

# CMC reports on meeting the challenges of future battlefields

by Gen Louis H. Wilson  
Commandant of the Marine Corps

Gen Louis H. Wilson's third annual State of the Corps message to the Congress was not based entirely on facts, figures and staff reports. It also included information received first-hand from Marines in the field during CMC's visit to WestPac in October 1977.

**T**hank you for this opportunity to report to you on the posture of the Marine Corps and to outline our plans for the battlefield of the future.

This is the third annual report that I have been privileged to make to Congress. My presentation today complements the positions already expressed to you by the Secretary of Defense and the Secretary of the Navy.

On 10 November 1977, the Marine Corps began its 203d year of service to our nation. While earning the reputation during those years of being the first to fight, we are also proud of the reputation we have gained for forward thinking and innovation. That latter fact has been obscured somewhat in the past two years because of the emphasis placed upon restoring the quality of our enlisted personnel and upon training and readiness of the Fleet Marine Forces.

Today it is very satisfying to report to you that our intensive efforts in the area of manpower quality and training and readiness are well in hand. The quality of our enlisted personnel has improved vastly and continues to improve, while the readiness of our Fleet Marine Forces has reached an uncommonly high level for peacetime. Efforts in those two areas will continue. Meanwhile, primary attention will be devoted this year to assessing and planning for the future. In my view, actions underway clearly suggest that, if given continued and close attention, they will assure our ability to meet the challenges of future battlefields.

The budget request submitted would permit the Corps to continue its march forward to achieve those ends just described. In my judg-



ment, our request again this year is realistic, modest and without frills. Its primary focus is on achieving the highest possible quality in our personnel, on further improving our training and material readiness and on ensuring that the most promising weapons and equipment essential for use on future battlefields are funded in an orderly and cost effective manner.

The Marine Corps' global perspective and the general disposition of our Fleet Marine Forces remain unchanged from last year. That, in turn, is a direct reflection upon the nature of the United States as a maritime nation with worldwide interests which must be safeguarded and upon the basic mission of the Marine Corps to provide Fleet Marine Forces of combined arms for service with the fleets. Before describing to you our preparations for the battlefield of the future, however, it may be helpful to mention briefly the three fundamentals that we Marines stress in order to be responsive to the mission directed by the Congress.

Operational readiness is at the apex of our efforts. It is the cornerstone of our existence as a fighting military organization. During my tenure as Commandant, that has remained our top priority. I am pleased to report today that our readiness remains at the same high level reported a year ago. We are prepared today, if called upon, to demonstrate that the nation's amphibious force-in-readiness is just that.

The second fundamental is versatility. The principle of task organization enables the Marine Corps to tailor precisely the mobility and combat power necessary to oppose and defeat well-equipped enemy forces in any combat en-

vironment, as well as to remain flexible enough to perform such other duties as the President may direct.

The third fundamental of Marine forces is the total integration of our capabilities into air-ground teams of combined arms. Air power is included not as a supplement to the organic firepower of the ground combat elements, but as a fully integrated component of that team. This fundamental is unique to the Marine Corps. We believe that it enhances to a preeminent degree the combat effectiveness of our Marine air-ground task forces.

By maintaining forces that stress the foregoing fundamentals, the Marine Corps is able to make its contribution to the Navy-Marine team, which provides the major U.S. capability for forcible entry into overseas areas. Hence, Marines lend a significant dimension to the options available to national command authorities. Regardless of the contingency, the Marine Corps is, unquestionably, fully capable of responding to the mission assigned us by law.

An outline of our preparations to be ready for the battlefield of the future follows.

### Training

Sustained emphasis on team effort is one of the oldest Marine traditions. We still firmly believe that if a combat force is to fight effectively, it must train to fight as a team. In our individual training, our formal schools and in our unit training, the Marine Corps stresses the team concept, while at the same time recognizing fully the need for efficient training methods. Nowhere is our concern with readiness for tomorrow more evident than in our training.

Our drive for manpower quality during the past two years has necessarily focused on the individual Marine. The success of that drive owes much to the fact that we have kept our recruit training at the high level of standards that have become our hallmark. We have seen to it that a sufficient number of top quality personnel are in supervisory assignments at the recruit depots. That is necessary in order to ensure adherence to the strict policies that we have set down to govern the conduct of recruit training — and it is working very well. With a view toward efficiency as well as quality, we have completed a thorough study of the recruit training syllabus. A nine-week syllabus, one training week shorter than the current program, will be evaluated this spring and summer for full implementation in October 1978.

Our determination to achieve training effici-

ency extends to all Marine Corps formal training programs. In that regard, all of our formal school requirements are undergoing a detailed review. To enhance Marine aviation weapons and tactics training, for example, we are consolidating our two existing Marine aviation weapons training units into a single weapons and tactics unit at the Marine Corps Air Station, Yuma, Ariz. That unit will be responsible for providing a graduate level Marine aviation weapons and tactics training course to qualified aircrewmembers and aviation ground officers. Marines completing the course will then form the foundation for an improved, sound, professional weapons and tactics program within their parent units. During the past year, our trial courses have met with great success. Complete implementation of the program is expected to increase readiness.

To achieve savings in manpower, facilities and funds, we take maximum advantage of interservice training opportunities. For example, 30 per cent of Marine Corps formal school training is accomplished through the use of schools operated by the other Services. Our sister Services have been most cooperative in that respect, and we will continue to take advantage of those opportunities. Further, another 30 per cent of our initial skill qualification is accomplished by means other than formal schooling.

The Marine Corps air-ground combat training program conducted at Twentynine Palms, Calif. was specifically structured two years ago to exercise and evaluate the combined arms capabilities and readiness of all elements of the Marine air-ground team. The value of that program has been firmly established and the results are a source of professional pride. Approximately ten combined arms exercises are conducted annually at Twentynine Palms. Each exercise is built around an infantry unit ranging in size from a battalion to a brigade supported by fixed and rotary wing aircraft, artillery, assault amphibian vehicles and tanks. Both regular and reserve units participate in these exercises, which take advantage of live firing and the full spectrum of combined arms in an open, unrestricted environment. That side-by-side training of regular and reserve Marines supports the total force concept and provides a realistic means of preparation for all contingencies.

Further demonstrating our concern with preparation for tomorrow, Marine forces, both regular and reserve, participate annually in over forty major exercises around the globe. Those exercises provide opportunities for joint training with other Services including the Military

Airlift Command and combined training with the forces of allied countries. Following fiscal years 1978 and 1979, deployed Marine units will have conducted cold weather training in Europe and Korea, jungle training in Panama and the Philippines and numerous amphibious exercises in other parts of the world. Those exercises will be in addition to the many unit training programs conducted within the United States.

The Marine Corps believes that education supports training and positively influences readiness. Voluntary education programs provide opportunities for active duty Marines to improve their basic skills. Those programs also assist in career progression, and strengthen generally the overall personnel base of the Marine Corps. Civilian educational institutions offer programs on or near Marine posts and stations ranging from secondary through graduate level.

We will continue to pursue training support programs which make training more challenging and interesting to the individual Marine. Such programs exploit modern technology and are cost effective. We are implementing applicable portions of the Department of Defense plan for the management and operation of audio-visual activities and we are actively exploring the expansion of computer technology to support training. Specific examples include the use of computer managed instruction; studies concerning the feasibility of applying





computer technology to training throughout the Marine Corps; and the Tactical Warfare Simulation, Evaluation and Analysis System, a computer-based system for controlling and evaluating field exercises and staff map exercises.

The Marine Corps will also continue to monitor closely other service developments and efforts in training support, and take advantage of applicable portions of such developments to meet our needs.

#### **Manpower**

The individual Marine continues to be the single most vital resource of the Marine Corps. Today, our recruiters are meeting both their numerical and quality goals. To build on the high quality Corps we have achieved, we intend to improve further the management of our available manpower.

*Requirements.* In addition to three combat division-wing teams, associated combat support and combat service support units, the Marine Corps is required to man security forces, base operations and training units.

Fiscal constraints, however, require that we accept an end strength authorization well below the peacetime requirement. We have adjusted our force to that peacetime level by selectively manning the active force structure so that we achieve maximum combat capability within current fiscal constraints. It has become necessary, therefore, to reduce selected units to zero manning and man the majority of Fleet Marine Force units at less than 100 per cent of

peacetime requirements. That level is further reduced to an active military strength authorization request of 190,000 for end fiscal year 1979. Although this request is slightly below the 1978 authorization of 191,500 and the 1977 authorization of 192,000, we propose to accomplish the reduction without loss of combat power. That is possible because of manpower savings which have come from our improved quality and two management actions. Improved quality has affected both attrition and retention, allowing us to reduce our accession requirements and, of course, the associated training and training overhead. The two management actions center upon reducing recruit training and the formal, specialized skill training program.

We are hopeful that Marine Corps strength will be stabilized in future years at about 190,000 in order to ensure the successful accomplishment of assigned missions.

Our civilian manpower request is for 20,095 personnel, an increase of 503 over 1978. Primarily, that increase relates to transferring Army responsibilities on Okinawa to the Marine Corps, which is called for under the Pacific Support Realignment Plan. Our integrated military and civilian workforce requires maintaining civilian strength at that currently planned level. In order to maintain functional capabilities, further reductions would require an offsetting increase in military manpower.

*Quality.* Our reasons for seeking quality personnel, particularly those who have graduated from the secondary school level, are simple and straight-forward. Generally, those graduates are more dependable, adaptable and trainable than non-graduates. Most importantly, their attrition rate in the first three years of an enlistment is half that of non-graduates. We intend to continue that emphasis on quality and accept nothing less than 75 per cent high school graduates among our new enlistees in order to succeed on tomorrow's battlefield. That policy also provides an opportunity to some non-high school graduates who are otherwise fully qualified and well-motivated to serve in our Corps. Our recruiters have responded exceedingly well to our quality goals. Seventy-five per cent of all fiscal year 1977 enlistees were high school graduates, including 5 per cent who earned their diplomas through general education development equivalency tests. That figure compares with 59 per cent in fiscal year 1975 and 69 per cent in fiscal year 1976. Such an increase in quality has raised the percentage of high school graduates in the current enlisted

force to 81 per cent, a level higher than it has been in the last ten years.

In the final month of fiscal year 1977, we had to reduce our recruiting quota significantly to ensure that the authorized end strength was not exceeded. Reduced attrition and attainment of retention goals, combined with a successful recruiting effort made that reduction possible. While attrition and retention are subject to internal control, continued successful recruiting and improved quality depend heavily upon approval of sufficient recruiting resources. Your support of our recruiting budget will help ensure that we will continue to obtain the quality we need. In that regard, authorized increases in the recruiting service budget and recruiter personnel in 1977 greatly assisted in accomplishing the fiscal year recruiting goals. That support is appreciated very much. Our objective is to improve the quality of new enlistees in order to reduce the number of Marines who fail to complete their initial enlistments, as well as enhance both our future first term and career retention rates.

The recruiting effort will also be aided by expanding the role of our women Marines, both in numbers and the scope of assignments. Within the total accession plan, we will continue to enlist women at the increased level approved for fiscal year 1978, increasing the strength by 22 per cent to 5,100. Women Marines, both officer and enlisted, now have the opportunity to serve in 90 per cent of all Marine Corps occupational fields. Further, their assignments are no longer limited to the supporting establishment, but only by our policy that they will not be assigned to units whose military mission and contingency roles can reasonably be expected to involve them in actual combat.

Even with the improvements in accession quality, we must continue to identify and discharge, as early as possible, those Marines who are poor performers, who are not motivated or who are not amenable to discipline. While weeding out such individuals, we have set new and ambitious goals for the reduction of non-expiration of active service attrition over the first three years of an enlistment. That effort holds good promise for success. Research into the causes of and possible solutions for the attrition problem is the top priority of our manpower research and development.

The results of our emphasis on quality accessions are most encouraging. The following selected quality indicators show the effectiveness of our program. Comparing fiscal year 1977



with fiscal year 1978, the Corps' unauthorized absence rate is 22 per cent and the confined population has been reduced 13 per cent. Discipline rates continue in a downward trend, as shown by a 30 per cent decrease in major command special courts-martial convictions. More significantly, losses for reasons other than normal expiration of active service are down by 46 per cent. In addition, quality improvement has had a positive effect on the Corps' retention rate, boosting it from 12.3 per cent in fiscal year 1976 to 17.3 per cent in fiscal year 1977 and 20.1 per cent in the first three months of this fiscal year. During some of my recent visits to field commands, quality improvement was readily apparent. I saw it directly reflected in the high state of unit morale.

*Improved personnel management.* While assuming that we can continue to attract quality young men and women and keep initial attrition rates to a minimum, we must still continue to make efficient use of our available Marines. Congress has expressed its concern over the assignment of Marines to security duty with the Navy and the Department of State, particularly in terms of a quality drain from the ground forces. As requested, the Congress has been provided with a comprehensive review of those assignments. In short, our review indicates that there has been no significant adverse effect upon the ground forces because of security assignments. Indeed, there are alternatives to using Marines for security, but those alternatives would be more costly and probably less effective. All parties benefit under the current agreements. We believe it is in the best interests of the United States to continue the existing security arrangements.

One of my major manpower concerns has been how to achieve greater personnel stability, particularly since 14.5 per cent of all Marines



have served during recent years in overseas commands unaccompanied by dependents. Last year we announced plans to test a unit deployment system for certain units in the Western Pacific. That system is designed to supplement the individual replacement system and cause a major reduction in personnel turbulence. Phase I of the unit deployment system was implemented on schedule in October of last year, with ground and aviation units from Hawaii on a six-month deployment replacing like units in the Western Pacific. That reduced the proportion of Marines serving unaccompanied overseas tours to 12.9 per cent. Phase II, which is scheduled for fiscal year 1979, will further reduce that proportion to 11.5 per cent. When fully implemented, those deployments will result in a major reduction in the number of unaccompanied overseas tours, will credit Marines with time spent deployed and will provide improved continuity of leadership and training, which we anticipate will have positive effects on morale, discipline and retention. There will be no impact on the Western Pacific force structure, and readiness will be enhanced.

While we strive to improve our manpower management techniques to benefit both the individual Marine and the Corps, it is also our basic policy to provide for the mental and physical well-being of Marines and their dependents. The provision of adequate, secure and well-maintained bachelor housing is vital to the Marines' quality of life. As we have done since 1970, the Marine Corps continues to place a high priority on military construction funding for room-configured, well-equipped, bachelor Marine housing. The portion of the Marine Corps' fiscal year 1979 military construction program for bachelor enlisted quarters is \$63,100,000, representing a commit-

ment of more than 70 per cent of construction dollars for that fiscal year. In addition, we provide a variety of morale, welfare and recreation facilities and programs. Those facilities and programs are operated and maintained by funds from two sources: those appropriated by Congress and those commonly known as non-appropriated funds, which supplement the basic Congressional appropriation.

We must explore and pursue every means of assuring our Service men and women that they have tangible and continuing support from those responsible for their welfare. In view of the growing concern in the ranks regarding pay and allowances, perceived further erosion of benefits and future retirement provisions, that assurance is necessary. The apparently independent and piecemeal nature of recent changes in our military compensation system have caused widespread apprehension over the eventual outcome of these changes and has reduced confidence in the security offered by a military career.

Attaining our manpower goals will contribute significantly to the accomplishment of the Corps' assigned missions. While manpower costs are high, we are as lean as we can feasibly be. Our average officer and enlisted grades, the officer to enlisted ratio and the percentages for the top six enlisted grades are the lowest of all the Services. In terms of active forces — for less than 4 per cent of the DoD budget — we provide 9 per cent of the uniformed personnel, 12 per cent of all tactical fighter and attack aircraft and 15 per cent of the land combat divisions, a significant portion of this nation's forces needed for the defense of freedom, today and tomorrow.

#### Reserves

In consonance with the Total Force Policy and to be prepared for the future, the Marine Corps Reserve strives to maintain the same high standards of readiness as units of the active forces.

We consider our reserves to have three options of employment during any mobilization. They can reinforce or augment our active forces, or provide a division-wing team in amphibious brigade increments up to two brigades. Those alternatives are, of course, options and not employment priorities. Actual employment of the reserve will depend to a large degree upon the extent of mobilization and the demands of the specific contingency.

The capabilities of our reserves are diverse. They contain a significant portion of the total Marine Corps artillery, tanks, light attack air-

craft and missiles. We continue to equip them with additional M60 tanks, TOW antitank missiles and UH-1N helicopters.

The goal of good quality high school graduates for non-prior service accessions applies equally to reserve recruiting and active force recruiting efforts. We are pleased with the recent success of two reserve recruiting programs, as well as our first term retention rates, both the category "P" program and the Reserve Optional Enlistment Program of four years in the selected reserve and two years in the Individual Ready Reserve have proven to be effective recruiting programs, especially for those high school seniors and individuals whose college or post-high school vocational training commitments coincide with their reserve obligation.

The success of those programs and the improved retention rate leads me to believe we will achieve our programmed strength on schedule. The selected reserve strength at the end of fiscal year 1977 was 30,951 up from 29,306 at the end of fiscal year 1976. The current strength is 31,232, which indicates we are right on track toward a strength of 33,500 by the end of fiscal year 1979.

Both the 4th Marine Division and 4th Marine Aircraft Wing conduct frequent tests for mobilization readiness of their units. During fiscal year 1977, a total of 12 mobilization operational readiness deployment tests were conducted. Those tests demonstrated the capability for combat in one week for the flying squadrons tested and thirty days to combat capability for the selected ground units involved. In addition, we are planning on widespread participation of our reserves during the conduct of a JCS Mobilization Command Post Exercise during 1978.

The continuing effort to improve our mobilization readiness is characterized by emphasis on and diversification of the individual training program. Increased readiness for mobilization begins with the well-trained individual Marine, both officer and enlisted. This year's program ranges from assigning recruit training graduates for Entry-Level Skill Qualification Training to the assignment of reserve colonels for two weeks of school at the National Defense University. The common goal of those assignments is to increase the mobilization readiness of the Marines concerned.

As in the past, we will continue to train reservists toward improving readiness and ensuring that each reserve unit and individual reservist is capable of responding for mobilization in combat-ready condition.



### Research and development

The Marine Corps Research and Development budget for fiscal year 1979 is \$85.7 million, a significant increase over the \$59.7 million figure for 1978. That requested figure excludes funds for aviation systems and for basic research and exploratory development efforts, which the Navy will expend in support of Marine Corps objectives. The \$26 million increase over 1978 is needed to permit the Marine Corps to realize the full benefits that today's rapidly changing technology can provide the individual Marine on the battlefields of the future.

Those battlefields are expected to be characterized by high mobility, increasingly accurate firepower and routine tactical employment of electronic countermeasures and counter-countermeasures. In that environment, there will be a premium on effective command and control mechanisms. Consequently, a substantial portion of our R&D effort will be devoted to upgrading our command, control and communications (C3) systems. Prominent among the C3 systems being developed are the Position Location and Reporting System (PLRS), which will provide accurate position information on friendly ground elements, helicopters and light attack aircraft; the Marine Integrated Fire and Air Support System (MIFASS), which integrates the control and coordination of mortar, artillery, naval gunfire and direct air support; and the Marine Air Command and Control System-1985 (MACCS-85), which provides the means to monitor, coordinate, and control interceptor aircraft and surface-to-air missile systems and gives en route traffic control assistance to aircraft within the amphibious objective area.

To support overall command and control efforts including the aforementioned systems,

the Marine Corps is improving its tactical communications. Two important efforts are the Unit Level Message Switch (ULMS) and Unit Level Circuit Switch (ULCS), which are Marine Corps developments as part of the Joint Tactical Communications Office (TRITAC) directed new family of communication equipment. Just as we strive for joint interoperability of our communications through TRITAC, the Marine Corps is an active participant in the program for Joint Interoperability of Tactical Command and Control Systems (JINTACCS) to ensure that our developing command and control systems can operate with the appropriate systems of the other Services. All of those systems are being developed with the specific objective of enhancing the projection of combat power ashore in an amphibious environment.

Because much of Marine Corps equipment is the same or similar to that of other Services or that of private industry, we are able to extend the reach of our relatively small R&D budget through the careful coordination and integration of new developments to meet Marine Corps requirements. That means that the investment of small amounts of R&D funds often permits us to influence development of costly systems to ensure compatibility with our amphibious mission. For example, we have participated with the Army in the development of a mortar locating radar system, the AN/TPQ-36. A modest investment in this program has permitted modification of the system to satisfy some unique Marine Corps landing force requirements.

Other significant programs which will contribute to our ability to prosecute future campaigns include Landing Vehicle Assault (LVA), a high-speed, versatile assault amphibian being developed to emphasize both the rapid ship-to-shore transit and the aggressive land combat roles required for the amphibious assault of the 1990's and Modular Universal Laser Equipment (MULE), a program to design, fabricate and evaluate a man-portable laser rangefinder and designator for terminally guided munitions.

One other program deserves special mention: the Mobile Protected Weapons System (MPWS). Together with the Army and the Defense Advanced Research Projects Agency, we are pursuing a medium caliber, antiarmor automatic cannon mounted on a helicopter-transportable armored vehicle which will give us an antiarmor and assault weapon to accompany the assault force during an amphibious operation. We see the Mobile Protected Weapons System as a high agility vehicle with significant

firepower and armor protection. It will be designed for combat on the highly mechanized battlefield. It will complement the main battle tank, and it will enjoy unique mobility, since we will be able to deploy rapidly the MPWS over impenetrable terrain or water barriers using the CH-53E.

In summary, the Marine Corps' RDT&E program is directed toward enhancing our unique ability to conduct amphibious operations or other assigned missions on sophisticated future battlefields. Full details of the Marine Corps' R&D program and budget are included in the Navy's research, development, test and evaluation program request.

### **Modernization and procurement**

Marine Corps modernization programs support three fundamental policies. First, Marine Corps combat forces will be maintained at the highest state of readiness attainable within available resources. Second, those forces will consist of balanced air and ground combat, combat support and combat service support units all capable of rapid deployment and operation in an expeditionary environment. Third, and consistent with possible mobilization needs, the base and logistic structure will be the minimum required to provide sustained support for the combat units.

*Ground programs.* In line with modernization, the Corps continuously evaluates its structure and capabilities, weighing both in light of response to contingencies. One such evaluation this year is an operational test of Marine mobile and mechanized concepts for operations in NATO. In addition, the Marine divisions have been restructured to contain a tank battalion and an assault amphibian battalion, giving more muscle to our ground combat elements and enhancing the Marine division's organic capability for all types of combat environment. Further, during this year, we intend to place our field artillery groups under the operational control of the Marine division. That will provide self-propelled artillery to the division commander.

The principal ground combat weapons systems in a modernization program for fiscal year 1979 include night vision enhancement devices, such as night sights for the DRAGON and TOW antitank weapons and individual night vision goggles, artillery related improvements and chemical defensive equipment.

The TOW and DRAGON antitank systems can defeat any existing armor threat at ranges much greater and with significantly better hit probabilities at all ranges than is possible with





the antitank weapons they are replacing. With the addition of night sights, our antitank systems will enjoy a 24-hour capability. A second 72-TOW, antitank company was activated in the 1st Marine Division in 1977. We will continue to equip both our active and reserve forces with that system in 1979. Initial fielding of DRAGON took place in 1977 in the 2d Marine Division. Both active and reserve forces will receive the DRAGON system during the 1978-1980 period. Starting in the early 1980's, night sights will be operational on both systems.

To improve the armored capability of both active and reserve forces, the Marine Corps has completed its fourth year of a six-year program for acquiring the M60A1. In order to reach the inventory objective, we are requesting authority to procure an additional twenty-eight M60A1 tanks during fiscal year 1979. Improvements in our M60A1's, made in two tank battalions, have significantly enhanced our night fighting capability. In addition, the Marine Corps readiness posture will be enhanced by procuring tank ammunition for training and war reserve stocks. As part of the artillery modernization program, our aging 155mm towed howitzers are scheduled for replacement by the new and greatly improved M198's. We look forward to the additional range the M198 provides over the current 105's and 155's. Further, 155mm ammunition developments are exciting. The Improved Conventional Munition round, the Area Denial Anti-personnel Mines round, the Antiarmor Mine System round and the Copperhead Laser Guided projectile all represent a vast increase in modern firepower.

During 1977 we completed modifications to the M109A1 155mm self-propelled howitzers. By the end of fiscal year 1978, we will have also completed a program to improve our 8-

inch howitzers. Those howitzer and ammunition improvements will substantially increase our ability to deliver firepower.

We are requesting authority to begin buying during fiscal year 1979 the AN/TPQ-36 Firefinder Radar. The AN/TPQ-36, a joint program with the Army, will provide a substantial improvement in response time and accuracy to our counterfire capability. In addition, we are requesting authority in fiscal year 1979 to begin buying the Battery Computer System, which is another joint program with the Army that will add speed and accuracy to the computations necessary to put rounds on target. By the early 1980's, we will be utilizing digital communications terminals to implement rapid communications by burst transmission from fire control observers to the battery computer system. For the delivery of air and ground laser guided munitions and to designate targets, we expect to field in the early 1980's, the Module Universal Laser Equipment (MULE), which I have already mentioned. The MULE will enhance our ability to deliver accurately conventional ammunition and allow for target identification and single-pass delivery of both conventional and laser guided munitions for laser spot tracker-equipped aircraft. In addition to improving our tank, antitank and artillery capabilities, we will improve the firepower of the infantry company by replacing the present company mortar system. Further, we will improve command control by acquiring satellite communication terminals, and we will enhance close air support coordination by acquiring the AN/MRC-138 HF/UHF radio vehicle. We have also begun a program that will extend the service life of the LVT-7 family of assault amphibious vehicles until 1992. The primary new components will be a power train, passive night driving and firing devices, Position Location Reporting System (PLRS), automatic fire detection and suppression and secure voice capability. Although those efforts are currently in the research and development stage, we expect them to be operational during fiscal year 1982.

Recognizing the continuing need to equip our Marines to fight in all types of environments, we will procure selected items of chemical defensive equipment during fiscal years 1979 and 1980. Among such items are protective clothing, detector kits and automatic detector alarms, which will be used to enhance operations in a chemical environment. We will continue monitoring other Service developments in collective shelters and collective protection for armored vehicles.

*Aviation programs.* The emphasis in our aviation programs has been to procure weapon systems which support the tactics we consider necessary for success on the battlefield of the future. Our concentration has been directed toward improving our ability to operate in the high threat environment. That translates into emphasis on highly responsive close air support, fighter air defense, night and all-weather attack systems, helicopter survivability, single pass kill capability and special attention to improving overall reliability and maintainability. We believe that the systems we are procuring will be the most effective against the projected threat.

*Offensive air support.* The funding level for the AV-8B program in the fiscal year 1979 budget has been a disappointment in our plan for providing optimum responsive air support to the ground commander. The program will now include only the prototype development instead of the full scale development and procurement program that was presented last year. We feel that the AV-8B V/STOL capability is a most important ingredient in the future viability of our light attack force and the future of highly mobile V/STOL air support in the United States. Pending a final decision on the AV-8B program, procurement of A-4M aircraft has been resumed. Procurement of a light attack aircraft is necessary to maintain force levels beyond the mid-1980's, but other actions are also required to prevent inventory shortfalls in fiscal years 1983 through 1985. Funding for the AV-8A to AV-8C Conversion In Lieu of Procurement (CILOP) will provide needed continuity in the light attack structure and improved combat capability and survivability. The A-6E Target Recognition and Attack Multisensor (TRAM) modification will provide a target identification and laser designation capability for that all-weather attack system. Procurement of the Laser Maverick missile has been slipped one year to coincide with the initial Air Force deliveries.

*Antiair warfare.* Conversion of the F-4J to F-4S aircraft is progressing on schedule with the first Marine squadron to be operational in September 1978. Introduction of the F-18 will commence in fiscal year 1983 at the rate of two squadrons per year. We will complete our fighter-attack aircraft modernization in fiscal year 1988. Procurement of the Army-developed, hand-held Stinger missile systems is needed to upgrade our surface launched antiair capability.

*Assault support.* The tactical range and lift



capabilities of our assault support helicopter force will gain an added dimension with the planned introduction of the CH-53E helicopter. The CH-53E will couple the capability of lifting sixteen tons (as compared to the CH-53D lifting 7.5 tons) with long range deployment capability. That increased life and range become a significant force multiplier in the assault and will enable us to exploit fully the tactical mobility of our organic fire support systems ashore. Programs have been initiated which will enhance survivability, maintainability and performance in our existing helicopter force. In addition, procurement of forward looking infrared devices and night vision goggles will expand our capability to operate at night or under conditions of reduced visibility. The CH-46E CILOP program, fiberglass rotor blades and external extended range tanks will substantially improve the performance of our primary assault helicopter. The AH-1T is a highly capable armed escort helicopter. It also provides an antiarmor capability with the TOW missile. The KC-130 CILOP program extends the useful combat life of the Marine Corps' tactical aerial refueling fleet into the 1980's.

*Air reconnaissance and tactical electronic warfare.* This year's budget continues the service life extension (SLEP) and sensor update program for our tactical reconnaissance aircraft, the RF-4B, thereby significantly improving the system supportability and the night and all-weather sensor capability. Transition from the EA-6A electronic warfare aircraft to the more capable EA-6B will continue for a total of fifteen aircraft and will be completed in fiscal year 1981.

*Command and control.* Procurement in the area of command control is concentrated on replacing our overage TPS-22 with the modern TPS-59 air surveillance radar, and updating our

aging TPS-32 radar. New technical requirements particularly in the areas of electronic warfare and interoperability coupled with the advanced age of present equipments require replacement with modern systems. Other significant procurement is aimed at incorporating changes required to maintain interoperability with the other U.S. Services and to achieve the full interoperability of the Marine Air Command and Control system with our allies. In that regard, during the last year, the Marine Corps developed and operationally demonstrated our interface with the NATO Air Command and Control system in an effort which was accepted by NATO as a U.S. short-term initiative. In addition, increased R&D funding is being



requested for system integration and continuing improvements for electronic counter-countermeasures.

*Aviation support.* Increased naval aviation funding (O&MN) has been requested as part of the aircraft readiness improvement effort to reduce component backlogs at the aircraft rework facilities. A principal request is for continued procurement of the CTX Base and Command support aircraft, which will replace the thirty-year-old C-117. The funding Congress provided in fiscal year 1978 for operation of the C-117 aircraft used in the Combat Support Transport (CST) role was very much appreciated, but funds were not requested in fiscal year 1979 for those aircraft because of the need to retire the C-117. That will leave the Marine Corps without an organic combat support transport.

*Logistics programs.* The procurement of more sophisticated combat and combat support systems is not without a price. Those systems in general require a larger logistical

support base in terms of personnel and equipment. To support those programs effectively while at the same time ensuring that the logistical support base does not exceed the combat-to-logistical support ratio of 60:40, as previously mentioned, the Marine Corps has implemented the Field Logistics Systems (FLS). As a part of the overall Marine Corps logistical effort, the FLS provides a fully integrated approach in meeting our logistical requirements, assures that new procurements and R&D efforts fully exploit the state of the art within industry and assures that those developments are implemented into new logistical support equipments. The FLS takes advantage of dimensional standardization in meeting medical, sanitation, environmental and maintenance transportation requirements. In short, the purpose of the FLS is that of providing the optimum in logistical support, while assuring a minimum investment in resources. The Marine Corps Environmentally Controlled Medical System and the Marine Corps Expeditionary Shelter System, both recently introduced, are examples of FLS implementation.

*Navy programs of Marine Corps interest.* Our amphibious orientation, our relationship with the Navy and the support we receive from the Navy, are of paramount importance to the Marine Corps. The Navy-Marine Corps amphibious team is a vital and integral part of the total naval force, since amphibious operations are essential elements of both power projection and sea control. A successful amphibious assault requires strength in many types of supporting naval forces including carrier, submarine and surface elements. Therefore, I strongly support the Secretary of the Navy and the Chief of Naval Operations in their efforts to attain increased and balanced naval force levels sufficient to ensure continuing freedom in our use of the seas.

The current program objective for amphibious ships is the capability to lift the assault echelons of one and one-third Marine Amphibious Forces. Delivery in 1980 of the last LHA within the five-ship program will increase our present capability to that nominal level. That will provide the capability to conduct a MAF-size assault while maintaining the capability to respond to a concurrent minor contingency with forces in size up to a Marine Amphibious Brigade. Replacement of eight aging landing ships (LSD-28's) with modern and more capable LSD-41's programmed for procurement beginning in 1981, is a critical step which must be taken in order to avoid a dangerous shortfall

in amphibious lift.

The continuing inadequacy of naval gunfire support is of serious concern. Naval gunfire provides essential all-weather fire support to landing forces during the critical initial assault phases of an amphibious operation and adds to the firepower of Marine forces during subsequent operations ashore. I strongly support all Navy programs designed to provide increased firepower to support landing forces during and following the assault phase of amphibious operations. One such program involves timely procurement and installation, in suitable ships, of the 8-inch major caliber lightweight gun along with successful development of improved conventional munitions and the 8-inch laser-guided projectile. In addition, I support efforts to improve current intermediate caliber guns.

As the mobility and effectiveness of coastal defense weaponry improves, concepts and equipment used in amphibious assault must similarly improve. Slow displacement landing craft of World War II design must be replaced with more capable models. In that respect, programs to upgrade existing landing craft and to develop a greatly improved mechanized Landing Craft, the LCM-9, are strongly supported.

The Marine Corps looks forward with great enthusiasm to the early and thorough evaluation of the two prototype Amphibious Assault Landing Craft, which will soon be engaged in underway testing. The operational models of the Landing Craft Air Cushion (LCAC), which will evolve from this evaluation, have the potential to revolutionize the surface assault. The 50-knot speed of the LCAS will greatly reduce troop exposure time in the ship-to-shore movement. A vast span of world littorals not assaultable with current landing craft will be open to assault with the LCAC. It will provide a capability to launch the landing force from less vulnerable positions further seaward, and to achieve a more rapid force buildup ashore. The Soviets now have at least three models of air cushion landing craft under development and

are using air cushion craft in amphibious exercises. Ship-to-shore mobility is an area in which we must press ahead by exploiting the inherent advantages of swift, versatile, over-the-beach assault craft.

The continuing prospect for limited numbers of amphibious ships requires that we rely on the Military Sealift Command and commercial shipping assets to lift our follow-on forces and for logistic support. The ability of the Military Sealift Command to achieve a modern, adequate and fully responsive ship force is vital to the Navy-Marine Corps capability to project power ashore at the force level required in major contingencies. Equally vital is the near-term development of methods to unload commercial ships in areas without sophisticated port facilities. Continued progress is required in programs involving Logistics-Over-the-Shore, Container-Offload and Transfer System and the Amphibious Logistics System. Also, the opportunity to use commercial ships regularly in major amphibious exercises is extremely important.

Two other areas in which we are deeply interested are medical support and shallow water mine countermeasures. Adequate medical support for amphibious operations is unavailable. Imaginative initiatives to solve this shortfall, such as modular adaptation of commercial ships to hospital ships, must be pursued. Mine reconnaissance and detection capabilities as well as mine clearance measures must be developed in order to avoid our counter-shallow water mine threats. Furthermore, those countermeasures must be capable of performance in a hostile environment.

Concerning the aviation picture, I strongly support efforts to increase the operational readiness of our combat aircraft through increased emphasis on Department of the Navy aircraft maintenance and spare parts funding.

#### Funding by major category

For comparison, our approved fiscal year 1978 budget and the fiscal year 1979 request are displayed in Figure 1 appropriations.

APPROPRIATION	FY 1978	FY 1979
Military Personnel, Marine Corps	2,023.2	2,016.5
Reserve Personnel, Marine Corps	81.5	81.2
Operation & Maintenance, Marine Corps	651.1	744.1
Operation & Maintenance, Marine Corps Reserve	16.6	20.0
Procurement, Marine Corps	450.2	371.9
Marine Corps Stock Fund	1.9	-0-

*Figure 1*

	FY 1979	FY 1980
Active Duty End Strength	190,000	189,300
Selective Reserve End Strength	33,500	33,500
Civilian Personnel End Strength		
(Marine Corps Portion of DON Request)	20,095 *	20,120
Average Military Training Student Load, Active	21,324	19,614
Average Military Training Student Load, Reserve	3,074	2,947
Procurement Requiring Authorization	72.8	50.4
*Includes 18,649 O&MMC, 126 O&MMCR and 1,320 MCIF		

Figure 2

The Military Personnel, Marine Corps appropriation provides for pay and allowances, subsistence, clothing, permanent change of station travel and related expenses in support of 190,000 active duty Marines in fiscal year 1979. The Reserve Personnel, Marine Corps appropriation provides the same support for 33,500 reserves, except for permanent change of station travel, as Military Personnel, Marine Corps does for active duty personnel. The Operation and Maintenance, Marine Corps (O&MC) appropriation provides the operational support requirements including supply, maintenance, training and administrative operations for the active forces of the Marine Corps. It also funds for 18,123 civilian personnel man-years, with an associated end strength of 18,649. Discounting inflation and assumption of responsibilities from other Services, the Operation and Maintenance, Marine Corps appropriation has grown by approximately 5 per cent over the fiscal year 1978 appropriation. That growth has been necessary in order to support vital readiness requirements.

The Operation and Maintenance, Marine Corps Reserve appropriation provides the same support for the reserves as O&MMC does for the active forces. In addition, it funds for 121 civilian personnel man-years with an attendant end strength of 126. The Procurement, Marine Corps appropriation provides funding for the acquisition of ammunition, weapons and tracked combat vehicles, guided missiles and artillery support equipment and engineering and other support equipment.

Those appropriations represent a well-balanced program, which provides only the essential resources necessary for a combat-ready Marine Corps. Barring an excessively high inflation rate and an excessively high rate of appreciation of the Yen against the dollar, I feel confi-

dent that this funding request will continue to provide the American people with essential combat strength at the least possible cost.

#### 1980 authorization request

In accordance with the Congressional Budget Act of 1974, the Marine Corps fiscal year 1980 authorization request is highlighted in Figure 2. The fiscal year 1979 authorization request is shown for comparison.

In summary, the total effort of the Marine Corps is oriented toward readiness — for instant combat and for combat on the battlefields of the future. The encouraging results of our manpower quality programs provide us the unprecedented opportunity to take full advantage of the truly sophisticated systems and equipment that American advanced technology has made available.

Our research and development budget and our participation in research and development programs with our sister Services reflect that focus on the future. The increase in this year's budget request is designed to provide the command and control systems so necessary for modern warfare — to achieve objectives while saving more lives than ever thought possible. Our modernization programs, both air and ground, are forward-reaching but totally realistic. The Marine Corps budget request, modest and without any extravagance, will permit the Corps to achieve those ends described.

Finally, readiness will remain synonymous with the term Marine: ready in mind, body and spirit; ready to go today, if the call should come; and ready in our preparations for tomorrow. We welcome the clear challenges which future battlefields surely hold, because we consider it a high honor indeed to serve this country well and contribute meaningfully to its national security.

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