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The United States Special Operations Command has an identified shortage of special operations aviation assets. Furthermore, Marine Corps Forces Special Operations Command has no organic aviation assets assigned to support its operations. The Marine Corps, through an incremental approach has the capacity and capability to build a special operations aviation element to support MARSOC. Through a series of near, mid, and long term investments in building and training a cadre of experienced aircrew, the creation of a Marine Corps special operations aviation element can be achieved with minimal impact to current force structure and current operational requirements.

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MASTER OF MILITARY STUDIES

TITLE:
MARSOC AVIATION: AN INCREMENTAL APPROACH

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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Executive Summary

Title: MARSOC Aviation: An Incremental Approach

Author: Major Michael Saddler, United States Marine Corps

Thesis: Although the Marine Corps may lack the funding to create a special operations aviation element, through an incremental approach Marine Aviation has the capability to expand its realm to provide assets that will fully support MARSOC as well as compliment current SOF aviation forces.

Discussion: The United States Special Operations Command has an identified shortage of special operations aviation assets. Furthermore, Marine Corps Forces Special Operations Command has no organic aviation assets assigned to support its operations. The Marine Corps, through an incremental approach has the capacity and capability to build a special operations aviation element to support MARSOC. Through a series of near, mid, and long term investments in building and training a cadre of experienced aircrew, the creation of a Marine Corps special operations aviation element can be achieved with minimal impact to current force structure and current operational requirements.

Conclusion: Whether fiscally or capability drive, the Defense Strategic Guidance has shifted towards a smaller and leaner conventional force. Along with the decrease in force size there will be an increase in special operations forces (SOF). Future operations around the globe will be carried out by SOF units. The Marine Corps, in promoting its future role as the "Middleweight" force in the overall fight, must wholeheartedly commit to supporting special operations. By supporting MARSOC with a special operations aviation element, the Marine Corps can secure its seat at the table when future conflicts arise.

DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

Preface

I have spent the majority of my career in an aviation billet. In that time, I have worked with and supported Special Operations Forces in numerous ways. These servicemen were always consummate professionals, however, SOF often get a bad rap. My time at Command and Staff has allowed me a greater exposure to the SOF community, as well as deeper appreciation on their impact to the overall fight. This is the first time I have been able to spend considerable time researching and investigating the topic of a MARSOC Aviation Element. This research has led me to conclude that there is place for Marine Aviation and MARSOC with in the Marine Corps.

I would like to thank the faculty at Marine Corps University and Command and Staff for allowing me the opportunity to develop my ideas and for providing support and mentorship. Finally, I would like to thank my wife and family for providing me support, encouragement, and especially time to work on and complete this project.

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Introduction

> *As we look beyond the wars in Iraq and Afghanistan -- and the end of long-term nation-building with large military footprints -- we'll be able to ensure our security with smaller conventional ground forces.*[1] – President Barrack Obama

With the release of the 2012 Defense Strategic Guidance, the United States Military will be making major changes and reductions to the current force structure. The Marine Corps will reduce end strength from 202,000 to approximately 186,000.[2] However, even with major budget and manpower cuts, the United States Special Operations Command (USSOCOM) and Special Operations Forces (SOF) are growing. According to Secretary of Defense Leon Panetta, "as we reduce the overall defense budget, we will protect, and in some cases increase, our investments in special operations forces."[3] The 2010 Quadrennial Defense Review Report (QDR) also called for a continued growth in the Special Operations (SO) community over the next several years. According to former USSOCOM Commander Admiral Olson, "SOF's organic manpower growth should be in the range of 3-5 percent per year," compared to decreases in most other areas of the military.

The Department of Defense (DOD) has identified a shortage in SO aviation assets commensurate with SO ground forces. As the ground forces grow and operations increase, aviation assets cannot keep up with the current requirements to support this increase. Thus, a gap between SOF aviation and ground forces has developed. With the projected growth of SO forces this gap will continue to grow. This has resulted in SO ground forces having to rely on conventional or general purpose aviation, often with negative outcomes. An excerpt from testimony before the House Committee on Armed Forces highlights the shortages in SOF aviation:

> Over the past several years, conventional Army aviation units have routinely provided lift support for about two thirds of SOF ground units. In Afghanistan, nearly fifty percent of the lift requests to support Joint Special Operations Task Force-Afghanistan operations

> have been unmet in recent years, owing primarily to competing demand from JSOC's SMUs and conventional ground forces. Given the ongoing expansion of Army SF and SEAL force structure by one third, as well as the standing up of the MSOAG and two MSOBs…, the demand for rotary-wing aviation is certain to expand.[4]

SO aviation must grow accordingly and be proportional to the expected growth of the SO ground forces.

As SOCOM grows it will look to the Services to provide and augment its aviation component. The Marine Corps, as the newest contributor to SOCOM with the establishment of Marine Corps Forces Special Operations Command (MARSOC), should provide some of those aviation assets. As MARSOC grows by 1,000 personnel[5], the Commandant of the Marine Corps has ordered us to "fully embrace MARSOC and capitalize on its unique capabilities, while we strengthen the relationships between our operating forces and special operations forces."[6] The Marine Corps can fully embrace this relationship by supporting MARSOC with all available assets. Supporting MARSOC with Marine Aviation directly adheres to the Commandant's intent; it also will serve in alleviating requirements levied on current SOF air assets.

With the decrease in conventional military operations and the increase in special operations, the Marine Corps must decide whether to invest in special operations aviation support to MARSOC or get left out of the fight. MARSOC, like the other SOF units, may see its requirements for support go unmet. The Commandant has assigned the task to rebalance the Corps, posture it for the future, and aggressively experiment with and implement new capabilities and organizations.[7] The Marine Corps needs to build on to current capabilities and develop new ones. As part of experimentation and implementation, the Marine Corps should invest in specially trained, equipped, and organized aviation units. This investment requires building a solid foundation and establishing the requisite experience base, which is by no means an overnight process. Although the Marine Corps may lack the funding to create a special

operations aviation element, through an incremental approach Marine Aviation has the capability to expand its realm to provide assets that will fully support MARSOC as well as compliment current SOF aviation forces.

This paper will take an in depth look at the history of Special Operations, United States Special Operations Command, and Marine Corps Forces Special Operations Command. Additionally, an examination and comparison of current Marine Corps aviation assets with SO air assets will be conducted. Finally, this paper will lay out a multi-year strategy with a detailed incremental approach to support MARSOC as well as reach the defined end state of a Marine Corps special operations aviation element. Furthermore, this paper will highlight areas that need improvement, current shortfalls, and current capabilities that reside in the Marine Corps.

Background

Joint Publication 3-05 defines special operations as: "Operations requiring unique modes of employment, tactical techniques, equipment and training often conducted in hostile, denied, or politically sensitive environments and characterized by one or more of the following: time sensitive, clandestine, low visibility,… and/or a high degree of risk."[8] Countries all over the world employ specialized forces in their modern militaries and conduct special operations, from the Russian Spetsnaz to the Special Air and Boat Services of the United Kingdom. The United States has been no different. Accounts of the United States conducting special operations date back through all military engagements this country has conducted. Special Operations Forces are forces "for which there are no broad conventional force requirements."[9]

SOF were employed extensively during World War II and during the Vietnam War. However, the post war years saw huge cuts in the budget and a drastic decrease in SOF manpower. At that time, many people within the DOD failed to see a need for SOF. After a

failed attempt to rescue American hostages in Iran by a specially organized group, that attitude changed. The official history of USSOCOM points out that "the failed mission struck a blow to American prestige and further eroded the public's confidence in the U.S. Government."[10] The mission, Operation Eagle Claw, was a turning point in the world of U.S. Special Operations.

Operation Eagle Claw

Operation Eagle Claw was a failed joint service rescue attempt conducted in April of 1980. Iranian students took fifty-two Americans hostage in the U.S. Embassy in Tehran. President Jimmy Carter ordered a rescue mission after nearly six months of negotiations had failed to procure the release of the hostages. The rescue would attempt to use all four services and a mixture of conventional and unconventional forces to complete the mission.

Commanded by Colonel Charlie Beckwith, the Army's new, top-secret counterterrorism unit, Delta Force, would be the main rescue force. Beckwith, creator of Delta Force, had spent his career selling the idea of an elite unit, and now that it existed, he was eager to show what miracles it could perform.[11] The specially trained operators of Delta Force were experts in hostage rescue. Members of the Army's 75th Ranger Battalion, Air Force combat controllers and C-130 crews, as well as Marine pilots flying Navy RH-53D helicopters augmented the rescue force.

Operation Eagle Claw was planned to be a two day mission. It began with a detailed night rendezvous at a remote desert location. The rescue force would land at an isolated airstrip, referred to as Desert One, on an Air Force C-130 Hercules aircraft. Marine helicopter pilots would then join the force at Desert One, load the troops, and transport them to hidden locations just outside of Tehran. The following day, the rescue force would infiltrate the city and raid the embassy. Once the hostages were rescued, the helicopters would extract the package and

transport everyone to an airfield previously seized by the Army Rangers. The entire force would then be lifted by C-130s out of Iran.

Meticulous planning and rehearsals were conducted at the unit level. Colonel Beckwith "and his men had been rehearsing the mission for so long that they could have done it in their sleep."[12] Problem after problem arose on the mission that plagued the rescue force. Author Mark Bowden asserts, "In their many rehearsals, they had determined that six choppers were essential for carrying all the men and equipment from Desert One to the hide sites."[13] With a mission "No Go" requirement of six aircraft, the decision was made to use only eight helicopters. Two of those helicopters failed to make it to Desert One, leaving them with no backup. A third helicopter was downed upon landing with a mechanical malfunction. Although mechanical issues caused the abort, Colonel Beckwith found fault in the Marines and complained "that the pilots were looking for excuses not to go."[14] To Beckwith, the rest of the rescue force "were all ordinary mortals, squires, spear carriers, water boys. Their job was to serve Delta, to get the colonel and his magnificent men into place for their rendezvous with destiny."[15] To Beckwith, Special Operations Forces were the elites of the warrior class and a step above the conventional forces supporting him. In Beckwith's assumption, it was the conventional forces that caused the mission abort.

After the abort call, disaster struck. While maneuvering one of the H-53s in order to refuel, the helicopter struck a parked C-130 filled with fuel resulting in a deadly fire. The remaining helicopters were blown in place while the surviving forces were loaded aboard the C-130s and flown out of Iran. Bowden surmises that "America's elite rescue force had lost eight men, seven helicopters, and a C-130, and had not even made contact with the enemy. It was a debacle. It defined the word debacle."[16]

Special Operations Command

Many significant changes resulted from the outcome of Desert One. The official history of USSOCOM notes, "The Desert One disaster, led the Defense Department to appoint an investigative panel…and to create a counterterrorist joint task force (CTJTF) and a Special Operations Advisory Panel (SOAP)."[17] Although often viewed as a failure, Operation Eagle Claw was the driving force in pushing the Services toward a future of joint operations as well as laying a foundation for the future of U.S. Special Operations.

The SOAP convened to examine the operation, chaired by Admiral James L. Holloway III along with five other flag officers. Included on the panel was General Leroy Manor, one of the pilots of the famous Son Tay Raid into North Vietnam. The "Holloway Commission" cited several factors that contributed to the failure of Desert One. The number of helicopters and selection of crews were a primary causal factor. The choice to use Marine pilots to fly unfamiliar Navy helicopters while using Night Vision Devices was significant. Mechanical issues were misdiagnosed by the Marine pilots causing them to abort. The Commission also noted the limited number of helicopters used. Had more helicopters been used, the probability of success would have increased. Finally, the pilots did not receive proper weather briefings before launching. The weather department had accurate weather briefs, but they withheld them due to a perception of operational security.

Historian and Professor, Dr. Charles G. Cogan argues, "The Holloway Commission also criticized the excessive secrecy employed by those who managed the operation, as this prevented a necessary exchange of information between military personnel belonging to the four different services."[18] The excessive need for operational security precluded the different elements from training together prior to the mission. Although the units conducted extensive rehearsals and

training, a full dress rehearsal was never attempted. It is essential to conduct at least one and preferably two full dress rehearsals prior to a mission. Plans may seem sound on paper, but when certain aspects of an operation are not rehearsed, it invariably fails during the actual mission.[19]

The findings of the Holloway Commission would lead to two major legislative acts that reshaped the DOD. In 1986, the Goldwater Nichols Act and the Cohen-Nunn Act drastically changed the way the Armed Services operated. Cogan contents, "Goldwater Nichols spelled the end of the large independence that the various branches of service had enjoyed, and it also strengthened the role of the Chairman of the JCS. From that point on, the emphasis was on joint operations. The Cohen-Nunn Act involved the reorganization and the consolidation of all the Special Forces."[20] In 1986, President Ronald Reagan ordered the DOD to stand up the United States Special Operations Command (USSOCOM) as a new and independent unified command.

SOCOM Organization

In 1987, the DOD officially activated USSOCOM. Its mission is to provide capable Special Operations Forces to defend the United States and its interests[21]. SOCOM prepares, trains, equips, and deploys SOF to support the Geographic Combatant Commanders. It is organized into four service commands: U.S. Army Special Operations Command (USASOC), Naval Special Warfare Command (NAVSPECWARCOM), Air Force Special Operations Command (AFSOC), and Marine Corps Forces Special Operations Command (MARSOC). Also under SOCOM are two sub-unified commands, Joint Special Operations Command (JSOC) and the Special Operations Command – Joint Capabilities (SOC-JC).[22]

Currently, only USARSOC and AFSOC provide dedicated aviation assets to special operations forces. Within USARSOC, U.S. Army Special Operations Aviation Command

(USARSOAC) supports special operations with the 160th Special Operations Aviation Regiment (SOAR). Better known as "the Night Stalkers", the 160th, like most SO units was born out of necessity[23] after Operation Eagle Claw. In the post mission years, analysis highlighted a capability gap; dedicated SO aviation did not exist prior to standing up the 160th SOAR. The Night Stalkers, who pioneered modern night flight techniques and equipment, provide the only precision rotary wing aviation support to joint SOF around the world.[24] Specially outfitted H-47 Chinooks, H-60 Blackhawks, and H-6 Little Birds provide organic assault support and close air support to SOF.

AFSOC provides dedicated fixed-wing and tilt-rotary aircraft to support SO along with a multitude of other special operations capabilities. Operating seven variants of the C-130, AFSOC Hercules support a range of activities from infiltration, resupply, aerial reconnaissance, armed over watch, CAS, aerial refueling, ISR, electronic broadcasting, and command and control.[25] AFSOC recently replaced its fleet of MH-53M/J Pavelow helicopters with the CV-22 Osprey. The CV-22, an enhanced variant of the Marine Corps MV-22B, is a vertical takeoff and landing (VTOL) tilt-rotor. With the sundown of the Pavelow fleet, AFSOC and SOCOM lost the only heavy lift helicopter support dedicated to SO. Although the CV-22 has an increased capability in speed, range, and altitude, it cannot conduct heavy lift operations. The CV-22 mission sets include penetrating denied airspace, conducting infiltration, personal recovery, exfiltration, and resupply.[26] The Air Force also routinely provides tankers and A-10 Thunderbolt II aircraft to support SOF operations. These conventional crews receive additional training allowing them to fully support SOF.

Neither MARSOC nor NAVSPECWARCOM have dedicated special operations aviation elements. The lack of capability has been a concern for both commands. In 2009, Admiral Eric

T. Olson, Commander USSOCOM stated, "Navy Special Warfare Command's validated requirements for Navy RW (rotary wing) support are significantly under resourced."[27] Subsequently, the Chief of Naval Operations (CNO) authorized two helicopter squadrons to provide dedicated support for NAVSPECWARCOM. Each squadron will deploy a detachment of four HH-60H Seahawks and add those assets to the 160th SOAR in support of SOF.[28] The Navy's intent is not just to provide transport, but also to make the helicopters and aircrew part of an integrated support team.[29] Special operations' flying requires skilled aviators to conduct intricate missions. In order to facilitate training and get the squadrons up to speed, the Navy is putting the aircrew through the 160th Regiment's Techniques, Training, and Procedures manual.[30] NAVSPECWARCOM Operations Officer, Commander Kevin Reams attests, "They (the 160th) are really the model for special operations support".[31]

With the future of military action leading towards a higher use of special operations forces, no doubt MARSOC will run into the same scenario as NAVSPECWARCOM. Without organic or dedicated air support, MARSOC should be concerned that a lack of sourcing for its aviation requests is both very possible and highly probable. As part of the Marine Corps transformation to a middleweight fighting force, and the task to embrace MARSOC, a fundamental change in the way the Corps operates is required. The Marine Corps must follow the example of the other services and build a SO aviation capability.

Marine Corps Forces Special Operations Command

The Marine Corps has a history of conducting special operations dating back to 1805, when First Lieutenant Presley O'Bannon led a detachment of Marines against a fortified city in Tripoli. O'Bannon used unconventional tactics when he crossed 600 miles of desert in order to surprise the enemy force.[32] In World War II, the Marine Corps created specially trained units to

carry out special operations. The Marine Corps stood up two Raider Battalions, created to be on par with the British Commandos. The Raiders were lightly armed, intensely trained units tasked with three missions: spearheading larger amphibious landings, conducting raids using speed and surprise, and operating as guerillas behind enemy lines.[33] The Raider Battalions achieved success in over twenty major operations during the war. Due to resentment within the Marine Corps, the battalions disbanded in 1944.

In 2001, Commandant General James L. Jones initiated the SOCOM/Marine Board to move the Marine Corps and SOCOM closer together and establish a framework to build relationships between the two organizations.[34] Marine Corps Special Operations Detachment One (MCSOCOM) formed as a test bed for the future of Marine SO capability and deployed alongside a Naval Special Warfare unit. As pointed out by author Fred Pushies, "The MCSOCOM Det demonstrated they could effectively conduct DA (direct action) and SR (special reconnaissance) in conjunction with a NSW Task Group."[35] Detachment One set the foundation for the Marine Corps to establish a special operations capability.

On February 24, 2006, the Marine Corps stood up Marine Corps Forces Special Operations Command. MARSOC's tasks include training, organizing, equipping, educating, maintaining, and providing Marine Corps special operations forces worldwide that are task organized, scalable, and responsive to missions assigned by USSOCOM and other combatant commanders.[36] MARSOC conducts four of the SOF disciplines: foreign internal defense, direct action, special reconnaissance, and counterterrorism. There are three subordinate commands under MARSOC: Marine Special Operations Support Group (MSOSG), Marine Special Operations Regiment (MSOR), and Marine Special Operation School (MSOS). The MSOR has

three battalions, two located at Camp Lejeune, NC, and the third located at Camp Pendleton, CA. The regiments are geographically located adjacent to Marine Air Wings.

U.S. Marine Corps Posture

In 2010, SOCOM identified its biggest capability and capacity shortfalls within the SOF community. Rotary-wing lift and close-air support provided by SOF gunships were among these capability shortfalls.[37] These capabilities presently reside in Marine Corps Aviation and if applied properly can support MARSOC without affecting current operations.

Marine Corps Aviation is currently postured to provide support to MARSOC without having an adverse effect on on-going operations. The commitment to Iraq has ended and the footprint in Afghanistan is shrinking daily. With a smaller overseas footprint, assumptions can be made that future deployments will dwindle and dwell time will increase. The increase in dwell time will free up aviation units to train with and provide support to MARSOC. This support will meet the CMC's guidance to strengthen the relationship between MARSOC and the Fleet Marine Forces. It will also provide MARSOC with a much needed capability. Aviation support to MARSOC would be a force multiplier on the battlefield.

With the existing force structure, the Marine Corps can provide both general and direct support to MARSOC. Marine Aviation has the capability in the current inventory to provide the level of support required of SO, a capability that is similar to the 160th SOAR. The U.S. Army's 160th SOAR is the premier SO rotary wing unit. The 160th is able to support all special operations core activities. Its mission sets include, but are not limited to: insertion, extraction, direct action (DA), Close Air Support (CAS), special reconnaissance, recovery of personnel, combat search and rescue, and command and control.[38] All of the 160th missions can be linked to the Mission Essential Task Lists (METL) of Marine rotary wing and tilt-rotary squadrons.

With the introduction of the Marine Corps UH-1Y Venom helicopter, the Marine Corps now has a utility helicopter that can provide assault support and close air support, as well as command and control commensurate with SOF assets. The UH-1Y mission sets closely align with the capabilities provided by the 160th's fleet of MH-60L Blackhawks. The UH-1Y has the ability to insert 8-10 operators, and then remain airborne to provide command and control or close air support for a mission. With an increased maximum speed of 155 KIAS, and the ability to dual fast rope 10 passengers in 23 seconds, the Super Huey has the capability to conduct SO missions. The Marine Corps insists, "The UH-1Y gives the Joint Force commander a true multi-role utility aircraft which can execute numerous mission elements during a single flight."[39]

Along with the UH-1Y, the Marine Corps version of the V-22 is a perfect fit for special operations. Assistant Secretary of Defense Michael Lumpkin testifies that, "This dynamic aircraft provides a tactical advantage of a helicopter with speeds and ranges of a C-130 resulting in the ideal machine to conduct a variety of missions to include the "Desert One"-style mission from which SOCOM was born."[40] Already in use by AFSOC, the V-22 provides precision assault support to SOF. "The Osprey's high-altitude capabilities make for an insertion platform that can vertically bypass surface-to-air threat systems like no other… assault support platform in the past."[41] Marines with II MEF Reconnaissance Company, in conjunction with Marine Tilt-rotor Test and Evaluation Squadron Two Two (VMX-22) recently conducted a deep strike exercise. The units successfully fused high-altitude aerial delivery of personnel with the range and ceiling of the MV-22, thus giving a commander the capability to insert deep reconnaissance forces, joint terminal air controllers, and SOF places not previously considered.[42]

The Marine Corps operates the only true heavy lift helicopter in the U.S. Military, the CH-53E. The CH-53E and its future replacement, the CH-53K, provide capabilities not offered

by current SO aviation elements. One capability, heavy lift of internal and external cargo, would provide MARSOC with logistics support and the ability to sustain independent operations for an extended period. Currently, the CH-53E has the external lift capability of 36,000 pounds and a maximum gross weight of 73,500 pounds. The CH-53K will have an increased maximum gross weight of roughly 88,000 pounds. The CH-53's internal auxiliary fuel tanks offer the ability to conduct Forward Arming and Refueling, thus providing another needed capability to MARSOC. Finally, with the recent addition of an updated avionics suite, to include precision GPS, improved Aviation Support Equipment, and aircraft armor, as well as an aerial refueling capability, the CH-53E can provide assault support transport to MARSOC wherever it needs to go in the battle space, whenever it wants to go there.

Two additional platforms reside in the Marine Corps that at present have the capabilities to support SO: the AH-1Z Super Cobra and the KC-130J. The Marine Corps newest helicopter, the AH-1Z Super Cobra is an upgrade from the current AH-1W attack helicopter. The Zulu has increased speed, range, payload, endurance, standoff ability, and situational awareness compared to the Whiskey model. The AH-1Z will provide commanders with an increased capability to execute every attack helicopter mission.[43]

The KC-130J recently added a close air support capability, known as Harvest Hawk, while retaining the capability to conduct assault support and aerial refueling. In Afghanistan, the Harvest Hawk is the close air support platform of choice for counter insurgency. Harvest Hawk is also a provider of surveillance to disrupt improvised explosive device emplacements.[44] The Marine Corps' fleet of C-130Js now provides a capability required and employed by the SOF community. Like the Marine Corps, AFSOC is going to be using the J-model C-130s to

recapitalize its fleet.[45] With an aging fleet of C-130 U and H models, the Air Force had decided to follow the path of the Marine Corps and transition to the J-model.

Incremental Approach

When USSOCOM stood up in 1987, the Marine Corps made the initial decision not to participate. Nearly twenty-five years later, MARSOC ground forces play an active role in the special operations world. However, MARSOC lacks the capability to operate as a complete and independent special operations package. The lack of dedicated aviation support denies MARSOC the ability to conduct combined arms operations. The Marine Corps prides itself on its ability to conduct combined arms. MCDP-1 states, "In order to maximize combat power, we must use all the available resources to best advantage. To do so, we must follow a doctrine of combined arms."[46] Supporting MARSOC with aviation helps facilitate this principle.

Similar to the Marine Corps reluctance to join SOCOM when it formed, many people currently oppose the idea of the Marine Corps providing MARSOC with an aviation element. However, former Commanding General of MARSOC, Lieutenant General Dennis Hejlik states, "I personally and professionally think that someday they (MARSOC) will have air assets like a MAGTF. I firmly believe that. That will take some time, just because of the cost and the war we're in right now. But, that's where I see them going."[47] Providing MARSOC with a dedicated air support should be the next step in the evolutionary cycle of the Marine Corps.

Developing a special operations aviation capability is not a simple process. The process will take several years to develop and mature. With the slow replacement of an aging fleet of multiple type model systems currently in progress and budget cuts looming overheard, the opposition has a plethora of excuses not to change the status quo. The detractors' arguments vary from lack of manpower, shortage of aircraft, and high costs, to the argument that Marine

Corps Aviation already has the ability to perform special operations missions. Some of these arguments may have merit. Lieutenant Colonel Scott B. Clifton highlights a shortage of assets that "would have to be drawn from the existing pool and further exacerbate the shortfall the MAGs are currently experiencing."[48] However, the Marine Corps Aviation Plan (AvPlan) contradicts this assumption. Grade Adjusted Recapitulation (GAR) represents the requirement for each Military Occupational Specialty (MOS).[49] From Fiscal Year 2011 to Fiscal Year 2012, the GAR for officers in an aviation billet rose from 97% to 100%, representing an overall growth in manpower.[50]

While there may be a shortfall in aircraft assets in certain communities due to losses suffered from a decade of combat operations, this is not true across all of Marine aviation. The aviation community's inventory shows an example that contradicts the shortfall argument. According to the AVPLAN figures, between Fiscal Year 2010 and 2012, all aviation platforms Primary Aircraft Inventories either remained the same or increase in total number of aircraft.[51] Aircraft are also routinely put into a preservation status while squadrons continue to operate and deploy on a regular basis. The ability for squadrons to preserve assets without having a negative effect on operations also disputes the shortfall argument.

For those in favor of supporting MARSOC with aviation assets, there have been many good ideas presented. Lieutenant Colonel Glen Butler makes many solid suggestions in his Gazette article, beginning with establishing "a clear, wide, and honest dialogue on the topic of MarSOC aviation."[52] However, amongst proponents' ideas, none outline a detailed plan or an implemented approach that successfully fills the requirements to bring Marine Aviation to a special operations level or provide a process to build a MARSOC aviation element from the ground up. First, the Marine Corps, with assistance from SOCOM, needs to define an end state.

Then it needs to address the question of required and desired capabilities. After the capabilities are set, then the required METLs can be assigned. Once the Marine Corps formalizes its goals, then it can begin to lay out a detailed plan and milestones may be set.

The incremental approach starts with building a foundation of knowledge and experience. Once a solid foundation is established, training opportunities with MARSOC and SOCOM units need to be increased, followed by redefining current mission sets and establishing a special operations qualification. After a formal standard is set, only then can the Marine Corps develop special operations certifications, qualifications, and designations. As experienced aircrew become qualified they will set up standing special operations detachments to provide support for MARSOC. When detachments mature and grow, the Marine Corps can build a squadron around those detachments. The end state and final goal should be a full, organic, and dedicated special operations aviation element within MARSOC.

Building a foundation

With today's budget cuts, the Marine Corps first step in building a foundation is to find low cost ways to maintain and improve capabilities. Accomplishment of this step is conceivable in the near term. The Marine Corps currently operates a Personnel Exchange Program (PEP) with several foreign countries as well as with the other services. Marine Corps Order 5700.4E states, "The purpose of the MCFPEP is to encourage the mutual confidence, understanding, and respect necessary to strengthen the relationship existing between the Marine Corps and foreign military services. Experience, professional knowledge, and doctrine shared to the maximum extent permissible will foster a mutual appreciation of the policies and doctrine of each service."[53] Exchange programs facilitate an exchange of ideas and tactics, techniques, and

procedures (TTPs) as well as build relationships and trust across the joint and coalition community.

Within the exchange program, there are ten foreign billets for pilots, and seven inter-service billets. Of the seventeen total billets, only four are in the rotary-wing/tilt-rotor community. Two of the seventeen are in a special operations billet. The Marine Corps currently has 694 rotary-wing/tilt-rotor assets and 470 fixed-wing assets.[54] Less than twenty five percent of the exchange tours are allocated to the rotary-wing community, yet sixty percent of the Marine Corps' assets are rotary-wing and tilt-rotor assets. The Marine Corps currently has one rotary-wing exchange billet with the Army's 160th Special Operations Aviation Regiment and one exchange billet with the Air Force's 9th Special Operations Squadron flying the C-130.

The Marine Corps can start to build a solid foundation of SO experience by increasing the number of exchange tours with the special operations community. Increasing the number of exchanges is a low cost solution that allows Marine Corps pilots an exposure to the realm of special operations. These potential billets would introduce Marine aviators to special operations and allow them to bring that knowledge back to the Marine Corps. Flying with SO units also creates a solid pool of aviators from which the Marine Corps can build a future MARSOC aviation capability around. Conducting exchange tours with SO units is mutually beneficial to all organizations involved. With ten years of combat action, the level of experience within Marine Aviation is drastically higher than a decade ago. It is from this cadre of combat experienced pilots that the Marine Corps can begin to build a SO capability.

Increase training opportunities with SOCOM Forces

USSOCOM Commander, Admiral William McRaven identified six principles to special operations in his book Spec Ops: simplicity, security, repetition, surprise, speed, and purpose.[55]

Repetition, which is paramount to the success of special operations, is the conduction of certain actions or skills over and over during training. Joint training is the next way the Marine Corps can increase exposure to special operations. Marine Aviation needs to take full advantage of training opportunities with MARSOC and other SO units. Marine Aviation must seek to train with and learn from SO aviation units to further develop a SO capability. This step can begin immediately, and should be an ongoing and continuous process.

To familiarize Marine Corps aviation to SO, the Marine Corps must actively look for training opportunities. Special operations forces regularly conduct joint and combined training, both within the SOF community and with conventional forces.[56] The DOD has numerous organizations and units that can help facilitate joint training. The National Training Center (NTC) and Joint Readiness Training Center (JRTC) both provide realistic joint combined arms training in operational atmospheres. Both the NTC and JRTC have aviation departments and Special Operations Training Detachments. The Air Force has a Special Operations Training Command, who is responsible for educating and training other USSOCOM components and joint/interagency/coalition partners.[57]

Marine Aviation must also look inward and re-examine how it trains within the Marine Corps. Inherent in the Marine Corps are several organizations whose mission is to expand training opportunities. The Marine Corps Tactics and Operations Group (MCTOG) and Marine Aviation Weapons and Tactics Squadron One (MAWTS-1) are tasked with providing advanced tactical and standardized training within their respective areas of expertise. MCTOG and MAWTS-1 should be tasked to help facilitate training between Marine Aviation, MARSOC, and other SO units. Joint Publication 3-05 Special Operations points out, “Effective SOF-CF integration facilitates the synchronizing of military operations in time, space, and purpose;

maximizes the capability of the joint force."[58] Finally, both Marine Expeditionary Forces have a Special Operations Training Group (SOTG) that can provide unit or individual training as well as conduct, evaluate, and certify Marine Expeditionary Units as they prepare to deploy in support of Combatant Commanders.[59]

Similar to the exchange program, increasing training opportunities between Marine Aviation, MARSOC, and other SO units is beneficial to all organizations. The CJCS advocates joint training in the 2012-2015 Chairman's Joint Training Guidance. "SOF-CF integration will continue to be a key enabler for joint operations across the range of military operations, and especially for IW."[60] Concurrent with the guidance given by the CJCS, JP 3-05 specifies that rigorous training and mission rehearsals are integral to the conduct of most SO.[61] Effective and safe facilitation of air support to SOF units by conventional forces requires those aviation units to receive enhanced training and/or equipment. Integrated training allows for the development of habitual relationships with SOF units.[62] In order to increase the experience and knowledge base within Marine Aviation, the Marine Corps must take advantage of all available joint training opportunities.

Refine mission sets and develop a SO standard

Once the Marine Corps establishes and increases training with MARSOC and other special operations units, then it can start to re-evaluate and refine current mission sets. The Marine Corps starts by identifying the required Mission Essential Tasks (METs). The Marine Aviation Training and Readiness Program (T&R) should then implement the identified METS. METS are capabilities for which a unit was organized or designed to perform. Most units have several tasks for which they were organized or designed and for which they train to.[63] The baseline METS for SO aviation have already been developed and are inherent in the training and

assessment program and the TTPs of current SO aviation units. The Marine Corps can take the METs currently assigned to the 160th SOAR and AFSOC units and develop similar mission tasks. This process can start now and is the next step in developing a special operations aviation capability. However, the refining of mission sets will take considerable time and effort and could be a multi-year project.

The T&R program provides a commander with an ACE capable of accomplishing its core METS. Subject matter experts, to maximize combat capabilities for assigned METs, validate the standards set forth in the T&R.[64] The set standards describe and define unit capabilities and requirements necessary to maintain proficiency in mission skills and combat leadership. Performance standards are used to build training events based on specific requirements to ensure a common base of training and depth of combat capability. The T&R Program implements a comprehensive, capabilities based training system that provides mission skill proficient crews and combat leaders to combatant commanders.[65]

MAWTS-1 has the task to conduct standardized training and certification for Marine Aviation. Along with this task, its mission includes providing assistance in the development and employment of aviation weapons and tactics.[66] The Marine Corps can task MAWTS-1 to assist in the coordination and development of a special operations qualification/standard. Within the SOCOM organizational structure, standardization is a mission of the Joint Special Operations Command (JSOC). JSOC studies special operations requirements and techniques, ensures interoperability and equipment standardization, plans and conducts joint special operations exercises and training, and develops joint special operations tactics.[67] MAWTS-1 working with JSOC can take existing standards within SOCOM to build a special operations standard for Marine Aviation.

Establishing a special operations aviation standard allows the Marine Corps to set the requirements that must be met in order to qualify personnel and eventually certify an aviation unit. A standard built with concurrence from SOCOM will ensure acceptance and approval from other SO units. After the standard is set, MAWTS-1 can begin assessment and certification. A certification refers to the evaluation process conducted via training event(s) by a designated instructor or authorized personnel for the purpose of assessing individual skills as a prerequisite to qualification or designation. Qualifications, assigned to personnel, are based on demonstration of proficiency in a specific skill. Designations are assigned to individuals based on leadership ability.[68]

Establish unit detachments

The Aviation Combat Element is task organized to support a MAGTF or in theory, any Task Force (TF) based on that commander's mission and the estimate of aviation capabilities required for accomplishing the mission.[69] Historically, an ACE is built around a standing medium lift helicopter squadron with detachments from other squadrons. However, this paradigm was intended to be flexible and scalable, thus allowing smaller units to be task organized for a specific mission. The inherent flexibility of the ACE structure allows the forming of detachments from existing units that could provide support for MARSOC.

Marine Corps aviation squadrons are staffed and trained to a unit's Table of Organization (T/O). A standard T/O will have the requirements for a full squadron as well as detachments. An example T/O for the CH-53E prescribes a squadron with sixteen aircraft and thirty-eight pilots, while a detachment has four aircraft and eight pilots assigned to it.[70] Along with detailing the number of aircraft and pilots, T&R manuals outline the required designations and qualifications needed per detachment. Applying the SO standard previously discussed to the

existing detachment structure is the next step in growing SO support for MARSOC. This step must obviously follow the previous steps and will take several years to accomplish.

In the near term, Marine Corps can easily follow the path set by the Navy and stand up a detachment to provide direct support to MARSOC. A special operations detachment could be built easily from existing force structure within the Marine Air Wing. The next step is to implement the special operations qualification with the detachment. The aircrews that have been designated as SO qualified by the standard previously established should be assigned to the detachment. The detachment can be formed from aircrew within a single squadron, group, or wing. Independent detachments could be stood up from the various squadrons, i.e. heavy lift, medium lift, light attack, etc.

Once the detachment has formed, it can begin training directly with MARSOC. The Marine Air Wings are geographically located adjacent to the MSOBs. This collocation allows an increase in training. The more units train together, the more that training facilitates relationships. Through increased relationships, a certain level of trust and confidence can be achieved. The forming and standing up of SO qualified a detachment is a lofty goal. This process will take several years to reach fruition.

Establish a standing squadron / Independent Aviation Combat Element

The final step in developing an aviation element to support MARSOC and SOCOM is to stand up a composite squadron from previously designated and assigned SO detachments. The last step is the easiest as all the leg work has been completed. However, it will take considerable time to accomplish. The hard work and effort of building a foundation, growing the experience base, and standardizing special operations aviation detachments will culminate when the individual platform detachments are combined. Through the time it took to grow the SO

experience, a qualified cadre of aviators will have formed. With time, the detachments will mature. From this cadre, the Marine Corps can look for and select a commander and the key billet holders to populate the squadron.

Conclusion

"The successful conduct of SO rely on individuals and small units proficient in specialized skills trained to be applied with adaptability, improvisation, and innovation."[71] Special Operations are not a new concept to the Marine Corps. The Marine Corps has conducted SO throughout our illustrious history; however, there are still people within the Corps who are adamantly opposed to Marines conducting and supporting SO.

MARSOC is here to stay, and as the Commandant has concluded, the Corps will embrace it. As the demand for special operations forces increases around the globe, MARSOC will see more action. The Marine Corps must decide to provide the support to MARSOC. As the Marine Corps Force Structure Review Group outlined the decrease in overall size of the Marine Corps, MARSOC is going to grow. As MARSOC grows in size and capability, the Marine Corps needs to fully support it with an aviation element.

Building a special operations aviation element is not a simple process. It will take considerable time and effort. However, as SO aviation is in short supply, and MARSOC lacks an aviation support, the Marine Corps must look at ways to provide that support to MARSOC. The Marine Corps must identify the requirement for SO aviation. Once the requirement is identified, an end state and approach can be outlined. Marine Aviation must look for ways to expand the current level of experience and grow the foundation of knowledge of special operations. Once the level of experience has increased, then the Marine Corps can begin to build on that experience. A standard must be set and a certification process must be built into existing

training programs. The Marine Corps has the current capabilities to support MARSOC, but if it hopes to achieve a special operations aviation element capable of fully supporting MARSOC, it must capitalize on those capabilities and expand them through an incremental approach.

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[1] Remarks by the President, Barrack Obama, on the Defense Strategic Review, 5 Jan, 2012, http://www.whitehouse.gov/the-press-office/2012/01/05/remarks-president-defense-strategic-review, (Accessed 10 Jan).
[2] Gen J. F. Amos. "Reshaping America's Expeditionary Force in Readiness," *Marine Corps Gazette*, Vol. 95, No. 5 (May 2011): 12-16.
[3] Remarks by the Secretary of Defense, Leon Panetta, 5 Jan, 2012. http://www/defense.gov/Speeches/Speech.aspx?SpeechID=1643. (Accessed 10 Jan).
[4] U.S. Congress. House. Committee on Armed Services. Terrorism, Unconventional Threats and Capabilities Subcommittee. *U.S. Special Operations Command: Challenges and Opportunities*. 111th Congress, First Session, March 3, 2009.
[5] Amos, 13.
[6] Gen J. F. Amos, "35th Commandant's Planning Guidance 2010". 27 October 2010, http://www.quantico.usmc.mil/uploads/files/CMC%2035%20Planning%20Guidance%20v.Q.pdf (Accessed 15 December 2011).
[7] Amos, 14.
[8] Joint Chiefs of Staff, *Special Operations*, JP 3-05 (MacDill AFB, Florida: USSOCOM, 18 April 2011), GL-12.
[9] JP 3-05, ix.
[10] United States Special Operations Command History, 6th Edition, page 5, 2008, http://www.socom.mil/Documents/history6thedition.pdf. (Accessed Jan 5, 2012)
[11] Mark Bowden, "The Desert One Debacle," *The Altanic* (May, 2006), http://www.theatlantic.com/magazine/archive/2006/05/the-desert-one-debacle/4803/ (Accessed 20 December, 2011)
[12] Bowden.
[13] Bowden.
[14] Bowden.
[15] Bowden.
[16] Bowden.
[17] USSOCOM History, 6th Edition, 5.
[18] Cogan, Charles G. The Journal of Military History, Volume 67, Number 1, Jan 2003, pp201-216
[19] William McRaven, *Spec Ops*: *Case Studies in Special Operations (*New York: Presidio, 1995), 16.
[20] Cogan, 210.
[21] Joint Special Operations University, *Special Operations Reference Manual*, 3rd Ed. (MacDill AFB, Florida: The JSOU Press, 2011), 2-1.
[22] SOF Reference Manual, 2-10.
[23] Michael Durant and Steven Hartov, *In the Company of Heroes* (New York: New American Library, 2003), 114.
[24] SOF Reference Manual, 3-17.
[25] SOF Reference Manual, 5-5.
[26] SOF Reference Manual, 5-6.
[27] MC2 John Scorza, "HSC-84 & HSC-85 Support of Special Operations," ETHOS: Naval Special Warfare, Issue 10 (January 2011), http://www.sealswcc.com/navy-seals-ethos-magazine.aspx#.T0RJytWiZEM (Accessed 18 February 2012), 4-5.
[28] Scorza, 4.
[29] Scorza, 4.
[30] Scorza, 5.
[31] Scorza, 5.
[32] Fred Pushies, *MARSOC: U.S. Marine Corps Special Operations Command. (*Minneapolis, MN: Zenith, 2001), 27.
[33] Pushies, 27.
[34] Pushies, 43.

[35] Pushies, 48.
[36] SOF Reference Manual, 6-2.
[37] "Interview of Michael Vickers, Assistant Secretary for SOLIC & Interdependent Capabilities," *DefenseNews.com*, March 22, 2010, http://www.defensenews.com/apps/pbcs.dll/article?AID=20103220325 (accessed 10 Feb, 2012).
[38] SOF Reference Manual, 3-18.
[39] Marine Aviation Weapons and Tactics Squadron One, "*UH-1 Capabilities Brief*," https://www.intranet.tecom.usmc.mil/sites/mawts1/departments1/ (accessed 17 Feb 2012).
[40] U.S. Congress. House. House Armed Services Subcommittee on Emerging Threats and Capabilities. *The Future of U.S. Special Operations Forces: Ten Years After 9/11And Twenty-Five Years After Goldwater-Nichols.* 112th Congress, 2nd session, September 22, 2011.
[41] Maj B. R. Carr and Maj S. Schoolfield. "Deep Strike Options," *Marine Corps Gazette*, Vol. 95, No. 12 (Dec 2011): 51-53.
[42] Carr, 53.
[43] Marine Aviation Weapons and Tactics Squadron One, "A*H-1 Capabilities Brief*," https://www.intranet.tecom.usmc.mil/sites/mawts1/departments1/ (accessed 17 Feb 2012).
[44] SSgt Christopher Flurry, "*KC-130J Harvest Hawk: Marine Corps teaches old plane new tricks in Afghanistan*," www.marines.mil, April 1, 2011, http://www.marines.mil/unit/mcascherrypoint/Pages/KC130JHarvestHawk20110401.aspx (accessed 15 Feb 2012).
[45]Interview of Michael Vickers.
[46] Headquarters U.S. Marine Corps, *Warfighting*, MCDP-1 (Washington, D.C.: U.S. Marine Corps, June 20, 1997), 93.
[47] Lamothe, Dan, "Former CG: MARSOC will grow, get air assets," *Marine Corps Times*, July 24, 2011, http://www.marinecorpstimes.com/news/2011/07/marine-marsoc-hejlik-grow-get-air-assets-072411w/ (accessed Dec 18).
[48] LtCol Scott B. Clifton. "A Case Against MarSOC Aviation," *Marine Corps Gazette*, Vol. 95, No. 5 (May 2011): 39-41.
[49] LtGen G.J. Trautman "Fiscal Year 2011 Marine Aviation Plan", 16 September 2010, http://www.marines.mil/unit/aviation/Documents/FY11%20%20Marine%20Aviation%20Plan.pdf (Accessed 5 January 2012). 11-2
[50] Robling, LtGen T.G. "Fiscal Year 2012 Marine Aviation Plan", December 2011, DRAFT, (Accessed 15 February 2012), 11-2.
[51] AVPLAN, 2-4 – 3-12.
[52] LtCol Glen Butler. "MarSOC Aviation: Ways to reseize the initiative," *Marine Corps Gazette*, Vol 95, No. 1 (January 2011): 37-40.
[53] Commandant of the Marine Corps, *Marine Corps Foreign Personnel Exchange Program (MCFPEP)*, MCO 5700.4E, August 10, 2005, http://www.usmc.mil/directiv.nsf/ (accessed January 5, 2012).
[54] FY11 AVPLAN, 2-5 – 3-14.
[55] McRaven, 8.
[56] JP 3-05, II-2.
[57] Air Force Special Operations, Unit List, http://www.afsoc.af.mil/units/index.asp, (Accessed 10 February 2012).
[58] JP 3-05, xxi.
[59] I Marine Expeditionary Force, Special Operations Training Group (SOTG) Website, http://www.i-mef.usmc.mil/external/imef-01/staff_sections_sotg.jsp, (Accessed 15 March 2012).
[60] Chairman JCSC, *2012-2015 Chairman's Joint Training Guidance*, CJCSN 3500.01, August 31, 2011, A-3.
[61] JP 3-05
[62] JP 3-05
[63] Department of the Navy. *Aviation Training and Readiness (T&R) Program Manual*. NAVMC Directive 3500.14B, 20 May 2009.
[64] NAVMC 3500.14B, 1-3.
[65] NAVMC 3500.14B, 1-3
[66] Marine Aviation Weapons and Tactics Squadron One, https://www.intranet.tecom.usmc.mil/sites/mawts1/departments1/ (Accessed 17 Feb 2012).
[67] SOF Reference Manual, 2-10.
[68] NAVMC 3500.14B, 2-22.

[69] Headquarters U.S. Marine Corps, *Aviation Operations*, MCWP 3-2 (Washington, D.C.: U.S. Marine Corps, May 9, 2000), 1-5.
[70] Department of the Navy. *CH-53 T&)Manual*, NAVMC Directive 3500.47A, 8 Mar 2011, 1-3.
[71] JP 3-05, I-2.

Bibliography

Amos, Gen J. F. “Reshaping America’s Expeditionary Force in Readiness”. *Marine Corps Gazette,* May 2011: 12-16

Amos, Gen J.F. “35th Commandant’s Planning Guidance 2010”. 27 October 2010 http://www.quantico.usmc.mil/uploads/files/CMC%2035%20Planning%20Guidance%20v.Q.pdf (Accessed 15 December 2011).

Bean, Capt David F. "Command and Control for Marine Special Operations". *Marine Corps Gazette,* August 2006: 44-46.

Bolden, LtCol A. Che. “MarSOC Aviation: The Capability already exists”. *Marine Corps Gazette,* May 2011: 50-51.

Bowden, Mark. *Black Hawk Down.* New York: Atlantic Monthly Press, 1999.

Bowden, Mark. “The Desert One Debacle.” *The Atlantic* (May, 2006). http://www.theatlantic.com/magazine/archive/2006/05/the-desert-one-debacle/4803/ (Accessed 20 January 2011).

Butler, LtCol Glen. “MarSOC Aviation: Ways to reseize the initiative”. *Marine Corps Gazette*, January 2011: 37-40.

Carr, Maj B. R. Carr and Maj S. Schoolfield. “Deep Strike Options”. *Marine Corps Gazette,* Dec 2011: 51-53.

Chairman Joint Chiefs of Staff. *2012-2015 Chairman’s Joint Training Guidance*. CJCSN 3500.01, August 31, 2011.

Clifton, LtCol Scott B. “A Case Against MarSOC Aviation”. *Marine Corps Gazette,* May 2011: 39-41.

Cogan, Charles G. “Desert One and Its Disorders”. *The Journal of Military History*, Jan 2003: 201-216.

Commandant of the Marine Corps. *Marine Corps Foreign Personnel Exchange Program (MCFPEP).* MCO 5700.4E, August 10, 2005.

Department of the Navy. *Aviation Training and Readiness (T&R) Program Manual*. NAVMC Directive 3500.14B, 20 May 2009.

Department of the Navy. *CH-53 Training and Readiness (T&R) Manual*. NAVMC Directive 3500.47A, 8 Mar 2011.

Dorschner, Jim. “Instructions Not Included – Thoughts on Building a Canadian Special Operations Aviation (SOA) Capability”. *Canadian Military Journal* (March, 2009). http://www.journal.dnd.ca/vo9/no3/13-dorschner-eng.asp (Accessed September 10, 2011).

Duke, LtCol J. Darren and Maj Jeff Landis. “Embracing MarSOC”. *Marine Corps Gazette*, October 2011: 56-60.

Durant, Michael J., and Steven Hartov. *In the Company of Heroes.* New York: New American Library, 2003.

Epton, Maj Peter J. *MARSOC needs Marine Aviation.* Research Report, Air Command and Staff College, United States Air University, 2006.

Feickert, Andrew. *U.S. Special Operations Forces (SOF): Background and Issues for Congress.* CRS Report for Congress RS21048. Washington, DC: Congressional Research Service, July 15, 2011.

Flurry, SSgt Christopher. “*KC-130J Harvest Hawk: Marine Corps teaches old plane new tricks in Afghanistan*”. (April 1, 2011). www.marines.mil (Accessed March 6, 2012).

George, LtCol Joseph E. *Aviation Support To U.S. Marine Corps Forces Special Operations Command.* Research Report, Air War College, United States Air University, 2007.

Headquarters United States Marine Corps. *Warfighting.* MCDP-1. Washington, DC: Headquarters U.S. Marine Corps, June 20, 1997.

Joint Special Operations University. *Special Operations Forces Reference Manual; Third Edition.* JSOU Press. MacDill AFB, FL, September 2011.

Lamothe, Dan. “Former CG: MARSOC will grow, get air assets.” *Marine Corps Times,* July 24, 2011, http://www.marinecorpstimes.com/news/2011/07/marine-marsoc-hejlik-grow-get-air-assets-072411w/ (accessed Dec 18).

Marine Aviation Weapons and Tactics Squadron One. *Mission Statement.* https://www.intranet.tecom.usmc.mil/sites/mawts1/departments1/ (accessed 17 Feb 2012).

McRaven, William. *Spec Ops: Case Studies in Special Operations Warfare: Theory and Practice.* New York: Presidio, 1995.

Newton, Richard D. *Special Operations Aviation in NATO.* JSOU Report 06-8, Hurlburt Field: Joint Special Operations University, 2006.

Pushies, Fred. *MARSOC: U.S. Marine Corps Special Operations Command*. Minneapolis, MN: Zenith Press, 2011.

Remarks by the President, Barrack Obama, on the Defense Strategic Review, 5 Jan, 2012. http://www.whitehouse.gov/the-press-office/2012/01/05/remarks-president-defense-strategic-review. (Accessed 10 Jan).

Remarks by the Secretary of Defense, Leon Panetta, 5 Jan, 2012. http://www/defense.gov/Speeches/Speech.aspx?SpeechID=1643. (Accessed 10 Jan).

Robeson, Mastin M. "Forging Marine Special Operators". *Joint Forces Quarterly*, 1st Quarter 2010: 85-88.

Robling, LtGen T.G. "Fiscal Year 2012 Marine Aviation Plan". December 2011. DRAFT. (Accessed 20 February 2012).

Scorza, MC2 John. "HSC-84 and HSC-85 Support of Special Operations," *ETHOS: Naval Special Warfare* (January 2011). http://www.sealswcc.com/navy-seals-ethos-magazine.aspx#.T0RJytWiZEM (accessed February 18, 2012).

Spulack, Robert G., Jr. *A Theory of Special Operations.* JSOU Report 07-7, Hurlburt Field: Joint Special Operations University, 2007.

Thompson, Maj Eric N. "MarSOC: It's about the future". *Marine Corps Gazette*, October 2011: 61-63.

Trautman, LtGen G.J. "Fiscal Year 2011 Marine Aviation Plan". 16 September 2010. http://www.marines.mil/unit/aviation/Documents/FY11%20%20Marine%20Aviation%20Plan.pdf (Accessed 5 January 2012)

Turnley, Jessica Glicken. *Retaining a Precarious Value as Special Operations Go Mainstream.* JSOU Report 08-2, Hurlburt Field: Joint Special Operations University, 2008.

U.S. Congress. House. Committee on Armed Services. Terrorism, Unconventional Threats and Capabilities Subcommittee. *U.S. Special Operations Command: Challenges and Opportunities.* 111th Congress, First Session, March 3, 2009.

U.S. Congress. House. House Armed Services Subcommittee on Emerging Threats and Capabilities. *The Future of U.S. Special Operations Forces: Ten Years After 9/11And Twenty-Five Years After Goldwater-Nichols.* 112th Congress, 2nd session, September 22, 2011.

U.S. Congress. Senate. Senate Armed Service Committee. *Posture Statement of Admiral Eric T. Olson, Commander United States Special Operations Command.* 112th Congress, First Session, March 1, 2011.

United States Joint Chiefs of Staff. *Joint Operations Planning.* JP 5-0. Washington, DC: Pentagon, December 26, 2006.

United States Joint Chiefs of Staff. *Joint Operations*. JP3-0. Washington, DC: Pentagon, September 17, 2006.

United States Joint Chiefs of Staff. *Special Operations*. JP 3-05. Washington, DC: Pentagon, April 18, 2011.

United States Special Operations. *USSOCOM History, Sixth Edition*, Tampa, FL: February 26, 2008.

Vickers, Michael. "Interview of Michael Vickers, Assistant Secretary for SOLIC & Interdependent Capabilities," *DefenseNews.com*, March 22, 2010, http://www.defensenews.com/apps/pbcs.dll/article?AID=20103220325 (Accessed February 29, 2012).

Winters, Edward G. "Adapting Across the Spectrum of Conflict: The Role of Naval Special Warfare". *Joint Forces Quarterly*, 1st Quarter 2010: 76-79.

Wurster, LtGen Donald C. "Mastering the Art of the Possible: The Air Force Special Operations Command". *Joint Forces Quarterly*, 1st Quarter 2010: 80-84.