Water for Sheep

UH-1Y training in the desert southwest

by Maj Evan Nordstrom

In late August of 2021, a section of UH-1Ys supported four days of operations in Southern California to help ensure the preservation of desert bighorn sheep. At face value, this would appear to be an inconsequential event or a puff piece to bolster the Marine Corps' image. It certainly was not standard, and there was no weaponry involved. Regardless, what occurred was significant and may serve to provide an example of the opportunities the Marine Corps has to shape and prepare itself for the next fight. If we train as we fight and we are not sure of what the next fight will be, then acceptance of the standard training profiles will leave the Corps in mediocrity.

The Mission

The unprecedented drought in the American Southwest this year has threatened the survival of desert bighorn sheep including the federally endangered subspecies peninsular desert bighorn sheep.[1] Many individuals and groups are doing their best to prevent the extirpation of this animal including Backcountry Hunters and Anglers (BHA). BHA is known for its support of public lands for hunting and fishing and has recently added an Armed Forces Initiative (AFI). It was through Camp Pendleton's BHA AFI chapter that a request for helicopter support was raised. Camp Pendleton's BHA AFI coordinator reached out to HMLAT-303, the training squadron for H-1 aircrew, to ask if there were any chance UH-1Ys would be able to fly water into the mountains where these sheep needed it. The experience was worthwhile from a training perspective and the squadron was granted permission (more on this later) from the chain of command.

Planning had started before the approval was given and continued in earnest for several weeks. The requirements for delivering external equipment in the mountainous terrain during the severe heat of mid-summer warranted the most senior crews available with two pilots and two crew chiefs per aircraft. Additionally, it was decided to have Marines in a support role on the ground for the aerial delivery of water. A captain from the 1st Marine Raider Support Battalion and another captain from Fleet Replacement Squadron Training at HMLAT-303 qualified as a forward air controller were chosen, bringing the total to ten Marines. This number does not include the Marines who were required to preposition to one of the fields where the helicopters would remain overnight so routine maintenance could be performed without the aircraft having to return to the home field.

Bucket being emptied into guzzler. *(Photo by Mr. Brian Schwab.)*

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Three distinct areas needed water. With no natural water left, manmade sources known as "guzzlers"—which come in various shapes and sizes—have been established in these areas. In order to fill the guzzlers, the utility helicopters would first drop off ground personnel at the guzzler. They would then externally carry a ten-foot diameter pool made out of metal and a pump and drop them with the ground personnel. As the ground personnel set up the pool and pump, the helicopter would fly back to a "dip site" where external agencies had trucked water in and transferred the water to a "pumpkin" (a larger pool colored orange). The pilots would then utilize a "bambi bucket" (a large container externally carried and filled with 225 gallons of water normally used in a

firefighting role) to carry water from the pumpkin at the dip site to the awaiting pool that ground personnel had set up by the guzzler. Once they dropped the water at the guzzler, the water would either be pumped or gravity fed to the long-term containers, which are a part of the guzzler.

The operation went on schedule over the planned four days with the helicopters working in unison with all other agencies. Though there were several setbacks throughout the long weekend, the sheep in all three areas were provided with enough water to last them through the Spring.[2] The experiences had during this operation lend themselves as a lens to consider the different facets of Marine Corps planning and training during a time when the biggest concern is the near-peer fight and the changing roles of legacy platforms in *Force Design 2030*.

UH on final to Guzzler. *(Photo by Mr. Brian Schwab.)*

Planning

This operation offered a unique exercise in planning to the Marines involved. Evolutions such as Service-Level Training Exercise (SLTE), Raven, and Summer Fury all provide Marines the ability to better themselves at planning. However, *MCDP 1* warns against the danger of "dictated" or "canned" scenarios, and while exercises like SLTE provide a useful training tool, its size and complexity require it to be scripted to a significant degree in order to mitigate the serious risk involved with the live-firing of ordnance.[3] There are no easy solutions to this problem as we as an organization require this magnitude of combined arms exercise in order to be proficient as a larger fighting force. The novelty of this mission coupled with the unfamiliarity between all players provided real friction and uncertainty. It required a concerted effort on the part of the Marines planning it and tested the veracity of the Marine Corps Planning Process. In the lead planner's own words, "This mission fell within the framework for USMC doctrinal planning, just in a non-standard way. Frankly, this showed the doctrinal planning works (primarily the contingency piece)."[4]

Roughly 30 hours of planning occurred led by a captain and a former Marine who works in his off time as a Society for the Conservation of Bighorn Sheep (SCBS) board member. In addition to SCBS, the other agencies/organizations involved included Anza-Borrego Desert State Park, California Department of Fish and Wildlife, Bureau of Land Management, California Chapter of the Wild Sheep Foundation, Desert Wildlife Unlimited, and another contingent of Marines located at Marine Corps Air Ground Combat Center, Twentynine Palms. The challenge for the captain was complex both in the area of operations as well as the diversity of participants.

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A large part of the planning involved confirmation of the efficacy of a UH-1Y as a delivery platform for water to the required sites. As a result of the time of year, the heat and orographic winds, and the amount of water necessary the helicopter was operating at its limit. Additionally, it was determined the most critical site requiring water could not be serviced utilizing the standard firefighting equipment. The site was in an area which required the use of a "long-line" (a reinforced 120' rope as compared to the standard 15' pendant). The aircrew determined unless one of the NGOs would be able to procure one for use on the UH-1Y the mission was not possible. Fortuitously, one of the crew chiefs decided to go to the Marine Air Logistics Squadron (MALS) on Camp Pendleton and dig through the parts there. He found a long line that not even the MALS personnel knew existed. Acceptance of the standard configuration had led H-1 crews and MALS personnel to forget a capability they had the entire time. After the aircrew confirmed the configuration was indeed legal, a proof of concept was required for this mission to succeed. While the long-line was effective at heavier weights, there was equipment that would be required to be carried in that was too light to

safely fly using the long-line. The apparatus to add weight did not exist but, the Captain worked with SCBS and the California Chapter of the Wild Sheep Foundation to garner funding for a specialized weight to be made by a civilian company. Through diligence and attention to detail, a problem worth thousands had been fixed for hundreds all while adding another capability to the already capable UH-1Y.

Once all sites had been thoroughly studied and the theoretical ability of a section of UH-1Ys to deliver enough water to be of sufficient use to the parties involved was confirmed, a timeline was determined and the next hurdle was addressed: Approval from higher. Risk management is important for the preservation of lives, assets, and capability. However, risk aversion can become crippling and lead to atrophy of the abilities of a Marine, a unit, and a force. The media attention this mission would incur and the austere environment within which it would be conducted left its planners skeptical of approval. It would be quite easy to lay blame on lower commanders if a mishap were to occur with admittedly high stakes. Fortunately, the Marines involved did a phenomenal job thinking through and planning for each contingency to include reconnaissance of the zones and trial runs with the new gear. The thoroughness of the preparation made it relatively easy for both the O-5 and O-6 commanders to approve the mission.

Training

The value afforded the Marines involved with this mission was predominantly in the form of experience doing something most of them had rarely done in their careers with people and agencies unfamiliar with each other. Secondarily, the rugged terrain reflected the same environments that groups such as ISIS operate in, and where small teams of Americans are forced to root them out. The environment and long days alone were challenging enough even to crews as senior as those chosen. Coupled with the unfamiliar long-line, the aircrew were well aware of the care necessary to ensure a safe and effective plan as the risks added up. The contingencies were

UH utilizing the longlinen with specialized weight. *(Photo by Mr. Brian Schwab.)*

planned for, extra aircraft were allotted, bump plans were created and all players were prepared by the time the mission began.

As *Warfighting* instructs, and similar to the planning, the conduct of the training was decentralized.[5] After takeoff, the crews were on their own with no expectation of reporting except for safe on deck at the end of the day. Within hours of launch, the section of UHs had each made a precautionary landing for separate emergencies and the backup UH had been found with problems on startup. The lead aircraft was able to correct the gripe on deck and continue to the landing site to conduct the face-to-face planning with the civilian agencies mentioned above which, to this point, none of the Marines had ever seen in person. This unknown situation with the variability of human interactions alone makes this operation effective in its training experience. The innovation required and the coordination conducted just on day one was enough to make the entire evolution worth it from the Marines' training perspective.[6]

All real-world missions will inherently involve dealing with friction. This often is not able to be duplicated by training during SLTE or other similar evolutions as the result is contrived whereas, if the sheep don't get water, they die regardless of the personalities and capabilities involved. Decentralized execution will only work with well-trained Marines. If the crew involved in this mission had not been at the top of their game, there were many pitfalls that could have ended in mission failure if not disaster.

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The next three days had one or both helicopters flying to the max of their crew day. During the first day of water delivery, the lead UH flew solo while the second UH returned to Pendleton to retrieve a fourth aircraft to help on the final two days of water delivery. Since the mission was planned for two UHs, the aircrew and their civilian partners had to decide on where only half of

the planned water would go. While the second day saw both UH successfully delivering water, the third day saw one of the apparatuses required for water delivery break so that it was unable to be fixed that day. Regardless of the issues faced, the Marines were able to work through the problems and successfully supply the Southern Californian populations of Bighorn Sheep with sufficient water to save them from the interminable drought. To further substantiate the significance of the Marine UH capability, one of the sites where water was successfully delivered would not be considered by the civilian contractors who are normally hired to deliver this water. To be clear, this is not to sully their reputation or to exaggerate the Marines' own. Simply, the Marine Corps exists to be able to do what others cannot. In this case, the crews looked at the problem, determined the risk, developed controls in the form of very small "work-ups" and safely executed the complex and dangerous task.[7]

The Marines on the ground also received experiences neither had ever had before. Being dropped into unfamiliar terrain in the extreme heat and constant battering downwash from the UH main rotor was taxing. The coordination piece again became a point of learning as while the Marines were familiar with the helicopter, the civilians who were on the ground with them were not. The civilians were volunteers who wanted to help but their eagerness became a liability. The Marines on the ground had to manage both the helicopter and the unfamiliar civilians who did not have an appreciation for nor the training required to work in tandem with the aircrew. As professionals, they were able to do it safely and successfully.

Implications based on the CPG and historical use of H-1s

The general tendency of the H-1 community, from the author's experience, is to concentrate on Force Design and its implications for the future of said community. While it is the number one priority, the Commandant states plainly the importance of warfighting and education as well. It is clear China is the pacing threat and the planning guidance is geared toward ensuring the Marine Corps is prepared to defeat them. However, as General Krulak pointed out, "The war you prepare for is rarely the war you get."[8] This is not the first article in recent history to suggest an alternative concentration for the H-1 community. An article printed in this publication about two years ago argues stand-off capability (a tenet of the Commandant's plan for the fight with China) isn't something H-1s bring to the table and should therefore be utilized in low to medium threat environments where they have proven their mettle over the last two decades.[9] While capability in a low to medium threat environment is important, preparing to fight for the last war is as grave a mistake as assuming the next war has been preordained.

UH with standard configuration drawing water from the pumpkin. *(Photo by Mr. Brian Schwab.)*

The UH-1Y will always have a use regardless of the foe. As the pilots who cut their teeth in Iraq and Afghanistan transition to senior staff positions or ride off into the sunset, the lack of combat experience in the company-grade officers leads to training becoming the end-all for preparing for the next war. The development of the next generation must be of primary concern. If training is all there is then the efficacy of that training is of the utmost importance. As *Warfighting* states, "Experience under fire generally increases confidence, as can realistic training by lessening the mystique of combat."[10] While training can only come so close to being "under fire" there are real-world scenarios in which the UH-1Y can train as shown by this sheep mission. The most obvious tasks trained during the sheep mission include CASEVAC as well as insert/extract practice but there is another facet to consider.

Consider the Marine Corps' actions in the smaller wars and disputes it has been a part of. Many of them provide examples of small units dealing with local populations and having a significant effect on the outcome of global power struggles. This is why the Commandant can say with certainty we are a force that, "ensures the prevention of major conflict and deters the escalation of conflict."[11] The first night of the sheep mission had the Marines camping near a road that local civilians frequented. The locals saw the grey helicopter land on the edge of state land and, their curiosity piqued, they drove out to see what the situation was. The Marines on this mission were professional and friendly and were happy to interact with the people who came to ask what they were doing. After talking with a particular group, the Marines were taken aback by the locals' opinion of Marine helicopters. From the perspective of the Americans who live in the Southern California desert, the grey helicopters

that are always overhead are, at best, an enigma. To talk with the helicopter aircrew and hear about the positive impact they are having in this one small instance left the local populace pleased and welcoming to the otherwise aloof and vaguely intimidating presence of the helicopters.[12]

This is not a novel occurrence. The importance of winning the loyalty of the people has long been a key to military victory and is perhaps best summarized by Sir Robert Thompson: "The peoples' trust is primary. It will come hard because they are fearful and suspicious. Protection is the most important thing you can bring them. After that comes health. And, after that, many things—land, prosperity, education and privacy to name a few."[13] After the initial combat and destruction, Marines must be able to lift up and support, through both goodwill and more concrete things such as infrastructure, those who are victim to but not the cause of whatever war is happening around them.[14] This is not always agreed upon but many examples provide at least an argument for the consideration of and planning for Marines to bolster civilian support.

Conclusion

The Marine Corps' focus is on preparing for victory in a war with the pacing threat and it will be this way for the foreseeable future (as it should). Training will follow suit and the scenarios within the training will reflect what we think will occur in places like the South China Sea and its surrounding areas. The requirements of the Marines during that fight will pertain to much more than the direct attack of the enemy and those of us whose jobs involve combat arms would do well to keep an eye out for how to keep the other capabilities that will lead to victory sharp. The mission to deliver water to an endangered species provided the Marines involved with an unparalleled experience. GySgt Jared Tape, a crew chief with eight deployments and over 4,000 hours in UH aircraft stated without hesitation, "This was the most varsity training I have ever participated in CONUS."[15] The mutual benefit between all parties has precipitated planning for the next round of water delivery. What other opportunities might exist within this country for Marines to work in actual situations and interact with various agencies and individuals who are not familiar with the military?

It is the direction of the Commandant for the Marine Corps to be, "A force that can prevent small disturbances from becoming regional conflicts."[16] The essence of war is lost oftentimes in large-scale exercises, and in order to be effective, the Marine Corps must look for other opportunities which allow for the practice of decentralized execution.[17] With just one overflight and a little bit of positive interaction, the Marines helping to save the endangered sheep made a lasting and positive impression on a population that was admittedly uncertain as to how they felt about the constant presence of the grey helicopters. The positive attributes of this mission are extensive and could take up much more than this article but, the takeaway must be individual circumspection as to how and where Marines may be able to train the full complement of essential tasks assigned to their MOS. Do not settle for the standard. Strive to look for new ways to train and new experiences to develop the next generation.

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Notes

1. Interview between author and Scott Gibson in September 2021.

2. Ibid.

3. Headquarters Marine Corps, *MCDP 1, Warfighting*, (Washington, DC: 1997).

4. Interview between author and Capt John Zimmer in October 2021.

5. *MCDP 1, Warfighting.*

6. Headquarters Marine Corps, *Force Design 2030: Annual Update*, (Washington, DC: April 2021).

7. Interview between author and Capt John Zimmer in October 2021.

8. Victor H. Krulak, *First to Fight: An Inside View of the U.S. Marine Corps*, (Annapolis, MD: Naval Institute Press, 1999).

9. B. O'Donnell, "Standby Five Line: The future of Marine Light Attack," *Marine Corps Gazette*, (Quantico, VA: February 2021). .

10. *MCDP 1, Warfighting.*

11. Headquarters Marine Corps, *38th Commandant's Planning Guidance*, (Washington, DC: 2019).

12. Interview between author and Capt John Zimmer in October 2021.

13. Victor H. Krulak, *First to Fight: An Inside View of the U.S. Marine Corps*, (Annapolis, MD: Naval Institute Press, 1999).

14. Ibid.

15. Interview between author and GySgt Jared Tape in September 2021.

16. Headquarters Marine Corps, *Force Design 2030: Annual Update*, (Washington, DC: April 2021).

17. *MCDP 1, Warfighting.*