SGT	6153		4	0	4	0	4	0	4	0	4	0	4
SGT	6172		3	0	3	0	3	0	3	0	3	0	3
SGT	6173		7	0	7	0	7	0	7	0	7	0	7
SGT	6322		3	0	3	0	3	0	3	0	3	0	3
SGT	6323		4	0	4	0	4	0	4	0	4	0	4
SGT	6324		2	0	2	0	2	0	2	0	2	0	2
SGT	6531		1	0	1	0	1	0	1	0	1	0	1
SSGT	2537		10	0	10	0	10	0	10	0	10	0	10
SSGT	6113		4	0	4	0	4	0	4	0	4	0	4
SSGT	6114		1	0	1	0	1	0	1	0	1	0	1
SSGT	6122		2	0	2	0	2	0	2	0	2	0	2
SSGT	6152		1	0	1	0	1	0	1	0	1	0	1
SSGT	6153		2	0	2	0	2	0	2	0	2	0	2
SSGT	6154		2	0	2	0	2	0	2	0	2	0	2
SSGT	6172		2	0	2	0	2	0	2	0	2	0	2
SSGT	6173		2	0	2	0	2	0	2	0	2	0	2
SSGT	6322		2	0	2	0	2	0	2	0	2	0	2
SSGT	6323		5	0	5	0	5	0	5	0	5	0	5

Chargeable Student Billets USMC and AR

	3	0	3	0	3	0	3	0	3	0	3	0	3
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TOTAL USMC ENLISTED BILLETS:

Operational	149	0	149	0	149	0	149	0	149	0	149	0	149
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II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY01		FY02		FY03		FY04		FY05	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
Chargeable Student			3	0	3	0	3	0	3	0	3	0	3

II.B. PERSONNEL REQUIREMENTS

II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE VH-60N System Familiarization
COURSE LENGTH: 0.8 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.00

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		16		16		16		16		16
		TOTAL:		16		16		16		16		16

CIN, COURSE Pilot COMM/NAV System Course
COURSE LENGTH: 0.6 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.00

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		16		16		16		16		16
		TOTAL:		16		16		16		16		16

CIN, COURSE VH-COMM/NAV Organizational Maintenance Course
COURSE LENGTH: 2.2 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.04

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		8		8		8		8		8
		TOTAL:		8		8		8		8		8

CIN, COURSE VH-60N Electrical Systems Maintenance Course
COURSE LENGTH: 2.2 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.04

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		8		8		8		8		8
		TOTAL:		8		8		8		8		8

CIN, COURSE VH-60N Automatic Flight Control System Maintenance Course
COURSE LENGTH: 1.6 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.00

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		8		8		8		8		8
		TOTAL:		8		8		8		8		8

II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE VH-60N Vibration Analysis Maintenance Course
COURSE LENGTH: 0.6 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: USMC: 0% **BACKOUT FACTOR:** 0.00

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		18	18	18	18	18	18	18	18	18
		TOTAL:		18	18	18	18	18	18	18	18	18

CIN, COURSE VH-60N Airframe and Powertrain Systems Course
COURSE LENGTH: 3.2 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: USMC: 0% **BACKOUT FACTOR:** 0.06

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		19	19	19	19	19	19	19	19	19
		TOTAL:		19	19	19	19	19	19	19	19	19

CIN, COURSE Refrigerant Recycling EPA Certification Course
COURSE LENGTH: 1.0 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: USMC: 0% **BACKOUT FACTOR:** 0.00

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		8	8	8	8	8	8	8	8	8
		TOTAL:		8	8	8	8	8	8	8	8	8

CIN, COURSE Composite Material Repair Course
COURSE LENGTH: 1.6 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: USMC: 0% **BACKOUT FACTOR:** 0.00

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		8	8	8	8	8	8	8	8	8
		TOTAL:		8	8	8	8	8	8	8	8	8

CIN, COURSE VH-60N Flight Control System Rigging Course
COURSE LENGTH: 0.8 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: USMC: 0% **BACKOUT FACTOR:** 0.00

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY01		FY02		FY03		FY04		FY05	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
HMX-1, Quantico, Virginia	USMC	USMC		11	11	11	11	11	11	11	11	11
		TOTAL:		11	11	11	11	11	11	11	11	11

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the VH-60N Helicopter Program and therefore are not included in Part III of this NTSP:

III.A. Training Course Requirements

III.A.1. Initial Training Requirements

III.A.2.b. Planned Courses

III.A.2.c. Unique Courses

III.A.3 Existing Training Phased Out

III.A. Training Course Requirements

III.A.1. Initial Training Requirements

III.A.2. FOLLOW-ON TRAINING

III.A.2.a. EXISTING COURSES

CIN, COURSE VH-60N System Familiarization
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
16		16		16		16		16		ATIR
16		16		16		16		16		Output
0.2		0.2		0.2		0.2		0.2		AOB
0.2		0.2		0.2		0.2		0.2		Chargeable

CIN, COURSE Pilot COMM/NAV System Course
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
16		16		16		16		16		ATIR
16		16		16		16		16		Output
0.1		0.1		0.1		0.1		0.1		AOB
0.1		0.1		0.1		0.1		0.1		Chargeable

CIN, COURSE VH-COMM/NAV Organizational Maintenance Course
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	8		8		8		8		8	ATIR
	8		8		8		8		8	Output
	0.3		0.3		0.3		0.3		0.3	AOB
	0.3		0.3		0.3		0.3		0.3	Chargeable

CIN, COURSE VH-60N Electrical Systems Maintenance Course
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	8		8		8		8		8	ATIR
	8		8		8		8		8	Output
	0.3		0.3		0.3		0.3		0.3	AOB
	0.3		0.3		0.3		0.3		0.3	Chargeable

III.A.2.a. EXISTING COURSES

CIN, COURSE VH-60N Automatic Flight Control System Maintenance Course
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	8		8		8		8		8	ATIR
	8		8		8		8		8	Output
	0.2		0.2		0.2		0.2		0.2	AOB
	0.2		0.2		0.2		0.2		0.2	Chargeable

CIN, COURSE VH-60N Vibration Analysis Maintenance Course
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	18		18		18		18		18	ATIR
	18		18		18		18		18	Output
	0.1		0.1		0.1		0.1		0.1	AOB
	0.1		0.1		0.1		0.1		0.1	Chargeable

CIN, COURSE VH-60N Airframe and Powertrain System
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	19		19		19		19		19	ATIR
	19		19		19		19		19	Output
	1.0		1.0		1.0		1.0		1.0	AOB
	1.0		1.0		1.0		1.0		1.0	Chargeable

CIN, COURSE Refrigerant Recycling EPA Certification Course
TRAINING HMX-1
LOCATION, Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	8		8		8		8		8	ATIR
	8		8		8		8		8	Output
	0.1		0.1		0.1		0.1		0.1	AOB
	0.1		0.1		0.1		0.1		0.1	Chargeable

III.A.2.a. EXISTING COURSES

CIN, COURSE Composite Material Repair Course

TRAINING LOCATION, HMX-1
Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	8		8		8		8		8	ATIR
	8		8		8		8		8	Output
	0.2		0.2		0.2		0.2		0.2	AOB
	0.2		0.2		0.2		0.2		0.2	Chargeable

CIN, COURSE VH-60N Flight Control System Rigging Course
TRAINING LOCATION, HMX-1
Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	11		11		11		11		11	ATIR
	11		11		11		11		11	Output
	0.1		0.1		0.1		0.1		0.1	AOB
	0.1		0.1		0.1		0.1		0.1	Chargeable

CIN, COURSE VH-60N Air Conditioning System Maintenance Course
TRAINING LOCATION, HMX-1
Quantico, Virginia, 55615

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY01		FY02		FY03		FY04		FY05		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	11		11		11		11		11	ATIR
	11		11		11		11		11	Output
	0.1		0.1		0.1		0.1		0.1	AOB
	0.1		0.1		0.1		0.1		0.1	Chargeable

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the VH-60N Helicopter Program and therefore, are not included in this NTSP:

IV.A. Training Hardware

IV.A.1. TTE/GPTE/SPTE/ST/GPETE/SPETE

IV.a.2 Training Devices

IV.B. Courseware Requirements

IV.B.1 Training Services

IV.B.2 Curricula materials and Training Aids

IV.B.3 Technical Manuals

IV.C. Facility Requirements

IV.C.1 Facility Requirements Summary (Space/Support) by Activity

NOTE: Upon confirmation with the squadron, it was determined that the training hardware, training devices, all courseware and training facilities, are assets of the squadron. The primary training contract at HMX-1 is for instruction with, some courseware development by the TC.

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
DA	Begin analysis of manpower, personnel, and training requirements.	2/00	Completed
DA	Distribute NTSP.	12/00	Pending
OPO	Approve and promulgate NTSP.	12/00	Pending

PART VI ACTION ITEMS/ACTION REQUIRED

No Decision Items or Actions
Pending

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
<p>CAPT Owen Fletcher Head, Plans, Policy, and Fleet Maintenance Support CNO, N781B Fletcher.owen@hq.navy.mil</p>	<p>COMM: (703) 604-7747 DSN: 664-7747 FAX: (703) 604-6972</p>
<p>CDR Wanda Janus Resource Sponsor / Program Sponsor CNO, N785D1 janus.wanda@hq.navy.mil</p>	<p>COMM: (703) 697-9359 DSN: 227-9359 FAX: (703) 695-7103</p>
<p>CAPT Thomas Vandenberg Head, Aviation Technical Training Branch CNO, N789H vandenberg.thomas@hq.navy.mil</p>	<p>COMM: (703) 604-7730 DSN: 664-7730 FAX: (703) 604-6939</p>
<p>AZCS Gary Greenlee NTSP Manager CNO, N789H1A greenlee.gary@hq.navy.mil</p>	<p>COMM: (703) 604-7743 DSN: 664-7743 FAX: (703) 604-6939</p>
<p>MGYSGT Ken Gravatt NTSP Manager CNO, N789H6 gravatt.kenneth.hq.navy.mil</p>	<p>COMM: (703) 604-7722 DSN: 664-7722 FAX: (703) 604-6939</p>
<p>CDR Kevin Neary Aviation Manpower CNO, N122C1 n122c1@bupers.navy.mil</p>	<p>COMM: (703) 695-3247 DSN: 225-3247 FAX: (703) 614-5308</p>
<p>Mr. Robert Zweibel Training Technology Policy CNO, N75B zweibel.robert@hq.navy.mil</p>	<p>COMM: (703) 614-1344 DSN: 224-1344 FAX: (703) 695-5698</p>
<p>MAJ Terry Stautberg Assault Helicopter Requirement Officer CNO, N780F3 Stautberg.terry@hq.navy.mil</p>	<p>COMM: (703) 695-2672 DSN: 224-2672 FAX: (703) 614-7047</p>
<p>LTCOL Curtis Haberbosch Heavy Helo Coordinator APW-51 haberbosch@hqmc.usmc.mil</p>	<p>COMM: (703) 614-1729 DSN: 224-1729 FAX: (703) 614-2318</p>
<p>COL Dennis Bartels Branch Head, USMC Aviation Manpower Management CMC, ASM-1 bartelsd@hqmc.usmc.mil</p>	<p>COMM: (703) 614-1244 DSN: 224-1244 FAX: (703) 614-1309</p>
<p>LTCOL Angela Clingman USMC Aircraft Maintenance Officer CMC, ASL-33 clingmanab@hqmc.usmc.mil</p>	<p>COMM: (703) 614-1187 DSN: 224-1187 FAX: (703) 697-7343</p>

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
<p>LTCOL Richard Findlay Head of Aviation Officers Assignment Section HQMC MMOA-2 Richard_j_findlay@manpower.usmc.mil</p>	<p>COMM: (703) 784-9267 DSN: 278-9267 FAX: (703) 278-9844</p>
<p>MAJ Nicholas Knight Unit Head for Enlisted MMEA84 Nicholas_l_knight@manpower.usmc.mil</p>	<p>COMM: (703) 784-9257 DSN: 278-9257 FAX: (703) 278-9845</p>
<p>Mr. Bill Laray Assistant Program Manager, Training Program NAVAIRSYSCOM, PMA205 laraywr@navair.navy.mil</p>	<p>COMM: (301) 757-8099 DSN: 757-8099 FAX: (301) 757-8079</p>
<p>Ms Marie Greening Program Manager, Aviation Common Support Equipment NAVAIRSYSCOM, PMA260 greeningma@navair.navy.mil</p>	<p>COMM: (301) 757-6899 DSN: 757-6899 FAX: (301) 757-6902</p>
<p>Mr. S.E. Campbell VH DAPML NAVAIRSYSCOM, Air 3.1.2K campbellse2@navair.navy.mil</p>	<p>COMM: (301) 757-5480 DSN: 757-5109 FAX: (301) 757-5970</p>
<p>MAJ Carl Ingebretsen VH Deputy Program Manager NAVAIRSYSCOM, PMA 2614 ingebretsecr@navair.navy.mil</p>	<p>COMM: (301) 757-5781 DSN: 757-5781 FAX: (301) 757-5109</p>
<p>CAPT Henry Hess VH APML NAVAIRSYSCOM, AIR 3.12K hesshg@navair.navy.mil</p>	<p>COMM: (301) 757-5479 DSN: 757-5479 FAX: (301) 757-5970</p>
<p>CDR Robin Mason Aviation NTSP Manager CINCLANTFLT, N-721 mason@cfl.navy.mil</p>	<p>COMM: (757) 836-0101 DSN: 836-0101 FAX: (757) 836-0141</p>
<p>CAPT Patricia Huiatt Deputy Assistant, Chief of Naval Personnel for Distribution NAVPERSCOM, PERS-4B p4b@persnet.navy.mil</p>	<p>COMM: (901) 874-3529 DSN: 882-3529 FAX: (901) 874-2606</p>
<p>LCDR B. Martin Hull and Engineering Assignments NAVPERSCOM, PERS-404 P402@persnet.navy.mil</p>	<p>COMM: (901) 874-3602 DSN: 882-3609 FAX: (901) 874-2743</p>
<p>CDR Timothy Ferree Branch Head, Aviation Enlisted Assignments NAVPERSCOM, PERS-404 p404@persnet.navy.mil</p>	<p>COMM: (901) 874-3691 DSN: 882-3691 FAX: (901) 874-2642</p>

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
<p>MAJ Jon Doering Head, ACE Branch, TFS Division MCCDC, C5325A doeringjg@mccdc.usmc.mil</p>	<p>COMM: (703) 784-6241 DSN: 278-6241 FAX: (703) 784-6072</p>
<p>LT COL Ben Mathews AMO HMX-1 (Cage), mathewshb@hmx-1.usmc.mil</p>	<p>COMM: (703) 784-5561 DSN: 784-5561 FAX: (703) 784-5575</p>
<p>MAJ Stewart Gold AAMO HMX-1 (Cage), goldso@hmx-1.usmc.mil</p>	<p>COMM: (703) 784-5561 DSN: 278-5561 FAX: (703) 784-5575</p>
<p>LT COL Jeff White Operations Officer HMX-1 HMX-1 (Cage), whitejr@hmx-1.usmc.mil</p>	<p>COMM: (703) 784-5487 DSN: 784-5487 FAX: (703) 784-5575</p>
<p>CDR Scott Gingery Aviation Department Head NAVMAC, 30 scott.gingery@navmac.navy.mil</p>	<p>COMM: (901) 874-6218 DSN: 882-6218 FAX: (901) 874-6471</p>
<p>Mr. Al Sargent NTSP Coordinator NAVMAC, 332 al.sargent@navmac.navy.mil</p>	<p>COMM: (901) 874-6247 DSN: 882-6247 FAX: (901) 874-6471</p>
<p>Mr. Steve Berk CNET NTSP Distribution CNET, ETS-23 stephen.berk@cnet.navy.mil</p>	<p>COMM:(850) 452-8919 DSN: 922-8919 FAX: (850) 452-4901</p>
<p>CDR Erich Blunt Aviation Technical Training CNET, ETE-32 cdr_erich.blunt@cnet.navy.mil</p>	<p>COMM: (850) 452-4915 DSN: 922-4915 FAX: (850) 452-4901</p>
<p>GYSGT David Castellano Tech Coordinator NAMTRAYGRU, N2123 gysgtdavid.castellano@smpt.cnet.navy.mil</p>	<p>COMM: (850) 452-9708 ext. 231 DSN: 452-9708 ext. 231 FAX: (850) 452-9769</p>
<p>GYSGT Francis Samsel Tech Coordinator NAMTRAGRU, N2124 gysgtfrancis.samsel@smptT.cnet.navy.mil</p>	<p>COMM: (850) 452-9708 ext. 230 DSN: 452-9708 ext. 230 FAX: (850) 452-9769</p>
<p>Beth Brandenburg Logistics Analyst, NTSP author DP Associates, bbrandenburg@dpatraining.com</p>	<p>COMM: (703) 521-6236 DSN: FAX: (703) 521-6899</p>

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL

TELEPHONE NUMBERS

Mr. Phil Szczyglowski

Competency Manager
NAVAIRSYSCOM, Air 3.4.1.1
szczyglowspr@navair.navy.mil

COMM: (301) 757-8280

DSN: 757-8280

FAX: (301) 342-7737

Mr. Bob Kresge

NTSP Manager
NAVAIRSYSCOM, AIR 3.4.1.1
kresgerj@navair.navy.mil

COMM: (301) 757-1844

DSN: 757-1844

FAX: (301) 342-7737

ATCS David Morris

NTSP Coordinator
NAVAIRSYSCOM, AIR 3.4.1
morrism@navair.navy.mil

COMM: (301) 757-3093

DSN: 757-3093

FAX: (301) 342-7737