U.S. Military Forces in FY 2022

Marine Corps

Mark F. Cancian

Part of *U.S. Military Forces in FY 2022*. The Marine Corps continues a major restructuring to develop capabilities for great power conflict in the Pacific after two decades of conducting counterinsurgency operations ashore. The budget cuts units and personnel to pay for these new capabilities. The restructuring remains controversial and a work in progress.

KEY TAKEAWAYS

- General David Berger's *Force Design 2020* initiative aims to restore the Marine Corps to its naval roots after two decades of operations ashore, invest in capabilities focused on great power conflict in the Pacific, and divest forces unneeded for these conflicts. The Marines intend to be a "stand-in" force that can operate inside an adversary's (China's) defensive bubble.
- To pay for new capabilities and accommodate a flat budget top line, the Marine Corps cuts active-duty end strength on a path to about 172,000, the level before the wars in Iraq and Afghanistan.
- Ground forces gain long-range precision fires but give up three infantry battalions, tanks, and most counterinsurgency capabilities. Most artillery convert from cannon to missile units. These changes are all underway. Final designs for logistics, reserve, and reconnaissance forces are still under development.
- Marine aviation gets smaller, consistent with cuts in the ground forces. Emerging concepts imply cuts to manned aircraft, particularly the F-35, but such plans are still under development.
- In FY 2022, the Marine Corps buys six MQ-9 Reaper unmanned aerial vehicles (UAVs), its first major such acquisition, but is far behind the Air Force in this area.
- The future amphibious fleet will include large numbers of light amphibious warships (LAWs) and fewer traditional large amphibious ships (LPDs, LSDs, LHAs, and LHDs). These small LAWs will provide more distributed capabilities to implement the new warfighting concept. The trade-off is that,



because of the LAW's small size, they will not be able to support the customary level of global forward deployments, which may decline as a result.

• The restructuring has been criticized for focusing too much on a maritime campaign in the Western Pacific, ignoring other global conflicts, and relying on unproven operational concepts.

The FY 2022 budget is an interim step as the Marine Corps implements a major restructuring. This restructuring would shed capabilities for counterinsurgency and sustained operations ashore and cut a slice across the entire Marine Corps to pay for new capabilities designed for conflict in the Western Pacific against China. Full implementation is expected in the FY 2023 budget and its associated five-year plan.

End Strength in FY 2022

Table 1: Marine Corps – Active, Reserve, and Civilians

	Marine Corps Active Duty	Marine Corps Reserve	Civilian Full-Time
	Authorized End Strength	Authorized End Strength	Equivalents
FY 2021 Enacted	181,200	36,200	22,792
FY 2022 Request	178,500	36,800	22,921
Change	-2,700	+600	+129

Source: Department of the Navy, Highlights of The Department of the Navy FY 2022 Budget (Washington, DC: Department of the Navy, 2021), Active-duty end strength data in Figure 7.5; Reserve end strength data in figure 7.7; Civilian data in Figure 7.10, https://www.secnav.navy.mil/ fmc/fmb/Documents/22pres/Highlights_Book.pdf.

In FY 2022, the Marine Corps cuts active-duty end strength by 2,700, continuing an end strength decrease to pay for the restructuring and to accommodate a budget top line projected to be flat. In this, the Marine Corps takes a diametrically different approach from the Army, which held onto end strength in FY 2022. (See Army chapter of this series for details.)

To accommodate this lower end strength, the Marine Corps cuts another infantry battalion, bringing the total down to 22 from a pre-restructuring level of 24. (A later section of this chapter describes all the force structure changes taking place.)

Marine Corps Reserve end strength appears to increase. However, this seems to be a response to a bad recruiting and retention year in FY 2020, when reserve end strength sank to 35,500. Typically, reserve end strength has been about 38,500, a level that historically has been both achievable and sufficient to fill the target structure. FY 2022 may be building back to that level. The number of infantry battalions remains at eight.

General Berger's original planning guidance hints at some reserve structure changes in the future: "We will explore the efficacy of fully integrating our reserve units within the Active Component, as well as other organizational options." The Force Design 2030: Annual Update considers the possibility of a combined active/reserve unit for UAVs, something common in the Air Force but novel for the Marine Corps. However, final decisions about a new reserve concept are still pending.² Unlike all the other services,

^{1.} David H. Berger, Commandant's Planning Guidance: 38th Commandant of the Marine Corps (Arlington, VA: U.S. Marine Corps, 2019), 6, https://www.hqmc.marines.mil/Portals/142/Docs/%2038th%20Commandant%27s%20Planning%20Guidance_2019. pdf?ver=2019-07-16-200152-700.

^{2.} U.S. Marine Corps, Force Design 2030: Annual Update (Arlington, VA: Department of the Navy, April 2021), 6, https://www.marines.

the Marine Corps Reserve is structured nearly identically to the active force and not as a complementary capability that fills gaps (with a few minor exceptions such as civil affairs, which exists in the reserve force but not in the active force).

Marine Corps civilians increase slightly, as with DOD civilians overall. This likely reflects a focus on rebuilding readiness and the substitution of civilians for military personnel in support activities. Marine Corps civilian strength levels have been relatively level for several years. However, General Berger has initiated a review aimed at cutting 15 percent of personnel in headquarters and the supporting establishment, so civilian strength might drop in the future.³ If the Marine Corps cuts functions in these supporting organizations, civilian reductions will follow. If the functions remain, but the civilians get cut, military personnel may be diverted to backfill, with an outcome contrary to the intention of the guidance.

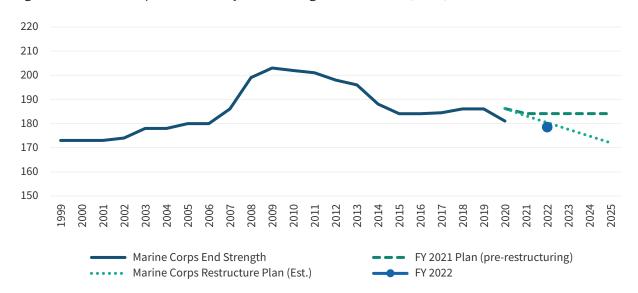


Figure 1: Marine Corps Active-Duty End Strength 1999–2025 (000s)

Source: Office of the Under Secretary of Defense (Comptroller), National Defense Budget Estimates for FY 2022 (Washington, DC: Department of Defense, August 2021), Table 7-5, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/FY22_Green_Book.pdf; Department of the Navy, Highlights of The Department of the Navy FY 2022 Budget (Washington, DC: Department of the Navy, 2021), Figure 7.5, and Department of the Navy, Highlights of The Department of the Navy FY 2021 Budget (Washington, DC: Department of the Navy, 2020), Figure 2.6, https://www.secnav.navy.mil/fmc/fmb/Documents/21pres/Highlights_book.pdf.

Recently, the Marine Corps had talked about expanding the active-duty force to 194,000. That level would have allowed the Marine Corps to build new capabilities without sacrificing the old. However, flat budgets required trade-offs.

The FY 2022 budget contained no future projections for Marine Corps end strength or elsewhere. Figure 1 shows the projection from the FY 2021 budget and reflects General Berger's recent statements to cut active-duty end strength by "about 12,000" to pay for the new capabilities envisioned. The FY 2022 budget

mil/Portals/1/Docs/2021%20Force%20Design%20Annual%20Update.pdf.

^{3.} David Larter, "In its Quest for Modernization, the US Marine Corps Looks to Shake up Its Headquarters," Defense News, March 1, 2021, https://www.defensenews.com/naval/2021/03/01/in-its-quest-for-modernizations-the-us-marine-corps-looks-to-shake-up-itsheadquarters/. This is reinforced in U.S. Marine Corps, Force Design 2030: Annual Update, 5.

^{4.} Berger, Commandant's Planning Guidance, 6. General Berger reiterated the intention to cut 12,000 Marines in David H. Berger, "Memorandum to the Secretary of Defense: United States Marine Corps Force Design 2030," U.S. Marine Corps, February 23, 2021, 2

is on track with that projection. Even at 172,000, the Marine Corps would be coming out of the wars at about the same level that it went in (172,600).

The McKenzie Group of 2013 (named after its leader, then-lieutenant general Kenneth F. McKenzie, now General McKenzie, commander of CENTCOM) argued that forward presence and crisis response were the Marine Corps' primary force drivers because of the strain from deployments. This reflects the time—10 years of high wartime operational tempo—but also the traditional Marine Corps focus on forward deployments.⁵

That argument has disappeared. General Berger, in his annual posture statement to Congress, did not mention high OPTEMPO or personnel stress.⁶ That is a change from statements pre-2016, when the commandants routinely cited the stress of multiple deployments.

A New Force Structure

When General Berger became commandant, he issued planning guidance with four major themes: (1) to reestablish the Marine Corps' naval roots after years of operations ashore in Iraq and Afghanistan; (2) to build structure and weapons for great power conflict, particularly in the Pacific ("We are laser focused on the Pacific"); (3) to eliminate capabilities that did not fit with a new concept; and (4) to maintain a high level of individual warfighting prowess. These themes were consistent with the National Defense Strategy and previously published Marine concepts such as Expeditionary Advance Base Operations and Littoral Operations in a Contested Environment. The Marine concepts envision a shift to distributed operations and the Marine Corps contributing to sea control in a naval campaign through forward deployed aircraft and shore-based fires, not just by projecting power ashore.

In March 2020, the Marine Corps announced the specifics of the restructuring in Force Design 2020. Subsequent guidance publications have elaborated and, in some cases, modified the original guidance.8 In addition, the Marine Corps has built out a broader doctrinal base with the Tentative Manual for Expeditionary Advance Base Operations, Marine Corps Doctrinal Publication 1-4 Competing, and Marine Corps Doctrinal Publication 7 *Learning*.

https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II. pdf?ver=2020-03-26-121328-460.

^{5.} Brian Buggeman and Ben Fitzgerald, Crisis Response: Institutional Innovation in the United States Marine Corps (Washington, DC: Center for a New American Security, November 2015), https://www.cnas.org/publications/reports/crisis-response-institutionalinnovation-in-the-united-states-marine-corps; Robert Neller, Posture of the Department of the Navy, Testimony before the Senate Armed Services Committee, 116th Cong., 1st sess., April 9, 2019, https://www.armed-services.senate.gov/imo/media/doc/ Neller_04-09-19.pdf.

^{6.} Thomas B. Modly, Michael M. Gilday, and David H. Berger, Fiscal Year 2021 Department of the Navy Budget, Statement before the Senate Armed Services Committee, 116th Cong., 2nd sess., March 5, 2020, https://www.armed-services.senate.gov/imo/media/doc/ Modly--Gilday--Berger_03-05-20.pdf.

^{7.} Statement by Lieutenant General Lewis Craparotta, head of the Marine Corps training and education command, cited in Mallory Shelbourne, "Marine Corps to Stand up First Marine Littoral Regiment in FY 2022," USNI News, January 20, 2021, https://news. usni.org/2021/01/20/marine-corps-to-stand-up-first-marine-littoral-regiment-in-fy-2022; U.S. Marine Corps, Marine Corps Operating Concept (Washington, DC: Department of the Navy, September 2016), https://www.mccdc.marines.mil/Portals/172/Docs/MCCDC/ young/MCCDC-YH/document/final/Marine%20Corps%20Operating%20Concept%20Sept%202016.pdf?ver=2016-09-28-083439-483; "Littoral Operations in a Contested Environment," U.S. Marine Corps, U.S. Navy, 2017, https://www.candp.marines.mil/Concepts/ Subordinate-Operating-Concepts/Littoral-Operations-in-a-Contested-Environment/; and "Expeditionary Advance Base Operations," U.S. Marine Corps, 2018, http://www.candp.marines.mil/Concepts/Subordinate-Operating-Concepts/Expeditionary-Advanced-Base-

^{8.} U.S. Marine Corps, Force Design 2030 (Washington, DC: Department of the Navy, March 2020), https://www.hqmc.marines.mil/ Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460; Berger, "Memorandum to the Secretary of Defense"; U.S. Marine Corps, Force Design 2030: Annual Update; and David H. Berger, "Preparing for the Future: Marine Corps Support to Joint Operations in Contested Littorals," Military Review, May 2021, https://www. armyupress.army.mil/journals/military-review/online-exclusive/2021-ole/berger-future/.

Unlike the Navy's proposed restructuring, General Berger stated, "I seek no additional resources for this effort." Thus, the restructure cuts many force elements to create savings to acquire new capabilities. The Marine Corps does acknowledge that there is a window of risk, as previous capabilities are drawn down before new capabilities become available.

Implementation is underway, with an initial operating capability planned for 2023 and a full operating capability planned for 2030. The documents emphasize that this is an ongoing process of experimentation and wargaming, even as major elements take shape. In particular, the logistics structure, reserves, reconnaissance, and some components of aviation are unresolved.

Indeed, in his FY 2022 posture statement, General Berger hints that major acquisition changes may be ahead:

With the new procurement of large weapon systems like the F-35B/C, CH-53K, MV-22, JLTV, and ACV—to name but a few—we should be prepared to modify programs of record to ensure affordability and viability throughout the entire lifecycle of each program. Prioritizing high end platforms without resourcing the supplies and infrastructure needed to sustain its operational capability is fundamentally irresponsible; the result would be a hollow force.¹⁰

General Berger has proposed a revised definition of readiness: "It is time for us to embrace a more sophisticated and balanced understanding of military readiness and cease using availability as the primary metric in our readiness evaluations." The implication in the testimony is to get rid of "legacy" systems and not use scarce funds to sustain them. 11 However, in the past, services have used arguments about focusing on "capability" rather than "readiness" as justifications to cut training and equipment maintenance. This will bear watching in the FY 2023 budget since readiness has been a hallmark of the Marine Corps as "first to fight."

Recent descriptions of the concepts behind the restructuring have emphasized the reconnaissance/ counter-reconnaissance aspects or "winning the hider/finder competition." "It seems increasingly likely that [what the Navy and joint force might need most from the Marine Corps] is not lethal fires as an in themselves but rather reconnaissance and counter reconnaissance applied in all domains and across the competition continuum." The Marine Corps hypothesizes that such forces, used before hostilities, could deter conflict, which it calls "deterrence by detection." 12 As a result of this increased focus, the Marine Corps reconnaissance structure of the future is in flux.

As justification for its new warfighting concept, the Marine Corps points to the second Nagorno-Karabakh war "in which the victor imposed their will primarily through the use of unmanned systems and loitering munitions."13 It also notes that "wargame after wargame suggests fixed land bases and high signature land forces will be vulnerable to long-range precision munitions."14

General Berger's original guidance and subsequent elaborations barely mention cyber and special operations, which raises questions about how they fit into his new concept for the Marine Corps. Both had

^{9.} David H. Berger, The Posture of the United States Marine Corps, Testimony to Senate Armed Services Committee, 117th Cong., 1st sess., April 26, 2021, https://www.armed-services.senate.gov/download/berger062221.

^{11.} Ibid., 24-25. Also, General Berger and General Charles Brown, heads of the Marine Corps and the Air Force, respectively, explain this in more detail in "Redefine Readiness or Lose," War on the Rocks, March 15, 2021, https://warontherocks.com/2021/03/redefinereadiness-or-lose/.

^{12.} Berger, "Preparing for the Future," 1, 3.

^{13.} U.S. Marine Corps, Force Design 2030: Annual Update, 3.

^{14.} Berger, "Preparing for the Future," 3.

been uncomfortable fits, with cyber Marines being hard to recruit and special forces Marines siphoning top talent from the regular line units.15

The Army has taken a bifurcated approach to Force Design 2030 and the concepts behind it. On the one hand, it has suggested that the Army might also provide distributed small units in the Pacific with longrange precision firepower. (See the Army chapter in this series for a description of the Army's thinking.) On the other hand, it has doubled down on traditional firepower, increasing the number of armored brigade combat teams (BCTs) and continuing to maintain a large force of cannon artillery.

If fully implemented, the restructuring would have a major cultural impact on the Marine Corps. Hitherto, the infantry has been the centerpiece of the Marine Corps and the principal instrument by which it wins battles. Its mission has been clear: "locate, close with, and destroy the enemy." ¹⁶ Under the restructuring, the Marine Corps would win battles using long-range fires from artillery and aviation. The infantry role would be mostly defensive to protect these long-range fire assets.¹⁷ General Berger has been emphatic, however, about the need to maintain basic combat skills across the entire force.

Ground Forces

Table 2 lays out the major changes that the restructuring would make to Marine Corps ground forces. The Marine Corps emphasizes that experimentation is ongoing, so additional changes are possible. In particular, the Marine Corps is still formulating plans for logistics and the reserves. (For a detailed assessment of Force Design 2030, see Mark Cancian, "The Marine Corps' Radical Shift toward China." 18)

^{15.} For the case against these units, see, for example, Dakota L. Wood, Rebuilding America's Military: The United States Marine Corps -Refocusing the Corps on Its Primary Mission: Contributing to the Prosecution of Naval Campaigns (Washington, DC: Heritage Foundation, March 21, 2019), https://www.heritage.org/sites/default/files/2019-03/SR211 0.pdf.

^{16.} The full infantry mission statement: "The mission of the [infantry] is to locate, close with, and destroy the enemy by fire and maneuver, or repel the enemy's assault by fire and close combat." From U.S. Marine Corps, The Marine Rifle Squad, MCWP 3-11.2 (Washington, DC: Department of the Navy, 2002), 1-1, https://www.marines.mil/Portals/1/Publications/MCWP%203-11.2%20 Marine%20Rifle%20Squad.pdf.

^{17.} Philip Athey, "Steely Eyed Killers No More: What Will the Corps' Culture Look like under the New Force Design?," Marine Corps Times, September 18, 2020, https://www.marinecorpstimes.com/news/your-marine-corps/2020/09/18/passive-defenders-or-steelyeyed-killers-what-will-the-corps-culture-look-like-under-new-force-design/; and a similar argument is made for the Army in David Barno and Nora Bensahel, "The Headwinds Looming for the US Army," War on the Rocks, October 27, 2020, https://warontherocks. com/2020/10/the-headwinds-looming-for-the-u-s-army/.

^{18.} Mark Cancian, "The Marine Corps' Radical Shift toward China," CSIS, Commentary, March 25, 2020, https://www.csis.org/analysis/ marine-corps-radical-shift-toward-china.

Table 2: Marine Corps Ground Force Structure

	Original Structure	2030 Structure	Recent Actions
Infantry	24 active-duty infantry battalions	21 active-duty infantry battalions, each about 15 percent, or 125 marines, smaller	Down to 22 battalions by end of FY 2022, future structure still under study
	8 reserve infantry battalions	6 reserve infantry battalions	Still at eight infantry battalions
Fire support	21 cannon batteries; 7 rocket batteries	5 cannon batteries; 21 missile/rocket batteries	In progress
Tanks	7 tank companies	0 tanks, no capability retained	All tank companies deactivated
Bridge companies	ies 3 bridging companies (active and reserve) 0 bridging companies		In progress
Law enforcement (military police) units	3 battalions	0 battalions	In progress, one retained in reserves
Marine Littoral Regiments (MLRs)	None	Conceptual in the original 2030 guidance	Three MLRs planned

Source: Mark Cancian, "The Marine Corps' Radical Shift toward China," CSIS, Commentary, March 25, 2020, https://www.csis.org/analysis/ marine-corps-radical-shift-toward-china.

Infantry: The cut of three infantry battalions appears to be a bill payer. The press release says that the remaining battalions will be more "mobile" and reportedly "commando-like." That implies deleting some of the heavy weapons such as mortars and anti-tank missiles. On the other hand, the commandant's memo to the secretary of defense cites "greater lethality." Indeed, at the tactical level, the Marine Corps has replaced its 1980s-era Shoulder-Launched Multipurpose Assault Weapon with the M3E1 Carl Gustaf Recoilless Rifle. The Carl Gustav has a longer range and a wider variety of munitions.

The Marine Corps is also moving toward 100 percent fill of its infantry units. If fully implemented and the initiative survives the decrease in end strength, this would produce a major increase in readiness. Customarily, infantry units were understrength and lost both combat power and deployability as a result.

The Marine Corps is considering a variety of actions that would have a major effect on the infantry if fully implemented, including:

- Extending the amount of training time at the School of Infantry from 9 to 14 weeks to ensure that **Marines going to the fleet will be conversant with all weapons systems.** This new approach is also designed to reinforce the critical thinking needed for distributed operations.
- Putting more experienced enlisted leaders at lower tactical levels. This would allow more versatile decisionmaking but age the force. The Marine Corps has customarily had the youngest enlisted force of all the services.

^{19.} Marine Corps Combat Development Command, "Press Release: Marine Corps Announces New Force Design Initiatives," U.S. Marine Corps, March 23, 2020, https://insidedefense.com/sites/insidedefense.com/files/documents/2020/mar/03232020_fd.pdf. 20. Berger, "Memorandum to the Secretary of Defense," 2.

• Developing "kamikaze drones" that would be launched from mobile platforms like a mortar. These would provide precision fires to low-level infantry units, potentially replacing some long-range fires and antitank weapons.

Experimentation continues, so the organization of the infantry battalion is not a settled issue.

Cutting infantry battalions allows proportional cuts in supporting capabilities—aviation, logistics, and fire support—thus generating enough savings to pay for new capabilities.

The infantry has long been the heart of the Marine Corps, so this would be a major institutional as well as force structure change if implemented.

The three active-duty divisions will have 21 infantry battalions after the restructuring, compared with 27 at full strength. The infantry battalions have also been getting smaller over time. Having consisted of about 1,050 Marines until the mid-1980s, infantry battalions would shrink to about 725 under Force Design 2030. Thus, the total number of Marines in infantry battalions drops from 28,350 in the early 1980s to 15,200 in the future, a cut of 47 percent for a Marine Corps of about the same size.

Fire Support: The artillery community will be roughly the same size after the restructuring, but it will be dramatically different and have three kinds of units: some units will remain equipped with conventional cannon; some will be HIMARS, which fire long-range guided and unguided missiles at land targets; and some will be a new system that fires tactical Tomahawk anti-ship missiles or the Naval Strike Missile. With their guided munitions, missile and rocket batteries can hit ground targets and ships at long range. However, they do not support the infantry with massed and area fires as cannon batteries do. This shift is a statement that the Marine Corps does not plan to face adversary armies close up on the ground but will instead fight maritime campaigns at long distances.

Tanks: This has been the most visible change. Tanks have been part of the Marine Corps since World War II and have fought in every conflict since. As with changes to the artillery, it is a dramatic statement that the Marine Corps does not plan to participate in ground conflicts in the future as it did in, for example, Desert Storm, the 2003 invasion of Iraq, or even the Korean War of 1950–1953.

Bridge Companies: These units provided bridges that allowed large numbers of vehicles, including armored vehicles, to cross rivers and gaps. However, they are not useful on islands with the limited maneuver space and small units envisioned in the force redesign.

Law Enforcement Battalions: These units are useful for counterinsurgency but would have little role in a Pacific maritime campaign. Thus, the restructuring cuts nearly all of the capability. This shows a determination not to get involved in future counterinsurgency campaigns.

Reconnaissance: Reconnaissance has emerged as a key capability in the Marine Corps' warfighting concept for the Western Pacific. Marine units will need to find adversary systems, on land, on the sea, and in the air in order to strike them with long-range fires. The Marine Corps will also need to conduct counter-reconnaissance to screen the joint force. The 2030 Force Design notes the need for "multi-domain reconnaissance" from a variety of systems as well as a reevaluation of the 12 planned Light Armored Reconnaissance companies.

Marine Littoral Regiments: This new kind of unit is emerging as the centerpiece of the restructuring effort. It would deliver anti-ground and anti-ship fires and be able to survive inside an adversary's (i.e., China's) defensive bubble (which the Marine Corps calls "the weapons engagements zone").

These new units harken back to a World War II capability, Marine Defense Battalions, which were designed to protect forward bases from naval and air attack. However, whereas the World War II units were defensive, the MLRs will provide an offensive fires capability. The Marine Corps has been experimenting on Hawaii using troops stationed there, and such experimentation continues. MLRs tentatively consist of a littoral combat team, a littoral anti-air battalion, and a littoral logistics battalion, though their exact structure is still being refined.²¹

Recent Marine Corps statements indicate that all three regiments of the Third Marine Division in the Pacific will convert to MLRs, with one each stationed on Okinawa, Guam, and Hawaii. The MLR on Hawaii will be a permanent unit. The MLRs on Okinawa and Guam (built from the 4th and 12th Marines) will be composite units with permanent headquarters, rotational subunits, and, possibly, flexible organization. Although MLRs look a lot like a specialized Marine Expeditionary Unit, the smallest of the Marine airground task forces, MLRs are not now characterized as task forces. They will apparently be permanent units. The first MLR will stand up in FY 2023.²²

If the MLR plan is fully implemented, the number of infantry battalions in the Western Pacific will decline to three, one in each of the MLRs, as the Marine Corps cuts infantry to put personnel into other capabilities.

Aviation Forces and Challenges

Table 3 shows the original (pre-restructuring) aviation structure, proposed changes under *Force Design* 2030, and recent actions.

^{21.} Megan Eckstein, "Marines Testing Regiment at Heart of Emerging Island Hopping Future," USNI News, June 4, 2020, https://news. usni.org/2020/06/04/marines-testing-regiment-at-heart-of-emerging-island-hopping-future; and Sean Snow, "New Marine Littoral Regiment, Designed to Fight in Contested Maritime Environment, Coming to Hawaii," Marine Corps Times, May 14, 2020, https:// www.marinecorpstimes.com/news/your-marine-corps/2020/05/14/new-marine-littoral-regiment-designed-to-fight-in-contestedmaritime-environment-coming-to-hawaii/.

^{22.} Shelbourne, "Marine Corps to stand up first Marine littoral Regiment in FY 2022." Later statements indicated the first Marine Littoral Regiment in FY 2023, Aidan Quigley, "Marine Corps Considering Three Marine Littoral Regiments by 2030," Inside Defense, February 3, 2021, https://insidedefense.com/daily-news/marine-corps-considering-three-marine-littoral-regiments-2030.

Table 3: Marine Corps Aviation Force Structure

	Original Structure	2030 Structure	Recent Actions
Rotary wing – tiltrotor	17 squadrons	14 squadrons	Two squadrons deactivated, with a third planned in 2021
Rotary wing - light attack	7 squadrons	5 squadrons	Reductions in progress
Rotary wing – heavy	8 squadrons, currently transiting from aging CH- 53Es to CH-53Ks	5 squadrons	Reductions in progress, target structure 5.25 squadrons
Fixed wing – fighter attack (F-18, F-35)	18 total squadrons; planned acquisition: 353 F-35Bs (STOVL version) and 67 F-35Cs (carrier version)	No change to number of squadrons, but number of F-35s per squadron reduced from 16 to 10	"Continued analysis"
C-130 cargo aircraft	3 squadrons	4 squadrons	Expansion being implemented as the Marine Corps takes most or all of the six C-130J aircraft that the Navy has requested in FY 2022.
Unmanned aviation vehicles (UAVs)	3 unarmed squadrons for ISR	Add 3 MQ-9 UAV squadrons,	MQ-9 procurement begun, RQ-21 fleet divested

Source: U.S. Marine Corps, Force Design 2030 (Washington, DC: Department of the Navy, March 2020), https://www.hqmc.marines.mil/ Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460; and U.S.Marine Corps, Force Design 2030 Annual Update (Washington, DC: Department of the Navy, April 2021), https://www.marines.mil/Portals/1/ Docs/2021%20Force%20Design%20Annual%20Update.pdf.

The key points are that several capabilities—tiltrotor, light attack, and heavy attack—shrink as the size of the ground forces, particularly infantry, shrinks. The C-130 fleet increases to provide regional sustainment of distributed forces. UAVs increase to leverage new technologies for numbers and survivability. (See detailed discussion of UAVs below.)

The major unresolved question is the size and structure of the fixed-wing fighter attack fleet.

The 2030 plan envisions a reduction in aircraft per squadron that implies a cut of about 45 F-35s from the planned Marine Corps buy of 420 when training units and maintenance overhead are included. The restructuring report points to a pilot shortage and the Marine Corps' continuing inability to fix the shortage as one reason for the reduction. The FY 2022 procurement budget does not show any reduction in F-35 procurement, though that could come in future years.

The commandant continues to signal a willingness to trade off expensive and manned fixed-wing aircraft. Last year he stated: "I am not convinced that we have a clear understanding yet of F-35 capacity requirements for the future force."23 In this year's posture statement, he said: "I am convinced that we must be willing to critically assess the scope of current programs of record for our major defense acquisition programs."24

The clear implication, and the recommendation of many strategists, is to cut F-35s and buy more UAVs. However, cutting F-35s will be controversial because of the program's strong support in Congress, which has annually added aircraft to the budget. So far, the Marine Corps has hesitated to take that step.

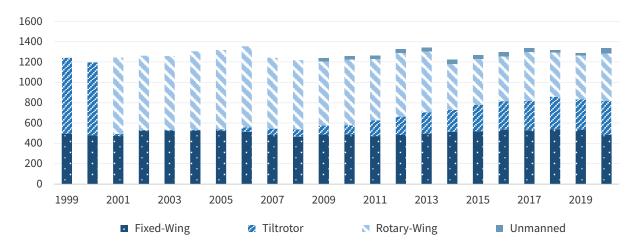


Figure 2: Marine Corps Aircraft Inventory by Type

Source: Data from successive editions of International Institute for Strategic Studies, Military Balance (London, UK: Routledge, 1999-2020), https://www.iiss.org/publications/the-military-balance. Supplemented by data from U.S. Marine Corps, 2019 Marine Corps Aviation Plan (Washington, DC: Department of the Navy, November 2019), https://www.aviation.marines.mil/portals/11/2019%20avplan.pdf.

Marine aircraft inventories have been stable for the last few years and have fluctuated within a relatively narrow band since the early 2000s. The rotary-wing fleet has recapitalized with the MV-22 and UH/ AH-1 procurements, making it modern and relatively young. The CH-53K program will complete that recapitalization. The fixed-wing fleet is in the process of recapitalization with the F-35. So, despite the high cost of modern aircraft, Marine aviation is in good shape, unlike the Air Force.

Force Design 2030 implies some reduction in aircraft inventories. It will cut rotary-wing, tiltrotor, and fixedwing fighter attack aircraft but with some offsetting increase in UAVs and C-130s. Such a change is just beginning and not fully incorporated into acquisition plans. The FY 2023 budget may take a major step in that direction with the mass retirement of Marine Corps F-18s. The Marine Corps still flies the older C and D models, never having acquired the newer E and F models as the Navy did.

Lag in Fielding UAVs

Despite having led the way on UAVs in the 1980s, the Marine Corps now lags far behind the Army and Air Force. General Berger vowed to change this, having spoken of a Marine Corps with "half our aviation fleet

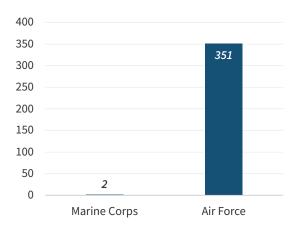
^{23.} Megan Eckstein, "Marines Won't Cut F 35 Buy Total for Now but External Review May Change That," USNI News, April 1, 2020, https://news.usni.org/2020/04/01/marines-wont-cut-planned-f-35-buy-totals-for-now-but-external-review-could-change-that. 24. Berger, Posture Statement, 22.

unmanned in the near to midterm."25 The FY 2022 budget takes an initial (but small) step in that direction by acquiring six MQ-9s.²⁶

In recent years, the Marine Corps had acquired the use of a few MQ-9 Reapers through contractors and had procured two in FY 2020. The FY 2022 budget reflects a decision to make the MQ-9 fleet permanent, and ownership allows more flexibility in operations.²⁷

The MQ-9 decision also reflects the collapse of the large UAV (part of the overarching MUX program) developed by the Marine Corps. That program was attractive because of its shipboard capabilities, allowing operations at sea, a capability MQ-9s lack. However, the program proved infeasible from trying to meet too many requirements. This is a cautionary tale about letting the requirements process opt for the perfect (MUX) over the good (MQ-9). To the Marine Corps' credit, it changed course when its ideal plan began to fail.

Figure 3: Marine Corps vs. Air Force Armed UAVs in FY 2022



Source: Air Force data from Department of the Air Force, Air Force Budget Highlights for FY 2022 (Washington, DC: DOD, 2020), appendix, https://www.saffm.hg.af.mil/Portals/84/documents/ FY22/SUPPORT_/FY22%20Budget%20Overview%20Book. pdf?ver=Reck2JzBUzoZmGByl9Zm-Q%3d%3d; and Department of the Navy, Department of Defense Fiscal Year (FY) 2022 Budget Estimates Aircraft Procurement, Navy, Book 1 (Washington, DC: Department of Defense, May 2021), 1-231, https://www.secnav.Navy.mil/fmc/fmb/ Documents/22pres/APN_BA1-4_Book.pdf.

The Marine Corps has not specified a target size for the MQ-9 UAV fleet. Planning documents show a total of six squadrons, three MALE/MQ-9 squadrons and three more with composition yet to be specified, perhaps a "loyal wingman" such as the Air Force is developing. The MALE/MQ-9 squadrons would stand up by 2026.28 As Figure 3 shows, the Marine Corps is still far behind the Air Force. Indeed, although the Air Force and CIA MQ-9s are armed, the Marine Corps currently plans to use their MQ-9s only for ISR but is considering arming them. The Air Force went through a similar process 20 years ago, ultimately recognizing the value of adding attack capabilities to its ISR UAVs (MQ-1 Predators at that time).29

As indicated in the Navy chapter, the Marine Corps' RQ-21 Blackjack has completed fielding, with a total of 58 systems. This UAV performs reconnaissance and surveillance functions but has no attack capability. However, its performance is apparently disappointing because the FY 2022 budget announced that all will be divested early.³⁰

^{25.} David H. Berger, "Message from the Commandant of the Marine Corps," in Department of the Navy, Unmanned Campaign Framework (Washington, DC: March 2021), 3, https://www.navy.mil/Portals/1/Strategic/20210315%20Unmanned%20Campaign_ Final_LowRes.pdf?ver=LtCZ-BPlWki6vCBTdgtDMA%3D%3D.

^{26.} The budget documents refer to this program as the Medium Altitude Long Endurance-Tactical (MALE-T) but later explain that the aircraft are MQ-9s. The MALE-T nomenclature may be an artifact of the older concept of a family of UAVs but might signal some limitations on making MQ-9s the permanent fleet. The FY 2023 budget might clarify this point.

^{27.} Justin Katz, "Marine Corps' first MQ-9A takes flight in Arizona," Breaking Defense, September 9, 2021, https://breakingdefense. com/2021/09/marine-corps-first-mq-9a-takes-flight-in-arizona/.

^{28.} Pat Host, "Hide and Seek: New USMC Basing Strategy in the Pacific Compels Tough Aviation Traces," Janes Navy International, August 17, 2021, 8.

^{29.} Department of the Navy, Department of Defense Fiscal Year (FY) 2021 Budget Estimates, Aircraft Procurement, Book 1 (Washington, DC: Department of Defense, February 2020), 203-206, https://www.secnav.navy.mil/fmc/fmb/Documents/21pres/APN_BA1-4_BOOK.pdf. 30. Divestment was announced in the Force Design 2030: Annual Update as well as in the budget documents. However, there was no explanation about why the early retirement occurred.

The Marine Corps also fields a wide variety of smaller UAVs (RQ-11, -12, -20) for tactical reconnaissance and targeting and is experimenting aggressively with integrating such capabilities into small unit operations. None of these systems have attack capabilities, however. A tactical "kamikaze" UAV, called "Switchblade," is under development for the infantry, as described earlier.

Despite the rhetoric, the Marine Corps, like the Navy, has focused on manned aircraft and is far behind the Army and the Air Force in fielding UAV capabilities. The Marine Corps' FY 2022 investment in UAVs is substantial, about \$300 million, but that is about the cost of two F-35s. In FY 2022, the Marine Corps spends about 13 times as much on procurement of manned aviation as on unmanned. General Berger wants to go in a different direction, but he faces decades of aviation culture built around manned aircraft.31

Reaction to Force Design 2030

The proposed restructuring has met with both support and doubts. Support comes from strategists who see China as the primary threat and would focus defense efforts tightly on that adversary. They endorse the new technologies and operational concepts.³² The new secretary of the Navy has indicated his support, which likely signals support in the Biden administration's forthcoming National Defense Strategy. Indeed, the emerging focus on China strengthens the argument for the Marine Corps' restructuring. (For a full discussion of the Biden administration's emerging strategy, see the overview chapter in this series.)

Despite the rhetoric, the Marine Corps, like the Navy, has focused on manned aircraft and is far behind the Army and the Air Force in fielding UAV capabilities.

Nevertheless, doubts persist from five primary concerns:³³

• The focus on China downplays the possibility of conflicts elsewhere. Since World War II, the United States has fought many regional conflicts but never a great power conflict. Thus, James Webb—a former senator, former secretary of the navy, and a Marine combat veteran—criticized a narrow focus on China: "If history teaches us anything in combat, it is that the war you get is rarely the war that you game." 34

^{31.} UAVs include the MQ-8, MQ-9, and STUASLO. Manned aviation includes the CH-53K, F-35, and KC-130J. Department of the Navy, Highlights of The Department of the Navy FY 2022 Budget, A-7.

^{32.} For example, T.X. Hammes, "Building a Marine Corps for Every Contingency, Clime, and Place," War on the Rocks, April 15, 2020, https://warontherocks.com/2020/04/building-a-marine-corps-for-every-contingency-clime-and-place; Jake Yaeger, "Expeditionary Advanced Maritime Operations: How the Marine Corps Can Avoid Becoming a Second Land Army in the Pacific," War on the Rocks, December 26, 2019, https://warontherocks.com/2019/12/expeditionary-advanced-maritime-operations-how-the-marine-corpscan-avoid-becoming-a-second-land-army-in-the-pacific/; Benjamin Jensen, "The Rest of the Story: Evaluating the US Marine Corps Force Design 2030," War on the Rocks, April 27, 2020, https://warontherocks.com/2020/04/the-rest-of-the-story-evaluating-the-u-smarine-corps-force-design-2030/; and Jeff Cummings, Scott Cuomo, Olivia Garard, and Noah Spataro, "Getting the Context of Marine Corps Reform Right," War on the Rocks, May 1, 2020, https://warontherocks.com/2020/05/getting-the-context-of-marine-corpsreform-right/.

^{33.} Raising all the concerns, Tanner Greer, "The Tip of the American Military Spear Is Being Blunted," Foreign Policy, September 29, 2020, https://foreignpolicy.com/2020/07/06/us-marines-strategy-military-tip-spear-china-congress/; Paul McHale, "A Critical Assessment of Marine Commandant David Berger's Planning Guidance and Force Design 2030," privately circulated; and Mark Cancian, "Don't Go Too Crazy, Marine Corps," War on the Rocks, January 8, 2020, https://warontherocks.com/2020/01/dont-go-toocrazy-marine-corps/.

^{34.} James Webb, "The Future of the US Marine Corps," The National Interest, May 8, 2020, https://nationalinterest.org/feature/futureus-marine-corps-152606; and Dan Goure, "Will Commandant Burger's Planning Guidance Mean the End of the Marine Corps?," Real

- The new warfighting concepts are unproven. The restructure assumes that, in a conflict with China, Marine forces could move into the Chinese defensive bubble, survive, and be supported. That may not work in a contested environment where logistics must move continuously and adversary firepower can strike isolated Marine outposts. Further, the forward locations that the Marine Corps concept requires exist on the sovereign territory of other nations that might not be involved in the conflict or be unwilling to have Marines fighting from their territory.³⁵
- A force designed for an island campaign in the Western Pacific will not be successful if deployed to another region and employed in a different kind of campaign. The Army of the 1960s that was designed to fight the Soviets on the plains of Germany was poorly positioned to fight insurgents in the jungles of Southeast Asia.³⁶
- Conflicts against China and Russia are likely to be in the gray zone, not high-intensity and kinetic. The new force design is not well suited for these demands because of reductions to counterinsurgency capabilities and the reorientation of training to focus on a high-end fight.³⁷
- All warfighting requires close-in firepower. The new structure focuses on long-range precision fire, but the need for close-in fires, including tanks and cannon artillery, has not gone away.³⁸

Congress has been equivocal. On the one hand, it has offered rhetorical support for the restructuring. On the other hand, it cut substantial resources in FY 2021 because of doubts regarding the maturity of technologies and related concepts.

Looking Ahead

As part of the restructure effort, the Marine Corps is developing a variety of new capabilities. These are at different levels of maturity but will have substantial impact on force structure when deployed. These capabilities and structures will also affect how the Marine Corps operates in the future.

Long-Range Fires: The Marine Corps already has the capability for long-range precision fires on ground targets with GMLRS rockets fired from existing HIMARS units in the artillery. It is on the cusp of deploying capabilities for long-range anti-ship fires. This capability is central to the new warfighting concept because it can strike at Chinese ships that sustain the defensive bubble around Chinese territory. The Marine Corps' system, called NMESIS, consists of an antiship naval strike missile on the chassis of the Joint Light Tactical Vehicle (JLTV). A functioning prototype exists and development continues.³⁹

Clear Defense, December 13, 2019, https://www.realcleardefense.com/articles/2019/12/13/will_commandant_bergers_planning_ guidance_mean_the_end_of_the_marine_corps_114919.html.

^{35.} Walker Mills, Dylan Phillips-Levine, and Colin Fox, "Cocaine Logistics for the Marine Corps," War on the Rocks, July 22, 2020, https://warontherocks.com/2020/07/cocaine-logistics-for-the-marine-corps/.

^{36.} Mark Stout, "Archives: World War I and the Lesser Included Threat," War on the Rocks, December 5, 2014, https://warontherocks. com/2014/12/warchives-world-war-i-and-the-lesser-included-threat/; and Ben Wan Beng Ho, "Shortfalls in the Marine Corps EABO Concept," U.S. Naval Institute, Proceedings, July 2020, https://www.usni.org/magazines/proceedings/2020/july/shortfalls-marinecorps-eabo-concept.

^{37.} John Vrolyk, "Insurgency, Not War, Is China's Most Likely Course of Action," War on the Rocks, December 19, 2019, https:// warontherocks.com/2019/12/insurgency-not-war-is-chinas-most-likely-course-of-action/.

^{38.} Jared Simonelli, "Declawing the Tiger: Rebuttal of the Decision to Phase out Marine Tank Battalions," The Strategy Bridge, August 4, 2020, https://thestrategybridge.org/the-bridge/2020/8/4/declawing-the-tiger-a-rebuttal-of-the-decision-to-phase-out-marinetank-battalions; Sebastien Roblin, "One for the Books: Marine Corps Sherman Tanks Have a Brutal Fight at Tarawa Atoll," National Interest, August 11, 2020, https://nationalinterest.org/blog/buzz/one-books-marine-corps-sherman-tanks-had-brutal-fight-tarawaatoll-152131; and David Banning, "Azimuth Check on the Commandants Planning Guidance," U.S. Naval Institute, Proceedings, April 2021, 20-25, https://www.usni.org/magazines/proceedings/2021/april/azimuth-check-commandants-planning-guidance. 39. Justin Katz, "What Is NMESIS, The Marine Corps' New Ship Killer?," Breaking Defense, September 29, 2021, https:// breakingdefense.com/2021/09/what-is-nmesis-the-marine-corps-new-ship-killer/.

Unmanned Ground Vehicles: The Marine Corps, like the Army, has been experimenting with a variety of such systems, mainly for logistics, but also with unmanned weapon systems (for example, the Remote Operated Ground Unit Expeditionary [ROGUE], which uses the JLTV chassis). None are quite ready for fielding due to a variety of command and control questions and technical challenges.

Air and Missile Defense: These capabilities are also central to the new warfighting concepts since Marine aviation will be unable to neutralize all adversary air threats, unlike in the post-Cold War regional conflicts. Some ground-based capability will be needed. The Marine Corps had such capabilities in the past but, like the Army, disestablished most of them when the focus shifted to regional conflicts. Now that capability will be coming back. In particular, the Marine Corps focuses on point defense rather than area defense. The Marine Corps will leave area air defense—which the Marine Corps had in the past with the Hawk system (deactivated in 2002)—to the Army and Air Force. The Marine Corps is in the process of upgrading its two air defense battalions, currently equipped with portable Stingers, with vehicle-mounted Stingers and improved command and control (called the Marine Air Defense Integrated System).

Long-Range Unmanned Surface Ship: The Marine Corps is developing a long-range unmanned reconnaissance surface vessel to provide sensors and possibly offensive weapons through long-range precision strike assets. Experiments continue. Whether this will produce a fielded system is unclear, since such a capability, if truly long range, would seem to fall into the Navy's mission set and not the Marine Corps'.

Global Deployments: The projected amphibious fleet, with fewer large amphibious ships and a large number of small ships, will not sustain the current structure of seven Marine Expeditionary Units (MEUs) (one in Japan, three on the West Coast, and three on the East Coast) and their long-standing forward deployments. The small amphibious ships (called light amphibious warships, or LAWs) are intended for relatively short voyages, such as transit from point A to point B, and not for long-term deployments. (See the Navy chapter in this series for an extended discussion of the emerging amphibious fleet.)

Further, the MLR structure in the Pacific is not well designed for peacetime day-to-day deployments. The full MLR is too large for routine long-term deployments, deploying just the combat team would leave the rest of the unit incomplete, and deploying a proportional slice would not produce the wide variety of capabilities that forward-deployed Marine units have traditionally had. Instead, the Marine Corps may move to periodic but limited-duration deployments for exercises and engagements with allies and partners.

The Marine Corps might fill the gap with special-purpose Marine air-ground task forces (SP-MAGTFs). Although not new, SP-MAGTF units represent a different capability for the Marine Corps. Traditionally, the smallest unit that the Marine Corps deployed was an MEU. To provide rapid response and persistent presence in AFRICOM and CENTCOM and periodic theater engagement in SOUTHCOM, the Marine Corps established smaller, special-purpose units, which are smaller than the MEU. That made them both more agile and easier to deploy, though at the cost of logistics and firepower. Although these units are typically land-based and not naval, the Marine Corps seems to be making them a routine capability, satisfying a deployment task without putting too many demands on the structure.⁴⁰

^{40.} The Marine Corps has long prided itself on being able to task organize—that is, to put existing units together into temporary groups for a particular purpose. The Marine Corps has a standard set of task force templates for what it calls Marine Air-Ground Task Forces, Each of the standard templates has four elements: a command element, a ground combat element, an aviation element, and a logistics element. The largest, a Marine Expeditionary Force (46,000–90,000 Marines) is built around the Marine division and air wing. The middle-sized force, the Marine Expeditionary Brigade (4,000-16,000 Marines) is built around an infantry regiment and air group. The smallest, the Marine Expeditionary Unit (or MEU, ~2,200 Marines) is built around an infantry battalion and composite squadron. U.S. Marine Corps, Expeditionary Operations, Marine Corps Doctrinal Publication 3 (Washington, DC: Department of the

The Navy and Marine Corps may use non-amphibious ships, such as Maritime Prepositioning Force ships (TAK-Es), high-speed vessels (Expeditionary Fast Transports), and mobile landing platforms/afloat forward staging bases (now called Expeditionary Sea Base and Expeditionary Transfer Dock). General Berger used them extensively when he was the Marine commander in the Pacific, but the concept does not appear in his guidance or in any discussion of the future amphibious fleet.⁴¹

Mark F. Cancian (Colonel, USMCR, ret.) is a senior adviser with the International Security Program at the Center for Strategic and International Studies in Washington, D.C.

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Navy, 1998), 69-77, https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/899839/mcdp-3/. 41. For General Berger's use of such ships while he was in command of the Pacific, see Robert D. Holzer and Scott C. Truver, "The U.S. Navy In Review," U.S. Naval Institute, Proceedings, May 2017, https://www.usni.org/magazines/proceedings/2017-05/us-navy-review.