

For Want of a Ground Training Strategy

Improving ground training systems

by Col William W. Yates, USMC(Ret)

Training and readiness (T&R) methodology was pioneered by Marine Corps and Navy aviation and provides traceability from objective assessment of skill mastery to the budgetary and personnel resources required to support training those skills; however, it has not been fully implemented for training on the ground side of the Marine Corps. Consequently, the funding needed to develop, maintain, and improve ground training systems and instrumentation is not prioritized according to the relationship that those systems have with readiness. A General Accounting Office report published in April 2019 cites the need for the Marine Corps to link training resources to readiness as mandated in the *Marine Corps Order 5230.23, Performance Management Planning*, (Washington, DC: HQMC, August

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2014). Of the seventeen program-of-record ground training systems requirement documents, only one has been updated and briefed to the Marine Corps Requirements Oversight Council for a decision memorandum between January 2014 and August 2018. Only four have been updated and received a decision memorandum from the Marine Corps Requirements Oversight Council since 2010. In many of these requirement documents, the key performance parameters for the objective level of capability are set as equal to the threshold level; this means that once a training

system is fielded with the threshold level of capability, there is no justification to invest in research and development for additional capability. The key performance parameters must first be updated. The result of outdated requirements is that ground training capability has remained stagnant in most areas. Establishing traceability between investments in training, training systems, and training standards will provide the solution to that stagnation of training capabilities and provide a means of calculating the return on investment in training.

In May 2011, Gen Joseph F. Dunford, Jr., received a command brief on the portfolio of training systems acquisition programs managed by the Program Manager for Training Systems. Gen Dunford provided the following direction to the Program Manager after the brief:

I am familiar with almost every training system that you briefed from the portfolio and we used them daily to good effect when I recently commanded I MEF. As Assistant Commandant I wear many hats and one of them is Chief Financial Officer. As CFO of the Marine Corps, I do not have a single dime to fund acquisition programs that produce systems that are optional to use. My issue with the portfolio of ground training systems is that they are not prescriptively mandated in the T&R Manuals. These training systems must be identified prescriptively in the T&R Manuals or the program funding will be directed elsewhere.

General Dunford's argument was that there is a negative return on investment for all training resources that go unused because they remain optional rather



Then ACMC, Gen Joseph Dunford, during a visit to PM Training Systems in 2011. (Photo by author.)

than prescriptive. In the eight years that have transpired since Gen Dunford gave that direction, little progress has been made to establish ground training systems as prescriptive and traceable directly to T&R manual tasks. While no ground training systems programs of record have been canceled, they have—in many cases—limped along without sufficient funding in the Program Objective Memorandum (POM) requests submitted by the Training Program Evaluation Board (PEB) to modernize them and take advantage of rapidly advancing technology to provide the quality and affordability of training that is technologically mature.

The Operator-Driver Simulator (ODS) for ground tactical vehicles has not received any operations and maintenance funding from the Training PEB since 2010 and is so obsolete that the nearly 60 remaining systems cannot be maintained. Over that same nine year period, no training standards to mandate the use of the ODS were published by Training and Education Command (TECOM) despite a specific direction in the *MCO 11240.118, Licensing Program for Tactical Wheeled Motor Transport Operators*, (Washington, DC: HQMC, 2014) to “develop and distribute a performance based training curriculum, which includes mandated use of ODS technology.” The Combat Convoy Simulator (CCS) has been a program of record since 2008 but is not mandated as a training platform for any T&R events. Even as funding for a new CCS 2.0 was allocated by Congress in 2016 and a contract was awarded to procure a new system, the operations and maintenance funding for the CCS was reduced to the point that the newly delivered system does not have sufficient funding to operate at all five installations where it will be deployed. The Marine Corps’ attention to ground training, as measured by allocation of budgetary resources, is focused mostly on the conduct of training activities and—to a far lesser extent—the measurement and analysis of skills acquisition. Without a strategy to achieve measured skill proficiency levels at both the individual and unit collective level, the Marine Corps can-

not allocate resources to training cost effectively. Part of the challenge is that training is measured generally in terms of the resources consumed, such as ammunition, fuel, repair parts, time for training, and the personnel structure required to support schoolhouses and service level training programs.

Why is this the case? The T&R standards and the training capability requirements are in separate silos which, in many instances, identify no connection between a T&R standard and the training system capability needed to conduct training. But this pathway is ill-informed because at its most basic, strategy is a matter of figuring out what we need to achieve, determining the best way to use the resources at our disposal to achieve it, and then executing the plan.¹ By that definition, the Marine Corps does not truly have a resource-loaded plan for ground training to

Marine Corps aviation employs a resource-loaded strategic plan for training ...

achieve the strategic objective. The strategic objective is force readiness, which comprises materiel readiness and training readiness, or—more specifically—“skill-proficiency.” Training is merely the activity through which the output of skill-proficiency is generated. A strategic plan for training must have direct traceability from T&R manual standards and mission essential task lists (METLs), ending with the Marine Corps’ POM submission to the Future Years Defense Plan. It is no coincidence that the title of the budget request is described as a “program objective” with the actual objectives for ground training being vague and ill-defined in terms of the resources needed to accomplish them.

The allocation of resources for the ground component of the Marine Corps’ training systems are in many cases outdated, insufficient (or in some cases excessive) in quantity, geographi-

cally inconvenient for the units using the systems, and absent of allowances established in the Total Force Structure Management System (TFSMS). Ultimately, resources for ground training capability are not structured to achieve the objective.

The relationship between program budget and mission readiness should be the basis for the POM submission by the Training PEB for every ground training system in the exact manner that Marine Corps aviation establishes a direct relationship between resources committed to training programs and systems as well as mission readiness. Marine Corps aviation employs a resource-loaded strategic plan for training to formulate aviation training systems capabilities requirements and the budget to develop and field aviation training systems to support the METLs of the ACE. The strategic plan used by the Deputy Commandant for Aviation, commonly referred to as the Av-Plan, connects T&R manual events to training systems capabilities and budget requests and ultimately to skills-proficiency for all Marine Corps aviation units. The number and geographic location at installations around the globe of flight simulators by type/model/series and Marine Common Aircrew Trainers is not an accident but a calculation; aviation T&R manuals not only identify the training system or simulator required but also specify contractor simulator instructors, which maps directly into the program life-cycle cost estimate and POM submission.

On the ground side of the Marine Corps, there is no corresponding “ground plan” that produces Marines trained to standard in their MOS through resource-loaded strategic planning. The quantities and locations of ground training systems are not directly traceable to T&R tasks for a specific MOS or even from the Marine Corps common skills list, and no clear rationale can be provided for ground training systems. In many cases, the approved acquisition objectives (AAOs) and unit allowances for training systems were never established in TFSMS. Despite the policy published in the TFSMS² that requires bi-annual AAO re-

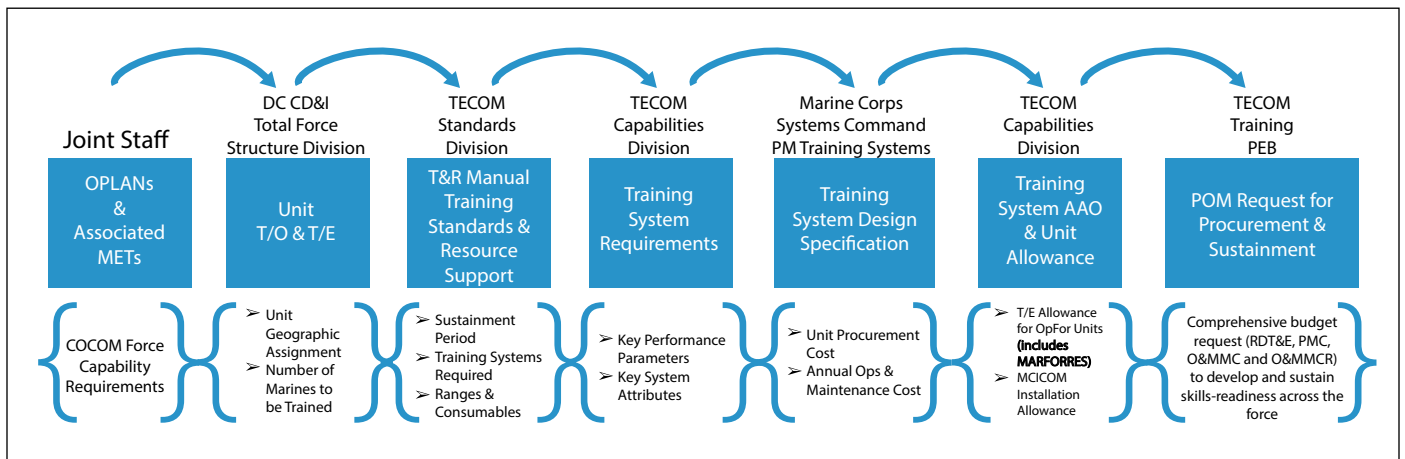


Figure 1. Process flow for ground training strategy development.

views for all TFSMS allowances, there has not been an AAO review conducted for any ground training systems in the past five years. Without allowances established in TFSMS for ground training systems, the Training PEB budget submission reflects the cost to sustain “how many we have” rather than “how many we need.” Lack of TFSMS allowances that support training to achieve METLs not only creates shortages of training capability but is also a material weakness for audit accountability of ground training systems and equipment. (See Figure 1.)

Five ground training systems programs are based on operational requirement documents that pre-date the establishment of the Joint Capabilities Integration & Development System process in 2002. The operational requirement documents for Marine Corps distance learning program, also known as MarineNet, was last updated in 1999. Consider for a moment that the Marine Corps distance learning requirement predates the release of the first-generation iPhone by eight years. As any Marine who is compelled to log in to MarineNet to complete several annual training online courses (I recommend reviewing “Tobacco Cessation” as a prime example) can tell you, the courseware is slow to load and based on outdated standards such as Adobe Flash. For Marines in their first term of enlistment, MarineNet is obviously something considered vintage even when they were in elementary school.

The discontinuity between training standards, training systems, unit and installation allowances, and the budget submission for the Training PEB must be corrected with a comprehensive ground training strategy that is reflected in the POM submission. There pres-

ently exists a lack of connection between the training systems Joint Capabilities Integration & Development System documents to the TFSMS, AAO and unit or installation allowances to possess the training systems. The lack of a ground training strategy influences

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not only training the Operating Forces, but also entry-level MOS schools that lack the training systems necessary to support their programs of instruction.

To illustrate how T&R standards impact resource loading in the budget, consider the task 8154-WPNS-2001 “Engage Threats with Service Rifle” from the Security Forces T&R Manual³ published in May 2018. The sustainability period for this task is six months and it applies to every Marine assigned to a security forces unit with a Service rifle as the table of organization weapon. The standard makes no mention of simulation or the Indoor Simulated Marksmanship Trainer (ISMT) that has been fielded across the Corps as a program of record since 1993.

More surprisingly, the support requirements for this single T&R task state that each Marine will require 3,720 M855 cartridges and 3,720 M862 cartridges every six months for live range training. The task 8154-WPNS-2002 “Engage Threats with Service Pistol” does actually mention the ISMT, but rather than stating a performance standard for percentage of hits on target for a course of fire described in the Combat Marksmanship Program,⁴ the use of the ISMT is stated as “one hour” followed by a support requirement of 5,740 rounds of M882 9mm ammunition per Marine.

The Assault Amphibious Vehicle T&R Manual,⁵ published in 2017, defines task AAV-AMPH-6002 “Support Amphibious Operations.” This includes components of “conduct embarkation of amphibious shipping” and “execute ship to shore movement.” It has a twelve-month sustainability period and states in the support requirements, “Amphibious Shipping required to support this task.” Despite being entirely reliant upon the availability of Navy amphibious shipping funded by Navy operations and maintenance resources to perform this task, no requirement has been identified and validated under by TECOM according to the Expeditionary Force Development System⁶ for an AAV crew trainer to facilitate affordable and effective training for AAV crews—and in the future amphibious combat vehicle crews—through simulation for

embarkation and ship-to-shore movement. AAV crews in Marine Forces Reserve have almost no opportunities to train for AAV-AMPH-6002 and no requirement to address this training capability gap has been addressed by a doctrine, organization, training, material, leadership, personnel, and facilities working group.

Some training systems programs of record have not a single T&R event in any Navy-Marine Corps Form (NAVMC) T&R manual that can be cited to justify the resources expended on their existence. For one example of a system that is untethered from T&R requirements, consider the Modular Amphibious Egress Trainer (MAET). The MAET is not cited as a requirement in any T&R manual. There was a T&R event 0918-SURV-2007, “Egress from a submerged aircraft” in the 2008 edition of the *NAVMC 3500.41* specific to the MOS 0918 (Water Safety Survival Instructor) that specified the MAET.⁷ However, event 0918-SURV-2007 was deleted from the *NAVMC 3500.41A*, and the latest *NAVMC 3500.41B* published in 2014.

The MAET trainers, originally designed to replicate the passenger compartment of a CH-46, are fielded to four locations and have continued to operate despite having no prescriptive T&R standard requiring their use in-

cluding the *MEU T&R Manual*.⁸ The only mention in Marine Corps policy of underwater egress training for aircraft passengers for ground component Marines is in the *MCO 3502.3B, MEU(SOC) Pre-deployment Training Program*, (Washington, DC: HQMC, 2012), but it only requires underwater egress training for “All designated frequent fliers.”⁹ Frequent flyer is a term used in the *MCO 3502.3B, MEU(SOC) Pre-Deployment Training Program*, but the order does not define any criterion for identifying what constitutes “frequent” versus “infrequent. The Pre-Deployment Training Program order provides no criterion for determining what constitutes a “frequent flier,” making the *MCO 3502.3B* less than helpful in justifying a budget request for the sustainment or upgrade of the MAET which was first fielded in 2004.

The Infantry Immersion Trainers (IIT) were first established as a program of record in 2009 after a successful technology demonstration by the Office of Naval Research (Code 30) at Camp Pendleton. The prototype IIT, known initially as “The Tomato Plant,” led to the fielding of IITs at Camp Lejeune and Marine Corps Training Area Bellows on Oahu, Hawaii. The user feedback on the IITs has been consistently positive; yet, the use of the IITs is only supported by local unit SOP and is



A course of fire for a moving threat is still not available. (Photo by PFC Mark Fike.)

prescriptively mandated in the infantry T&R standards. The most basic missing link among the silos of Marine Corps ground training capability is the lack of connection between ground T&R manuals in containing objective performance metrics that inform the training systems JCIDS requirement documents.

The update cycle for T&R standards is biannual but often changes, and updates take more than one cycle to be incorporated into a Marine Corps order or T&R manual. Marine Corps orders cited as references for T&R manuals often taken even longer to be updated. The Fiscal Year 2016 Combat Marksmanship Symposium recommended to Deputy Commandant for Capabilities Development and Integration (DC CD&I) that a marksmanship table for moving threat engagement should be added to the Combat Marksmanship Program (CMP).¹⁰ Deputy Commandant for CD&I published the Combat Marksmanship Symposium Post Symposium Message¹¹ in February 2016, directing the proponent for combat marksmanship to develop a Moving Threat Engagement Table 7 course of fire. The proponent convened an operational planning team with stakeholders from the MEFs, Training Command, and TECOM, and a proposed course of fire was submitted to DC CD&I for endorsement. Nearly three years later, the CMP order has not been updated to incorporate the Table 7 course of fire developed in the spring of 2016. Without the update to the CMP order, the target systems technology required to support advanced moving threat engagement training has no requirement and no funding.

The Live, Virtual, and Constructive Training Environment (LVC-TE) Initial Capabilities Document was endorsed by the MROC in 2010. The next step in refining the LVC-TE capability requirement to produce a capability development document was not initiated until 2014 and stalled. An analysis of alternatives was initiated in 2017 and is nearing completion. As of early 2019, the LVC-TE requirement has still not reached a maturity that supports a Milestone B decision that would initiate an acquisition program. Eight years after

the validation of the Initial Capabilities Document, there remains no endorsed requirement for the capability to conduct distributed training that can connect installations around the globe and all elements of the MAGTF when necessary to train as a team.

A comprehensive list of examples where the lack of an overarching strategic plan for ground training results in wasted or misaligned resources would be quite long. Lack of connection between training standards, training system requirements, and budgeting to acquire and sustain affordable and effective training for the Corps is a critical gap in policy that should be corrected without delay beginning with T&R events prescriptively identifying the systems needed to support them. In December 2015, Gen Robert B. Neller laid out his vision for how the force should be trained in a speech that included the following statement:

So, I think we got to take a look at how we do this training because to me training is all about reps, it's about reps. And anybody played on a sports team in here? You know, run it again. Run it again. Run it again. Run it again. And we do a really good job at getting reps in a lot of things, particularly individual task condition standards like air crew, and I think pilots get a great job. Simulators are very sophisticated. They get rep after rep.¹²

The sufficiency in quality and quantity of training systems and support personnel to facilitate increasing repetitions of practice cannot be realized for the ground elements of the MAGTF without a coherent resource-loaded ground training strategy. In practical terms, the absence of a strategic plan for ground training means that the funding allocated to support Marine Corps ground training capability functions more as a training crisis slush fund. Training support funding that is requested for one stated purpose is frequently re-allocated in a reactive manner to address emergent training shortfalls that are a symptom of no strategic vision for ground training.

Notes

1. Headquarters Marine Corps, *MCDP 1-1, Strategy*, (Washington, DC: November 1997).
2. Headquarters Marine Corps, *MCO 5311.6, Advocate and Proponent Assignments and Responsibilities*, (Washington, DC: December 2013).
3. Department of the Navy, *NAVMC 3500.61C, Operations & Readiness*, (Washington, DC: May 2018).
4. Headquarters Marine Corps, *MCO 3574.2L, Marine Corps Combat Marksmanship Program*, (Washington, DC: September 2014).
5. Department of the Navy, *NAVMC 3500.02C w/CHI, Assault Amphibious Vehicle Training and Readiness Manual*, (Washington, DC: March 2017).
6. Headquarters Marine Corps, *MCO 3900.15B, Marine Corps Expeditionary Force Development System*, (Washington, DC: May 2008).
7. Department of the Navy, *NAVMC 3500.41, Training Military Occupational Specialties Training and Readiness Manual, (TMOS T&RM)*, (Washington, DC: March 2008); *NAVMC 3500.41A*, cancelled by *NAVMC 3500.41B*, (Washington, DC: October 2014).
8. Department of the Navy, *NAVMC 3500.99, Marine Expeditionary Unit (MEU) Training and Requirements Manual*, cancelled by *NAVMC 3500.16A, Marine Air-Ground Task Force Training and Requirements Manual*, (Washington, DC: January 2018).
9. Frequent flyer is a term used in the *MCO 3502.3B MEU(SOC) Pre-Deployment Training Program* but the order does not define any criterion for identifying what constitutes "frequent" versus "infrequent."
10. *Marine Corps Combat Marksmanship Program*.
11. Headquarters Marine Corps, *MARADMIN 112/16, FY16 Combat Marksmanship Symposium Post Symposium Message*, (Washington DC: February 2016).
12. NTSA Today, "Gen Robert B. Neller, USMC and Panel on 'Training Innovation,'" YouTube Video, 1:32:37, (Online: December 2015).

