Amphibious Breaching

A capability to project power where we want to fight

by LtCol Chris Haar

With maneuver warfare tenets, we will always seek a gap in the enemy's defense to exploit and attack. The MAGTF's ability to land at a place of our choosing and rapidly build combat power ashore allows it to fight and win a battle. However, finding a weak point in the enemy's defense does not mean the MAGTF will land where there is no enemy; it will have to conduct an assault, even if the enemy is present, to gain the beachhead and introduce further combat power. While this seems unpalatable in our current risk-averse culture, if the enemy provokes us with a shocking enough event, the political will of the United States will be behind us, taking the fight to the enemy.

Limited numbers of amphibious ships and landing craft will force the commander landing force to make hard decisions about how to build combat power ashore. Ultimately, the mixture of forces in and scheduled waves of the assault will be planned based on an analysis of enemy forces, the natural and manmade obstacles in the beachhead, and the geography of the area. Marine combat engineers will be key players in the initial waves to provide mobility for the force from the *line of demarcation* to the beach exit and on to the beachhead objectives, but balancing the number of assets required to provide this mobility with the combat power will be a key decision. These engineers are one portion of the breach force required by the MAGTF to reduce, proof, and mark lanes in obstacles then conduct follow-on clearance operations to enable combat power to be built up ashore. Herein lies the *Catch 22*: effectively balancing the mix of combat engineer assets with other combat arms to gain and build combat power ashore.

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During the assault, the combat engineers will need to rapidly reduce obstacles to create lanes from the landing point to the beach exit zones so that the landing force can secure beachhead objectives. Securing the beach in craft landing zones is required to allow the combat engineers to focus on the clearance operations. During exercise STEEL KNIGHT in December 2017, Marines from 1st Combat Engineer Battalion and 3d Amphibious Assault Battalion worked with Sailors from the USS *Rushmore* (LSD-47) to rehearse these actions. This event and the doctrinal tactics tested and evaluated were supported with test equipment from Marine Corps Systems Command.

Reducing obstacles on the beach will require multiple reduction methods with redundant capabilities. These obstacles will be both natural and manmade. Mobility on the beach is already complicated because sand affects the mobility of our vehicles. For example, many beaches contain walls of sand, requiring heavy equipment or a combat dozer blade to reduce the wall when it exceeds the step requirements of our combat vehicles. Explosive obstacles will include mines, unexploded ordnance, and improvised explosive devices—all of which combat engineers are trained and authorized to blow in place during

Firing the MICLIC from a buoyant AAV with Mk154 Mod 1. *(Photo by LCpl Preston Hightower.)*

ABV and ACE extend the breach lane through obstacles ashore. *(Photo by LCpl Rhita Daniel.)*

breaching operations. It is likely that there will also be wire, hedgehogs, log cribs, and other manmade obstacles in the beach zone that combat engineers can and will be required to reduce through explosive and mechanical means.

Going forward, the MAGTF will need to plan for flexible and redundant means of reducing obstacles during the assault. During Steel Knight, we experimented with a combination of AAVP7 firing the mine-clearing line charge (MICLIC) with the newly modified Mk154 breaching system "feet dry" from the surf zone and buoyant shots. (Previous testing has shown that the MICLIC is effective in reducing explosive obstacles to a depth of eight feet.) Following these charges were LCUs loaded with assault breacher vehicles (ABVs) with a modified, full-width mine plow and an armored combat excavator and LCUs loaded with a medium crawler tractor (MCT) and an ABV with a combat dozer blade. To better explain the capabilities of these vehicles and the mechanics of their utilization, the ABVs carry two MICLICs each to explosively reduce obstacles, while the modified full-width mine plow and the blade assets are used to proof the lanes. After breaching and proofing the lanes with the aforementioned assets, combat engineers in a chase AAV conducted lane marking and were then available for dismounted breaching as required. In future iterations, we need to integrate tanks with a track-width mine plow and landing obstacle clearance detachments from LCACs and continue to experiment with robots and other unmanned systems to reduce and proof lanes. Again, redundancy in reduction and proofing methods is required in the planning to ensure enough lanes are reduced, proofed, and marked to allow for the rapid buildup of combat power ashore.

Once the lane is reduced and proofed, combat engineers will supervise the marking of these areas until the beach operating group and landing support Marines are able to take full control of the beach. A revised method for the initial marking of breach lanes was exercised during Steel Knight. The panel system developed for the exercise included a three-foot by three-foot panel indicating the color of the beach on top with a three-foot by three-foot naval letter designating the letter of the lane. Hence Blue Beach 1, Lane A, is represented by a blue square over an A pennant. This system was visible to AAV crewmen and LCU operators out to one nautical mile with the naked eye. Marking in this method will enable the direction of combat power to the proper lane ashore until the beach is cleared of obstacles through the utilization of common communication means between the blue-green team.

Clearing obstacles to enable combat power to be built ashore will be a deliberately planned action. Other capability gaps to clearing the beach remain. The JDAM Assault Breaching System has not been tested against obstacles on an actual beach or rehearsed during an exercise. Current ground-penetrating radar is limited in its ability to identify subsurface explosive hazards on the beach, and, although new systems are currently under development, we will need to use other means to identify and clear the obstacles. Using mine rakes mounted on an up-armored MCT bulldozer and the full-width mine plow on the ABV are two mechanical methods we have for rapidly proofing areas for craft landing zones. The Marine Corps currently does not have a side-cast mine rake in the inventory, but having this asset would allow us to more effectively push any mines found in the spoil in one direction across the entire width of the breach lane, as current rakes and plows are pointed in the center and have the potential to push mines in the spoil to both sides.

Although the current capabilities are not ideal for conducting an amphibious breach, the live fire combined arms amphibious breach onto San Clemente Island proved we have the capability to conduct these operations. Exercises like 1st MarDiv's Steel Knight and 3rd Fleet's Rim of the Pacific Exercise are ideal times for us to continue to experiment and rehearse how to conduct these operations. Only through exercising these capabilities will we develop the techniques, tactics, and procedures for further refinement and uncover the gaps in our current capabilities and equipment for development by the Supporting Establishment.

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