

Recommendations for the FY 2018-FY 2022 Defense Budget By Senator John McCain, Chairman, Senate Armed Services Committee

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EXECUTIVE SUMMARY

For seven decades, America has played a unique role in the world. We have led a global effort to maintain an international order and a balance of power that have expanded security, prosperity, and freedom. This has required all elements of our national influence—diplomacy, alliances, trade, values, and most importantly, a strong U.S. military that can project power globally to deter war and, when necessary, defeat America's adversaries. We have done this for a simple reason: It benefits America most of all. It is in our national interest.

We are now at a tipping point. Since the end of the Cold War, the United States has often swung from retrenchment to overextension with a dearth of strategy, depleting our margin of global influence. We now face, at once, a persistent war against terrorist enemies and a new era of great power competition. The wide margin for error that America once enjoyed is gone.

This deterioration of America's global position has accelerated in recent years, in part, because the Obama administration's defense strategy was built on a series of flawed assumptions. It assumed the United States could pull back from the Middle East and contain the threat of violent Islamist extremism. It assumed that "strategic patience" toward North Korea would improve conditions for negotiations and not exacerbate the threat. It assumed that a nuclear deal with Iran would moderate its regional ambitions and malign behavior. It assumed that U.S.-Russia relations could be "reset" into a partnership and that American forces in Europe could be reduced. It assumed that a minimal "rebalance" of efforts could deter China from using its rising power to coerce American partners and revise the regional order. And it assumed with the Budget Control Act of 2011 that defense spending could be cut significantly for a decade.

Though all of these assumptions have been overtaken by events, the President and many in Congress, both Republicans and Democrats, have nonetheless failed to invest sufficiently in our nation's defense. Indeed, for most of the past eight years, including this one, Congress has forced the Department of Defense to start the year locked into the previous year's budget and priorities, which in practice is a budget cut. As a result, our military is caught in a downward spiral of depleted readiness and deferred modernization. Readiness is suffering, in part, because the force is too small and being asked to do more with less. This, in turn, harms modernization, as future defense investments are delayed and mortgaged to pay for present operations. That helps to explain why all of the Joint Chiefs of Staff have stated that our military cannot accomplish the nation's strategic objectives at acceptable risk to the force and the mission.

Reversing this budget-driven damage to our military must be a top priority for national leaders. President-elect Donald Trump has pledged to "fully eliminate the defense sequester" and "submit a new budget to rebuild our military." This cannot happen soon enough. The damage that has been done to our military over the past eight years will not be reversed in one year. Just stemming the bleeding caused by recent budget cuts will take most of the next five years, to say nothing of the sustained increases in funding required thereafter.

None of this means giving the Department of Defense a blank check or tolerating any waste of taxpayer dollars, especially in defense acquisition. To this end, the significant defense reforms that the Congress has led over the past two years must be sustained and expanded upon.

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At the same time, rebuilding our military must be done smartly. The joint force must be bigger, but more importantly, it must be more capable. Our adversaries are modernizing their militaries to exploit our vulnerabilities. If all we do is buy more of the same, it is not only a bad investment; it is dangerous. We must rethink how our military projects power, invest in new capabilities, and devise new ways of operating.

This paper offers a general blueprint to begin rebuilding and reshaping our military. It is not cheap—roughly \$430 billion of new money above the Obama administration's defense budget for the next five years, which is already more than \$100 billion above the budget caps in law. The cost of further inaction, however, is worse: We will irreparably damage our military's ability to deter aggression and conflict. Indeed, as General Mark Milley, Chief of Staff of the Army, has said: "The only thing more expensive than deterrence is actually fighting a war, and the only thing more expensive than fighting a war is fighting one and losing one."

THE FAILURE OF THE BUDGET CONTROL ACT

It is helpful to step back and recall how we have ended up in our present predicament. In 2011, Congress passed and President Obama signed the Budget Control Act (BCA) with the goal of controlling federal spending and reducing the national debt. The legislation arbitrarily capped discretionary spending, reducing it by \$1 trillion over ten years. Half of those cuts were applied to defense. The legislation also tasked a "super committee," comprised of members of Congress from each party, with crafting a deal to reduce the real drivers of federal spending: the growing mandatory costs of entitlement programs, such as Medicare and Social Security. The BCA contained what many thought would be an incentive to reach agreement: If the super committee failed, an additional \$1.2 trillion of cuts over ten years would be mandated—again, with half of those cuts falling on defense. This was sequestration, a large automatic cut that was assumed to be so destructive and unthinkable that it would force agreement on mandatory spending reform.

Instead, the super committee failed. The Budget Control Act spending caps were reduced by another half a trillion dollars. Sequestration was then applied halfway through Fiscal Year 2013 and the defense budget was reduced by \$41 billion. What was worse was how those cuts were applied: every defense program, regardless of priority, was reduced equally across the board. Readiness, for example, was cut the same percentage as administrative overhead. The havoc that sequestration wreaked on each of the military services is still being felt to this day.

Rather than summon the courage to reverse a devastating blow to our military that was never supposed to happen, Washington has done what it does best: Nothing. It has resorted instead over the past five years to perverse coping mechanisms to try to live with sequestration. One such mechanism has been to adjust the caps on defense spending without removing them. Time and again, some in the Congress and some in the Department of Defense have sought to increase defense spending above the BCA caps. Others have sought to maintain those caps. The result has been gridlock, uncertainty, and instability that has harmed our military's ability to plan strategically and wasted even more money. Twice in the past five years, these stand-offs

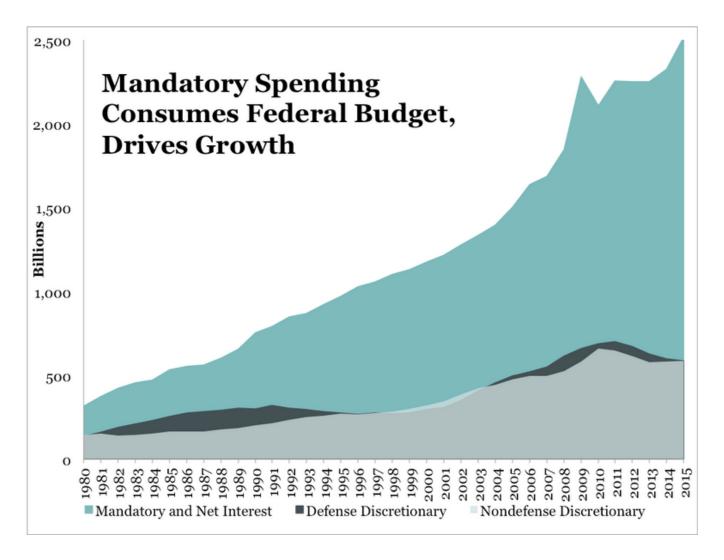
have led to temporary agreements to spend more on our military, but not as much as needed. As welcome as this budget relief has been, it has merely papered over the damage that the BCA caps were doing without solving the problem. As a result, over the next five years, the Obama administration has stated their defense plans require more than \$100 billion over the BCA caps.

In reality, the true cost is far higher, because another coping mechanism has been that the Department of Defense resorted to flawed assumptions to balance its books within the BCA caps. For example, in order to flatten defense costs over the next several years, the Department has assumed no growth above inflation in the two largest defense budget accounts, Operations and Maintenance and Military Personnel. In reality, those accounts have historically grown by 5 percent and 3.5 percent, respectively, per year. Proper forecasting of these accounts would add \$80 billion over the next five years to the President's current requests. To make matters worse, future growth for these accounts will only accelerate due to growth in healthcare costs and usage. And yet, the Department has assumed savings from efficiencies and reductions to military personnel benefits that Congress has not adopted, and likely will not adopt, in their entirety.

Perhaps the biggest coping mechanism of all has been the use and abuse of the Overseas Contingencies Operations (OCO) budget, both by the Department of Defense and Congress. This account was created to separate enduring base defense budget requirements from temporary expenses related to military operations in places like Afghanistan and Iraq. As such, OCO does not count against the defense budget caps in the BCA, but it is real spending nonetheless. To be sure, this kind of special war account was misused during the Bush administration. But over the past five years, the abuse of OCO has reached new levels of dishonesty due to the BCA. Rather than repealing the budget caps, Congress and the Obama administration have just hid from the problem, by pushing more and more legitimate defense spending from the base budget to OCO.

Abusing OCO has added up. The Department has stated that \$30 billion of the \$59 billion it originally requested for OCO in Fiscal Year 2017 is actually an enduring cost that belongs in the base budget. In reality, it is closer to \$41 billion, and more if we exclude the Department's rosy assumptions about future defense cost growth. These hidden costs include regular military training that must be done regardless of overseas operations; changes to long-term forward posture, such as the European Deterrence Initiative, that reflect new requirements; and security cooperation with foreign military partners that must be sustained over time to succeed. In short, if all of our current military operations were to end in the near future, which they will not, there is more than \$200 billion over the next five years that must be shifted from OCO to the base budget. Simply cutting that funding would deal a devastating blow to our military.

By all measures, the BCA has failed. A law intended to reduce federal spending has cut defense and other discretionary budgets for five years without decreasing the federal debt. Indeed, since 2011, the national debt has grown from 66 percent to 75 percent of GDP, an increase of \$3.9 trillion. Five years ago, CBO estimated that the U.S. debt would reach 80 percent of GDP by 2029. Today, CBO projects that to happen in 2022. This is pretty basic math: Without addressing the growing mandatory costs of entitlement programs, cutting discretionary budgets alone will not decrease our national debt and will further harm our national security.



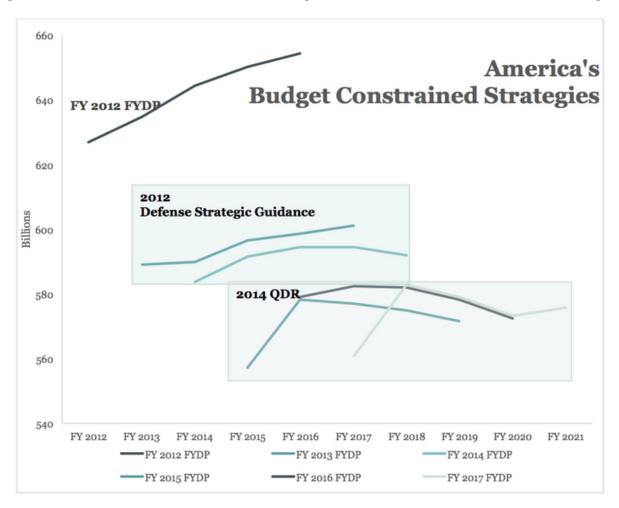
We cannot go on like this for another four years, as the BCA mandates. This law must be repealed outright so we can budget for the true costs of our national defense. Many of those costs are hiding in plain sight, in the form of broken future spending caps, unrealistic cost growth assumptions, and the abuse of OCO. This adds up to more than \$300 billion in existing defense costs above the remaining four years of BCA caps, just to pay for the military we have, doing nothing more than it is doing right now, which is insufficient.

A BETTER DEFENSE STRATEGY

For too long, we have allowed budget constraints to drive strategy. It is time to turn this around and return to the first order question: What do we need our military to do for the nation? A Better Defense Strategy For many years after the end of the Cold War, U.S. defense planning and budgeting were guided by what was called a "two major regional contingency" force sizing construct. This required the U.S. military to be sized, shaped, and postured to fight and win two major wars in different regions of the world more or less at the same time.

In 2012, the Obama administration departed from this construct and proposed a strategy of "defeat and deny." This called for the U.S. military to be able to win one regional war while

preventing an aggressor in a second region from achieving its war aims. This force sizing construct was driven by the defense spending caps in the Budget Control Act, and it assumed the United States could pull back from the world at acceptable levels of risk. Instead, it stoked a perception of American weakness and created power vacuums that adversaries have exploited.



A better defense strategy must acknowledge the reality that we have entered a new era of great power competitions. China and Russia aspire to diminish U.S. influence and revise the world order in ways that are contrary to U.S. national interests. They maintain large, survivable nuclear arsenals. They are modernizing their militaries in order to counter our ability to project power. And they are making rapid progress. To be sure, a smart strategy must avoid the classic trap of great power rivalry and exploit the fact that Russia and China are still wary of each other. At the same time, the United States must have the will and military capability to deter and, if necessary, defeat these competitors in order to maintain peace through strength. Without sufficient hard power, which is our leverage, our diplomacy will be ineffective.

A better defense strategy must also account for the threats posed by North Korea and Iran. Whereas China and Russia pose global challenges, Iran and North Korea primarily threaten the security of their regions. But these dangers are serious and growing. North Korea already has nuclear weapons and is rapidly developing a nuclear-capable intercontinental ballistic missile that could strike the U.S. homeland. Iran's quest for nuclear weapons has been postponed but not

halted. And it seeks to use its malign influence to remake the Middle East in its image. If left unchecked, these threats will grow, to the detriment of American interests, allies, and partners.

Finally, a better defense strategy must recognize that violent Islamist extremist groups will continue to pose a direct threat to American lives, and that U.S. forces will be conducting counterterrorism operations at varying levels of intensity, for the foreseeable future. This threat has been degraded, but not destroyed. It has metastasized, and will continue to do so, just as Al-Qaeda spawned the so-called Islamic State. Even President Obama, who actively sought to avoid long-term combat operations in the Middle East, ultimately had to reverse himself because the threat demanded it. We cannot afford to pretend again that pulling back will make things better.

The threats we face call not for one uniform defense strategy, but rather an integrated set of strategies, tailored and differentiated to our greatest threats. On the high end of the spectrum, the U.S. military must deter conflict with, and aggression by, Russia and China while conducting long-term great power competitions that possess clear military dimensions, often occurring below the threshold of war. In the middle of the spectrum, the U.S. military must contain the malign influence of North Korea and Iran and prevent these states from destabilizing regional order. And on the low end of the spectrum, the U.S. military must prosecute an enduring, global counterterrorism fight that may grow in size and scope, despite our best efforts to prevent it.

Put simply, while combating violent Islamist extremist groups worldwide, the United States must employ strategies for global deterrence and denial—preventing war with nation-state rivals by credibly threatening that, if deterrence fails, the U.S. military can and will deny an aggressor's objectives or rapidly impose devastating costs. This means that our military must be shaped, sized, and postured to deter and, if necessary, wage and win conventional warfare in three priority theaters: Asia, Europe, and the Middle East. At the same time, deterrence must apply at different levels of conflict. Our rivals are increasingly competing with us below the threshold of major conflict, in domains such as cyber and irregular warfare. We must develop strategies to contest these so-called "gray zone" threats. Likewise, there are nations that increasingly believe nuclear weapons are essential for their survival. Others are enhancing the role of nuclear weapons in their military doctrine and actively considering their use on the battlefield. Providing a modern, credible U.S. nuclear deterrent is more vital than ever.

This is what the United States needs its military to do for the nation. But at present, our forces have neither the right mix of capabilities nor sufficient capacity to do so. Our military is optimized for fighting in relatively permissive environments and too small to serve as a credible deterrent force in Asia, Europe, and the Middle East, while conducting prolonged counterterrorism operations worldwide. Our military's capabilities are also out of balance. On the lower end of the spectrum, we need greater numbers of more affordable, less advanced systems to fight terrorist enemies in permissive environments. On the higher end of the spectrum, as nation-state rivals can increasingly counter our military's ability to project power, we need longer-range, more survivable platforms and munitions, more autonomous systems, greater cyber and space capabilities, among other new technologies. In this way, the joint force should be equipped with what is often called "a high/low mix" of capabilities. Finally, we need to rethink our global military posture to make it more forward, flexible, resilient, and formidable.

This is the kind of military that we need, but current defense spending is not sufficient to deliver it. Rooting out all of the waste and inefficiency in the defense budget, while necessary, will not be sufficient to cover our nation's defense needs. We must repeal the BCA and increase defense spending. The upcoming transition provides an opportunity to do just that.

BEGINNING TO REBUILD THE MILITARY

This paper seeks to provide actionable recommendations on the national defense budget for the new Administration and the Congress. Thus, the scope of this paper is limited to the next five years (Fiscal Years 2018 to 2022). Viewed this way, the scale of our defense challenges are clear: Major improvements can be made in the next five years, but we will not be able to rebuild and reshape our military to the degree necessary in that timeframe.

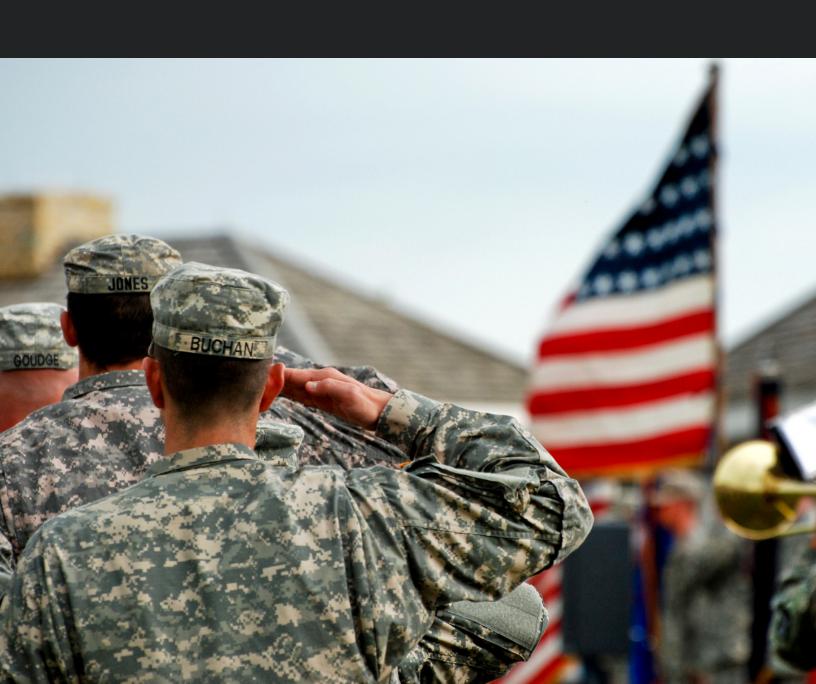
In this way, the goal of the next five years is more digging out than building up—halting the accumulated damage done during the Obama administration through decreasing force size, depleted readiness, deferred modernization, and sustained high operational tempo. The Department of Defense can only execute so much new money responsibly per year. Each military service can only recruit so many new people per year. The defense industrial base takes years to rebuild workforces and retool production lines before it can deliver higher quantities of new equipment. More money will not overcome these structural limitations, but the longer we wait, the worse it will get, and the longer it will take to fix.

This paper recommends a \$640 billion base national defense budget (including Department of Energy nuclear activities) in Fiscal Year 2018, which is \$54 billion above President Obama's planned budget. Over five years, this plan represents a \$430 billion increase above current plans. These recommendations should be regarded as reasoned estimates. The focus is not accounting for every single dollar, but rather to highlight the major strategic choices and investments we must make in our military over the next five years. As such, the recommendations in this paper focus on two broad priorities.

The first is modernizing the joint force for the new realities of deterring conflict and competing with great powers that possess advanced military forces. For too long, we have taken for granted that the joint force could operate anywhere and dominate any environment with minimal effort. That assumption no longer holds, and we must rethink how the U.S. military projects power, including in such seemingly mundane but indispensable areas as logistics. This will not happen quickly. But with greater investments in new technologies, our military can make incremental but real improvements in capability over the next five years. It can also begin to develop a "high/low mix" of capabilities that is better aligned with emerging threats.

A second priority is regaining capacity for our military, which does not have enough ships, aircraft, vehicles, munitions, equipment, and personnel to perform its current missions at acceptable levels of risk. To be clear, adding capacity alone is not the answer, and any capacity that we do add, especially personnel, must be done deliberately and sustainably. That said, as numerous think tanks and independent panels have recommended, each military service needs

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more capacity. How much more is a question that the next Secretary of Defense must resolve together with Congress. Whatever the answer, regaining capacity will require a multi-year effort and likely will not be achieved over the next five years. We should therefore begin growing the size of our military quickly and responsibly while refining our ultimate end-strength goals based on a revised defense strategy.

What follows is a more detailed description of these investments for each service. The itemized costs represent estimates over the next five years above President Obama's current plan.

NAVY

Today, the U.S. Navy is 274 ships. This was already short of the joint force requirement of 308 ships. And that was before the Chief of Naval Operations announced that the Navy should grow to 355 ships to address the growing fleet sizes and capabilities of our adversaries.

Whatever the right fleet size ultimately is, one key objective for the next five years is the same: The Navy must ramp up shipbuilding. It is unrealistic to deliver 81 ships by 2022. The shipbuilding industry and workforce, as well as the Navy's own personnel, simply cannot grow fast enough to execute this goal. President Obama's defense plan calls for procuring 41 ships over the next five years. However, with sufficient funding, the Navy could procure 59 ships in this timeframe, including five fast attack submarines, five fleet oilers, three destroyers, two amphibious ships, two afloat forward staging bases, two undersea surveillance ships, two survey ships, two patrol ships, one aircraft carrier, and one new small surface combatant.

More important than buying more ships is buying the rights kinds of ships and changing the shape of the fleet. The Navy should be optimized for deterring conflict against increasingly capable great power competitors. Given the time limitations of shipbuilding, the Navy must seek to add new capabilities incrementally and make a series of strategic choices.

One such choice would be increasing and accelerating investment in unmanned and autonomous systems—on the sea, under the sea, and in the air—that could enhance current capabilities in certain areas, such as minelaying, surveillance, and offensive strike. The goal should be a future fleet and air wing comprised of larger numbers of smaller and relatively cheaper systems that can operate in denied environments, rather than smaller numbers of larger and more expensive systems that our adversaries can increasingly locate and target.

Reshaping the Navy also means more investment in undersea warfare, which is one area where the United States still has an advantage over our adversaries. Maintaining that advantage will be critical to deterring great power conflict. As such, while accelerating unmanned undersea vehicles of various classes and the supporting undersea architecture, the Navy should increase its procurement of manned submarines from two per year to three per year in 2020 and four per year starting in 2021. We cannot produce more submarines over the next five years even if we want.

Another strategic choice would be to curtail the Littoral Combat Ship (LCS) program in 2017, buying only the minimum number of additional ships necessary to serve as a bridge for the

industrial base to compete for the next Small Surface Combatant, which could begin procurement in 2022 or sooner. This could accelerate the next Small Surface Combatant by seven years and result in procurement of two additional small combatants by 2030 compared to the current plan. According to the Government Accountability Office, the Navy's proposal to continue the LCS program with minor modifications (called a frigate) was largely the result of cost and schedule constraints, and still would be unable to meet the Navy's capability requirements. An alternative plan could allow for a fuller competition among modified existing U.S. and foreign designs. The next Small Surface Combatant must address the capability and survivability shortfalls of the LCS, including the ability to: (1) attack enemy surface ships at over-the-horizon ranges with multiple salvos; (2) defend nearby noncombatant ships from air and missile threats; (3) conduct longduration escort or patrol missions, including anti-submarine warfare, without frequent refueling; and (4) survive in contested environments. The Littoral Combat Ship falls short in each of these areas. We must get beyond it as soon as possible.

The Navy should also pursue a new "high/low mix" in its aircraft carrier fleet. Traditional nuclear-powered supercarriers remain necessary to deter and defeat near-peer competitors, but other day-to-day missions, such as power projection, sea lane control, close air support, or counterterrorism, can be achieved with a smaller, lower cost, conventionally powered aircraft carrier. Over the next five years, the Navy should begin transitioning from large deck amphibious ships into smaller aircraft carriers with the goal of delivering the first such ship in the mid-2030s.

Similarly, the number of aircraft carriers is irrelevant if there is a shortfall of Navy strike aircraft, as there is now. The Navy currently has approximately 830 frontline strike fighters. Its projected shortfall will grow from 29 aircraft in 2020 to roughly 111 aircraft in 2030. The continued delays to the F-35C have exacerbated these shortfalls, while delaying the modernization needed to keep pace with emerging threats. Over the next five years, the Navy should therefore procure 58 additional F/A-18 E/F Super Hornets and 16 additional EA-18G Growlers, while continuing to procure the F-35C as rapidly as possible, to fill out ready and effective carrier air wings that can meet joint requirements.

Unmanned aerial vehicle technology will be essential to the future of the aircraft carrier and its continued ability to project power. The MQ-25 will bring the first unmanned aerial vehicle to the carrier while performing tanking and some intelligence missions. The Navy should accelerate this program to achieve initial operational capability in the next five years. At the same time, the effective striking range of the carrier air wing has decreased in recent decades. As advanced, long-range air defense systems proliferate, the carrier air wing needs aircraft with greater range that can penetrate advanced defenses and conduct strike and intelligence missions. The Navy must proceed rapidly to develop a carrier-based unmanned aircraft to perform these missions.

The Navy is critically low in munitions for the same reasons as the rest of the force: Munitions are one of the first victims of budget cuts. The Navy should increase its munitions inventories, including the Long-Range Anti-Ship Missile and Advanced Medium Range Air-to-

Air Missile. Also, in order to keep pace with the advanced capabilities of our adversaries and ensure relevant and credible striking power, the Navy should develop advanced, long range, air-to-air, anti-surface, and anti-ship missiles, including hypersonic missiles.

New force structure will require commensurate investments in readiness at a time when the Navy is experiencing readiness shortfalls due to increased operations, extended deployments, deferred maintenance, and shortened training. The Navy readiness account is short \$1.8 billion in the current fiscal year alone. Fixing readiness while simultaneously growing the fleet will require significant increases to operations and sustainment funding.

MARINE CORPS

The Marine Corps has been focused over the past 15 years on sustained counterterrorism and crisis response operations. While sustaining those capabilities and critical warfighting skills, the Marine Corps must modernize itself for the deterrence of great power competitors. This means the Marines will increasingly need to operate in more distributed formations in contested environments, projecting power at greater range across all domains, especially in support of naval forces. This will require greater investments in unmanned systems, long-range fires, electronic warfare, and amphibious vehicles of various classes, among other advanced systems. The new Marine Corps Operating Concept is a good start to rethinking the service's future role.

To play these roles effectively, the Marine Corps will need to be bigger. After several years of cutting end-strength, the Marine Corps today is composed of 24 battalions compromised of 182,000 Marines. This is down from a height of 202,100 in 2012. Like the Army, reducing the size of the Marines Corps as operational requirements have grown has led to readiness shortfalls. Indeed, to maintain a healthy force, the Marine Corps recommends a deployment to dwell ratio of 1:3. The current ratio of 1:2 strains both the force and families alike.

The current force of 182,000 Marines is too small. The National Defense Authorization Act for Fiscal Year 2017 has authorized a force level of 185,000, while the Marine Corps currently conducts an extensive study to determine its ideal force size. Previous studies, such as the 2010 Quadrennial Defense Review, have recommended 202,000 Marines. Others have proposed higher based on historical experience with major wars and extended contingency operations. At a minimum, an active force of 194,000 is necessary to sustain the 1:2 ratio. It is safe to assume that the Marine Corps could grow at 3,000 Marines a year and reach 200,000 by Fiscal Year 2022, with the possibility of exceeding that if operational requirements demand it.

The Marine Corps also requires critical investments in readiness, especially in its aviation enterprise, which is in a state of crisis. The Marine Corps is in the process of modernizing nearly its entire fleet of aircraft, but those new aircraft have not shown up yet. In the meantime, many Marine Corps aircraft have been pushed well beyond their service life. As a result, the majority of Marine aircraft now sit in depots awaiting maintenance. So many aircraft are unusable that pilots are unable to meet training requirements. While Marine Corps leadership has instituted a

number of changes to help rectify the situation, fully funding spare parts, depot maintenance, and other enabler accounts could accelerate the recovery of Marine Corps aviation readiness.

Increasing aircraft maintenance only buys the Marines time. Eventually, these aircraft will have to be replaced. The best fix to this readiness crisis is accelerating the procurement of replacement aircraft, especially the F-35B strike aircraft, CH-53K helicopter, and KC-130J tanker and support aircraft. This will speed the transition out of the older aircraft while bringing new and needed capabilities to the Marine Corps. In particular, procurement of the F-35B—the replacement for the Marines' F/A-18 Hornet, EA-6B Prowler, and AV-8B Harrier—should be increased by 20 aircraft over the next five years.

AIR FORCE

The Air Force is the oldest, smallest, and least ready in its history. The Air Force has divested over 400 combat fighters in the last five years alone and now has only approximately 1,100 combat-coded fighter aircraft. This is well short of the requirement stated in the 2012 Defense Strategic Guidance for the Air Force to maintain 2,250 total fighter aircraft in order to field 1,200 combat-coded fighters. At the same time, the failure of the F-35A to arrive on time and in sufficient numbers has meant that fighter aircraft are being retired without replacements, while a geriatric bomber force still awaits a new replacement aircraft that is only now beginning development. As a result, the Air Force has severe capacity challenges and is struggling to meet the high rate of demand in today's missions.

At the same time, recent events call into question the total fighter aircraft objective in the 2012 Defense Strategic Guidance. Operations against the Islamic State are consuming the capacity and depleting the readiness of the Air Force. More troublingly, China and Russia are developing and fielding potent integrated air defense systems, fifth generation fighter fleets, advanced munitions, and other systems that are eroding U.S. air superiority capabilities. U.S. air dominance is no longer assured by 2025. To be effective against these emerging global threats, the Air Force may require closer to 60 combat squadrons, totaling around 1,500 combat-coded fighter aircraft. More importantly, the Air Force must be reshaped to deliver a wider range of capabilities, including more advanced technologies that are optimized for peer competitors and lower-cost systems that are adequate for permissive environments.

Due to funding constraints, the Air Force is planning to procure 228 F-35As between Fiscal Years 2018 and 2022, reaching a maximum rate of 48 aircraft per year. At this low rate, the Air Force will not complete its total projected buy of 1,763 F-35As until 2040. This goal is unrealistic and requires reevaluation, and likely a reduction, of the ultimate size of the F-35 fleet. However, we do not have to make that decision during the next five years. It will take the industrial base until Fiscal Year 2022 to ramp up to the maximum annual production rate, resulting in an additional 73 F-35As beyond current plans by that time. Therefore, given the Air Force's ongoing capacity shortfalls, the goal for the next five years should be to procure as many F-35As as possible, with an ultimate goal of moving beyond the program as quickly as possible.

While the F-35A is highly capable, its limited range presents challenges. The F-22 fleet is also impressive, but small. And the aircraft's high unit cost and older technology means that restarting production is not the best way to counter future threats to U.S. air superiority. Instead, the Air Force must develop and field new penetrating counter-air and electronic attack capabilities to maintain U.S. air dominance beyond the 2020s. These capabilities may not resemble traditional fighter aircraft and could be unmanned. Indeed, future air dominance may favor larger aircraft with greater numbers of longer-range sensors and munitions. This is another compelling reason why the B-21 bomber must deliver on budget and on schedule: The nation may need more of them than planned.

The Air Force also requires urgent investments in other capabilities that are necessary for the contested and denied battlefields of the future. This includes advanced electronic attack capabilities, countermeasures, and munitions. Like the other services, the Air Force not only needs larger munition inventories—it also needs new munitions, such as Survivable Strike Weapons, that are optimized for countering the advanced capabilities of near–peer competitors.

At the same time, the Air Force should embrace a "high/low mix" of fighter aircraft. Very expensive fifth-generation technology is not needed in every scenario. The current fourth-generation fleets of F-15 and F-16 fighters will remain in the force for years to come. Critical investments in these legacy fighter aircraft, including capabilities to facilitate manned-unmanned teaming, should be made over the next five years to keep these aircraft relevant in the future.

Similarly, while sustaining the A-10 fighter fleet for close air support, the Air Force should procure 300 low-cost, light-attack fighters that would require minimal work to develop. These aircraft could conduct counterterrorism operations, perform close air support and other missions in permissive environments, and help to season pilots to mitigate the Air Force's fighter pilot shortfall. The Air Force could procure the first 200 of these aircraft by Fiscal Year 2022.

The growth of critical enablers for Air Force operations must keep pace with the growth of combat forces. Mobility forces, tanker aircraft, ISR platforms, airborne battle management capabilities, and electronic attack aircraft must all be recapitalized and increased in quantity. For mobility forces, a core mission is the support for ground forces. If the Army grows, the Air Force's airlift fleet must be able to support it. Finally, the Air Force's pilot training infrastructure must be enhanced with faster procurement of the T-X advanced pilot training system to produce more pilots and provide appropriate training for them on fifth generation platforms.

Existing manning shortfalls and increasing numbers of fielded aircraft necessitate a growth of Air Force military end strength by 20,000 personnel over the next five years. This additional capacity will help the Air Force return more quickly to full-spectrum readiness, which would take more than 10 years under the current plan. Greater investments in specific readiness accounts, such as flying hours and weapon system sustainment, will also be necessary.

ARMY

The Army must modernize for the harsh realities of 21st century warfare. Soldiers must be trained, organized, and equipped for an increasingly diverse and complex range of threats. They must be able to defeat peer competitors in highly lethal, combined arms maneuver; near-peer competitors in hybrid warfare; and determined adversaries employing insurgent tactics.

The Army has not truly modernized for decades. This is partly the legacy of 15 years at war. It is also due to the fact that the Army has squandered billions of dollars in recent years on failed acquisition programs, such as the Future Combat System. Any major investment in Army modernization without a detailed plan to achieve it would risk further wasting taxpayer money. That plan should include a new multifunctional, adaptable ground combat vehicle, using non-development components for rapid fielding at lower cost. The Army should also dedicate more of its resources over the next five years to fielding emerging technologies, such as electronic warfare and unmanned ground vehicles, which could make existing Army units more capable.

Modernizing munitions must be another priority. The Army has assumed for too long that it could divest its long-range strike capabilities and not invest in new systems. Reduced budgets have compounded this problem because munitions have often been cut first to pay for larger programs. As a result, Army munitions are seriously depleted. Major investments must be made in Army Tactical Missile Systems, Guided Multiple Launch Rocket Systems, Paladin Integrated Management, and developing follow-on programs that deliver greater hitting power at greater range. Similarly, modernizing the Army's air defense capabilities will be critical. The Patriot and Stinger missiles should be upgraded, while development efforts focus on a highly maneuverable, short-range, air defense system. If the Army is to realize its vision of being able to strike enemy targets at range across all domains, modernizing and growing its munitions inventory is essential.

As the Army continues work on a new modernization plan, legacy systems can still be improved, albeit limitedly. For example, five armored brigade combat teams (BCTs) could be upgraded to more modern equipment sets. This would require upgrading to the latest variants of the Abrams tank and Bradley fighting vehicle and new Armored Multi-Purpose Vehicles, while outfitting them with Active Protection Systems to increase their lethality and survivability.

Reshaping the Army must be the priority, but resizing it is also necessary. The Army has been cut by 100,000 soldiers since 2012. It is time to chart a new course. The Army should conduct a study to recommend the optimum size and shape of the future Army. Outside recommendations have suggested an Active Army well above 500,000 soldiers. A realistic objective is to add 8,000 soldiers a year through Fiscal Year 2022. Anything beyond this rate of growth risks diminishing recruiting standards. The Army would then have the option to continue increasing end-strength should requirements demand it. It is assumed that the Army Reserves and National Guard may also increase to correspond with the growth of the Active Army.

This additional end-strength should serve several purposes. First and foremost, it should be used to fill holes in existing formations, increasing the number of trained soldiers available for duty. This will improve readiness for the Army. Additional end-strength could also be used to retain heavier force structure that was set to be eliminated, such as the 11th Combat Aviation Brigade in Korea, and build new heavier forces, such as additional Armored BCTs or a 12th

Combat Aviation Brigade. This new force structure should primarily support increased forward presence in Europe. The Obama administration's withdrawal of troops from Europe went hand-in-hand with reduced Army end-strength. Following a reverse in the Russian "reset" decision, lower Army end-strength still limits the U.S. ability to increase forward presence.

Additional soldiers could also help the Army to reshape the force, which is currently out of balance. Today's threats require a greater emphasis on armored forces that are optimized for deterrence and combat missions against near-peer competitors, while some portion of the force must be dedicated to the enduring counterterrorism mission. Additional end-strength could help the Army to experiment with new force mixtures and concepts, such as Train/Advise/Assist Brigades to build the capacity of partner militaries and Multi-Domain Combat Brigades to project power in contested environments through long-range fires, cyber, and other capabilities. Another priority for experimentation and development is a ground combat formation that operates across all domains to enable the joint force, possesses reconnaissance and strike capabilities, maximizes maneuver through technology, especially new ground combat vehicles, and increases combat power while decreasing manpower and sustainment requirements.

Finally, additional end-strength will enable and require greater investments in readiness. Only two of the Army's 60 BCTs are currently at the highest standard of readiness. The Army has billions of dollars in unfunded readiness requirements through 2022. Increasing the size of the Army would reduce the operational tempo for existing units and regenerate readiness.

SPECIAL OPERATIONS FORCES

For the last 15 years, U.S. special operations forces (SOF) have been a critical component of the fight against global terrorist groups. These highly innovative and agile units are organized with a global outlook and able to conduct operations in austere and complex environments with a relatively small footprint, making them a logical leading element of the global counterterrorism mission. SOF have increasingly been optimized for that mission over the past 15 years, while high operational tempo and repeated deployments have put real strains on SOF operators and units, despite the growth in their ranks that has occurred in recent years. Because the global counterterrorism mission shows no sign of diminishing in the foreseeable future, SOF will continue to play an outsized role in that effort.

At the same time, SOF must increasingly perform critical missions within the broad discipline of irregular warfare beyond counterterrorism. China, Russia, Iran, and North Korea are increasingly competing with the United States below the threshold of major conflict in what has been called "hybrid warfare" or "gray zone" operations. These threats across Europe, the Middle East, and Asia are aimed at challenging U.S. interests and partnerships and destabilizing regional order. Put simply, SOF has an indispensable role to play in great power competitions and global counterproliferation. This reality demands a greater employment of the broad spectrum of U.S.

special operations capabilities. SOF's ability to conduct low-visibility, special warfare operations in politically sensitive environments makes them uniquely suited for this mission.

An even greater reliance on SOF beyond counterterrorism will likely require further investments in new special operations capabilities and some additional force structure. The challenges posed by militarily advanced great powers, in particular, will require the development and employment of new technologies and capabilities. At the same time, the readiness of the force should remain a priority, which will likely necessitate additional capacity. The growth in SOF end-strength called for in the 2010 and 2014 Quadrennial Defense Reviews never fully materialized because of budget constraints. Any growth now will depend on increases in the size of our conventional forces, since they will be the sources from which SOF operators are assessed and selected, as well as the dominant providers of enabling support.

NUCLEAR FORCES

Nuclear weapons play an increasing role in the strategies of Russia, North Korea, Pakistan, India, and China. For example, Russian doctrine contemplates the limited use of nuclear weapons to gain advantage in a crisis. These countries are modernizing their land, air, and sea-based nuclear forces. In addition to those states that already have nuclear weapons, Iran has not given up its nuclear ambitions. Because our enemies get a vote, the U.S. nuclear umbrella is growing more important for U.S. allies, especially in Asia and Europe.

The essential requirement of U.S. nuclear policy is to deter nuclear attack against the United States and its allies. U.S. nuclear weapons also play an important role in assuring U.S. allies, preserving peace, and preventing nuclear coercion. This is done by maintaining a highly survivable, fully exercised, and ready nuclear force that can withstand a surprise attack and carry out presidential orders. There is bipartisan consensus in support of the current nuclear modernization plan—replacing our ballistic missile submarines, strategic bombers and air launched cruise missiles, and Intercontinental Ballistic Missiles (ICBMs), while modernizing the Department of Energy's nuclear weapons research and manufacturing enterprise. The costs, while significant, are manageable: Sustaining and modernizing our nuclear deterrent makes up about five percent of national defense spending over the next decade.

The current nuclear modernization plan is vital and cannot be further delayed. It entails:

- Maintaining New START treaty force levels of 400 ICBMs, 240 submarine launched ballistic missiles (SLBM) on 12 nuclear submarines, and 60 strategic bombers;
- Replacing the Ohio-class ballistic missile submarine, developing a follow-on ICBM (the Ground Based Strategic Deterrent), and fielding a sufficient number of dual-capable B-21 heavy bombers;
- Replacing the Air Launched Cruise Missile (ALCM) with the Long Range Stand-off missile (LRSO) for the bomber force and extending the service life of the B61-12 nuclear bomb, W76-1, W78, W80, and Interoperable Warheads;
- Modernizing the nuclear command and control and communications system;
- Providing a nuclear capable variant of the F-35; and

 Recapitalizing outdated nuclear weapons facilities operated by the Department of Energy, including replacements for the Uranium Processing Facility and the Chemistry and Metallurgy Research Facility.

MISSILE DEFENSE

The U.S. homeland, it allies, and U.S. deployed forces today enjoy a measure of protection against ballistic missile threats from rogue nations such as North Korea and Iran. For the past 10 years, the Missile Defense Agency (MDA) budget has declined 14 percent. Yet the threats from ballistic missiles only continues to grow. North Korea has made advancements in mobile long-range missile threats. The Iranian nuclear deal has not halted the development and testing of Iranian long range ballistic missiles. And Russia and China continue to deploy ballistic, cruise, and hypersonic missiles that threaten U.S. forces and the homeland.

Given this, the United States must expand its ground-based midcourse defense system, including an additional interceptor site in the eastern United States. Similarly, regional missile defenses should also be increased. The Aegis ashore sites in Romania and Poland should continue as planned, but with a greater number of interceptors.

Missile defense systems must also be modernized to keep pace with our advancing adversaries. The development of the Redesigned Kill Vehicle and Multiple Object Kill Vehicle should be accelerated. We also need improved capability in sensor systems, such as increased coverage against Iran, and space-based sensor architecture that could potentially serve as an alternative to costly ground-based radars. Most importantly, new investments should be made in developing the next generation of advanced capabilities, with an emphasis on getting the United States on the right side of the cost-exchange ratio. Important development areas should include boost phase defense programs, directed energy, hypervelocity projectiles, high-power microwaves, battle management using learning machines, and space-based capabilities.

SPACE

For decades, the U.S. military has assumed that space was a sanctuary. No more. Near-peer competitors such as Russia and China are developing military capabilities explicitly to deny U.S. forces the use of space, including by targeting our satellites. This space threat has developed with alarming speed. And yet, during the same time period, the Department of Defense has significantly reduced research and development dedicated to space systems, dropping from \$5 billion to less than \$1 billion over the past six years (Fiscal Years 2009 to 2016).

The Department of Defense has finally awoken to the reality that we must invest in the next generation of space capabilities, and recent budgets have begun to arrest the decline in those investments. Over the next five years, space must be a priority for additional funding to ensure that the United States maintains its space superiority and has the capabilities and capacity to deter and defend our critical space assets in future conflicts. Many of these investments will, by necessity, be classified. Congressional oversight is thus even more vital to ensuring that the Department of Defense is spending sufficiently, and wisely, on space.

CYBER

Our senior military leaders have all stated that cyber is the one domain of warfare in which the United States does not enjoy a qualitative advantage over our adversaries. While cyber funding has steadily increased over the past five years, those resources have gone almost exclusively to building and training the 6,200-person cyber force. Sufficient funding has not been allocated to develop the cyber capabilities that this force must employ. Just as it would be unacceptable to send a soldier into battle without a rifle, we cannot deprive our cyber forces of the basic tools they need to execute their missions. Recent budgets have omitted funding for even the most basic tools, including for cyber protection teams to assess and triage compromised networks.

Put simply, future investments must prioritize the development of cyber weapons systems that are necessary to conduct military operations in cyberspace. We must provide our well-trained cyber forces with the tools to deter, defend against, and respond to malicious cyber activities. While many of these investments will be classified, the development of a unified platform, a persistent cyber training environment, and a cyber situational awareness and battle management system are the first foundational cyber capabilities that must be prioritized and continuously refreshed to ensure that our capabilities are responsive to the continuously changing cyber battlefield. The services must also adopt cybersecurity strategies for all of their weapons systems and a meaningful risk-based strategy for mitigating cyber vulnerabilities in already deployed systems.

Many of these investments will not be extremely expensive. But if we fail to invest sufficiently in cyber capabilities, we run the risk of creating a hollow cyber force.

FORCE POSTURE

One of the first actions that the next Secretary of Defense should undertake is a new comprehensive review of global force posture. The worldwide presence and posture of U.S. forces still too often reflects legacy Cold War basing and decisions taken over the past eight years based on rosy assumptions that the United States could draw down forward-deployed forces in key theaters. At the same time, the effort to "rebalance" U.S. forces toward the Asia-Pacific region has not delivered on the early high expectations of its architects.

Given growing anti-access and area denial challenges across multiple theaters, many of our longstanding assumptions about force posture are being called into question. We require more permanently forward-stationed forces that are highly survivable and capable of denying an adversary air cover, rapid land mobility, control of the seas, and effective use of the electromagnetic spectrum. Forward-stationed air and naval forces may need capabilities to conduct strikes and achieve dominance in critical domains from far greater ranges, with less dependence on vulnerable forward bases and staging areas.

The next Secretary and the Congress must determine together how many and what kinds of U.S. forces must be forward-stationed and forward-deployed in what locations in order to execute our nation's defense strategy. Rethinking U.S. global force posture must account, among

other factors, for the requirements of deterring near-peer competitors and reassuring allies in multiple parts of the world at the same time; the military commitments that will likely endure in places like the Middle East and northern Africa; the growing threats posed to our forward bases and forces by the proliferation of long-range precision fires; and the challenge of flowing forces into highly contested environments during conflict.

When reconsidering global force posture, one option should clearly be off the table: a large-scale reduction in the forward-stationed and forward-deployed forces that the United States relies upon around the world. We have run this experiment over the past eight years: The United States has withdrawn forces in Europe and the Middle East, and the resulting vacuum was filled with chaos, the malign influence of our adversaries, and threats to our nation.

It is as yet unclear what a global realignment of U.S. forces could cost, but it is safe to assume that changes to force posture will be necessary and not budget neutral. We must therefore plan to spend additional resources over the next five years to reset our global force posture.

NEW TECHNOLOGIES

The Congress has grown increasingly concerned that the U.S. military technological advantage is eroding as great power competitors modernize their militaries to counter our ability to project power. Part of this erosion is due to the defense acquisition system, which has grown too risk-averse, takes too long, and costs too much to innovate, develop, and field new capabilities. At the same time, the U.S. government is no longer the world leader in research and development funding, as it was during the Cold War. Commercial research and development now dwarfs U.S. government investments, and more and more of the technologies that the U.S. military will need to remain dominant are being developed by commercial firms, including those that traditionally have been deterred from doing business with the Department of Defense. If the United States does not adjust to this new reality, we will fall further behind.

Over the past two years, the Congress has led significant acquisition reforms through the National Defense Authorization Act. An overarching theme of these reforms has been the creation of alternative acquisition pathways to improve and accelerate the Department of Defense's ability to acquire new commercial technologies and adapt them for military use. The next Secretary of Defense must work closely with the Congress to take advantage of these acquisition reforms. An arrangement must be reached to provide the Congress with greater transparency into the Department's acquisition of new technology, and to provide the Department with greater congressional support and funding to experiment with new approaches that can deliver greater capabilities to our warfighters more quickly and cost effectively.

This will require additional funding for research and development. These resources should be focused on developing new capabilities in certain priority areas, including unmanned and autonomous systems, artificial intelligence, robotics, cyber and space capabilities, hypersonic munitions, directed energy, electronic warfare, nanotechnology, and lightweight protective materials. Additional resources should also be directed toward supporting the new

Rapid Capabilities Offices in each of the military services, with greater emphasis on prototyping, experimentation, and common sense principles such as "fly before you buy."

ACTIONS FOR CONGRESS

As a co-equal branch of government, the Congress shares responsibility with the President for our national defense. It is time for the Congress to start acting like it. We have been deceiving ourselves and the American people for too long. We have allowed arbitrary caps on our national defense spending to remain in place for five years, despite clear evidence that the world is growing more dangerous, the state of military readiness and modernization is growing more perilous, and none of this is having any impact on the national debt, which keeps growing.

The highest priority for the 115th Congress must be to repeal the Budget Control Act and work with the next President to increase defense spending in line with a new defense strategy. So long as the Budget Control Act is the law of the land, any claims to rebuild our military will be empty. The chart below contains an informed estimate of the increased defense spending that will be necessary over the next five years.

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
SASC Recommendation	**	***	***		
Base 050 Above President Obama's	\$640,341	\$662,342	\$686,531	\$720,975	\$740,517
Budget	\$54,141	\$68,042	\$86,131	<i>\$105,075</i>	\$116,517
Above BCA Caps	\$91,341	\$100,342	\$110,531	<i>\$130,975</i>	
OCO Estimate	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000
Total National Defense	\$700,341	\$722,342	\$746,531	\$780,975	\$800,517

This paper's recommended amount of \$640 billion for Fiscal Year 2018 is an increase of \$54 billion above the current President's budget. Following Fiscal Year 2018, the defense budget should grow 4 percent annually, which is required to sustain an actual build-up of the military. That would amount to a total of \$430 billion over the next five years in additional defense spending above President Obama's current plan. Annual growth above inflation is necessary to build military capabilities while contending with increasing internal costs like healthcare.

The budget increase would repair the damage to our military in two ways. First, it would address approximately \$80 billion of "unpaid bills"—the rosy assumptions about cost growth that the Department of Defense has baked into its current projections. This \$80 billion would not actually buy the military any increase in capabilities. Second, the remaining \$350 billion of the budget increase would begin to dig the military out of years of budget cuts. It begins the development of capabilities necessary to deter great power competitors. It undoes cuts to capacity that have gone too deep. And it finally provides a path forward to fix readiness.

A budget of \$640 billion does not include transferring enduring OCO costs to the base budget. The current abuse of the OCO account is a byproduct of the BCA. It can only be fixed once there has been a complete repeal of the BCA and its discretionary spending caps. To begin

"The highest priority for the 115th Congress must be to repeal the Budget Control Act and work with the next President to increase defense spending in line with a new defense strategy. So long as the Budget Control Act is the law of the land, any claims to rebuild our military will be empty."



any transfer of OCO in a budget environment like the past several years would do even more harm to the Department, and will cost us more down the line. These are real dollars paying for real activities: troop deployments, bases, training, flight hours, ammunition, and fuel. These requirements will persist at the same levels, if not higher, as a result of the operations in Afghanistan, Iraq, Syria, and the general counterterrorism mission. That is unlikely to happen in the next five years. However, once the BCA is finally repealed, the Department and Congress should agree on a plan to transition enduring OCO costs back to the base budget.

The budget increase advocated for in this paper is a lot of money, but we must be clear about the cost of doing nothing: Our military's ability to deter conflict will continue to weaken. And should we find ourselves in conflict, our nation will be forced to send young Americans into battle without sufficient training or equipment to fight a war that will take longer, be larger, cost more, and ultimately claim more American lives than it otherwise would have. That is the course we are on, but if the new President and Congress work together, we can begin to chart a better course, one that is worthy of the service and sacrifice of those who volunteer to put themselves in harm's way on our behalf.

APPENDIX

NAVY INCREASES ABOVE CURRENT BUDGET

Item	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
CVN 78 - Compress delivery to 4 years	\$0	\$o	\$ 0	\$0	\$1,000,000
Quantities	0	0	0	0	1
DDG 51 - Compress delivery to 9 months	\$433,000	\$1,578,600	\$1,617,750	\$o	\$0
Quantities	1	1	1	0	0
New Frigate - Procure by 2022	\$ 0	\$o	\$0	\$o	\$1,000,000
Quantities	0	0	0	0	1
New Patrol ship (<800 tons)	\$ 0	\$0	\$400,000	\$408,000	\$416,000
Quantities	0	0	1	1	1
SSN 774 - Ramp to 4 submarines a year	\$ 0	\$0	\$3,295,800	\$4,173,350	\$5,924,000
Quantities	0	0	1	2	2
LPD 17 - Procure LPD-29	\$1,800,000	\$ 0	\$0	\$0	\$0
Quantities	1	0	0	0	0
LX(R) - Accelerate one year	\$0	\$1,470,000	-\$1,499,000	\$1,740,000	\$o
Quantities	0	1	-1	1	0
T-ESB	\$661,000	\$ 0	\$716,000	\$o	\$0
Quantities	1	0	1	0	0
Truncate LCS	-\$860,700	-\$1,124,400	-\$895,500	-\$1,540,200	-\$1,618,600
Quantities	-1	-1	-1	-2	-2
T-AO(X)	\$477,000	\$467,100	\$489,600	\$486,000	\$486,000
Quantities	1	1	1	1	1
T-AGS	\$100,000	\$100,000			
Quantities	1	1			
T-AGOS(X) - Accelerate by 2 years			\$300,000		\$250,000
Quantities			1		1
Navy Endstrength (10,000)	\$240,000	\$480,000	\$720,000	\$960,000	\$1,200,000
End Strength increase*	2,000	4,000	6,000	8,000	10,000
F/A-18 Super Hornet	\$818,000	\$1,963,200	\$1,963,200	\$0	\$0
F/A-18 Super Hornet Quantity	10	24	24	0	0
EA-18 Growlers	\$ 0	\$324,800	\$324,800	\$324,800	\$324,800
EA-18 Growler Quantities	0	4	4	4	4

Marine Corps End Strength	\$330,000	\$700,000	\$1,000,000	\$1,400,000	\$1,800,000
Marine Corps End Strength Increase	3,000	6,000	9,000	12,000	15,000
F-35B	\$520,000	\$520,000	\$520,000	\$520,000	\$520,000
F-35B Quantities	4	4	4	4	4
Joint Light Tactical Vehicle	\$ 0	\$200,000	\$250,000	\$300,000	\$400,000
LRASM	\$ 0	\$0	\$75,000	\$75,000	\$75,000
AMRAAM	\$ 0	\$ 0	\$50,000	\$75,000	\$75,000
SEWIP Blk 3	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
CVL Development	\$5,000	\$10,000	\$20,000	\$30,000	\$35,000
Large Surface Combtant	\$5,000	\$10,000	\$20,000	\$30,000	\$35,000
LCS land-based test site	\$231,000	\$ 0	\$ 0	\$o	\$o
New SSC (Frigate) Development	\$10,000	\$70,000	\$70,000	\$100,000	\$0
Yard Patrol craft	\$45,000	\$17,000	\$17,000	\$18,000	\$18,000
TERN	\$100,000	\$50,000	\$30,000	\$10,000	\$10,000
Unmanned Undersea Vehicle (UUV)	\$80,000	\$50,000	\$30,000	\$30,000	\$30,000
Large displacement UUV	\$20,000	\$5,000	\$5,000	\$20,000	\$5,000
Extra-Large UUV	\$70,000	\$70,000	\$30,000	\$10,000	\$50,000
Medium displacement UUV	\$10,000	\$10,000	\$30,000	\$50,000	\$50,000
Small displacement UUV	\$5,000	\$5,000	\$10,000	\$10,000	\$10,000
Micro UUV	\$30,000	\$30,000	\$5,000	\$5,000	\$5,000
Wave Gliders	\$5,000	\$5,000	\$10,000	\$10,000	\$10,000
Medium Displacement Unmanned Surface Vehicle	\$50,000	\$50,000	\$20,000	\$10,000	\$50,000
Destroyer Modernization	\$65,000	\$65,000	\$65,000	\$65,000	\$65,000
F-18 Series Modifications (e.g. RF Kill Chain Enhancements)	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
F/A-18 Super Hornet Capability Upgrades	\$50,000	\$100,000	\$100,000	\$100,000	\$100,000
EA-18G Growler Capability Upgrades	\$ 0	\$10,000	\$35,000	\$35,000	\$50,000
F-35 System Design and Development	\$225,000	\$212,500	\$75,000	\$o	\$0
MQ-25 development	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Long-Range ISR and strike	\$100,000	\$200,000	\$250,000	\$300,000	\$350,000
Rapid Prototyping	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
R&D increase	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Repairing Navy Readiness	\$1,000,000	\$1,100,000	\$1,210,000	\$1,331,000	\$1,464,100

Readiness requirements for larger fleet	\$2,000,000	\$3,000,000	\$4,000,000	\$5,000,000	\$6,000,000
Marine Corps Aviation Readiness requirements	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
FSRM 80% Requirement	\$600,000	\$720,000	\$864,000	\$1,036,800	\$1,244,160
Military Construction	\$500,000	\$550,000	\$605,000	\$665,500	\$732,050

^{*}Patrol Ships are not counted in the Navy fleet battle force

^{*}Endstrength quantities are cumulative of previous year increases. Thus, the endstrength increase in Fiscal Year 2022, is the total amount of endstrength increase.

AIR FORCE INCREASES ABOVE CURRENT BUDGET

Item	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Military End Strength MILPERS Increases (20,000)	\$450,000	\$1,100,000	\$1,700,000	\$2,300,000	\$2,900,000
End strength increase*	3,000	7,000	11,000	15,000	20,000
F-35A Increased Procurement Rate	\$500,000	\$750,000	\$1,500,000	\$4,000,000	\$4,800,000
Added F-35As per year	0	4	12	25	32
C-130J	\$584,000	\$876,000	\$876,000	\$876,000	\$876,000
C-130J Quantities	8	12	12	12	12
EC-37B Compass Call	\$103,000	\$309,000	\$309,000	\$309,000	\$o
EC-37B Compass Call Quantities	1	3	3	3	0
KC-46	\$832,000	\$1,664,000	\$1,664,000	\$1,664,000	\$1,664,000
KC-46 Quantities	4	8	8	8	8
JSTARS Replacement Radar Development	\$80,000	\$ 0	\$ 0	\$ 0	\$o
JSTARS Replacement	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
O/A-X Light Attack Fighter	\$1,200,000	\$960,000	\$930,000	\$1,400,000	\$1,500,000
Penetrating Counter-Air Capability	\$400,000	\$750,000	\$1,500,000	\$2,000,000	\$3,000,000
Presidential Aircraft Replacement (PAR)	\$ 0	\$130,000	\$380,000	\$260,000	\$70,000
AMRAAM	\$ 0	\$ 0	\$50,000	\$75,000	\$75,000
Small Diameter Bomb	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Advanced munitions Survivable Strike Weapon	\$300,000	\$1,000,000	\$1,200,000	\$1,200,000	\$1,200,000
(SEAD/DEAD HARM) Advanced electronic attack	\$50,000	\$100,000	\$100,000	\$150,000	\$188,000
capability					
Advanced countermeasures	\$ 0	\$ 0	\$85,000	\$91,000	\$112,000
F-22 Common Configuration Upgrades	\$150,000	\$250,000	\$300,000	\$300,000	\$300,000
F-15C/D Sustainment	\$ 0	\$ 0	\$ 0	\$300,000	\$500,000
F-35 System Design and Development	\$225,000	\$212,500	\$75,000	\$0	\$0
Rapid Prototyping	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
R&D increase	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Weapons System Sustainment (Depot) 90% requirement	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Increase Flying Hours due to capacity	\$0	\$21,016	\$84,064	\$215,414	\$383,542
FSRM 80% Requirement	\$579,000	\$694,800	\$833,760	\$1,000,512	\$1,200,614

Repairing Readiness	\$1,000,000	\$1,100,000	\$1,210,000	\$1,331,000	\$1,464,100
Military Construction	\$500,000	\$550,000	\$605,000	\$665,500	\$732,050

^{*}Endstrength quantities are cumulative of previous year increases. Thus, the endstrength increase in Fiscal Year 2022, is the total amount of endstrength increase.

ARMY INCREASES ABOVE CURRENT BUDGET

Item	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Military End Strength Increase (40,000)	\$960,000	\$1,920,000	\$2,880,000	\$3,840,000	\$4,800,000
Military End Strength Increase*	8,000	16,000	24,000	32,000	40,000
Recruiting	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Additional Army Force Structure	\$3,300,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000
Upgrade Five Armored BCT	\$2,000,000	\$2,000,000	\$2,000,000	\$2,250,000	\$2,250,000
Increase Munitions and Munitions Infrastructure	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Multi-Domain Brigade	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Air Defense Capability	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Soldier Capability Enhancements	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Rapid Prototyping	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
R&D increase	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Readiness requirements for larger Army	\$2,000,000	\$3,000,000	\$4,000,000	\$5,000,000	\$6,000,000
Repairing Readiness	\$1,000,000	\$1,100,000	\$1,210,000	\$1,331,000	\$1,464,100
FSRM 80% Requirement	\$536,000	\$643,200	\$771,840	\$926,208	\$1,111,450
Military Construction	\$500,000	\$550,000	\$605,000	\$665,500	\$732,050

^{*}Endstrength quantities are cumulative of previous year increases. Thus, the endstrength increase in Fiscal Year 2022, is the total amount of endstrength increase.

OTHER INCREASES ABOVE CURRENT BUDGET

Item	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Cyber	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Space RDT&E	\$500,000	\$1,000,000	\$1,500,000	\$2,000,00 0	\$2,500,000
Space deterrent	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000
Space System Procurement	\$200,000	\$400,000	\$400,000	\$500,000	\$500,000
Missile Defense Development	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
GBSD (Minuteman ICBM replacement)	\$ 0	\$40,000	\$0	\$510,000	\$690,000
Additional for nuclear infrastructure shortfall	\$1,060,000	\$1,060,000	\$1,060,000	\$1,060,000	\$1,060,000
Strategic Capabilities Office	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Defense Wide Rapid Prototyping	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Defense Wide R&D increase	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Asia Pacific Stability Initiative	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Increase to ASFF	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000
Increase to European Deterrence Initiative	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000
Increase to Operation Freedom's Sentinel Higher Troop Presence	\$2,500,00 0	\$2,500,000	\$2,500,000	\$2,500,000	\$2,500,000
Defense Wide Military Construction	\$500,000	\$550,000	\$605,000	\$665,500	\$732,050

U.S. Senator John McCain Chairman, Senate Armed Services Committee

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