

Calendar No. 205

116TH CONGRESS }
1st Session }

SENATE

{ REPORT
116-103

DEPARTMENT OF DEFENSE APPROPRIATIONS BILL, 2020

SEPTEMBER 12, 2019.—Ordered to be printed

Mr. SHELBY, from the Committee on Appropriations,
submitted the following

REPORT

[To accompany S. 2474]

The Committee on Appropriations reports the bill (S. 2474) making appropriations for the Department of Defense for the fiscal year ending September 30, 2020, and for other purposes, reports favorably thereon and recommends that the bill do pass.

New obligatory authority

Total of bill as reported to the Senate	\$687,546,478,000
Amount of 2019 appropriations	668,515,759,000
Amount of 2020 budget estimate	690,617,564,000
Bill as recommended to Senate compared to—	
2019 appropriations	+ 19,030,719,000
2020 budget estimate	– 3,071,086,000

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BACKGROUND

PURPOSE OF THE BILL

This bill makes appropriations for the military functions of the Department of Defense for the period October 1, 2019, through September 30, 2020. Functional areas include the pay, allowances, and support of military personnel, operation and maintenance of the forces, procurement of equipment and systems, and research, development, test and evaluation. Appropriations for foreign military assistance, military construction, family housing, nuclear weapons programs, and civil defense are provided in other bills.

HEARINGS

The Appropriations Subcommittee on Defense began hearings on March 13, 2019, and concluded them on June 5, 2019, after nine separate sessions. The subcommittee heard testimony from representatives of the Department of Defense and the Intelligence Community.

SUMMARY OF THE BILL

The Committee recommendation of \$687,546,478,000 includes funding to develop, maintain, and equip the military forces of the United States and for other purposes, including \$70,665,000,000 in overseas contingency operations, \$1,710,245,000 in emergency funding and \$514,000,000 in mandatory spending.

The fiscal year 2020 budget request for activities funded in the Department of Defense appropriations bill totals \$690,617,564,000 in new budget authority, including \$163,980,474,000 in overseas contingency operations funding, and \$514,000,000 in mandatory spending.

In fiscal year 2019, the Congress appropriated \$667,319,910,000 for activities funded in this bill. This amount includes \$599,405,910,000 in base appropriations and \$67,914,000,000 in overseas contingency operations appropriations provided in Public Law 115–245. Additionally, Congress appropriated \$1,195,849,000 in emergency appropriations for fiscal year 2019 in Public Laws 116–20 and 116–26. The Committee recommends that funds requested for Coast Guard overseas contingency operations be appropriated directly to the Department of Homeland Security.

The Committee recommendation in this bill is \$19,030,719,000 above the amount provided in fiscal year 2019 and \$3,071,086,000 below the amount requested for fiscal year 2020.

COMMITTEE RECOMMENDATIONS

The following table displays the recommendations for each title:

[In thousands of dollars]

	Fiscal year 2019 enacted	Fiscal year 2020 estimate	Committee recommendation
Title I—Military Personnel	138,537,041	143,476,503	142,983,813
Title II—Operation and Maintenance	193,682,875	123,944,614	200,610,130
Title III Procurement	135,362,619	118,923,130	132,837,153
Title IV—Research, development, test and evaluation	94,896,708	102,647,545	104,282,139
Title V—Revolving and management funds	1,641,115	1,426,211	1,580,211
Title VI—Other Department of Defense Programs	36,212,133	35,147,087	35,728,689
Title VII—Related Agencies	1,036,424	1,072,000	1,053,400
Title VIII—General provisions (net)	–1,963,005	.....	–3,904,302
Title IX—Overseas Contingency Operations	67,914,000	163,980,474	70,665,000
Title X—Additional Appropriations for Disaster Relief .....	.....	.....	1,710,245
Additional Supplemental Appropriations for Disaster Relief Act, 2019 (Public Law 116–20)	1,051,000	.....	.....
Emergency Supplemental Appropriations for Humanitarian As- sistance and Security at the Southern Border Act, 2019 (Public Law 116–26)	144,849	.....	.....
Net grand total	668,515,759	690,617,564	687,546,478
Total mandatory and discretionary (incl. scorekeeping adjustments)	676,092,849	698,476,379	695,405,293

The Committee has displayed recommended adjustments in tables presented under each appropriation account.

These adjustments reflect the following Committee actions: elimination of funds requested for programs which are lower priority, duplicative, or not supported by firm requirements in out-year development or procurement appropriations; deletion of excess funds based on program delays or slow execution; addition of funds to reflect congressional priorities and to rectify shortfalls in the budget estimate; and implementation of recommendations in the National Defense Authorization Act for Fiscal Year 2020.

CLASSIFIED PROGRAM ADJUSTMENTS

The Committee recommends adjustments to certain classified programs, as explained in the classified annex to the Committee's report.

BUDGET JUSTIFICATION MATERIALS FOR SPECIAL ACCESS PROGRAMS

The Committee recommends additional adjustments to the budget justification materials provided in the Special Access Program Annual Report to Congress submitted in accordance with Title 10, United States Code, Section 119(a)(1), as explained in the classified annex to the Committee's report. It is expected that these adjustments will be incorporated in future budget submissions.

DEFINITION OF PROGRAM, PROJECT AND ACTIVITY

For the purposes of the Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99–177), as amended by the Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 (Public Law 100–119), and by the Budget Enforcement Act of 1990 (Public Law 101–508), the terms “program, project, and activity” for appropriations contained in this act shall be defined as the most specific level of budget items identified in the Department of Defense Appropriations Act, 2020, the related classified annexes

and Committee reports, and P-1 and R-1 budget justification documents as subsequently modified by congressional action.

The following exception to the above definition shall apply: the military personnel and the operation and maintenance accounts, for which the term “program, project, and activity” is defined as the appropriations accounts contained in the Department of Defense Appropriations Act.

At the time the President submits the budget request for fiscal year 2021, the Secretary of Defense is directed to transmit to the congressional defense committees budget justification documents to be known as the “M-1” and “O-1” which shall identify, at the budget activity, activity group, and sub-activity group level, the amounts requested by the President to be appropriated to the Department of Defense for military personnel and operation and maintenance in any budget request, or amended budget request, for fiscal year 2021.

REPROGRAMMING GUIDANCE

The Secretary of Defense is directed to continue to follow the reprogramming guidance for acquisition accounts as specified in the report accompanying the House version of the Department of Defense appropriations bill for fiscal year 2008 (House Report 110-279). The dollar threshold for reprogramming funds shall remain at \$10,000,000 for military personnel; \$15,000,000 for operation and maintenance; \$20,000,000 for procurement; and \$10,000,000 for research, development, test and evaluation.

Also, the Under Secretary of Defense (Comptroller) is directed to continue to provide the congressional defense committees annual DD Form 1416 reports for titles I and II and quarterly, spreadsheet-based DD Form 1416 reports for service and defense-wide accounts in titles III and IV of this act. Reports for titles III and IV shall comply with guidance specified in the explanatory statement accompanying the Department of Defense Appropriations Act for Fiscal Year 2006. The Department shall continue to follow the limitation that prior approval reprogrammings are set at either the specified dollar threshold or 20 percent of the procurement or research, development, test and evaluation line, whichever is less. These thresholds are cumulative from the base for reprogramming value as modified by any adjustments. Therefore, if the combined value of transfers into or out of a military personnel (M-1), an operation and maintenance (O-1), a procurement (P-1), or a research, development, test and evaluation (R-1) line exceeds the identified threshold, the Secretary of Defense must submit a prior approval reprogramming to the congressional defense committees. In addition, guidelines on the application of prior approval reprogramming procedures for congressional special interest items are established elsewhere in this report.

FUNDING INCREASES

The funding increases outlined in the tables for each appropriation account shall be provided only for the specific purposes indicated in the tables.

CONGRESSIONAL SPECIAL INTEREST ITEMS

Items for which additional funds have been recommended or items for which funding is specifically reduced as shown in the tables detailing Committee recommended adjustments or in paragraphs using the phrase “only for” or “only to” are congressional special interest items for the purpose of the Base for Reprogramming [DD Form 1414]. Each of these items must be carried on the DD Form 1414 at the stated amount, as specifically addressed elsewhere in this report.

RECOMMENDATIONS TO ENHANCE THE CONGRESSIONAL REVIEW PROCESS

The foundation of the congressional budget review process is the budget justification materials provided by the Department of Defense. Therefore, it is imperative that the materials are accurate and informative. Although the majority of the budget volumes and exhibits are sufficient, the Committee is concerned about particular gaps that prohibit adequate congressional oversight. To further inform the congressional review, the Committee directs the following actions for the Office of the Under Secretary of Defense (Comptroller) [OUSD(C)]:

- Improve the coordination among all stakeholders for cross-cutting budgetary issues. These crosscutting issues include, but are not limited to, the Information Technology budget, the European Deterrence Initiative, Joint Urgent Operational Needs [JUONs], and audit costs. These types of budget topics cross multiple appropriations and while some are addressed in the budget justification, some data is only provided via question and answer between the Committee and the services and defense agencies. As an example, OUSD(C) provided to the Committee (upon request) a helpful summary of all JUONs included in the fiscal year 2020 President’s budget request. However, the Committee found inconsistencies in the data when compared to the service justification materials, which caused confusion and doubt in the validity of the estimates. Improving the coordination between OUSD(C) and the services with regard to high interest, crosscutting issues should reduce these inconsistencies.
- Refine OUSD(C)’s role in the development of estimates for supplemental appropriations for emergencies or other emergent requirements. The military services are eager to inform the Committee about damage estimates or other emergent requirements as they became available, however, the services have historically been hesitant to provide such information without OUSD(C)’s approval first. The Committee notes that in 2018, hurricanes Florence and Michael devastated a significant number of Department of Defense facilities. While the affected military services provided timely damage estimates, those coming from OUSD(C) were delayed and, in some cases, conflicted with the information previously provided by the services. Additionally, the Committee received conflicting cost estimates for the amounts needed to support border operations. The OUSD(C) used a cost model to formulate budget requests for

border support contradicting estimates from the military services charged with executing the mission. In both of these instances, the Committee found the data provided by the military services more accurate, timely, and informative. The Committee appreciates OUSD(C)'s desire to coordinate the transmission of such data; however, it is important that the Committee maintain communication with the services. Therefore, the OUSD(C)'s guidance shall not restrict the services' ability to provide information directly to the Committee through any point in the process. Clarifying OUSD(C)'s processes and procedures for providing such information to the Committee should benefit all stakeholders.

- Reduce the time it takes to respond to congressional inquiries about the budget request. The responses to questions for the defense agencies on their operation and maintenance requests have historically taken an inordinate amount of time. During this cycle, nearly one-third of the responses were received by the Committee up to six weeks after the questions were sent. In another case, the Committee requested the Fiscal Year 2020 Working Capital Fund Rate guidance that was used to formulate the budget request, yet OUSD(C) refused to provide it. Timely responses allow for a smoother budget review and better inform Committee recommendations.
- Include appropriation and line item detail in Table 3 of the European Deterrence Initiative justification book.
- Establish a standard process for submitting responses to recurring requests for additional information regarding the annual budget submission, including, but not limited to, information regarding proposed changes to general provisions; documents detailing the assumptions of budget estimates, such as inflation guidance; and accurate documentation in support of executed Rapid Acquisition Authority.

CIVILIAN PAY INCREASE

The Committee notes that the President's fiscal year 2020 budget request called for a civilian pay freeze while including a 3.1 percent pay increase for the military, the largest in 10 years. However, on August 30, 2019, the President transmitted an alternative plan for pay adjustments that called for a 2.6 percent across-the-board increase for civilian pay in January of 2020. The Committee supports the alternative pay plan and is evaluating the impact to the Department of Defense. In order to inform this assessment, the Committee directs the Secretary of Defense to provide the estimated cost of a 2.6 percent pay increase for calendar year 2020 by appropriation account to the House and Senate Appropriations Committees not later than September 30, 2019.

COMMITTEE INITIATIVES

The Committee recognizes the importance of continuing to invest in the priorities outlined in the 2018 National Defense Strategy and has made important investments to maintain and modernize our forces and our capabilities. We must ensure that our Nation has a competitive approach to force development and a consistent,

multiyear investment that restores warfighting readiness and integrates cutting edge technology. Today's security environment is affected by rapid technological advancements, expanding to more actors with lower barriers of entry, and moving at accelerating speed, all of which are changing the character of war. In order to maintain overmatch against adversaries across the domain spectrum, the Committee recommends additional investments in areas such as basic research, hypersonics, 5G, artificial intelligence, missile defense, cybersecurity, and complimentary aspects including test and evaluation infrastructure. The drive to develop new technologies is relentless and we must not fall behind; however, the development of new technologies is not enough, we must also ensure that they are fielded. To that end, the Committee has prioritized the importance of accelerating the transition of technologies and capabilities from concept to production. Rather than spending decades in development we must seek to more quickly deploy these innovations to benefit the warfighter. The Committee notes that the Department's technological advantage depends on a healthy and secure national security innovation base and as such recommends additional investments in the defense industrial base as well as manufacturing communities across the country.

The Committee expects that the Department will sustain and support continued investments in these areas in the fiscal year 2021 President's budget request. Additionally, the Committee directs the Secretary of Defense to provide a spend plan for execution of the additional fiscal year 2020 resources provided for committee initiatives not later than 60 days following enactment of this act.

Finally, the Committee directs that funds for these initiatives are to be competitively awarded or provided to programs that have received competitive awards in the past.

NIGHT COURT

The Committee notes that in advance of the President's fiscal year 2020 budget request, the Department of the Army undertook a bottom-up review of all programs, projects and activities in an effort to identify and realign \$25,000,000,000 to resource the Army's top modernization priorities over the Future Years Defense Program [FYDP]. By the Army's own estimate, the final adjustments exceeded \$31,000,000,000 of realignments to support and fully fund the 31 Army program priorities under the purview of the Army Futures Command and supporting Cross-Functional Teams [CFTs]. This included the realignment of \$15,047,944,000 from legacy or underperforming acquisition programs identified to the congressional defense committees in a consolidated list of 93 program eliminations and 93 program truncations.

The Committee further notes that since fiscal year 2018, the Army has repeatedly engaged the congressional defense committees through requests for fiscal realignments after the budget submissions, requests to resource unfunded requirements outside of the traditional budget cycle, and reprogramming actions during the year of execution for new start CFT priorities. Prior to passage of the Consolidated Appropriations Act, 2018 (Public Law 115-141), but after the House Committee on Appropriations marked up the Department of Defense Appropriations Act, 2018 (H.R. 3219), the

Army submitted a request to the Senate Committee on Appropriations to realign resources for a new network modernization strategy by truncating and cancelling existing network programs. Then, during execution of fiscal year 2018 resources, the Army submitted multiple reprogramming requests to stand-up or accelerate CFT programs, including the Enhanced Night Vision Goggle—Binocular, Synthetic Training Environment, Heads Up Display 3.0 (now Integrated Visual Augmentation System), Maneuver-Short Range Air Defense, Next Generation Combat Vehicle, Next Generation Squad Weapon, Deep Strike Cannon Artillery System and Future Vertical Lift. After the submission of the fiscal year 2019 President's budget request, the Army submitted a request to realign its Science and Technology resources; and additional reprogramming actions for CFT priorities were submitted during the year of execution.

The Committee recognizes the need for modernization and practical disconnects between budget cycles and strategy changes requiring flexible resourcing authorities. The Committee also recognizes the benefits of conducting a bottom-up review of legacy programs identifying areas ripe for efficiency, consolidation, or elimination. However, the Committee is concerned with continued program reviews in fiscal year 2021 targeting a reported \$10,000,000,000 for realignment into CFT priorities. This represents a clear disconnect between Army messaging with the fiscal year 2020 President's budget request that the Army's priorities were fully funded in the fiscal year 2020 FYDP. Of additional concern are indications that the Office of the Secretary of Defense [OSD] is undertaking a similar process for review of defense agencies and activities in preparation for the fiscal year 2021 President's budget submission.

Continued, wide-ranging truncation or elimination of programs without notification to the congressional defense committees in advance of the subsequent budget submission leads to inefficiencies and misappropriation of resources in the current budget request being considered. In many cases, the congressional defense committees were required to authorize programs and appropriate resources within the fiscal year 2019 defense bills for programs that had already been eliminated or truncated within the Department's subsequent Program Objective Memorandum and budget review cycles. With the continued, senior level reviews for the Army and the Office of the Secretary of Defense, the Committee is in a position to again appropriate resources to programs that will be truncated or eliminated in the fiscal year 2021 budget request.

Therefore, the Committee directs the Secretary of the Army and the Secretary of Defense to provide documentation to the congressional defense committees concurrent with the fiscal year 2021 President's budget request that highlights all program truncations or eliminations resulting from senior level "Night Courts". This document shall maintain the format of the Army's list of fiscal year 2020 program eliminations and truncations. Further, the Committee directs that for each program eliminated or truncated, to include those in the operation and maintenance accounts, the Secretary of the Army and the Secretary of Defense will submit spend plans for all fiscal year 2020 appropriations allocated to those programs. The spend plans shall also include narrative justification

explaining the necessity of prior year funding still available for obligation given the fiscal year 2021 funding levels and a timeline within the Department highlighting at what point decisions were made to truncate or eliminate each program.

PROVIDING OF ACQUISITION DOCUMENTS AND PROGRAM TRANSPARENCY

The Committee is dismayed with the Army's lack of transparency and reluctance to provide the Committee access to common acquisition documents, to include acquisition decision memoranda, acquisition strategies, and Simplified Acquisition Management Plans, during its budget and program reviews. The Committee requested several standard acquisition documents which are critical in tracking the status of programs in relation to the previously submitted budget request and justification documents during its review of the fiscal year 2020 budget request and was repeatedly met with resistance from the Army.

The Committee understands that budget requests are formulated well in advance of their submission to Congress and that fact-of-life changes require up-to-date briefings and ongoing dialogue in order for the Committee to provide appropriate resources for dynamic programs. Additionally, the Committee is supportive of the desire to reform and streamline the acquisition process; however, such reforms should be transparent to Congress. In prior fiscal years the aforementioned documents were freely shared, which facilitated a more transparent and productive budget and program review. The Committee urges the Army to review its current practices with an eye towards returning to the constructive information exchange of prior years. Such review should include the consideration of all relevant authorities, policies and procedures regarding the Committee's access to documentation. The Secretary of the Army shall provide a briefing to the Committee on the findings of the review not later than 30 days after enactment of this act.

ARMY ACQUISITION ROLES AND RESPONSIBILITIES

The Committee has supported efforts by the Army to address modernization shortfalls and deliver critically needed capabilities to the warfighter through establishment of Cross-Functional Teams [CFTs] and ultimately the stand-up of Army Futures Command [AFC]. However, questions remain on the roles and responsibilities of AFC and the Assistant Secretary of the Army (Acquisition, Logistics & Technology) [ASA(ALT)]. As an example, the Committee recently learned of a newly created Science Advisor position within AFC, which seems to be duplicative of the longstanding role of the Deputy Assistant Secretary of the Army for Research and Technology. Additionally, the Committee was concerned to learn that funding decisions on investment accounts, to include science and technology programs, would be directed by AFC rather than ASA(ALT).

While the Committee supports AFC's role in establishing requirements and synchronizing program development across the Army, it affirms that ASA(ALT) has a statutory role in the planning and resourcing of acquisition programs. The ASA(ALT) should maintain

a substantive impact on the Army's long-range investments, not just serve as a final approval authority. Therefore, the Committee directs the Secretary of the Army to provide a report that outlines the roles, responsibilities, and relationships between ASA(ALT) and AFC to the congressional defense committees not later than 90 days after enactment of this act. The report shall include a clear description of the responsibilities of each organization throughout the phases of the planning, programming, budgeting, and execution of resources.

AIR FORCE STRATEGIC BUDGETING

The Committee is concerned with the Air Force's fiscal year 2020 future years defense program and recent strategic budgeting decisions. The last 3 years of record investment funding levels for the Department should have afforded the Air Force the opportunity to make responsible and deliberate strategic budgeting decisions as well as plan for the prospect of a top-line leveling or downturn. Instead, the Air Force has reversed acquisition strategies on key investment programs, divested or insufficiently funded key capabilities in the out-years, and failed to transition some critical technologies to programs of record.

While the Committee recognizes the uncertainty caused by the threat of sequestration and Defense budget caps in recent years, it also notes that recent budget requests have far exceeded these budget caps, insulating the Air Force from making difficult choices. The Committee fears that the lack of strategic budgeting decisions, which can be delayed in the current budget environment, could have a detrimental impact on the effectiveness of the Air Force in the future budget environment. Therefore, the Committee directs Air Force leadership, to include the Air Force Deputy Chief of Staff for Plans and Programs, to brief the congressional defense committees not later than 30 days after the release of the fiscal year 2021 President's budget request on its strategic budgeting decisions, to include a classified component, as well as changes to key investment programs, divestments, and out-year funding disconnects.

FIFTH GENERATION WIRELESS

Fifth Generation wireless [5G] is anticipated to produce dramatic improvements in data speed, volume and latency that have the potential to enable transformational technologies that will both revolutionize and challenge Department of Defense processes and operations.

An April 2019 Defense Innovation Board [DIB] report noted that 5G ecosystems of technology can revolutionize Department operations, networks, and information processes by allowing volumes of data to be shared in close time across geographically dispersed systems. In particular, 5G has the potential to provide the Department expanded network capabilities that will enable new technologies like hypersonic weapons and hypersonic defenses to be deployed.

This new 5G technology also presents serious risks if the U.S. does not lead the field in 5G infrastructure and systems and instead must rely on foreign components embedded throughout the 5G network. The DIB report also cautioned that while the United

States continues to pursue investments in the mmWave spectrum to support 5G technology, the rest of the world, led by China, is focused on building out sub-6 spectrum infrastructure. The report noted that the Department will have to develop spectrum strategies, including whether and how to share sub-6 spectrum currently used by the Department while ensuring spectrum security and performance, and how to operate on the sub-6 infrastructure developed by China and expected to be used by the much of rest of the world. In this scenario, which the DIB viewed as likely, the Department will need significant investment in system security and resiliency to enable operations on a network infrastructure that will be highly vulnerable to cyber-attack.

The Committee believes there is an urgency to addressing these issues and supports the Department's efforts to prepare for this changing landscape through its Next Generation Information Communications Technology [5G-XG] program. The program seeks to harness emerging information communications technologies to enhance military capabilities and potentially accelerate U.S. deployment of new commercial products and services enabled by 5G networks. Accordingly, the Committee recommends an increase of \$436,000,000 in Research, Development, Test and Evaluation, Defense-Wide for the 5G-XG program. The Committee directs the Secretary of Defense to provide a spend plan for the funding prior to obligation of fiscal year 2020 funds and, not later than 60 days after the enactment of this act, to report to the congressional defense committees on how it is addressing the DIB recommendations.

MISSILE DEFENSE AGENCY

Missile Defense Agency Priorities, Unfunded Requirements and Budget.—The fiscal year 2020 President's budget request for the Missile Defense Agency [MDA] is \$9,385,907,000 (excluding appropriations for Military Construction), a decrease of \$919,667,000 from amounts enacted for fiscal year 2019. Further, with submission of the fiscal year 2020 President's budget request, the Director, MDA, submitted to the congressional defense committees a list of unfunded priorities for fiscal year 2020 totaling in excess of \$1,900,000,000. The Committee recommends \$10,537,895,000 for MDA activities in this bill in fiscal year 2020, including \$635,136,000 for unfunded requirements; \$692,000,000 for additional MDA unfunded requirements identified subsequent to the budget submission; a realignment of \$728,000,000 following the termination of the Redesigned Kill Vehicle program, as addressed elsewhere in this report; as well as funding for additional MDA priorities.

The Committee is concerned by the apparent disconnect among the 2018 National Defense Strategy, the 2019 Missile Defense Review and the fiscal year 2020 President's budget request for MDA. Further, the Committee notes that acquisition strategies and cost estimates for several programs identified as MDA priorities, to include the Hypersonic and Ballistic Tracking Space Sensor, laser demonstration and scaling programs, and advanced discrimination efforts have changed from the previous year, despite full funding provided for these efforts in the Department of Defense Appropria-

tions Acts for fiscal years 2018 and 2019. The Committee expects greater programmatic and fiscal alignment consistent with the aforementioned documents among the Director, MDA; the Under Secretary of Defense (Research and Engineering); the Under Secretary of Defense (Acquisition and Sustainment); the Under Secretary of Defense (Comptroller); the Director, Cost Assessment and Program Evaluation; and the Director, Office of Management and Budget in future budget submissions.

Missile Defense Agency Workforce.—The Committee notes that with the fiscal year 2020 President’s budget request, the Missile Defense Agency is proposing to reduce its civilian Full-Time Equivalent [FTE] target by 4.17 percent from fiscal year 2019. The Committee further notes that if approved, this would represent a 8.58 percent reduction to MDA’s civilian FTEs since fiscal year 2017, while MDA’s overall budget has increased by over 30 percent since that time. Additionally, MDA has proposed a reduction of 5.6 percent to its military authorizations since fiscal year 2017, to include the elimination of the position of the Deputy Director, MDA. Further, the Committee notes that the Director, MDA, submitted with the fiscal year 2020 President’s budget request a list of unfunded requirements with estimated costs in excess of \$8,000,000,000 over the next 5 years and requires additional civilian FTE to manage and oversee; as well as proposed a realignment of over \$12,000,000,000 in current budget plans for development of a Next Generation Interceptor for Ground-based Midcourse Defense.

The Committee is concerned by the apparent disconnect between MDA’s workforce and mission requirements. Therefore, the Under Secretary of Defense (Acquisition and Sustainment) in coordination with the Director, MDA, is directed to submit to the congressional defense committees, no later than with the fiscal year 2021 President’s budget request, an assessment on MDA’s current and required workforce size, qualifications and makeup to address MDA requirements.

Hypersonic and Ballistic Tracking Space Sensor.—The fiscal year 2020 President’s budget request includes no funds to continue the development of a Hypersonic and Ballistic Tracking Space Sensor [HBTSS], previously named the Space Sensor Layer [SSL] program. The Committee notes that \$14,000,000 was requested and appropriated for SSL in fiscal year 2018, and \$73,000,000 was appropriated for SSL in fiscal year 2019, consistent with the fiscal year 2019 unfunded requirement for SSL identified by the Director, Missile Defense Agency. For fiscal year 2020, the Director, MDA, has identified a HBTSS unfunded requirement of \$108,000,000 to continue development of on-orbit testbeds. The Committee understands that these on-orbit testbeds will demonstrate a capability to detect and track emerging threats and conventional ballistic missiles, support missile warning and missile defense, and support the overhead persistent infrared enterprise; and that such a capability is consistent with U.S. missile defense programs and capabilities called for in the 2019 Missile Defense Review.

The Committee recommends \$108,000,000 for HBTSS in fiscal year 2020. The Committee directs the Director, MDA, to submit to the congressional defense committees, no later than with the submission of the fiscal year 2021 President’s budget request, the ac-

quisition strategy for HBTSS, to include the contract-type determination and rationale therefor, plans for technical data management, sustainment strategy, integrated master test plan and integrated master schedule, as well as a cost estimate. The Director, Operational Test and Evaluation, is directed to submit, not later than 30 days thereafter, to the congressional defense committees, an assessment of MDA's proposed test strategy for HBTSS. Further, the Under Secretary of Defense (Research and Engineering) is directed to provide to the congressional defense committees, with submission of the fiscal year 2021 President's budget request, an acquisition roadmap for MDA space sensor acquisition programs that identifies synergies, as well as decision points and off-ramps for complimentary programs funded by MDA, as well as the Defense Advanced Research Projects Agency and the Space Development Agency.

Redesigned Kill Vehicle Program Termination and Development of Next Generation Interceptor.—Subsequent to the submission of the fiscal year 2020 President's budget request, the Under Secretary of Defense (Research and Engineering) terminated for convenience the Redesigned Kill Vehicle [RKV] program and initiated the development of a Next Generation Interceptor [NGI] for U.S. Ground-based Midcourse Defense [GMD]. The Committee has been briefed by the Under Secretary of Defense (Research and Engineering) and the Director, MDA, about these proposed program adjustments and supports developing and fielding an operational NGI while continuing to sustain and modernize current GMD capabilities. Therefore, the Committee recommends a realignment of \$728,000,000 of fiscal year 2019 and 2020 GMD funds to support a competitive acquisition of the NGI while addressing current GMD requirements.

The Director, MDA, is directed to submit to the congressional defense committees, not later than with submission of the fiscal year 2021 President's budget request, the acquisition strategy for a competitive NGI program, to include the contract-type determination and rationale therefor, plans for technical data management, sustainment strategy, integrated master test plan and integrated master schedule, as well as a cost estimate. The Director, Operational Test and Evaluation, is directed to submit, not later than 30 days thereafter, to the congressional defense an assessment of MDA's proposed test strategy for NGI. Additionally, the Director, Cost Assessment and Program Evaluation, is directed to submit to the congressional defense committees with submission of the fiscal year 2021 President's budget request an Independent Cost Estimate for the NGI program, and the Under Secretary of Defense (Comptroller) is directed to certify to the congressional defense committees with submission of the fiscal year 2021 President's budget request full funding for the NGI acquisition strategy.

Use of Research, Development, Test and Evaluation Appropriations.—The fiscal year 2020 President's budget request includes \$41,000,000 in Research, Development, Test and Evaluation, Defense-Wide, program element 0604672C, for activities that have previously been requested and appropriated in Military Construction, Defense-Wide appropriations. The Committee does not agree with this proposed use of research and development funds, nor the

associated legislative proposals, and recommends a reduction to the budget request accordingly. Further, the Committee directs that none of the funds appropriated in this act for research, development, test and evaluation may be used for military construction activities, unless expressly stated so in this act.

AEGIS Baselines Budget Estimates.—As expressed elsewhere in this report, the Committee remains concerned with consistently evolving requirements and costs to develop and field AEGIS baseline capability upgrades. The Committee recommends a 10 percent increase for AEGIS Baseline 9 over amounts enacted for fiscal year 2019.

JOINT STRIKE FIGHTER

F-35 Production.—The fiscal year 2020 President’s budget request includes 78 F-35 Joint Strike Fighters [JSF], 19 fewer than were provided in the Department of Defense Appropriations Act, 2019 (Public Law 115-245). The Committee notes that the Department of Defense continues to request fewer than 60 F-35A variants and a stable F-35B procurement profile was reduced by more than half to 10 aircraft in the fiscal year 2020 President’s budget request. As a result, the Committee recommends an additional \$156,000,000 in advance procurement for the F-35A, as delineated on the Air Force unfunded priority list, and \$1,056,000,000 to procure 12 additional F-35As in fiscal year 2020. In addition, the Committee recommends \$791,970,000 to procure 6 additional F-35Bs for the Marine Corps.

The Committee understands that the Department of Defense took several actions to prepare for Turkey’s removal from the F-35 program, given its acquisition of the Russian-made S-400 air and missile defense system. Turkey joined the F-35 program in 2002, has been a significant industrial participant, and planned to procure 100 F-35As for approximately \$8,000,000,000. The Department has implemented changes to its supply base and supply chain to accommodate the loss of Turkish industrial participation. As a result, the Committee recommends \$250,400,000 to help offset the cost of establishing alternate sources in the F-35 supply chain. The Committee also understands that the Department wants to maintain its contractual handshake agreement on Lots 12 through 14, which included 24 F-35A aircraft for Turkey. The Committee provides funding for 18 additional aircraft, as outlined above, and encourages the Department to take further action to maintain the current handshake agreement to avoid disruption in upcoming deliveries.

Economic Order Quantity.—The Committee recommendation fully funds the Department’s request for \$544,000,000 in advance procurement for Economic Order Quantity [EOQ] of material and equipment for 270 U.S. F-35 aircraft to be procured in fiscal years 2021 through 2023. The Committee also supports the Air Force’s unfunded priority request of \$62,000,000 for additional EOQ funding, as part of its recommendation for advance procurement funding in fiscal year 2020. According to Joint Program Office [JPO] estimates, the EOQ recommended for fiscal year 2020 along with \$558,000,000 programmed for fiscal year 2021 would save the Department approximately \$410,000,000 in additional material costs.

The Committee directs the Director of the Cost Assessment and Program Evaluation [CAPE] to provide an analysis of this savings estimate to the congressional defense committees not later than 30 days after enactment of this act.

The Committee supported the first request for JSF EOQ in the Department of Defense Appropriations Act, 2018 (Public Law 115–141) and notes that the significant savings estimated by the JPO was not fully realized in the execution of this funding. The JPO initial estimate of total program savings as presented in the fiscal year 2018 budget request was \$1,200,000,000. A follow-on analysis by the Director of CAPE concluded that anticipated total savings would be \$595,000,000. Current JPO estimates further revise down the savings to \$435,000,000, approximately one-third of the initial savings estimate. The Committee notes that actual savings will be realized and confirmed when parts are delivered and directs the F–35 Program Executive Officer to provide a report to the congressional defense committees not later than 30 days after enactment of this act on the final cost savings realized on the fiscal year 2018 EOQ investment.

Configuration Management.—The Committee notes that as of March 2019, 292 F–35 aircraft were fielded and that by the end of 2022, that number will approach 1,000 aircraft. Concurrently with the fielding of additional aircraft, the JPO is developing and fielding incremental software upgrades as part of Continuous Capability Development and Delivery of F–35 Block 4 efforts. The Committee understands that these upgrades are intended to be fielded in no less than six-month increments with the intent to respond quickly to warfighter needs and other program adjustments.

The Committee supports the prudent development and fielding of additional F–35 capabilities but is concerned that current plans do not sufficiently address configuration management among fielded aircraft, simulators and trainers, spare parts and operator training requirements. In particular, the Committee notes that upgrades to simulator software packages are not synchronized with deployed aircraft. The Committee directs the Under Secretary of Defense (Acquisition and Sustainment) to provide to the congressional defense committees, not later than with submission of the fiscal year 2021 President’s budget request, a comprehensive plan for configuration management and control of F–35 fleet capabilities, to include simulators, trainers, operator training, and aircraft within deployed squadrons.

F–15EX

The fiscal year 2020 President’s budget requests \$1,050,000,000 for 8 F–15EX fighters, the first new fighter jet procured by the Air Force in more than a decade. While the Committee understands the Air Force’s need to maintain fighter capacity and mitigate problems associated with legacy F–15C/D aircraft that are approaching the end of their service life, the Committee continues to have questions about the sole-source acquisition strategy and program baseline for F–15EX. Further, the Committee understands that the first two aircraft will deliver in fiscal year 2022 and be used to integrate and test U.S.-only communications and electronic warfare software and hardware. Accordingly, the Committee recommends transfer-

ring \$364,400,000 from Aircraft Procurement, Air Force to Research, Development, Test and Evaluation, Air Force for the procurement of two test aircraft and half of the requested amount for non-recurring engineering.

The Committee understands that the last six aircraft are not scheduled to deliver until the end of fiscal year 2023. Further, the Committee was provided different rationale and justifications from Air Force leadership, the Cost Assessment and Program Evaluation office, and the F-15 program office on the inclusion of F-15EX in the fiscal year 2020 President's budget request. Therefore, the Committee directs that of the funds provided in Aircraft Procurement, Air Force for the remaining F-15EX aircraft, no more than \$37,200,000 for long-lead materials may be obligated until the Secretary of the Air Force provides to the congressional defense committees a report detailing: a comprehensive review of options to address the Air Force fighter capacity shortfall; an approved program acquisition strategy; an acquisition program baseline; a test and evaluation master plan; a life-cycle sustainment plan; and a post-production fielding strategy.

EC-37B COMPASS CALL

The Committee remains committed to ensuring the U.S. Air Force's electronic warfare capabilities continue to counter modern threats and has supported the Air Force plan to modernize the fleet of Compass Call aircraft by cross-decking the mission electronics to a more capable and sustainable airframe. As the Air Force has stated that cross-decking two aircraft per year is the optimum rate for cost effectiveness and delivering capability to the warfighter, the Committee was disappointed to see only one aircraft funded in the fiscal year 2020 President's budget request. The Committee is also aware of the significance of the Baseline 4 low-band capability upgrade and believes the development and first Baseline 4 aircraft procurement should be accelerated into fiscal year 2020. Accordingly, the Committee recommends an additional \$332,500,000 across the Aircraft Procurement, Air Force, and Research, Development, Test and Evaluation, Air Force, accounts to accelerate the Baseline 4 capabilities into the EC-37B Compass Call fleet.

READINESS

The Committee recommends an additional \$1,100,000,000 in title IX of this act to be transferred to the operation and maintenance accounts and be divided proportionately among the services and the National Guard and reserve components. This funding shall be used only to improve military readiness, including increased training, depot maintenance, and base operations support. None of the funding provided may be used for recruiting, marketing, or advertising programs. The funding provided is a congressional special interest item. The Secretary of Defense and the Service Secretaries are directed to submit a detailed spending plan by sub-activity group to the House and Senate Appropriations Committees not less than 30 days prior to the obligation of these funds. These transfers may be implemented 30 days after congressional notification unless

an objection is received from either the House or Senate Appropriations Committees.

Political Activity by Members of the Armed Forces.—The Committee remains strongly committed to the principle that the United States Armed Forces must remain an apolitical military profession. In particular, the Committee reiterates its support for DoD Directive 1334.10, Political Activity by Members of the Armed Forces, which outlines that, “members on active duty should not engage in partisan political activity, and that members not on active duty should avoid inferences that their political activities imply or appear to imply official sponsorship, approval, or endorsement...” Further, the Committee commends Secretary of Defense Mark Esper and General Mark Milley for their recent public comments stating their personal commitments that this principle will remain a bedrock principle of military professionalism.

TITLE I
MILITARY PERSONNEL

Funds appropriated under this title provide the resources required for basic pay, retired pay accrual, employers' contribution for Social Security taxes, basic allowance for subsistence, basic allowance for housing, special and incentive pays, permanent change of station travel, and other personnel costs for uniformed members of the Armed Forces.

The President's fiscal year 2020 budget requests a total of \$143,476,503,000 for military personnel appropriations. This request funds an Active component end strength of 1,339,500 and a Reserve component end strength of 800,800.

SUMMARY OF COMMITTEE ACTION

The Committee recommends military personnel appropriations totaling \$142,983,813,000 for fiscal year 2020. This is \$492,690,000 below the budget estimate.

Committee recommended military personnel appropriations for fiscal year 2020 are summarized below:

SUMMARY OF MILITARY PERSONNEL APPROPRIATIONS

[In thousands of dollars]

Account	2020 budget estimate	Committee recommendation	Change from budget estimate
Military Personnel:			
Military Personnel, Army	43,347,472	42,968,799	- 378,673
Military Personnel, Navy	31,831,199	31,763,263	- 67,936
Military Personnel, Marine Corps	14,175,211	14,088,775	- 86,436
Military Personnel, Air Force	31,284,959	31,261,759	- 23,200
Reserve Personnel:			
Reserve Personnel, Army	4,964,671	4,920,866	- 43,805
Reserve Personnel, Navy	2,123,947	2,121,507	- 2,440
Reserve Personnel, Marine Corps	838,854	837,854	- 1,000
Reserve Personnel, Air Force	2,038,040	2,022,340	- 15,700
National Guard Personnel:			
National Guard Personnel, Army	8,808,305	8,912,605	+ 104,300
National Guard Personnel, Air Force	4,063,845	4,086,045	+ 22,200
Total	143,476,503	142,983,813	- 492,690

Committee recommended end strengths for fiscal year 2020 are summarized below:

RECOMMENDED END STRENGTH

	2019 authorization	2020 budget estimate	Committee recommendation	Change from budget estimate
Active:				
Army	487,500	480,000	480,000	

RECOMMENDED END STRENGTH—Continued

	2019 authorization	2020 budget estimate	Committee recommendation	Change from budget estimate
Navy	335,400	340,500	340,500	.....
Marine Corps	186,100	186,200	186,200	.....
Air Force	329,100	332,800	332,800	.....
Subtotal	1,338,100	1,339,500	1,339,500	.....
Selected Reserve:				
Army Reserve	199,500	189,500	189,500	.....
Navy Reserve	59,100	59,000	59,000	.....
Marine Corps Reserve	38,500	38,500	38,500	.....
Air Force Reserve	70,000	70,100	70,100	.....
Army National Guard	343,500	336,000	336,000	.....
Air National Guard	107,100	107,700	107,700	.....
Subtotal	817,700	800,800	800,800	.....
Total	2,155,800	2,140,300	2,140,300	.....

Committee recommended end strengths for full-time support of the Reserve and Guard for fiscal year 2020 are summarized below:

RECOMMENDED ACTIVE GUARD AND RESERVE END STRENGTH

	2019 authorization	2020 budget estimate	Committee recommendation	Change from budget estimate
Active Guard and Reserve:				
Army Reserve:	16,386	16,511	16,511	.....
Navy Reserve:	10,110	10,155	10,155	.....
Marine Corps Reserve:	2,261	2,386	2,386	.....
Air Force Reserve:	3,849	4,431	4,431	.....
Army National Guard:	30,595	30,595	30,595	.....
Air National Guard:	19,861	22,637	22,637	.....
Total	83,062	86,715	86,715	.....

REPROGRAMMING GUIDANCE FOR MILITARY PERSONNEL ACCOUNTS

The Committee directs the Secretary of Defense to submit the Base for Reprogramming (DD Form 1414) for each of the fiscal year 2020 appropriation accounts not later than 60 days after the enactment of this act. The Secretary of Defense is prohibited from executing any reprogramming or transfer of funds for any purpose other than originally appropriated until the aforementioned report is submitted to the House and Senate Appropriations Committees. The Committee directs the Secretary of Defense to use the normal prior approval reprogramming procedures to transfer funds in the services' military personnel accounts between budget activities in excess of \$10,000,000.

MILITARY PERSONNEL SPECIAL INTEREST ITEMS

Items for which additional funds have been provided or have been specifically reduced as shown in the project level tables or in paragraphs using the phrase "only for" or "only to" in this report are congressional special interest items for the purpose of the Base for Reprogramming (DD Form 1414). Each of these items must be carried on the DD Form 1414 at the stated amount as specifically

addressed in the Committee report. Below Threshold Reprogrammings may not be used to either restore or reduce funding from congressional special interest items as identified on the DD Form 1414.

MILITARY PERSONNEL OVERVIEW

Reserve Component Budget Reporting.—The Committee continues its requirement for the Department to provide a semi-annual detailed report to the congressional defense committees showing transfers between subactivities within the military personnel appropriation. Reports shall be submitted not later than 30 days following the end of the second quarter and 30 days following the end of the fiscal year.

Defense Personal Property Program.—The Committee shares the Department of Defense's stated goals of improving both the moving experience for military members and their families and the efficiency in contracting for those services. However, the Committee is concerned that the changes proposed have the potential to increase costs to the government and create new challenges for military families. The Committee acknowledges that section 355 included in S. 1790, the National Defense Authorization Act for Fiscal Year 2020, as passed by the Senate, prohibits a contract award until Congress has received a requested report on the administration of the Defense Personal Property Program from the Comptroller General of the United States. The Committee commends the Department for soliciting input from those communities affected by the proposed changes, including the military services, representatives for military families as well as industry, and urges the Department to address substantive concerns that are raised during those exchanges as well as any potential issues that are raised in the Comptroller General's report.

Advanced Trauma Training Program for National Guard and Reserve.—The Committee recognizes the valuable support universities, hospitals, and other military partners provide by offering civilian-based emergency response trauma training and critical care training including public health, bio-environmental, and biomedical instruction to sustain medics' and medical providers' capabilities of the National Guard Enhanced Response Forces Packages [CERFP], National Guard Homeland Response Forces [NGHRF], the Army Reserve Consequence Management Response Forces [CCMRF] and other National Guard and Reserves medical conversion/readiness requirements. The Committee encourages the National Guard and Reserves to continue pursuing state-of-the-art trauma training with these civilian partners, thus maintaining unit medical readiness postures at optimum levels as military healthcare providers in CERFPs, NGHRFs, and CCMRFs maintain their individual skills to respond effectively to emergency incidents on the homeland. Furthermore, in order to minimize the civilian-military operational gaps in the event of a catastrophic incident, the Committee also encourages the development of enhanced medical and critical care preparedness medical training programs focusing on public health curriculums and the epidemiology of public health diseases, mass casualty triage, advanced disaster life support, advanced hazardous material life support, emergency dental, and psychological health

by increasing civilian-based advanced trauma expertise gained through day-to-day experiences and medical research programs.

Military Personnel and Extremist Ideologies.—Not later than 120 days after the enactment of this act, the Committee directs the Secretary of Defense to submit an unclassified report to the House and Senate Appropriations Committees that details: (1) current policies of the Department and each service on white supremacist, neo-Nazi, terrorist, gang and other extremist affiliations by service members and recruits; (2) procedures of the Department and each service to identify and mitigate such affiliations; and (3) the number of violations the Department and each service has identified in the prior 12 months and a description of each violation including the nature of the affiliation and disciplinary and other measures taken in each case. This report may include a classified annex only to the extent necessary.

MILITARY PERSONNEL, ARMY

Appropriations, 2019	\$42,690,042,000
Budget estimate, 2020	43,347,472,000
Committee recommendation	42,968,799,000

The Committee recommends an appropriation of \$42,968,799,000. This is \$378,673,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

(In thousands of dollars)

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
MILITARY PERSONNEL, ARMY				
ACTIVITY 1: PAY AND ALLOWANCES OF OFFICERS				
5	BASIC PAY	7,521,813	7,521,813	.....
10	RETIRED PAY ACCRUAL	2,327,136	2,327,136	.....
11	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	75,832	75,832	.....
25	BASIC ALLOWANCE FOR HOUSING	2,173,982	2,173,982	.....
30	BASIC ALLOWANCE FOR SUBSISTENCE	289,916	289,916	.....
35	INCENTIVE PAYS	94,521	94,521	.....
40	SPECIAL PAYS	357,377	357,377	.....
45	ALLOWANCES	198,232	198,232	.....
50	SEPARATION PAY	56,700	56,700	.....
55	SOCIAL SECURITY TAX	574,217	574,217	.....
	TOTAL, BUDGET ACTIVITY 1	13,669,726	13,669,726	.....
ACTIVITY 2: PAY AND ALLOWANCES OF ENLISTED PERSONNEL				
60	BASIC PAY	13,774,829	13,774,829	.....
65	RETIRED PAY ACCRUAL	4,264,203	4,264,203	.....
66	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	96,028	96,028	.....
80	BASIC ALLOWANCE FOR HOUSING	4,684,587	4,684,587	.....
85	INCENTIVE PAYS	88,082	88,082	.....
90	SPECIAL PAYS	1,115,638	1,115,638	.....
95	ALLOWANCES	731,968	731,968	.....
100	SEPARATION PAY	266,807	266,807	.....
105	SOCIAL SECURITY TAX	1,053,774	1,053,774	.....
	TOTAL, BUDGET ACTIVITY 2	26,075,916	26,075,916	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
110	ACTIVITY 3: PAY AND ALLOWANCES OF CADETS ACADEMY CADETS	90,098	90,098	.....
115	ACTIVITY 4: SUBSISTENCE OF ENLISTED PERSONNEL BASIC ALLOWANCE FOR SUBSISTENCE	1,234,543	1,234,543	.....
120	SUBSISTENCE-IN-KIND	661,633	661,633	.....
121	FAMILY SUBSISTENCE SUPPLEMENTAL ALLOWANCE	50	50	.....
	TOTAL, BUDGET ACTIVITY 4	1,896,226	1,896,226	.....
125	ACTIVITY 5: PERMANENT CHANGE OF STATION ACCESSION TRAVEL	139,802	139,802	.....
130	TRAINING TRAVEL	141,782	141,782	.....
135	OPERATIONAL TRAVEL	433,985	433,985	.....
140	ROTATIONAL TRAVEL	669,799	669,799	.....
145	SEPARATION TRAVEL	214,770	214,770	.....
150	TRAVEL OF ORGANIZED UNITS	1,812	1,812	.....
155	NON-TEMPORARY STORAGE	698	698	.....
160	TEMPORARY LODGING EXPENSE	60,824	60,824	.....
	TOTAL, BUDGET ACTIVITY 5	1,663,472	1,663,472	.....
170	ACTIVITY 6: OTHER MILITARY PERSONNEL COSTS APPREHENSION OF MILITARY DESERTERS	234	234	.....
175	INTEREST ON UNIFORMED SERVICES SAVINGS	128	128	.....
180	DEATH GRATUITIES	42,600	42,600	.....
185	UNEMPLOYMENT BENEFITS	68,731	68,731	.....
195	EDUCATION BENEFITS	6,006	6,006	.....
200	ADOPTION EXPENSES	496	496	.....
210	TRANSPORTATION SUBSIDY	11,623	11,623	.....
215	PARTIAL DISLOCATION ALLOWANCE	74	74	.....
217	RESERVE OFFICERS TRAINING CORPS (ROTC)	105,698	107,198	+ 1,500
218	JUNIOR ROTC	29,746	39,746	+ 10,000
	TOTAL, BUDGET ACTIVITY 6	265,336	276,836	+ 11,500
	LESS REIMBURSABLES	- 313,302	- 313,302	.....
	UNDISTRIBUTED ADJUSTMENT .....	.....	- 390,173	- 390,173
	TOTAL, ACTIVE FORCES, ARMY	42,347,472	42,968,799	- 378,673
	TOTAL, TITLE I, MILITARY PERSONNEL, ARMY	43,347,472	42,968,799	- 378,673
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, IN- DEFINITE AUTHORITY) (PUBLIC LAW 108-375)	2,186,006	2,186,006	.....
	TOTAL, MILITARY PERSONNEL, ARMY	45,533,478	45,154,805	- 378,673

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
217	Reserve Officers Training Corps (ROTC)	105,698	107,198	+ 1,500
	Program increase: ROTC helicopter training program .....	.....	.....	+ 1,500
218	Junior ROTC	29,746	39,746	+ 10,000
	Program increase .....	.....	.....	+ 10,000
UNDIST	Improving funds management: Revised budget estimate .....	.....	- 292,473	- 292,473
UNDIST	Improving funds management: Historical underexecution .....	.....	- 60,000	- 60,000
UNDIST	Improving funds management: Rate adjustments .....	.....	- 37,700	- 37,700

MILITARY PERSONNEL, NAVY

Appropriations, 2019 \$30,164,481,000
 Budget estimate, 2020 31,831,199,000
 Committee recommendation 31,763,263,000

The Committee recommends an appropriation of \$31,763,263,000.
 This is \$67,936,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	MILITARY PERSONNEL, NAVY			
	ACTIVITY 1: PAY AND ALLOWANCES OF OFFICERS			
5	BASIC PAY	4,561,662	4,561,662	.....
10	RETIRED PAY ACCRUAL	1,411,830	1,411,830	.....
11	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	59,653	59,653	.....
25	BASIC ALLOWANCE FOR HOUSING	1,599,286	1,599,286	.....
30	BASIC ALLOWANCE FOR SUBSISTENCE	172,715	172,715	.....
35	INCENTIVE PAYS	167,877	167,877	.....
40	SPECIAL PAYS	457,901	457,901	.....
45	ALLOWANCES	120,046	120,046	.....
50	SEPARATION PAY	43,367	43,367	.....
55	SOCIAL SECURITY TAX	347,668	347,668	.....
	TOTAL, BUDGET ACTIVITY 1	8,942,005	8,942,005	.....
	ACTIVITY 2: PAY AND ALLOWANCES OF ENLISTED PERSONNEL			
60	BASIC PAY	10,279,881	10,279,881	.....
65	RETIRED PAY ACCRUAL	3,186,556	3,186,556	.....
66	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	100,891	100,891	.....
80	BASIC ALLOWANCE FOR HOUSING	4,785,627	4,785,627	.....
85	INCENTIVE PAYS	109,034	109,034	.....
90	SPECIAL PAYS	1,006,625	1,006,625	.....
95	ALLOWANCES	624,120	624,120	.....
100	SEPARATION PAY	84,737	84,737	.....
105	SOCIAL SECURITY TAX	786,411	786,411	.....
	TOTAL, BUDGET ACTIVITY 2	20,963,882	20,963,882	.....
	ACTIVITY 3: PAY AND ALLOWANCES OF MIDSHIPMEN			
110	MIDSHIPMEN	85,203	85,203	.....
	ACTIVITY 4: SUBSISTENCE OF ENLISTED PERSONNEL			
115	BASIC ALLOWANCE FOR SUBSISTENCE	847,463	847,463	.....
120	SUBSISTENCE-IN-KIND	432,870	432,870	.....
121	FAMILY SUBSISTENCE SUPPLEMENTAL ALLOWANCE	5	5	.....
	TOTAL, BUDGET ACTIVITY 4	1,280,338	1,280,338	.....
	ACTIVITY 5: PERMANENT CHANGE OF STATION			
125	ACCESSION TRAVEL	91,470	91,470	.....
130	TRAINING TRAVEL	102,482	102,482	.....
135	OPERATIONAL TRAVEL	231,305	231,305	.....
140	ROTATIONAL TRAVEL	280,181	280,181	.....
145	SEPARATION TRAVEL	113,668	113,668	.....
150	TRAVEL OF ORGANIZED UNITS	30,258	30,258	.....
155	NON-TEMPORARY STORAGE	13,695	13,695	.....
160	TEMPORARY LODGING EXPENSE	16,398	16,398	.....
	TOTAL, BUDGET ACTIVITY 5	879,457	879,457	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	ACTIVITY 6: OTHER MILITARY PERSONNEL COSTS			
170	APPREHENSION OF MILITARY DESERTERS	37	37	.....
175	INTEREST ON UNIFORMED SERVICES SAVINGS	1,252	1,252	.....
180	DEATH GRATUITIES	22,100	22,100	.....
185	UNEMPLOYMENT BENEFITS	41,522	41,522	.....
195	EDUCATION BENEFITS	8,745	8,745	.....
200	ADOPTION EXPENSES	178	178	.....
210	TRANSPORTATION SUBSIDY	4,270	4,270	.....
215	PARTIAL DISLOCATION ALLOWANCE	34	34	.....
217	RESERVE OFFICERS TRAINING CORPS (ROTC)	21,458	22,258	+ 800
218	JUNIOR ROTC	15,259	20,259	+ 5,000
	TOTAL, BUDGET ACTIVITY 6	114,855	120,655	+ 5,800
	LESS REIMBURSABLES	- 434,541	- 434,541	.....
	UNDISTRIBUTED ADJUSTMENT .....	.....	- 73,736	- 73,736
	TOTAL, ACTIVE FORCES, NAVY	31,831,199	31,763,263	- 67,936
	TOTAL, TITLE I, MILITARY PERSONNEL, NAVY	31,831,199	31,763,263	- 67,936
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, IN- DEFINITE AUTHORITY) (PUBLIC LAW 108-375)	1,549,638	1,549,638	.....
	TOTAL, MILITARY PERSONNEL, NAVY	33,380,837	33,312,901	- 67,936

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
217	Reserve Officers Training Corps (ROTC)	21,458	22,258	+ 800
	Program increase .....	.....	.....	+ 800
218	Junior ROTC	15,259	20,259	+ 5,000
	Program increase .....	.....	.....	+ 5,000
UNDIST	Improving funds management: Revised budget estimate .....	.....	- 56,036	- 56,036
UNDIST	Improving funds management: Rate adjustments .....	.....	- 17,700	- 17,700

MILITARY PERSONNEL, MARINE CORPS

Appropriations, 2019	\$13,779,038,000
Budget estimate, 2020	14,175,211,000
Committee recommendation	14,088,775,000

The Committee recommends an appropriation of \$14,088,775,000. This is \$86,436,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	MILITARY PERSONNEL, MARINE CORPS			
	ACTIVITY 1: PAY AND ALLOWANCES OF OFFICERS			
5	BASIC PAY	1,715,465	1,715,465	.....
10	RETIRED PAY ACCRUAL	530,702	530,702	.....
11	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	27,890	27,890	.....
25	BASIC ALLOWANCE FOR HOUSING	537,566	537,566	.....
30	BASIC ALLOWANCE FOR SUBSISTENCE	67,825	67,825	.....
35	INCENTIVE PAYS	51,099	51,099	.....
40	SPECIAL PAYS	4,125	4,125	.....
45	ALLOWANCES	50,685	50,685	.....
50	SEPARATION PAY	15,112	15,112	.....
55	SOCIAL SECURITY TAX	131,233	131,233	.....
	TOTAL, BUDGET ACTIVITY 1	3,131,702	3,131,702	.....
	ACTIVITY 2: PAY AND ALLOWANCES OF ENLISTED PERSONNEL			
60	BASIC PAY	5,349,883	5,349,883	.....
65	RETIRED PAY ACCRUAL	1,653,002	1,653,002	.....
66	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	113,526	113,526	.....
80	BASIC ALLOWANCE FOR HOUSING	1,599,187	1,599,187	.....
85	INCENTIVE PAYS	7,937	7,937	.....
90	SPECIAL PAYS	204,034	204,034	.....
95	ALLOWANCES	315,811	315,811	.....
100	SEPARATION PAY	94,173	94,173	.....
105	SOCIAL SECURITY TAX	408,685	408,685	.....
	TOTAL, BUDGET ACTIVITY 2	9,746,238	9,746,238	.....
	ACTIVITY 4: SUBSISTENCE OF ENLISTED PERSONNEL			
115	BASIC ALLOWANCE FOR SUBSISTENCE	430,434	430,434	.....
120	SUBSISTENCE-IN-KIND	400,978	400,978	.....
121	FAMILY SUBSISTENCE SUPPLEMENTAL ALLOWANCE	10	10	.....
	TOTAL, BUDGET ACTIVITY 4	831,422	831,422	.....
	ACTIVITY 5: PERMANENT CHANGE OF STATION			
125	ACCESSION TRAVEL	53,167	53,167	.....
130	TRAINING TRAVEL	18,363	18,363	.....
135	OPERATIONAL TRAVEL	167,868	167,868	.....
140	ROTATIONAL TRAVEL	111,200	111,200	.....
145	SEPARATION TRAVEL	77,577	77,577	.....
150	TRAVEL OF ORGANIZED UNITS	682	682	.....
155	NON-TEMPORARY STORAGE	10,505	10,505	.....
160	TEMPORARY LODGING EXPENSE	4,345	4,345	.....
	TOTAL, BUDGET ACTIVITY 5	443,707	443,707	.....
	ACTIVITY 6: OTHER MILITARY PERSONNEL COSTS			
170	APPREHENSION OF MILITARY DESERTERS	273	273	.....
175	INTEREST ON UNIFORMED SERVICES SAVINGS	19	19	.....
180	DEATH GRATUITIES	13,100	13,100	.....
185	UNEMPLOYMENT BENEFITS	26,734	26,734	.....
195	EDUCATION BENEFITS	3,611	3,611	.....
200	ADOPTION EXPENSES	100	100	.....
210	TRANSPORTATION SUBSIDY	1,487	1,487	.....
215	PARTIAL DISLOCATION ALLOWANCE	108	108	.....
216	SGLI EXTRA HAZARD PAYMENTS	2,075	2,075	.....
218	JUNIOR ROTC	3,866	5,930	+ 2,064
	TOTAL, BUDGET ACTIVITY 6	51,373	53,437	+ 2,064
	LESS REIMBURSABLES	- 29,231	- 29,231	.....
	UNDISTRIBUTED ADJUSTMENT .....	.....	- 88,500	- 88,500
	TOTAL, ACTIVE FORCES, MARINE CORPS	14,175,211	14,088,775	- 86,436

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	TOTAL, TITLE I, MILITARY PERSONNEL, MARINE CORPS	14,175,211	14,088,775	- 86,436
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, INDEFINITE AUTHORITY) (PUBLIC LAW 108-375)	859,667	859,667	.....
	TOTAL, MILITARY PERSONNEL, MARINE CORPS	15,034,878	14,948,442	- 86,436

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
218	Junior ROTC	3,866	5,930	+ 2,064
	Program increase .....	.....	.....	+ 2,064
UNDIST	Improving funds management: Revised budget estimate .....	.....	- 70,000	- 70,000
UNDIST	Improving funds management: Rate adjustments .....	.....	- 18,500	- 18,500

MILITARY PERSONNEL, AIR FORCE

Appropriations, 2019	\$30,074,691,000
Budget estimate, 2020	31,284,959,000
Committee recommendation	31,261,759,000

The Committee recommends an appropriation of \$31,261,759,000. This is \$23,200,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	MILITARY PERSONNEL, AIR FORCE			
	ACTIVITY 1: PAY AND ALLOWANCES OF OFFICERS			
5	BASIC PAY	5,419,404	5,419,404	.....
10	RETIRED PAY ACCRUAL	1,666,501	1,666,501	.....
11	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	68,361	68,361	.....
25	BASIC ALLOWANCE FOR HOUSING	1,630,177	1,630,177	.....
30	BASIC ALLOWANCE FOR SUBSISTENCE	204,432	204,432	.....
35	INCENTIVE PAYS	349,589	349,589	.....
40	SPECIAL PAYS	337,986	337,986	.....
45	ALLOWANCES	119,612	119,612	.....
50	SEPARATION PAY	43,588	43,588	.....
55	SOCIAL SECURITY TAX	413,905	413,905	.....
	TOTAL, BUDGET ACTIVITY 1	10,253,555	10,253,555	.....
	ACTIVITY 2: PAY AND ALLOWANCES OF ENLISTED PERSONNEL			
60	BASIC PAY	9,912,417	9,912,417	.....
65	RETIRED PAY ACCRUAL	3,061,954	3,061,954	.....
66	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	77,645	77,645	.....
80	BASIC ALLOWANCE FOR HOUSING	4,017,647	4,017,647	.....
85	INCENTIVE PAYS	61,239	61,239	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
90	SPECIAL PAYS	337,702	337,702	.....
95	ALLOWANCES	630,858	630,858	.....
100	SEPARATION PAY	136,265	136,265	.....
105	SOCIAL SECURITY TAX	758,300	758,300	.....
	TOTAL, BUDGET ACTIVITY 2	18,994,027	18,994,027	.....
	ACTIVITY 3: PAY AND ALLOWANCES OF CADETS			
110	ACADEMY CADETS	80,959	80,959	.....
	ACTIVITY 4: SUBSISTENCE OF ENLISTED PERSONNEL			
115	BASIC ALLOWANCE FOR SUBSISTENCE	1,047,572	1,047,572	.....
120	SUBSISTENCE-IN-KIND	159,138	159,138	.....
121	FAMILY SUBSISTENCE SUPPLEMENTAL ALLOWANCE	3	3	.....
	TOTAL, BUDGET ACTIVITY 4	1,206,713	1,206,713	.....
	ACTIVITY 5: PERMANENT CHANGE OF STATION			
125	ACCESSION TRAVEL	102,944	102,944	.....
130	TRAINING TRAVEL	59,189	59,189	.....
135	OPERATIONAL TRAVEL	284,731	284,731	.....
140	ROTATIONAL TRAVEL	453,527	453,527	.....
145	SEPARATION TRAVEL	162,547	162,547	.....
150	TRAVEL OF ORGANIZED UNITS	4,347	4,347	.....
155	NON-TEMPORARY STORAGE	26,215	26,215	.....
160	TEMPORARY LODGING EXPENSE	33,162	33,162	.....
	TOTAL, BUDGET ACTIVITY 5	1,126,662	1,126,662	.....
	ACTIVITY 6: OTHER MILITARY PERSONNEL COSTS			
170	APPREHENSION OF MILITARY DESERTERS	12	12	.....
175	INTEREST ON UNIFORMED SERVICES SAVINGS	2,299	2,299	.....
180	DEATH GRATUITIES	15,000	15,000	.....
185	UNEMPLOYMENT BENEFITS	22,571	22,571	.....
195	EDUCATION BENEFITS	28	28	.....
200	ADOPTION EXPENSES	395	395	.....
210	TRANSPORTATION SUBSIDY	2,718	2,718	.....
215	PARTIAL DISLOCATION ALLOWANCE	492	492	.....
217	RESERVE OFFICERS TRAINING CORPS (ROTC)	46,429	46,429	.....
218	JUNIOR ROTC	20,439	27,439	+ 7,000
	TOTAL, BUDGET ACTIVITY 6	110,383	117,383	+ 7,000
	LESS REIMBURSABLES	- 487,340	- 487,340	.....
	UNDISTRIBUTED ADJUSTMENT .....	.....	- 30,200	- 30,200
	TOTAL, ACTIVE FORCES, AIR FORCE	31,284,959	31,261,759	- 23,200
	TOTAL, TITLE I, MILITARY PERSONNEL, AIR FORCE	31,284,959	31,261,759	- 23,200
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, IN-DEFINITE AUTHORITY) (PUBLIC LAW 108-375)	1,514,694	1,514,694	.....
	TOTAL, MILITARY PERSONNEL, AIR FORCE	32,799,653	32,776,453	- 23,200

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
218	Junior ROTC	20,439	27,439	+ 7,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase			+ 7,000
UNDIST	Improving funds management: Revised budget estimate		- 30,200	- 30,200

RESERVE PERSONNEL, ARMY

Appropriations, 2019	\$4,836,947,000
Budget estimate, 2020	4,964,671,000
Committee recommendation	4,920,866,000

The Committee recommends an appropriation of \$4,920,866,000. This is \$43,805,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESERVE PERSONNEL, ARMY			
	ACTIVITY 1: RESERVE COMPONENT TRAINING AND SUPPORT			
10	PAY GROUP A TRAINING (15 DAYS & DRILLS 24/48)	1,591,993	1,591,993	.....
20	PAY GROUP B TRAINING (BACKFILL FOR ACTIVE DUTY)	45,748	45,748	.....
30	PAY GROUP F TRAINING (RECRUITS)	201,613	201,613	.....
40	PAY GROUP P TRAINING (PIPELINE RECRUITS)	6,717	6,717	.....
60	MOBILIZATION TRAINING	2,373	2,373	.....
70	SCHOOL TRAINING	240,785	240,785	.....
80	SPECIAL TRAINING	382,398	382,398	.....
90	ADMINISTRATION AND SUPPORT	2,358,782	2,358,782	.....
94	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	11,205	11,205	.....
100	EDUCATION BENEFITS	22,714	22,714	.....
120	HEALTH PROFESSION SCHOLARSHIP	61,392	61,392	.....
130	OTHER PROGRAMS	38,951	38,951	.....
	TOTAL, BUDGET ACTIVITY 1	4,964,671	4,964,671	.....
	UNDISTRIBUTED ADJUSTMENT		- 43,805	- 43,805
	TOTAL, TITLE I, RESERVE PERSONNEL, ARMY	4,964,671	4,920,866	- 43,805
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, INDEFINITE AUTHORITY) (PUBLIC LAW 108-375) ..	394,612	394,612	.....
	TOTAL, RESERVE PERSONNEL, ARMY	5,359,283	5,315,478	- 43,805

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
UNDIST	Improving funds management: Revised budget estimate		- 40,531	- 40,531
UNDIST	Improving funds management: Rate adjustments		- 3,274	- 3,274

RESERVE PERSONNEL, NAVY

Appropriations, 2019 \$2,049,021,000
 Budget estimate, 2020 2,123,947,000
 Committee recommendation 2,121,507,000

The Committee recommends an appropriation of \$2,121,507,000.
 This is \$2,440,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESERVE PERSONNEL, NAVY			
	ACTIVITY 1: RESERVE COMPONENT TRAINING AND SUPPORT			
10	PAY GROUP A TRAINING (15 DAYS & DRILLS 24/48)	712,650	712,650	.....
20	PAY GROUP B TRAINING (BACKFILL FOR ACTIVE DUTY)	7,839	7,839	.....
30	PAY GROUP F TRAINING (RECRUITS)	54,101	54,101	.....
60	MOBILIZATION TRAINING	12,537	12,537	.....
70	SCHOOL TRAINING	56,593	56,593	.....
80	SPECIAL TRAINING	124,738	124,738	.....
90	ADMINISTRATION AND SUPPORT	1,091,583	1,091,583	.....
94	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	6,326	6,326	.....
100	EDUCATION BENEFITS	1,116	1,116	.....
120	HEALTH PROFESSION SCHOLARSHIP	56,464	56,464	.....
	TOTAL, BUDGET ACTIVITY 1	2,123,947	2,123,947	.....
	UNDISTRIBUTED ADJUSTMENT		-2,440	-2,440
	TOTAL, TITLE I, RESERVE PERSONNEL, NAVY	2,123,947	2,121,507	-2,440
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, INDEFINITE AUTHORITY) (PUBLIC LAW 108-375)	136,926	136,926	.....
	TOTAL, RESERVE PERSONNEL, NAVY	2,260,873	2,258,433	-2,440

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
UNDIST	Improving funds management: Rate adjustments .....	.....	-2,440	-2,440

RESERVE PERSONNEL, MARINE CORPS

Appropriations, 2019 \$782,390,000
 Budget estimate, 2020 838,854,000
 Committee recommendation 837,854,000

The Committee recommends an appropriation of \$837,854,000.
 This is \$1,000,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESERVE PERSONNEL, MARINE CORPS			
	ACTIVITY 1: RESERVE COMPONENT TRAINING AND SUPPORT			
10	PAY GROUP A TRAINING (15 DAYS & DRILLS 24/48)	290,938	290,938	.....
20	PAY GROUP B TRAINING (BACKFILL FOR ACT DUTY)	46,716	46,716	.....
30	PAY GROUP F TRAINING (RECRUITS)	139,238	139,238	.....
60	MOBILIZATION TRAINING	1,422	1,422	.....
70	SCHOOL TRAINING	24,532	24,532	.....
80	SPECIAL TRAINING	53,388	53,388	.....
90	ADMINISTRATION AND SUPPORT	264,360	264,360	.....
94	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	3,759	3,759	.....
95	PLATOON LEADER CLASS	8,283	8,283	.....
100	EDUCATION BENEFITS	6,218	6,218	.....
	TOTAL, BUDGET ACTIVITY 1	838,854	838,854	.....
	UNDISTRIBUTED ADJUSTMENT		-1,000	-1,000
	TOTAL, TITLE I, RESERVE PERSONNEL, MARINE CORPS	838,854	837,854	-1,000
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, INDEFINITE AUTHORITY) (PUBLIC LAW 108-375) ...	77,427	77,427	.....
	TOTAL, RESERVE PERSONNEL, MARINE CORPS	916,281	915,281	-1,000

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
UNDIST	Improving funds management: Rate adjustments .....	.....	-1,000	-1,000

RESERVE PERSONNEL, AIR FORCE

Appropriations, 2019	\$1,860,406,000
Budget estimate, 2020	2,038,040,000
Committee recommendation	2,022,340,000

The Committee recommends an appropriation of \$2,022,340,000. This is \$15,700,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESERVE PERSONNEL, AIR FORCE			
	ACTIVITY 1: RESERVE COMPONENT TRAINING AND SUPPORT			
10	PAY GROUP A TRAINING (15 DAYS & DRILLS 24/48)	722,193	722,193	.....
20	PAY GROUP B TRAINING (BACKFILL FOR ACTIVE DUTY)	102,802	102,802	.....
30	PAY GROUP F TRAINING (RECRUITS)	54,454	54,454	.....
40	PAY GROUP P TRAINING (PIPELINE RECRUITS)	2,669	2,669	.....
60	MOBILIZATION TRAINING	760	760	.....
70	SCHOOL TRAINING	169,565	169,565	.....
80	SPECIAL TRAINING	329,355	329,355	.....
90	ADMINISTRATION AND SUPPORT	570,532	570,532	.....
94	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	3,390	3,390	.....
100	EDUCATION BENEFITS	15,395	15,395	.....
120	HEALTH PROFESSION SCHOLARSHIP	64,474	64,474	.....
130	OTHER PROGRAMS (ADMIN & SUPPORT)	2,451	2,451	.....
	TOTAL, BUDGET ACTIVITY 1	2,038,040	2,038,040	.....
	UNDISTRIBUTED ADJUSTMENT		-15,700	-15,700
	TOTAL, TITLE I, RESERVE PERSONNEL, AIR FORCE	2,038,040	2,022,340	-15,700
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, INDEFINITE AUTHORITY) (PUBLIC LAW 108-375)	139,697	139,697	.....
	TOTAL, RESERVE PERSONNEL, AIR FORCE	2,177,737	2,162,037	-15,700

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
UNDIST	Improving funds management: Revised budget estimate .....	.....	-14,700	-14,700
UNDIST	Improving funds management: Rate adjustments .....	.....	-1,000	-1,000

NATIONAL GUARD PERSONNEL, ARMY

Appropriations, 2019	\$8,600,945,000
Budget estimate, 2020	8,808,305,000
Committee recommendation	8,912,605,000

The Committee recommends an appropriation of \$8,912,605,000. This is \$104,300,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	NATIONAL GUARD PERSONNEL, ARMY			
	ACTIVITY 1: RESERVE COMPONENT TRAINING AND SUPPORT			
10	PAY GROUP A TRAINING (15 DAYS & DRILLS 24/48)	2,607,324	2,607,324	.....
30	PAY GROUP F TRAINING (RECRUITS)	539,742	539,742	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
40	PAY GROUP P TRAINING (PIPELINE RECRUITS)	44,401	44,401	.....
70	SCHOOL TRAINING	529,639	529,639	.....
80	SPECIAL TRAINING	813,283	818,283	+ 5,000
90	ADMINISTRATION AND SUPPORT	4,182,249	4,182,749	+ 500
94	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	19,194	19,194	.....
100	EDUCATION BENEFITS	72,473	72,473	.....
	TOTAL, BUDGET ACTIVITY 1	8,808,305	8,813,805	+ 5,500
	UNDISTRIBUTED ADJUSTMENT .....	.....	- 121,800	- 121,800
	ADVANCED TRAUMA TRAINING .....	.....	1,100	+ 1,100
	OPERATION GUARDIAN SUPPORT .....	.....	219,500	+ 219,500
	TOTAL, TITLE I, NATIONAL GUARD PERSONNEL, ARMY ...	8,808,305	8,912,605	+ 104,300
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, IN- DEFINITE AUTHORITY) (PUBLIC LAW 108-375)	703,636	703,636	.....
	TOTAL, NATIONAL GUARD PERSONNEL, ARMY	9,511,941	9,616,241	+ 104,300

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
80	Special Training	813,283	818,283	+ 5,000
	Program increase: Wildfire training .....	.....	.....	+ 5,000
90	Administration and Support	4,182,249	4,182,749	+ 500
	Program increase: Preventative mental health program .....	.....	.....	+ 500
UNDIST	Improving funds management: Revised budget estimate .....	.....	- 108,600	- 108,600
UNDIST	Improving funds management: Rate adjustments .....	.....	- 13,200	- 13,200
UNDIST	Program increase: Operation Guardian Support .....	.....	+ 219,500	+ 219,500
UNDIST	Program increase: Advanced trauma training .....	.....	+ 1,100	+ 1,100

National Guard Cyber Units.—The Committee is aware of the critical capability that the National Guard provides to state governments, and in support of the Defense Department's national cyber defense mission. The Committee strongly urges the Department to prioritize continued development of cyber capabilities within the National Guard, and ensure cyber capabilities in every State.

NATIONAL GUARD PERSONNEL, AIR FORCE

Appropriations, 2019	\$3,699,080,000
Budget estimate, 2020	4,063,845,000
Committee recommendation	4,086,045,000

The Committee recommends an appropriation of \$4,086,045,000. This is \$22,200,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	NATIONAL GUARD PERSONNEL, AIR FORCE			
	ACTIVITY 1: RESERVE COMPONENT TRAINING AND SUPPORT			
10	PAY GROUP A TRAINING (15 DAYS & DRILLS 24/48)	935,299	935,299	.....
30	PAY GROUP F TRAINING (RECRUITS)	81,644	81,644	.....
40	PAY GROUP P TRAINING (PIPELINE RECRUITS)	7,969	7,969	.....
70	SCHOOL TRAINING	357,890	357,890	.....
80	SPECIAL TRAINING	218,104	220,104	+ 2,000
90	ADMINISTRATION AND SUPPORT	2,438,963	2,439,463	+ 500
94	THRIFT SAVINGS PLAN MATCHING CONTRIBUTIONS	10,083	10,083	.....
100	EDUCATION BENEFITS	13,893	13,893	.....
	TOTAL, BUDGET ACTIVITY 1	4,063,845	4,066,345	+ 2,500
	UNDISTRIBUTED ADJUSTMENT .....	.....	- 12,200	- 12,200
	ADVANCED TRAUMA TRAINING .....	.....	2,200	+ 2,200
	OPERATION GUARDIAN SUPPORT .....	.....	29,700	+ 29,700
	TOTAL, TITLE I, NATIONAL GUARD PERSONNEL, AIR FORCE	4,063,845	4,086,045	+ 22,200
	TOTAL, TRICARE ACCRUAL PAYMENTS (PERMANENT, INDEFINITE AUTHORITY) (PUBLIC LAW 108-375)	254,512	254,512	.....
	TOTAL, NATIONAL GUARD PERSONNEL, AIR FORCE	4,318,357	4,340,557	+ 22,200

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
80	Special Training	218,104	220,104	+ 2,000
	Program increase: Wildfire training .....	.....	.....	+ 2,000
90	Administration and Support	2,438,963	2,439,463	+ 500
	Program increase: Preventative mental health program .....	.....	.....	+ 500
UNDIST	Improving funds management: Revised budget estimate .....	.....	- 11,200	- 11,200
UNDIST	Improving funds management: Rate adjustments .....	.....	- 1,000	- 1,000
UNDIST	Program increase: Operation Guardian Support .....	.....	+ 29,700	+ 29,700
UNDIST	Program increase: Advanced trauma training .....	.....	+ 2,200	+ 2,200

TITLE II
OPERATION AND MAINTENANCE

Funds appropriated under this title provide the resources required to prepare for and conduct combat operations and other peace time missions. These funds are used to purchase fuel and spare parts for training operations, pay supporting civilian personnel, and purchase supplies, equipment, and service contracts for the repair of weapons and facilities.

The President's fiscal year 2020 budget requests a total of \$123,944,614,000 for operation and maintenance appropriations.

SUMMARY OF COMMITTEE ACTION

The Committee recommends operation and maintenance appropriations totaling \$200,610,130,000 for fiscal year 2020. This is \$76,665,516,000 above the budget estimate.

Committee recommended operation and maintenance appropriations for fiscal year 2020 are summarized below:

SUMMARY OF OPERATION AND MAINTENANCE APPROPRIATIONS

[In thousands of dollars]

Account	2020 budget estimate	Committee recommendation	Change from budget estimate
Operation and Maintenance:			
Operation and Maintenance, Army	22,797,873	40,437,663	+ 17,639,790
Operation and Maintenance, Navy	25,952,718	48,200,088	+ 22,247,370
Operation and Maintenance, Marine Corps	3,928,045	7,608,598	+ 3,680,553
Operation and Maintenance, Air Force	21,278,499	43,092,286	+ 21,813,787
Operation and Maintenance, Space Force	72,436	72,436	.....
Operation and Maintenance, Defense-Wide	37,399,341	37,236,175	- 163,166
Operation and Maintenance, Army Reserve	1,080,103	2,990,610	+ 1,910,507
Operation and Maintenance, Navy Reserve	261,284	1,100,116	+ 838,832
Operation and Maintenance, Marine Corps Reserve	61,090	292,076	+ 230,986
Operation and Maintenance, Air Force Reserve	2,231,445	3,222,818	+ 991,373
Operation and Maintenance, Army National Guard	3,335,755	7,588,903	+ 4,253,148
Operation and Maintenance, Air National Guard	3,612,156	6,732,792	+ 3,120,636
United States Court of Appeals for the Armed Forces	14,771	14,771	.....
Environmental Restoration, Army	207,518	209,218	+ 1,700
Environmental Restoration, Navy	335,932	335,932	.....
Environmental Restoration, Air Force	302,744	402,744	+ 100,000
Environmental Restoration, Defense-Wide	9,105	9,105	.....
Environmental Restoration, Formerly Used Defense Sites	216,499	216,499	.....
Overseas Humanitarian, Disaster, and Civic Aid	108,600	108,600	.....
Cooperative Threat Reduction Account	338,700	338,700	.....
Department of Defense Acquisition Workforce Development Fund ..	400,000	400,000	.....
Total	123,944,614	200,610,130	+ 76,665,516

REPROGRAMMING GUIDANCE FOR OPERATION AND MAINTENANCE
ACCOUNTS

The Committee directs the Secretary of Defense to submit the Base for Reprogramming (DD Form 1414) for each of the fiscal year 2020 appropriation accounts not later than 60 days after the enactment of this act. The Secretary of Defense is prohibited from executing any reprogramming or transfer of funds for any purpose other than originally appropriated until the aforementioned report is submitted to the House and Senate Appropriations Committees.

The Committee directs the Secretary of Defense to use the normal prior approval reprogramming procedures to transfer funds in the services' operation and maintenance accounts between O-1 budget activities, or between subactivity groups in the case of Operation and Maintenance, Defense-Wide, in excess of \$15,000,000. In addition, the Secretary of Defense shall follow prior approval reprogramming procedures for transfers in excess of \$15,000,000 out of the following readiness sub-activity groups:

Army:

- Maneuver units
- Modular support brigades
- Land forces operations support
- Aviation assets
- Force readiness operations support
- Land forces depot maintenance
- Base operations support
- Facilities sustainment, restoration and modernization
- Specialized skill training

Navy:

- Mission and other flight operations
- Fleet air training
- Aircraft depot maintenance
- Mission and other ship operations
- Ship depot maintenance
- Facilities sustainment, restoration and modernization

Marine Corps:

- Operational forces
- Field logistics
- Depot maintenance
- Facilities sustainment, restoration and modernization

Air Force:

- Primary combat forces
- Combat enhancement forces
- Depot purchase equipment maintenance
- Facilities sustainment, restoration and modernization
- Contractor logistics support and system support
- Flying hour program

Air Force Reserve:

- Primary combat forces

Air National Guard:

- Aircraft operations

Additionally, the Committee directs the Secretary of Defense to use normal prior approval reprogramming procedures when imple-

menting transfers in excess of \$15,000,000 into the following budget sub-activities:

- Operation and Maintenance, Army:
 - Recruiting and advertising
- Operation and Maintenance, Army National Guard:
 - Other personnel support/recruiting and advertising

OPERATION AND MAINTENANCE BUDGET EXECUTION DATA

The Committee directs the Secretary of Defense to continue to provide the congressional defense committees with quarterly budget execution data. Such data should be provided not later than 45 days after the close of each quarter of the fiscal year, and should be provided for each O-1 budget activity, activity group, and sub-activity group for each of the active, defense-wide, reserve, and National Guard components. For each O-1 budget activity, activity group, and sub-activity group, these reports should include the budget request and actual obligation amount, the distribution of unallocated congressional adjustments to the budget request, all adjustments made by the Department in establishing the Base for Reprogramming (DD Form 1414) report, all adjustments resulting from below threshold reprogrammings, and all adjustments resulting from prior approval reprogramming requests.

OPERATION AND MAINTENANCE SPECIAL INTEREST ITEMS

Items for which additional funds have been provided or have been specifically reduced as shown in the project level tables or in paragraphs using the phrase “only for” or “only to” in the Committee report are congressional special interest items for the purpose of the Base for Reprogramming (DD Form 1414). Each of these items must be carried on the DD Form 1414 at the stated amount as specifically addressed in the Committee report. Below Threshold Reprogrammings may not be used to either restore or reduce funding from congressional special interest items as identified on the DD Form 1414.

OPERATION AND MAINTENANCE OVERVIEW

Civilian Workforce.—The Committee expects the Department of Defense to maintain a stable, effective, right-sized civilian cadre. The Committee further expects the hiring process to be responsive and efficient in order to build the workforce needed to achieve its mission and strategic goals. The Committee recognizes the critical role that the civilian workforce plays every day in ensuring the mission success of the Armed Forces.

Contract Services Spending.—The Committee is concerned that the Department of Defense lacks adequate policies, procedures, and controls in place to enforce limitations on the annual amounts expended on contracted services. There is further concern that not all contracted services are being subjected to spending limitations because of the exclusion of contracted services involving Economy Act transfers between and within Department of Defense components. Additionally, because of the disparity between the levels of contracted services captured in the Inventory of Contracts for Services, required under section 2330a of title 10, United States Code, and

what the Department budgets for contracted services, it appears as though the Department does not deliberately plan for most contracted services. The Committee urges the Under Secretary of Defense (Comptroller) to review the efforts of the financial management and acquisition communities to implement effective control mechanisms for contracted services spending.

Tobacco Use in the Military.—Tobacco use is the leading cause of preventable death in the United States, with more than 480,000 deaths attributable to cigarette smoking each year. The Department of Defense has affirmed the goal of a tobacco-free military, and has implemented a range of programs including public education campaigns, the banning of all tobacco use during basic training, and the prohibition of tobacco use by instructors in the presence of students. The Committee supports the Secretary of Defense's Policy Memorandum 16-001 from April 8, 2016, directing the military services "to ensure a comprehensive tobacco policy that assists with preventing initiation of tobacco use, helping those who want to quit using tobacco succeed, and decreasing exposure to second-hand smoke for all our people." As a result, the Committee retains a provision from the Department of Defense Appropriations Act, 2019 (Public Law 115-245) directing the elimination of the price subsidy provided to tobacco products at military exchanges.

Voluntary Military Education Programs—Enforcing Memorandum of Understanding.—The Committee supports the Department of Defense's commitment to enforcing the terms of the current Memorandum of Understanding [MOU] with all educational institutions providing educational programs through the Department of Defense tuition assistance program. The Committee is also supportive of the Department's efforts to increase participating institutions' understanding of their contractual obligations as MOU signatories and the procedures for enforcement as outlined in Department of Defense Instruction [DODI] 1322.25. The Committee urges the Department to maintain vigorous defense of these responsibilities in order to protect the integrity and quality of voluntary military education programs.

Drinking Water Contamination.—The Committee remains concerned about the health implications of contaminated drinking water due to perfluoroalkyl and polyfluoroalkyl substances [PFAS]. The Committee worked with the military services to assess unfunded executable requirements in fiscal year 2020 due to issues associated with PFAS and provided additional funding accordingly. The Committee intends to aggressively follow up with the services on procedures for timely remediation and community notification.

For the National Guard, the Committee has increased funding for such purposes in the operation and maintenance accounts. However, the Committee acknowledges that section 319 included in S. 1790, the National Defense Authorization Act for Fiscal Year 2020, as passed by the Senate, proposes the establishment of environmental restoration accounts for the National Guard components and may consider transferring the increases to the new accounts pending the outcome of National Defense Authorization Act conference negotiations.

Uncontaminated Water for Agricultural Purposes.—The Committee recognizes section 1073 included in S. 1790, the National

Defense Authorization Act for Fiscal Year 2020, as passed by the Senate, and urges the secretaries of the military services to keep the congressional defense committees apprised of plans to use these authorities.

Boards for Correction of Military Records.—The Air Force Review Board Agency, Army Review Boards Agency, and the Board of Naval Corrections play a decisive role ensuring that military personnel enjoy fair, just, and equitable decisions as it pertains to their service records and benefits. However, the Committee is concerned that the Boards have failed to modernize personnel, processes, and infrastructure at the pace required for demonstrated increases in the volume and complexity of its caseloads. As a result, the Boards are significantly under-resourced. The Committee also notes that none of the Boards have current, validated needs assessments for personnel, information technology, and operations, which are critical to the budget process. The Committee has not yet received the report directed by the Department of Defense Appropriations Act, 2018, and awaits receipt of the service Secretaries' plans to address these resourcing issues.

Perfluorinated Chemicals Contamination and First Responder Exposure.—The Committee remains concerned about the health implications of contaminated drinking water due to perfluorinated chemicals [PFCs], including the exposure of Department of Defense firefighter and first responder personnel. The Committee understands that the Air Force currently uses Phos-Chek 3 foam, which contains trace amounts of PFCs, but does not accumulate in the body. Given the lack of definitive guidance around exposure levels, the Committee urges the Secretary of the Air Force to accelerate adoption of other forms of foam which would meet military specifications and do not contain PFCs. The Committee further urges the Secretary of Defense to coordinate with the Agency for Toxic Substances and Disease Registry on validated blood assay research for these chemicals and integrate that knowledge into the policies and procedures for Department of Defense first responders. Finally, the Committee directs the Assistant Secretary of Defense (Health Affairs) to brief the House and Senate Appropriations Committees not later than 180 days after the enactment of this act on a plan to test and track potential first responder exposure to these chemicals as part of their existing, annual medical surveillance exams.

Military Spouse Employment.—The Committee recognizes the challenges military spouses face when seeking and retaining employment and the impact these issues can have on a military family. Military Spouse Economic Empowerment Zones were launched in 2018 in cities across America to address local military spouse unemployment and underemployment issues through the efforts of local working groups. These groups work to establish a range of local employment-related resources and to identify opportunities as well as barriers to entry for military spouses seeking meaningful employment. The Committee encourages the Secretary of Defense to continue to facilitate collaboration between local and national employers, educational institutions, and community organizations to build a robust employment network for military spouses.

The Committee further encourages the Secretary of Defense to enter into a cooperative agreement with the Council of State Gov-

ernments to assist in the funding and development of interstate compacts on licensed occupations, in an effort to increase military spouse employment by removing limits on the portability of employment licenses and credentials across State lines.

Operation and Maintenance Budget Justification.—The Committee commends the Department for the improvements in the Operation and Maintenance budget materials made over the past several years. To further inform the congressional review, the Committee directs the following actions:

- The Commander, United States Special Operations Command, in coordination with the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict, and the Under Secretary of Defense (Comptroller), shall develop and submit performance criteria for each sub-activity group with the fiscal year 2021 President’s budget request.
- The Secretary of Defense shall submit a separate OP–5 and OP–32 exhibit for each line that is requested on the O–1 breakout of Operation and Maintenance Programs. This direction is specifically for the Operation and Maintenance, Defense-Wide [O&M, DW] appropriation. The fiscal year 2020 President’s budget request broke out cyber lines in O&M, DW yet the narrative associated with those new lines is buried within the exhibit for each agency. In another instance, the budget request for The Joint Chiefs of Staff includes four separate lines on the O–1 yet there is only one OP–5 exhibit rolling up all of those lines and does not provide sufficient detail for each.
- Each service shall include details required by Section N of the Exhibit OP–5 Base Support Program [Attachment 8] as shown in the Department of Defense Financial Management Regulation [DoD 7000.14–R]. This references Child and Youth Development Programs and the services shall provide data for each and every category on the list in the Regulations such as the number of child development centers, total number of children receiving care, total number of children on the waitlist, etc. Additionally, there shall be a new category to capture the funding level for childcare programs specifically.

Disaster Relief Assistance to the Bahamas.—The Committee is deeply concerned about the destruction and devastation in the Bahamas by Hurricane Dorian and appreciates that the Department of Defense has already taken steps to provide humanitarian and disaster relief funding and support, including logistics, transportation, health, and engineering assessments using Overseas Humanitarian, Disaster and Civic Aid [OHDACA] funding. The Committee encourages the Department to continue to prioritize OHDACA funds for these recovery efforts and to report to the congressional defense committees accounting for these expenditures and any additional costs due to damage from Hurricane Dorian to military installations or assets.

OPERATION AND MAINTENANCE, ARMY

Appropriations, 2019	\$40,145,482,000
Budget estimate, 2020	22,797,873,000
Committee recommendation	40,437,663,000

The Committee recommends an appropriation of \$40,437,663,000. This is \$17,639,790,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, ARMY			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	LAND FORCES			
10	MANEUVER UNITS		1,729,422	+ 1,729,422
20	MODULAR SUPPORT BRIGADES		122,815	+ 122,815
30	ECHELONS ABOVE BRIGADES		716,356	+ 716,356
40	THEATER LEVEL ASSETS		878,891	+ 878,891
50	LAND FORCES OPERATIONS SUPPORT		1,227,477	+ 1,227,477
60	AVIATION ASSETS		1,255,606	+ 1,255,606
	LAND FORCES READINESS			
70	FORCE READINESS OPERATIONS SUPPORT	408,031	3,114,315	+ 2,706,284
80	LAND FORCES SYSTEMS READINESS	417,069	426,269	+ 9,200
90	LAND FORCES DEPOT MAINTENANCE		983,327	+ 983,327
	LAND FORCES READINESS SUPPORT			
100	BASE OPERATIONS SUPPORT		7,976,933	+ 7,976,933
110	FACILITIES SUSTAINMENT, RESTORATION, & MODERNIZATION	4,326,840	4,330,840	+ 4,000
120	MANAGEMENT AND OPERATIONAL HEADQUARTERS	405,612	405,612	.....
	COMBATANT COMMAND SUPPORT			
160	US AFRICA COMMAND	251,511	234,511	- 17,000
170	US EUROPEAN COMMAND	146,358	146,358	.....
180	US SOUTHERN COMMAND	191,840	209,840	+ 18,000
190	US FORCES KOREA	57,603	57,603	.....
200	CYBERSPACE ACTIVITIES—CYBERSPACE OPERATIONS	423,156	423,156	.....
210	CYBER SPACE ACTIVITIES—CYBERSECURITY	551,185	551,185	.....
	TOTAL, BUDGET ACTIVITY 1	7,179,205	24,790,516	+ 17,611,311
	BUDGET ACTIVITY 2: MOBILIZATION			
	MOBILITY OPERATIONS			
220	STRATEGIC MOBILITY	380,577	380,577	.....
230	ARMY PREPOSITIONED STOCKS	362,942	362,942	.....
240	INDUSTRIAL PREPAREDNESS	4,637	5,637	+ 1,000
	TOTAL, BUDGET ACTIVITY 2	748,156	749,156	+ 1,000
	BUDGET ACTIVITY 3: TRAINING AND RECRUITING			
	ACCESSION TRAINING			
250	OFFICER ACQUISITION	157,175	157,175	.....
260	RECRUIT TRAINING	55,739	55,739	.....
270	ONE STATION UNIT TRAINING	62,300	62,300	.....
280	SENIOR RESERVE OFFICERS TRAINING CORPS	538,357	538,357	.....
	BASIC SKILL AND ADVANCED TRAINING			
290	SPECIALIZED SKILL TRAINING	969,813	969,813	.....
300	FLIGHT TRAINING	1,234,049	1,395,049	+ 161,000
310	PROFESSIONAL DEVELOPMENT EDUCATION	218,338	218,338	.....
320	TRAINING SUPPORT	554,659	554,659	.....
	RECRUITING AND OTHER TRAINING AND EDUCATION			
330	RECRUITING AND ADVERTISING	716,056	706,056	- 10,000
340	EXAMINING	185,034	185,034	.....
350	OFF-DUTY AND VOLUNTARY EDUCATION	214,275	214,275	.....
360	CIVILIAN EDUCATION AND TRAINING	147,647	147,647	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
370	JUNIOR RESERVE OFFICERS TRAINING CORPS	173,812	176,812	+ 3,000
	TOTAL, BUDGET ACTIVITY 3	5,227,254	5,381,254	+ 154,000
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	LOGISTICS OPERATIONS			
390	SERVICEWIDE TRANSPORTATION	559,229	559,229	.....
400	CENTRAL SUPPLY ACTIVITIES	929,944	929,944	.....
410	LOGISTICS SUPPORT ACTIVITIES	629,981	629,981	.....
420	AMMUNITION MANAGEMENT	458,771	451,771	- 7,000
	SERVICEWIDE SUPPORT			
430	ADMINISTRATION	428,768	418,768	- 10,000
440	SERVICEWIDE COMMUNICATIONS	1,512,736	1,472,736	- 40,000
450	MANPOWER MANAGEMENT	272,738	272,738	.....
460	OTHER PERSONNEL SUPPORT	391,869	361,869	- 30,000
470	OTHER SERVICE SUPPORT	1,901,165	1,881,165	- 20,000
480	ARMY CLAIMS ACTIVITIES	198,765	198,765	.....
490	REAL ESTATE MANAGEMENT	226,248	226,248	.....
500	FINANCIAL MANAGEMENT AND AUDIT READINESS	315,489	287,489	- 28,000
510	INTERNATIONAL MILITARY HEADQUARTERS	427,254	427,254	.....
520	MISC. SUPPORT OF OTHER NATIONS	43,248	43,248	.....
	OTHER PROGRAMS			
	OTHER PROGRAMS	1,347,053	1,372,383	+ 25,330
	TOTAL, BUDGET ACTIVITY 4	9,643,258	9,533,588	- 109,670
	OVERESTIMATION OF CIVILIAN FTE TARGETS .....	.....	- 105,000	- 105,000
	TRANSFER: THAAD SUSTAINMENT FROM OMDW MDA LINE .....	.....	87,149	+ 87,149
	Public Law 115-68 IMPLEMENTATION AT COCOMS .....	.....	1,000	+ 1,000
	TOTAL, OPERATION AND MAINTENANCE, ARMY	22,797,873	40,437,663	+ 17,639,790

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
111	Maneuver Units .....	.....	1,729,422	+ 1,729,422
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 1,735,922
	Improving funds management: Program decrease unaccounted for .....	.....	.....	- 6,500
112	Modular Support Brigades .....	.....	122,815	+ 122,815
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 127,815
	Maintain Program Affordability: Unjustified growth .....	.....	.....	- 5,000
113	Echelons Above Brigade .....	.....	716,356	+ 716,356
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 716,356
114	Theater Level Assets .....	.....	878,891	+ 878,891
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 890,891
	Maintain Program Affordability: Unjustified growth .....	.....	.....	- 12,000
115	Land Forces Operations Support .....	.....	1,227,477	+ 1,227,477
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 1,232,477
	Maintain Program Affordability: Unjustified growth .....	.....	.....	- 5,000
116	Aviation Assets .....	.....	1,255,606	+ 1,255,606
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 1,355,606
	Maintain Program Affordability: Projected underexecution .....	.....	.....	- 100,000
121	Force Readiness Operations Support	408,031	3,114,315	+ 2,706,284
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 2,824,284

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Maintain Program Affordability: Unjustified growth			−60,000
	Restoring acquisition accountability: Synthetic Training Environment			−30,000
	Improving funds management: Program decrease unaccounted for			−20,000
	Maintain Program Affordability: Reduce duplication			−8,000
122	Land Forces Systems Readiness	417,069	426,269	+9,200
	Improving funds management: Program decrease unaccounted for			−20,000
	Program increase: Multi-Domain Task Force-Power Projection Support Team			+3,300
	Program increase: Exercise integration and experimentation			+2,500
	Program increase: MDO live fire capability demos			+2,300
	Program increase: Joint combined war games			+2,000
	Program increase: ICEWS unit integration and training support			+12,000
	Program increase: Pacific Multi-Domain PED architecture support			+7,100
123	Land Forces Depot Maintenance		983,327	+983,327
	Transfer: From Title IX to Title II for base requirements			+983,327
131	Base Operations Support		7,976,933	+7,976,933
	Transfer: From Title IX to Title II for base requirements			+8,047,933
	Maintain Program Affordability: Unjustified growth			−70,000
	Maintain program affordability: Remove one-time fiscal year 2019 cost			−6,000
	Program increase: PFAS remediation			+5,000
132	Facilities Sustainment, Restoration & Modernization	4,326,840	4,330,840	+4,000
	Program increase: Advanced Manufacturing COE sustainment			+4,000
141	US Africa Command	251,511	234,511	−17,000
	Transfer to Title IX: Personnel Recovery and Casualty Evacuation Support			−17,000
143	US Southern Command	191,840	209,840	+18,000
	Program increase: SOUTHCOM Multi-Mission support vessel			+18,000
213	Industrial Preparedness	4,637	5,637	+1,000
	Program increase: Advanced Manufacturing COE technology roadmapping			+1,000
322	Flight Training	1,234,049	1,395,049	+161,000
	Program increase: Aviation training			+161,000
331	Recruiting and Advertising	716,056	706,056	−10,000
	Maintain Program Affordability: Unjustified growth for Accessioning Information Environment			−10,000
335	Junior Reserve Officer Training Corps	173,812	176,812	+3,000
	Program increase			+3,000
411	Security Programs	1,347,053	1,372,383	+25,330
	Program increase: SOUTHCOM ISR Operations and Technical Network Analysis Center			+10,330
	Program increase: SOUTHCOM SAR			+15,000
424	Ammunition Management	458,771	451,771	−7,000
	Maintain Program Affordability: Unjustified growth			−7,000
431	Administration	428,768	418,768	−10,000
	Maintain Program Affordability: Unjustified growth			−10,000
432	Service-wide Communications	1,512,736	1,472,736	−40,000
	Improving funds management: Program decrease unaccounted for			−40,000
434	Other Personnel Support	391,869	361,869	−30,000
	Maintain Program Affordability: Unjustified growth			−30,000
435	Other Service Support	1,901,165	1,881,165	−20,000
	Maintain Program Affordability: Unjustified growth			−20,000
438	Financial Improvement and Audit Readiness	315,489	287,489	−28,000
	Improving funds management: Program decrease unaccounted for			−28,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
UNDIST	Maintain program affordability: Overestimation of civilian FTE targets		-100,000	-105,000
UNDIST	Transfer: THAAD sustainment from O&M DW MDA line		87,149	+ 87,149
UNDIST	Program increase: Public Law 115-68 implementation at Combatant Commands		1,000	+ 1,000

Army Sustainment, Restoration and Modernization and Facility Reduction Funding.—The Committee supports the robust funding level requested in fiscal year 2020 for facility sustainment, restoration and modernization. The Secretary of the Army is encouraged to use a portion of these funds for the demolition of contaminated military facilities that are no longer in use.

Energy Resilience.—Energy resilience promotes Army readiness by anticipating, preparing for, and adapting to changing conditions. It enables the Army to withstand, respond to, and recover from disruptions in the availability of energy, land, and water resources. The Committee encourages the Secretary of the Army to focus on the restoration of energy and water systems to critical facilities and to continue development and training on the resiliency of these systems.

Organizational Clothing and Individual Equipment.—The Committee commends the Army for taking the necessary steps to address capability gaps by modernizing cold weather organizational clothing and individual equipment [OCIE]. The Committee encourages the Secretary of the Army to make cold weather OCIE items, including handwear, available to all eligible soldiers as soon as possible. Further, the Committee supports efforts to support a strong domestic industrial base to ensure the availability of innovative and cost-effective cold weather OCIE items.

United States Southern Command Synthetic Aperture Radar.—The Committee recommends \$15,000,000 in order to achieve a greater level of geospatial intelligence of the features, objects, activities and environments in the United States Southern Command [SOUTHCOM] area of operations. Further, the Committee recommends funds be used to leverage relationships with academic partners to establish a database of SAR-derived geospatial information for SOUTHCOM operations based on the most technically advanced SAR systems available and the use of automated intelligence and machine learning techniques.

OPERATION AND MAINTENANCE, NAVY

Appropriations, 2019	\$48,034,826,000
Budget estimate, 2020	25,952,718,000
Committee recommendation	48,200,088,000

The Committee recommends an appropriation of \$48,200,088,000. This is \$22,247,370,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, NAVY			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	AIR OPERATIONS			
10	MISSION AND OTHER FLIGHT OPERATIONS		4,659,109	+ 4,659,109
20	FLEET AIR TRAINING	2,284,828	2,284,828	
30	AVIATION TECHNICAL DATA AND ENGINEERING SERVICES		59,299	+ 59,299
40	AIR OPERATIONS AND SAFETY SUPPORT	155,896	155,896	
50	AIR SYSTEMS SUPPORT	719,107	719,107	
60	AIRCRAFT DEPOT MAINTENANCE		1,154,181	+ 1,154,181
70	AIRCRAFT DEPOT OPERATIONS SUPPORT	60,402	60,402	
80	AVIATION LOGISTICS	1,241,421	1,241,421	
	SHIP OPERATIONS			
90	MISSION AND OTHER SHIP OPERATIONS		3,297,262	+ 3,297,262
100	SHIP OPERATIONS SUPPORT AND TRAINING	1,031,792	1,031,792	
110	SHIP DEPOT MAINTENANCE		6,861,298	+ 6,861,298
120	SHIP DEPOT OPERATIONS SUPPORT		2,069,141	+ 2,069,141
	COMBAT COMMUNICATIONS/SUPPORT			
130	COMBAT COMMUNICATIONS	1,378,856	1,364,856	- 14,000
150	SPACE SYSTEMS AND SURVEILLANCE	276,245	276,245	
160	WARFARE TACTICS	675,209	675,209	
170	OPERATIONAL METEOROLOGY AND OCEANOGRAPHY	389,516	389,516	
180	COMBAT SUPPORT FORCES	1,536,310	1,463,310	- 73,000
190	EQUIPMENT MAINTENANCE	161,579	161,579	
210	COMBATANT COMMANDERS CORE OPERATIONS	59,521	59,521	
220	COMBATANT COMMANDERS DIRECT MISSION SUPPORT	93,978	98,978	+ 5,000
230	MILITARY INFORMATION SUPPORT OPERATIONS	8,641	8,641	
240	CYBERSPACE ACTIVITIES	496,385	496,385	
	WEAPONS SUPPORT			
260	FLEET BALLISTIC MISSILE	1,423,339	1,423,339	
280	WEAPONS MAINTENANCE	924,069	914,069	- 10,000
290	OTHER WEAPON SYSTEMS SUPPORT	540,210	537,110	- 3,100
	BASE SUPPORT			
300	ENTERPRISE INFORMATION TECHNOLOGY	1,131,627	1,111,627	- 20,000
310	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	3,029,634	3,029,634	
320	BASE OPERATING SUPPORT		4,346,943	+ 4,346,943
	TOTAL, BUDGET ACTIVITY 1	17,618,565	39,950,698	+ 22,332,133
	BUDGET ACTIVITY 2: MOBILIZATION			
	READY RESERVE AND PREPOSITIONING FORCES			
330	SHIP PREPOSITIONING AND SURGE	942,902	922,902	- 20,000
340	READY RESERVE FORCE	352,044	352,044	
	ACTIVATIONS/INACTIVATIONS			
360	SHIP ACTIVATIONS/INACTIVATIONS	427,555	402,555	- 25,000
	MOBILIZATION PREPAREDNESS			
370	FLEET HOSPITAL PROGRAM	137,597	137,597	
390	COAST GUARD SUPPORT	24,604	24,604	
	TOTAL, BUDGET ACTIVITY 2	1,884,702	1,839,702	- 45,000
	BUDGET ACTIVITY 3: TRAINING AND RECRUITING			
	ACCESSION TRAINING			
400	OFFICER ACQUISITION	150,765	150,765	
410	RECRUIT TRAINING	11,584	11,584	
420	RESERVE OFFICERS TRAINING CORPS	159,133	159,433	+ 300
	BASIC SKILLS AND ADVANCED TRAINING			
430	SPECIALIZED SKILL TRAINING	911,316	911,316	
450	PROFESSIONAL DEVELOPMENT EDUCATION	185,211	185,211	
460	TRAINING SUPPORT	267,224	267,224	

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RECRUITING, AND OTHER TRAINING AND EDUCATION			
470	RECRUITING AND ADVERTISING	209,252	209,252	.....
480	OFF-DUTY AND VOLUNTARY EDUCATION	88,902	88,902	.....
490	CIVILIAN EDUCATION AND TRAINING	67,492	67,492	.....
500	JUNIOR ROTC	55,164	55,164	.....
	TOTAL, BUDGET ACTIVITY 3	2,106,043	2,106,343	+ 300
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	SERVICEWIDE SUPPORT			
510	ADMINISTRATION	1,143,358	1,127,358	- 16,000
530	CIVILIAN MANPOWER AND PERSONNEL MANAGEMENT	178,342	178,342	.....
540	MILITARY MANPOWER AND PERSONNEL MANAGEMENT	418,413	418,413	.....
	LOGISTICS OPERATIONS AND TECHNICAL SUPPORT			
580	SERVICEWIDE TRANSPORTATION	157,465	157,465	.....
600	PLANNING, ENGINEERING AND DESIGN	485,397	485,397	.....
610	ACQUISITION AND PROGRAM MANAGEMENT	654,137	647,137	- 7,000
	SECURITY PROGRAMS			
650	NAVAL INVESTIGATIVE SERVICE	718,061	718,061	.....
	OTHER PROGRAMS			
	OTHER PROGRAMS	588,235	595,535	+ 7,300
	TOTAL, BUDGET ACTIVITY 4	4,343,408	4,327,708	- 15,700
	REMOVAL OF ONE TIME fiscal year 2019 INCREASE .....	.....	- 100,000	- 100,000
	TRANSFER: AEGIS SUSTAINMENT FROM OMDW MDA LINE .....	.....	75,237	+ 75,237
	Public Law 115-68 IMPLEMENTATION AT COCOMS .....	.....	400	+ 400
	TOTAL, OPERATION AND MAINTENANCE, NAVY	25,952,718	48,200,088	+ 22,247,370

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Mission and Other Flight Operations .....	.....	4,659,109	+ 4,659,109
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 4,659,109
1A3A	Aviation Technical Data & Engineering Services .....	.....	59,299	+ 59,299
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 59,299
1A5A	Aircraft Depot Maintenance .....	.....	1,154,181	+ 1,154,181
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 1,154,181
1B1B	Mission and Other Ship Operations .....	.....	3,297,262	+ 3,297,262
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 3,447,262
	Maintain Program Affordability: Unjustified growth .....	.....	.....	- 150,000
1B4B	Ship Depot Maintenance .....	.....	6,861,298	+ 6,861,298
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 8,061,298
	Transfer: To Other Procurement, Navy line 23x for Pacific Fleet ship maintenance pilot program .....	.....	.....	- 1,200,000
1B5B	Ship Depot Operations Support .....	.....	2,069,141	+ 2,069,141
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 2,073,641
	Maintain Program Affordability: Unjustified growth .....	.....	.....	- 7,500
	Program increase: River Maintenance Dredging .....	.....	.....	+ 3,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1C1C	Combat Communications and Electronic Warfare	1,378,856	1,364,856	- 14,000
	Maintain Program Affordability: Unjustified growth			- 14,000
1C6C	Combat Support Forces	1,536,310	1,463,310	- 73,000
	Maintain Program Affordability: Unjustified growth			- 64,000
	Improving funds management: Program decrease unaccounted for			- 9,000
1CCM	Combatant Commanders Direct Mission Support	93,978	98,978	+ 5,000
	Program increase: Enduring posture site assessments INDOPACOM			+ 5,000
1D4D	Weapons Maintenance	924,069	914,069	- 10,000
	Maintain Program Affordability: Unjustified growth			- 10,000
1D7D	Other Weapon Systems Support	540,210	537,110	- 3,100
	Classified adjustment			- 3,100
BSIT	Enterprise Information	1,131,627	1,111,627	- 20,000
	Maintain Program Affordability: Unjustified growth			- 20,000
BSS1	Base Operating Support		4,346,943	+ 4,346,943
	Transfer: From Title IX to Title II for base requirements			+ 4,414,943
	Maintain Program Affordability: Unjustified growth			- 40,000
	Improving funds management: Remove one-time fiscal year 2019 increase			- 28,000
2A1F	Ship Prepositioning and Surge	942,902	922,902	- 20,000
	Maintain Program Affordability: Unjustified growth			- 20,000
2B2G	Ship Activations/Inactivations	427,555	402,555	- 25,000
	Maintain Program Affordability: Unjustified growth			- 25,000
3A3J	Reserve Officers Training Corps	159,133	159,433	+ 300
	Program increase			+ 300
4A1M	Administration	1,143,358	1,127,358	- 16,000
	Maintain Program Affordability: Unjustified growth			- 16,000
4B3N	Acquisition, Logistics and Oversight	654,137	647,137	- 7,000
	Maintain Program Affordability: Unjustified growth			- 7,000
999	Classified Programs	588,235	595,535	+ 7,300
	Classified adjustment			+ 7,300
UNDIST	Improving funds management: Removal of one-time fiscal year 2019 increase		- 100,000	- 100,000
UNDIST	Transfer: AEGIS sustainment from O&MDW MDA line		75,237	+ 75,237
UNDIST	Program increase: Public Law 115-68 implementation at Combatant Commands		400	+ 400

Private Contracted Ship Maintenance.—The fiscal year 2020 President's budget request included bill language within Operation and Maintenance, Navy [O&M, Navy] designating the amount budgeted for private contracted ship maintenance as available for a 2-year period. The rationale behind extending the period of availability is that historically, ship maintenance has been a significant contributor to undisbursed balances in O&M, Navy, accounting for more than 20 percent of the annual unexpended balances. Arguably, a multi-year period of availability for ship maintenance funding would generate a substantial financial benefit and help to improve funding reversions to the Treasury.

The Committee firmly believes that operation and maintenance funding shall continue to remain available for 1 year. However, the Committee acknowledges that maintenance trends indicate pricing or growth in scope changes are occurring well after the fiscal year has ended. According to Navy data, approximately two-thirds of ship availabilities complete in the second year. Therefore, the Committee recommends a pilot program to fund the private contracted ship maintenance planned for the Pacific Fleet in fiscal year 2020 through Other Procurement, Navy [OPN]. This proposal would pro-

vide the Department of the Navy with a solution to the challenges associated with ship maintenance by extending the period of availability.

In this proposed pilot, the Secretary of the Navy shall target 100 percent obligation of the depot maintenance funding in OPN during the first fiscal year, but can retain the ability to reapply de-obligations to other increasing costs or emergent requirements. The pilot will also allow more flexibility to address requirements late in the fiscal year without unproductive time constraints, and enable de-obligations and re-obligations of appropriated funds more effectively in the second or third fiscal year. Finally, the Secretary of the Navy shall provide an annual assessment of the progress of the pilot program to the congressional defense committees, including benefits or disadvantages of continuing the pilot.

Naval Shipyard Apprentice Program.—The Committee directs that during fiscal year 2020 the Navy shall induct classes of no fewer than 100 apprentices, respectively, at each of the naval shipyards. The Committee further directs the Navy to include the costs of the fiscal year 2021 class of apprentices in its budget request.

U.S. Coast Guard.—The Committee is aware that Department of Defense [DoD] regulations currently restrict DoD mission appropriated funded activities from offering reimbursable rates to non-DoD agencies. This restriction forces the Navy to charge the U.S. Coast Guard fully burdened rates for drydocking services at Navy shipyards rather than reimbursable rates. Therefore, the Committee directs that funds appropriated under Operation and Maintenance, Navy may be used to pay overhead costs incurred by a Naval Shipyard when drydocking U.S. Coast Guard ships.

Talent Management and Talent Acquisition.—The Committee is aware of a newly emerging class of artificial intelligence [AI] technology called Cross-Enterprise AI that could provide Navy Personnel Command the ability to use AI to integrate existing silos of data and systems to augment decisionmaking and drive better outcomes with little or no workflow or IT transformation. The Committee encourages the Secretary of the Navy to consider the return on investment and efficacy of leveraging commercial solutions that include cloud-based and rapidly configurable use dynamic model-based AI foundation to enable closed-loop machine learning on existing Navy enterprise systems.

Virginia-Class Material.—The Committee is aware of the Department of Defense's March 12, 2019, Report to Congress on Submarine Depot Maintenance and is concerned with material availability and cost increases for depot maintenance of *Virginia*-class submarines. As noted in the report, a lack of material availability has contributed to an increase in costs, as well as increased reliance on cannibalization of material from other operational platforms in support of maintenance schedules, which adds to maintenance requirements and generates additional follow-on availability requirements. The Committee encourages the Secretary of the Navy to continue to update *Virginia*-class maintenance plans, improve material forecasting tools, and adjust acquisition strategies to resolve the need for cannibalization of materials and reduce risk of material not being available.

OPERATION AND MAINTENANCE, MARINE CORPS

Appropriations, 2019 \$6,540,049,000
 Budget estimate, 2020 3,928,045,000
 Committee recommendation 7,608,598,000

The Committee recommends an appropriation of \$7,608,598,000.
 This is \$3,680,553,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, MARINE CORPS			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	EXPEDITIONARY FORCES			
10	OPERATIONAL FORCES		767,224	+ 767,224
20	FIELD LOGISTICS	1,278,533	1,264,533	- 14,000
30	DEPOT MAINTENANCE		232,991	+ 232,991
	USMC PREPOSITIONING			
40	MARITIME PREPOSITIONING		100,396	+ 100,396
	COMBAT OPERATIONS/SUPPORT			
50	CYBERSPACE ACTIVITIES	203,580	203,580	.....
	BASE SUPPORT			
60	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	1,115,742	1,559,034	+ 443,292
70	BASE OPERATING SUPPORT		2,150,650	+ 2,150,650
	TOTAL, BUDGET ACTIVITY 1	2,597,855	6,278,408	+ 3,680,553
	BUDGET ACTIVITY 3: TRAINING AND RECRUITING			
	ACCESSION TRAINING			
80	RECRUIT TRAINING	21,240	21,240	.....
90	OFFICER ACQUISITION	1,168	1,168	.....
	BASIC SKILLS AND ADVANCED TRAINING			
100	SPECIALIZED SKILLS TRAINING	106,601	106,601	.....
110	PROFESSIONAL DEVELOPMENT EDUCATION	49,095	49,095	.....
120	TRAINING SUPPORT	407,315	407,315	.....
	RECRUITING AND OTHER TRAINING EDUCATION			
130	RECRUITING AND ADVERTISING	210,475	210,475	.....
140	OFF-DUTY AND VOLUNTARY EDUCATION	42,810	42,810	.....
150	JUNIOR ROTC	25,183	25,183	.....
	TOTAL, BUDGET ACTIVITY 3	863,887	863,887	.....
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	SERVICEWIDE SUPPORT			
160	SERVICEWIDE TRANSPORTATION	29,894	29,894	.....
170	ADMINISTRATION	384,352	384,352	.....
	SECURITY PROGRAMS			
	SECURITY PROGRAMS	52,057	52,057	.....
	TOTAL, BUDGET ACTIVITY 4	466,303	466,303	.....
	TOTAL, OPERATION AND MAINTENANCE, MARINE CORPS	3,928,045	7,608,598	+ 3,680,553

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Operational Forces		767,224	+ 767,224
	Transfer: From Title IX to Title II for base requirements			+ 768,224
	Improving funds management: Program decrease unaccounted for			- 11,000
	Program increase: Marine hearing enhancement and protection			+ 10,000
1A2A	Field Logistics	1,278,533	1,264,533	- 14,000
	Maintain program affordability: Unjustified growth			- 14,000
1A3A	Depot Maintenance		232,991	+ 232,991
	Transfer: From Title IX to Title II for base requirements			+ 232,991
1B1B	Maritime Prepositioning		100,396	+ 100,396
	Transfer: From Title IX to Title II for base requirements			+ 100,396
BSM1	Sustainment, Restoration & Modernization	1,115,742	1,559,034	+ 443,292
	Transfer: From Title IX to Title II for base requirements			+ 443,292
BSS1	Base Operating Support		2,150,650	+ 2,150,650
	Transfer: From Title IX to Title II for base requirements			+ 2,200,650
	Improving funds management: Program decrease unaccounted for			- 30,000
	Maintain program affordability: Unjustified growth			- 30,000
	Program increase: AFFF requirements			+ 10,000

OPERATION AND MAINTENANCE, AIR FORCE

Appropriations, 2019	\$40,379,184,000
Budget estimate, 2020	21,278,499,000
Committee recommendation	43,092,286,000

The Committee recommends an appropriation of \$43,092,286,000. This is \$21,813,787,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, AIR FORCE			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	AIR OPERATIONS			
10	PRIMARY COMBAT FORCES	729,127	729,127	.....
20	COMBAT ENHANCEMENT FORCES	1,318,770	1,358,770	+ 40,000
30	AIR OPERATIONS TRAINING	1,486,790	1,348,970	- 137,820
40	DEPOT MAINTENANCE		2,646,792	+ 2,646,792
50	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	3,675,824	4,142,435	+ 466,611
50	CYBERSPACE SUSTAINMENT		228,811	+ 228,811
60	CONTRACTOR LOGISTICS SUPPORT AND SYSTEM SUPPORT		8,329,364	+ 8,329,364
70	FLYING HOUR PROGRAM		3,248,773	+ 3,248,773
80	BASE OPERATING SUPPORT		7,181,487	+ 7,181,487
	COMBAT RELATED OPERATIONS			
90	GLOBAL C3I AND EARLY WARNING	964,553	964,553	.....
100	OTHER COMBAT OPERATIONS SUPPORT PROGRAMS	1,032,307	1,032,307	.....
110	CYBERSPACE ACTIVITIES	670,076	670,076	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	SPACE OPERATIONS			
130	LAUNCH FACILITIES	179,980	179,980	.....
140	SPACE CONTROL SYSTEMS	467,990	467,990	.....
	COCOM			
170	US NORTHCOM/NORAD	184,655	184,655	.....
180	US STRATCOM	478,357	478,357	.....
190	US CYBERCOM	323,121	347,921	+ 24,800
200	US CENTCOM	160,989	160,989	.....
210	US SOCOM	6,225	6,225	.....
220	US TRANSCOM	544	544	.....
220	CENTCOM CYBERSPACE SUSTAINMENT	2,073	2,073	.....
230	USSPACECOM	70,588	70,588	.....
	OPERATING FORCES			
	CLASSIFIED PROGRAMS	1,322,944	1,319,883	- 3,061
	TOTAL, BUDGET ACTIVITY 1	13,074,913	35,100,670	+ 22,025,757
	BUDGET ACTIVITY 2: MOBILIZATION			
	MOBILITY OPERATIONS			
230	AIRLIFT OPERATIONS	1,158,142	1,158,142	.....
240	MOBILIZATION PREPAREDNESS	138,672	138,672	.....
	TOTAL, BUDGET ACTIVITY 2	1,296,814	1,296,814	.....
	BUDGET ACTIVITY 3: TRAINING AND RECRUITING			
	ACCESSION TRAINING			
280	OFFICER ACQUISITION	130,835	130,835	.....
290	RECRUIT TRAINING	26,021	26,021	.....
300	RESERVE OFFICER TRAINING CORPS (ROTC)	121,391	121,391	.....
	BASIC SKILLS AND ADVANCED TRAINING			
330	SPECIALIZED SKILL TRAINING	454,539	414,539	- 40,000
340	FLIGHT TRAINING	600,565	600,565	.....
350	PROFESSIONAL DEVELOPMENT EDUCATION	282,788	282,788	.....
360	TRAINING SUPPORT	123,988	113,988	- 10,000
	RECRUITING, AND OTHER TRAINING AND EDUCATION			
380	RECRUITING AND ADVERTISING	167,731	167,731	.....
390	EXAMINING	4,576	4,576	.....
400	OFF DUTY AND VOLUNTARY EDUCATION	211,911	211,911	.....
410	CIVILIAN EDUCATION AND TRAINING	219,021	214,021	- 5,000
420	JUNIOR ROTC	62,092	65,092	+ 3,000
	TOTAL, BUDGET ACTIVITY 3	2,405,458	2,353,458	- 52,000
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	LOGISTICS OPERATIONS			
430	LOGISTICS OPERATIONS	664,926	664,926	.....
440	TECHNICAL SUPPORT ACTIVITIES	101,483	101,483	.....
	SERVICEWIDE ACTIVITIES			
480	ADMINISTRATION	892,480	892,480	.....
490	SERVICEWIDE COMMUNICATIONS	152,532	122,532	- 30,000
500	OTHER SERVICEWIDE ACTIVITIES	1,254,089	1,204,089	- 50,000
510	CIVIL AIR PATROL CORPORATION	30,070	39,100	+ 9,030
	SUPPORT TO OTHER NATIONS			
530	INTERNATIONAL SUPPORT	136,110	136,110	.....
	SECURITY PROGRAMS			
	SECURITY PROGRAMS	1,269,624	1,269,624	.....
	TOTAL, BUDGET ACTIVITY 4	4,501,314	4,430,344	- 70,970
	UNJUSTIFIED GROWTH		- 90,000	- 90,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Public Law 115-68 IMPLEMENTATION AT COCOMS .....	.....	1,000	+ 1,000
	TOTAL, OPERATION AND MAINTENANCE, AIR FORCE	21,278,499	43,092,286	+ 21,813,787

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
011C	Combat Enhancement Forces	1,318,770	1,358,770	+ 40,000
	Transfer: Air Force-requested transfer from RDAF line 234 for Multi Domain Command and Control .....	.....	.....	+ 40,000
011D	Air Operations Training (OJT, Maintain Skills)	1,486,790	1,348,970	- 137,820
	Maintain program affordability: Unjustified growth for contract air services .....	.....	.....	- 100,000
	Improving funds management: Program decrease unaccounted for .....	.....	.....	- 33,000
	Transfer: Air Force-requested transfer to OPAF line 27 for SCARS .....	.....	.....	- 4,820
011M	Depot Purchase Equipment Maintenance .....	.....	2,646,792	+ 2,646,792
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 2,684,792
	Improving funds management: Remove one-time fiscal year 2019 increase .....	.....	.....	- 38,000
011R	Facilities Sustainment, Restoration & Modernization	3,675,824	4,142,435	+ 466,611
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 466,611
011V	Cyberspace Sustainment .....	.....	228,811	+ 228,811
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 228,811
011W	Contractor Logistics Support and System Support .....	.....	8,329,364	+ 8,329,364
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 8,329,364
011Y	Flying Hour Program .....	.....	3,248,773	+ 3,248,773
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 3,398,773
	Maintain program affordability: Unjustified growth .....	.....	.....	- 150,000
011Z	Base Support .....	.....	7,181,487	+ 7,181,487
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 7,223,982
	Improving funds management: Remove one-time fiscal year 2019 increase .....	.....	.....	- 40,000
	Transfer: Air Force-requested transfer to O&M Air National Guard for environmental compliance .....	.....	.....	- 4,495
	Program increase: Civil engineers equipment .....	.....	.....	+ 2,000
015E	US CYBERCOM	323,121	347,921	+ 24,800
	Program increase: Cyber National Mission Force Mobile & Modular Hunt Forward Kit .....	.....	.....	+ 5,300
	Program increase: Cyber National Mission Force Capability Acceleration Plan .....	.....	.....	+ 1,500
	Program increase: ETERNALDARKNESS .....	.....	.....	+ 18,000
999	Classified Programs	1,322,944	1,319,883	- 3,061
	Classified adjustment .....	.....	.....	- 6,250
	Program increase: SOUTHCOM Counter Threat Network Cell .....	.....	.....	+ 3,189
032A	Specialized Skill Training	454,539	414,539	- 40,000
	Maintain program affordability: Unjustified growth .....	.....	.....	- 40,000
032D	Training Support	123,988	113,988	- 10,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Improving funds management: Remove one-time fiscal year 2019 increase			- 10,000
033D	Civilian Education and Training	219,021	214,021	- 5,000
	Improving funds management: Remove one-time fiscal year 2019 increase			- 5,000
033E	Junior ROTC	62,092	65,092	+ 3,000
	Program increase: Pilot scholarship program			+ 3,000
042B	Servicewide Communications	152,532	122,532	- 30,000
	Maintain program affordability: Unjustified growth			- 30,000
042G	Other Servicewide Activities	1,254,089	1,204,089	- 50,000
	Improving funds management: Remove one-time fiscal year 2019 increase			- 30,000
	Improving funds management: Program decrease unaccounted for			- 20,000
042I	Civil Air Patrol	30,070	39,100	+ 9,030
	Program increase: Civil Air Patrol			+ 7,163
	Program increase: Civil Air Patrol-communication equipment			+ 1,867
UNDIST	Maintain program affordability: Unjustified growth		- 90,000	- 90,000
UNDIST	Program increase: Public Law 115-68 implementation at Combatant Commands		1,000	+ 1,000

Mission Defense Teams.—Mission Defense Teams are an organic pathfinder capability assigned to Air Force wing commands and are charged with identifying, analyzing and defending the Air Force’s most critical assets from adversaries. The Committee encourages the Secretary of the Air Force to provide robust funding levels for Defensive Cyberspace Operations to help these highly qualified teams keep up with emerging threats and vulnerabilities in order to reduce overall risk to mission.

Air Force Auxiliary Airfield Runway Replacement.—Gila Bend Air Force Auxiliary Field is an emergency landing and training facility used by Luke Air Force Base and Davis-Monthan Air Force Base aircraft and units from other nearby bases using the Barry M. Goldwater Air Force Range complex. The Committee encourages the Secretary of the Air Force to prioritize funding the replacement of the current end-of-runway turnaround at Gila Bend Air Force Auxiliary Field to accommodate increased air traffic.

OPERATION AND MAINTENANCE, SPACE FORCE

Appropriations, 2019	
Budget estimate, 2020	\$72,436,000
Committee recommendation	72,436,000

The Committee recommends an appropriation of \$72,436,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, SPACE FORCE			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	AIR OPERATIONS			
270	BASE SUPPORT	72,436	72,436	.....
	TOTAL, BUDGET ACTIVITY 1	72,436	72,436	.....
	TOTAL, OPERATION AND MAINTENANCE, SPACE FORCE ..	72,436	72,436	.....

Operation and Maintenance, Space Force.—Adversary development of space systems, to both offensively and defensively counter U.S. space superiority is a growing national security challenge. In the past few years the Air Force has taken steps to bolster our space capabilities and defenses, but the Committee believes more must be done to increase the integration of military capabilities in space into the planning and execution of military operations, and to improve the acquisition of new technologies for space operations. While targeted and even increased spending can certainly help improve our space capabilities, integration and strategic space challenges are not likely to be addressed without improving integration of space warfighters with the combatant commands and streamlining acquisition procedures. Such change efforts have minimal costs with potentially substantial impacts. Moreover, devoting more resources to space operations without a strategic plan may only result in more bureaucracy, overhead, and duplication. The approach for the future of space operations must have an appropriate balance of increasing warfighting capability, improving acquisition efficiency, and minimizing bureaucratic growth.

The recommendation includes \$72,436,000, which is equal to the budget request and the amount authorized in S. 1790, the National Defense Authorization Act for Fiscal Year 2020, as passed by the Senate, for Operation and Maintenance, Space Force. The Committee notes that of these amounts, \$53,845,000 was requested to conduct studies and analysis necessary for the efficient implementation of the Space Force, \$8,686,000 was requested for transfer of certain civilian positions from other appropriations, and \$9,905,000 was requested for the hire of 65 full time equivalents.

This allocation of funds constitutes a reasonable approach to examining and informing Congress and the Department of Defense on critical issues regarding the establishment of a Space Force and limiting bureaucratic growth before major implementation decisions are made. Accordingly, the Committee directs the Secretary of the Air Force to provide a spend plan broken out by month for fiscal year 2020 for the Operation and Maintenance, Space Force funding to the congressional defense committees not later than 30 days after the enactment of this act. The spend plan shall include, but not be limited to, funding for civilian personnel (including the number of full time equivalents), supplies and materials, and contract support. If there is a change to the spend plan in any given month, the Secretary of the Air Force shall provide written notifi-

cation to the congressional defense committees not later than 10 days following the end of that month explaining any adjustments.

OPERATION AND MAINTENANCE, DEFENSE-WIDE

Appropriations, 2019	\$35,613,354,000
Budget estimate, 2020	37,399,341,000
Committee recommendation	37,236,175,000

The Committee recommends an appropriation of \$37,236,175,000. This is \$163,166,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

(In thousands of dollars)

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, DEFENSE-WIDE			
	BUDGET ACTIVITY 1: OPERATING FORCES			
10	JOINT CHIEFS OF STAFF	409,542	392,542	- 17,000
20	JOINT CHIEFS OF STAFF	579,179	579,179	.....
30	JOINT CHIEFS OF STAFF—CYBER	24,598	24,598	.....
40	SPECIAL OPERATIONS COMMAND COMBAT DEVELOPMENT ACTIVITIES	1,075,762	1,070,262	- 5,500
50	SPECIAL OPERATIONS COMMAND CYBERSPACE ACTIVITIES	14,409	14,409	.....
60	SPECIAL OPERATIONS COMMAND INTELLIGENCE	501,747	480,885	- 20,862
70	SPECIAL OPERATIONS COMMAND MAINTENANCE	559,300	540,057	- 19,243
80	SPECIAL OPERATIONS COMMAND MANAGEMENT/OPERATIONAL HEADQUARTERS	177,928	177,928	.....
90	SPECIAL OPERATIONS COMMAND OPERATIONAL SUPPORT	925,262	925,149	- 113
100	SPECIAL OPERATIONS COMMAND THEATER FORCES	2,764,738	2,723,421	- 41,317
	TOTAL, BUDGET ACTIVITY 1	7,032,465	6,928,430	- 104,035
	BUDGET ACTIVITY 3: TRAINING AND RECRUITING			
50	DEFENSE ACQUISITION UNIVERSITY	180,250	180,250	.....
60	JOINT CHIEFS OF STAFF RECRUITING, AND OTHER TRAINING AND EDUCATION	100,610	100,610	.....
70	SPECIAL OPERATIONS COMMAND PROFESSIONAL DEVELOPMENT EDUCATION	33,967	33,967	.....
	TOTAL, BUDGET ACTIVITY 3	314,827	314,827	.....
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
80	CIVIL MILITARY PROGRAMS	165,707	245,063	+ 79,356
100	DEFENSE CONTRACT AUDIT AGENCY	627,467	627,467	.....
190	DEFENSE CONTRACT AUDIT AGENCY—CYBER	3,362	3,362	.....
110	DEFENSE CONTRACT MANAGEMENT AGENCY	1,438,068	1,423,068	- 15,000
210	DEFENSE CONTRACT MANAGEMENT AGENCY—CYBER	24,391	24,391	.....
120	DEFENSE HUMAN RESOURCES ACTIVITY	892,438	952,438	+ 60,000
130	DEFENSE INFORMATION SYSTEMS AGENCY	2,012,885	1,992,885	- 20,000
240	DEFENSE INFORMATION SYSTEMS AGENCY—CYBER	601,223	636,360	+ 35,137
150	DEFENSE LEGAL SERVICES AGENCY	34,632	34,632	.....
160	DEFENSE LOGISTICS AGENCY	415,699	432,999	+ 17,300
170	DEFENSE MEDIA ACTIVITY	202,792	202,792	.....
180	DEFENSE PERSONNEL ACCOUNTING AGENCY	144,881	153,881	+ 9,000
190	DEFENSE SECURITY COOPERATION AGENCY	696,884	667,133	- 29,751
200	DEFENSE COUNTERINTELLIGENCE AND SECURITY AGENCY	889,664	894,664	+ 5,000
340	DEFENSE COUNTERINTELLIGENCE AND SECURITY AGENCY—CYBER	9,220	12,220	+ 3,000
360	DEFENSE TECHNICAL INFORMATION CENTER	3,000	3,000	.....
220	DEFENSE TECHNOLOGY SECURITY AGENCY	35,626	35,626	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
230	DEFENSE THREAT REDUCTION AGENCY	568,133	568,133	.....
400	DEFENSE THREAT REDUCTION AGENCY—CYBER	13,339	13,339	.....
250	DEPARTMENT OF DEFENSE EDUCATION ACTIVITY	2,932,226	2,917,226	— 15,000
280	OFFICE OF ECONOMIC ADJUSTMENT	59,513	134,513	+ 75,000
290	OFFICE OF THE SECRETARY OF DEFENSE	1,604,738	1,607,738	+ 3,000
420	MISSILE DEFENSE AGENCY	522,529	438,473	— 84,056
470	OFFICE OF THE SECRETARY OF DEFENSE—CYBER	48,783	48,783	.....
480	SPACE DEVELOPMENT AGENCY	44,750	44,750	.....
310	WASHINGTON HEADQUARTERS SERVICES	324,001	324,001	.....
	OTHER PROGRAMS	15,736,098	15,640,381	— 95,717
	TOTAL, BUDGET ACTIVITY 4	30,052,049	30,079,318	+ 27,269
	SEXUAL TRAUMA TREATMENT PILOT PROGRAM		2,000	+ 2,000
	UNJUSTIFIED GROWTH		— 80,000	— 80,000
	BUDGET JUSTIFICATION INCONSISTENCIES		— 25,000	— 25,000
	VIETNAM DIOXIN REMEDIATION		15,000	+ 15,000
	Public Law 115–68 IMPLEMENTATION AT COCOMS		1,600	+ 1,600
	TOTAL, OPERATION AND MAINTENANCE, DEFENSE-WIDE	37,399,341	37,236,175	— 163,166

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1PL1	Joint Chiefs of Staff	409,542	392,542	— 17,000
	Improving funds management: Program decrease unaccounted for			— 12,000
	Improving funds management: Remove one-time fiscal year 2019 costs			— 5,000
1PL6	Special Operations Command Combat Development Activities Classified adjustment	1,075,762	1,070,262	— 5,500
1PLU	Special Operations Command Intelligence	501,747	480,885	— 20,862
	Insufficient budget justification: Repricing civilian personnel realignments			— 2,181
	Improving funds management: Remove one-time fiscal year 2019 increase			— 1,504
	Maintain program affordability: Unjustified growth			— 7,318
	Improving funds management: Revised program baseline			— 9,959
	Improving funds management: Overestimation of contractor FTE			— 2,200
	Program increase: Identity Management			+ 2,300
1PL7	Special Operations Command Maintenance	559,300	540,057	— 19,243
	Maintain program affordability: Unjustified growth			— 5,276
	Insufficient budget justification: Inconsistencies in budget materials			— 2,512
	Maintain program affordability: Unjustified program baseline			— 11,455
1PLV	Special Operations Command Operational Support	925,262	925,149	— 113
	Maintain program affordability: Base support pricing adjustment			— 675
	Insufficient budget justification: One-time base support decreases not properly accounted for			— 7,715
	Improving funds management: Underexecution			— 10,646
	Improving funds management: Program decrease unaccounted for			— 7,899
	Maintain program affordability: Unjustified growth			— 1,678

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Identity Management			+ 28,500
1PLR	Special Operations Command Theater Forces	2,764,738	2,723,421	- 41,317
	Improving funds management: Remove one-time fiscal year 2019 increase			- 13,440
	Maintain program affordability: Unjustified CLS growth			- 1,096
	Insufficient budget justification: Repricing civilian personnel realignments			- 881
	Improving funds management: Overestimation of flying hours			- 20,900
	Transfer Preservation of the Force and Family-Behavioral Health: SOCOM-requested to DHP O&M In-House Care			- 5,000
4GT3	Civil Military Programs	165,707	245,063	+ 79,356
	Program increase: National Guard Youth Challenge			+ 50,000
	Program increase: STARBASE			+ 35,000
	Program increase: Innovative Readiness Training			+ 14,356
4GT0	Defense Contract Management Agency	1,438,068	1,423,068	- 15,000
	Improving funds management: Program decreases unaccounted for			- 20,000
	Program increase: Demonstration project for contractors employing persons with disabilities			+ 5,000
4GT8	Defense Human Resources Activity	892,438	952,438	+ 60,000
	Maintain program affordability: Unjustified growth			- 10,000
	Program increase: Special Victims' Counsel			+ 35,000
	Program increase: Beyond the Yellow Ribbon			+ 20,000
	Program increase: Defense Language Training Centers			+ 15,000
4GT9	Defense Information Systems Agency	2,012,885	1,992,885	- 20,000
	Maintain program affordability: Unjustified growth			- 20,000
4GU9	Defense Information Systems Agency-Cyber	601,223	636,360	+ 35,137
	Transfer from O&MDW line 999: Sharkseer			+ 35,137
4GTB	Defense Logistics Agency	415,699	432,999	+ 17,300
	Program increase: Procurement Technical Assistance Program			+ 17,300
4GTC	Defense Personnel Accounting Agency	144,881	153,881	+ 9,000
	Program increase: Missing in Action accounting program			+ 9,000
4GTD	Defense Security Cooperation Agency	696,884	667,133	- 29,751
	Maintain program affordability: Unjustified growth			- 30,000
	Transfer: From Title IX to Title II for George C. Marshall Center			+ 249
4GTE	Defense Counterintelligence and Security Agency	889,664	894,664	+ 5,000
	Program increase: Access to criminal records for local law enforcement			+ 5,000
4GTG	Defense Counterintelligence and Security Agency-Cyber	9,220	12,220	+ 3,000
	Program increase: Defensive cyber and counterintelligence operations			+ 3,000
4GTJ	Department of Defense Education Activity	2,932,226	2,917,226	- 15,000
	Maintain program affordability: Overestimation of civilian FTE targets			- 20,000
	Improving funds management: Remove one-time fiscal year 2019 increase			- 50,000
	Program increase: Impact Aid			+ 40,000
	Program increase: Impact Aid for children with disabilities			+ 10,000
	Program increase: Family advocacy program			+ 5,000
4GTM	Office of Economic Adjustment	59,513	134,513	+ 75,000
	Program increase: Defense Community Infrastructure Program			+ 75,000
4GTN	Office of the Secretary of Defense	1,604,738	1,607,738	+ 3,000
	Maintain program affordability: Unjustified growth			- 37,000
	Program increase: CDC water contamination study and assessment			+ 10,000
	Program increase: WWII Commemorative program			+ 5,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Interstate compacts for licensure and credentialing			+ 4,000
	Program increase: National Commission on Military Aviation Safety			+ 3,000
	Program increase: Cyber institutes			+ 5,000
	Program increase: Resilience planning			+ 3,000
	Program increase: Readiness and Environmental Protection Initiative			+ 10,000
011A	Missile Defense Agency	522,529	438,473	- 84,056
	Improving funds management: THAAD prior year under-execution			- 12,670
	Transfer: THAAD sustainment to O&M Army Undistributed			- 87,149
	Transfer: AEGIS sustainment to O&M Navy Undistributed			- 75,237
	Program increase: Electronic Equipment Unit modernization			+ 16,000
	Program increase: Cooling Equipment Unit refurbishment			+ 15,000
	Program increase: Cooling Equipment Unit refurbishment kits			+ 3,000
	Program increase: Spares			+ 57,000
9999	Classified Programs	15,736,098	15,640,381	- 95,717
	Classified adjustment			- 60,580
	Transfer to DISA: Sharkseer			- 35,137
UNDIST	Maintain program affordability: Unjustified growth		- 80,000	- 80,000
UNDIST	Maintain program affordability: Budget justification inconsistencies		- 25,000	- 25,000
UNDIST	Program increase: Sexual trauma treatment pilot program ...		2,000	+ 2,000
UNDIST	Program increase: Vietnam Dioxin Remediation		15,000	+ 15,000
UNDIST	Program increase: Public Law 115-68 implementation at Combatant Commands		1,600	+ 1,600

Special Victims' Counsel Program.—The Committee remains concerned with the level of sexual assault in the military and supports the Department's continuing efforts to strengthen its sexual assault prevention and response program. The needs of victims of sexual assault for legal advice and guidance are particularly acute. To ensure that the Department continues to make progress protecting a victim's confidentiality and ending alienation during the investigation and prosecution of their case, the Committee recommends \$35,000,000 for implementation of the Special Victims' Counsel Program across the services.

Defense Language and National Security Education Office.—The Committee recognizes that, in partnership with universities across the country, the Defense Language and National Security Education Office provides critical college accredited training for service members and government officials in a number of languages and strategic cultures. The Committee encourages the Department of Defense to continue placing a high priority on the Language Training Centers and the Language Flagship strategic language training program and designates the funding included in the fiscal year 2020 President's budget request for the Language Training Centers as a congressional special interest item.

Defense POW/MIA Accounting Agency.—The Committee remains committed to the significant remains recovery goals outlined in the National Defense Authorization Act for Fiscal Year 2010 (Public

Law 111–84) and commends the Defense POW/MIA Accounting Agency [DPAA] for undertaking trial contracts with Carnegie R1 Research Universities in furtherance of that goal. These partnerships have significantly increased recovery rates while also generating savings of approximately seventy percent compared to prior internal efforts. In light of this progress and the continued need for additional recovery efforts, the Committee recommends an additional \$15,000,000 for DPAA to expand this pilot effort into a systematic research and recovery process through partnerships with Carnegie R1 research universities.

Military Childcare.—The Committee recognizes the importance of military childcare to readiness and retention goals, and understands the strain that lack of access can put on servicemembers and their families. The Committee is concerned that the Department of Defense lacks a comprehensive plan to address the shortage of available childcare in many locations. Therefore, the Committee directs the Secretary of Defense, in conjunction with the service secretaries, to submit to the congressional defense committees a report on the current status of Department of Defense childcare, efforts underway to increase childcare capacity, and recommendations on reducing availability shortfalls. The report shall detail capacity, enrollment, staffing, and waitlist data for all childcare facilities to include child development centers, before and after school programs, and family childcare programs. The report shall also include: overall and current facility capacity, current facility enrollment, the process for determining capacity, current waitlist and estimated time to placement, average salary for direct care staff and staffing shortfalls, and processes for determining funding allocations. The report shall also consider the degree to which childcare is available in the community through the fee-assistance program, the number of families receiving fee assistance, the fee assistance wait list, and the amount subsidized per child. Finally, the report shall include information on childcare facilities where normal operations were interrupted by the deterioration of facility infrastructure or conditions that do not meet the relevant standards set by the Department or outside expert organizations. Based on this data, the report shall conclude with a prioritized list of the top 50 overall child development center construction requirements for new, refurbishment, or expansion, which shall be ranked in order of need. The report shall detail each service's process for prioritization of child development program construction requirements in relation to the overall service construction requirement. This report shall be submitted not later than 180 days after the enactment of this act.

Sexual Trauma Treatment Pilot Program.—The Committee recommends \$2,000,000 to implement section 702 of the National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232), A Pilot Program on Treatment of Members of the Armed Forces for Post-Traumatic Stress Disorder Related to Military Sexual Trauma. The Committee encourages the Secretary of Defense to take the following actions associated with this proposed increase: (1) that this funding be used in partnership with public, private, and/or non-profit healthcare organizations, universities and/or institutions which meet the criteria set forth in section 702, (2) to enable

testing of new models of care that would be evidence-based and measurable, and (3) to use a value-based purchasing structure for this pilot program, in addition to a defined grant amount to cover the necessary associated costs.

Security Assistance Reporting Requirements.—The Secretary of Defense is directed to submit reports, on a quarterly basis, to the congressional defense committees not later than 30 days after the last day of each quarter of the fiscal year that detail commitment, obligation, and expenditure data by sub-activity group for Operation and Maintenance, Defense-Wide, Defense Security Cooperation Agency.

OPERATION AND MAINTENANCE, ARMY RESERVE

Appropriations, 2019	\$2,781,402,000
Budget estimate, 2020	1,080,103,000
Committee recommendation	2,990,610,000

The Committee recommends an appropriation of \$2,990,610,000. This is \$1,910,507,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, ARMY RESERVE			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	LAND FORCES			
10	MODULAR SUPPORT BRIGADES		11,927	+ 11,927
20	ECHELONS ABOVE BRIGADES		533,015	+ 533,015
30	THEATER LEVEL ASSETS		119,517	+ 119,517
40	LAND FORCES OPERATIONS SUPPORT		543,468	+ 543,468
50	AVIATION ASSETS		86,670	+ 86,670
	LAND FORCES READINESS			
60	FORCES READINESS OPERATIONS SUPPORT	390,061	390,061	.....
70	LAND FORCES SYSTEM READINESS	101,890	101,890	.....
80	DEPOT MAINTENANCE		48,503	+ 48,503
	LAND FORCES READINESS SUPPORT			
90	BASE OPERATIONS SUPPORT		592,407	+ 592,407
100	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	444,376	444,376	.....
110	MANAGEMENT AND OPERATIONS HEADQUARTERS	22,095	22,095	.....
120	CYBERSPACE ACTIVITIES—CYBERSPACE OPERATIONS	3,288	3,288	.....
130	CYBERSPACE ACTIVITIES—CYBERSECURITY	7,655	7,655	.....
	TOTAL, BUDGET ACTIVITY 1	969,365	2,904,872	+ 1,935,507
	ADMINISTRATION AND SERVICEWIDE ACTIVITIES			
120	SERVICEWIDE TRANSPORTATION	14,533	14,533	.....
130	ADMINISTRATION	17,231	17,231	.....
140	SERVICEWIDE COMMUNICATIONS	14,304	14,304	.....
150	PERSONNEL/FINANCIAL ADMINISTRATION	6,129	6,129	.....
160	RECRUITING AND ADVERTISING	58,541	58,541	.....
	TOTAL, BUDGET ACTIVITY 4	110,738	110,738	.....
	OVERESTIMATION OF CIVILIAN FTE TARGETS		- 25,000	- 25,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	TOTAL, OPERATION AND MAINTENANCE, ARMY RESERVE	1,080,103	2,990,610	+ 1,910,507

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
112	Maneuver Units		11,927	+ 11,927
	Transfer: From Title IX to Title II for base requirements			+ 11,927
113	Echelons Above Brigade		533,015	+ 533,015
	Transfer: From Title IX to Title II for base requirements			+ 533,015
114	Theater Level Assets		119,517	+ 119,517
	Transfer: From Title IX to Title II for base requirements			+ 119,517
115	Land Forces Operations Support		543,468	+ 543,468
	Transfer: From Title IX to Title II for base requirements			+ 550,468
	Maintain program affordability: Unjustified growth			- 7,000
116	Aviation Assets		86,670	+ 86,670
	Transfer: From Title IX to Title II for base requirements			+ 86,670
123	Land Forces Depot Maintenance		48,503	+ 48,503
	Transfer: From Title IX to Title II for base requirements			+ 48,503
131	Base Operations Support		592,407	+ 592,407
	Transfer: From Title IX to Title II for base requirements			+ 598,907
	Improving funds management: Program decrease unaccounted for			- 6,500
UNDIST	Maintain program affordability: Overestimation of civilian FTE targets		- 25,000	- 25,000

OPERATION AND MAINTENANCE, NAVY RESERVE

Appropriations, 2019	\$1,018,006,000
Budget estimate, 2020	261,284,000
Committee recommendation	1,100,116,000

The Committee recommends an appropriation of \$1,100,116,000. This is \$838,832,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, NAVY RESERVE			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	RESERVE AIR OPERATIONS			
10	MISSION AND OTHER FLIGHT OPERATIONS		629,220	+ 629,220
20	INTERMEDIATE MAINTENANCE	8,767	8,767	
30	AIRCRAFT DEPOT MAINTENANCE		108,236	+ 108,236
40	AIRCRAFT DEPOT OPERATIONS SUPPORT	463	463	
50	AVIATION LOGISTICS	26,014	26,014	
	RESERVE SHIP OPERATIONS			
60	SHIP OPERATIONAL SUPPORT AND TRAINING	583	583	

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESERVE COMBAT OPERATIONS SUPPORT			
70	COMBAT COMMUNICATIONS	17,883	17,883	.....
80	COMBAT SUPPORT FORCES	128,079	128,079	.....
90	CYBERSPACE ACTIVITIES	356	356	.....
	RESERVE WEAPONS SUPPORT			
100	ENTERPRISE INFORMATION TECHNOLOGY	26,133	26,133	.....
	BASE OPERATING SUPPORT			
110	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	35,397	35,397	.....
120	BASE OPERATING SUPPORT		101,376	+ 101,376
	TOTAL, BUDGET ACTIVITY 1	243,675	1,082,507	+ 838,832
	ADMINISTRATION AND SERVICEWIDE ACTIVITIES			
130	ADMINISTRATION	1,888	1,888	.....
140	MILITARY MANPOWER & PERSONNEL	12,778	12,778	.....
160	ACQUISITION AND PROGRAM MANAGEMENT	2,943	2,943	.....
	TOTAL, BUDGET ACTIVITY 4	17,609	17,609	.....
	TOTAL, OPERATION AND MAINTENANCE, NAVY RESERVE	261,284	1,100,116	+ 838,832

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Mission and Other Flight Operations .....	.....	629,220	+ 629,220
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 654,220
	Maintain program affordability: Projected underexecution .....	.....	.....	- 25,000
1A5A	Aircraft Depot Maintenance .....	.....	108,236	+ 108,236
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 108,236
BSSR	Base Operating Support .....	.....	101,376	101,376
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 101,376

OPERATION AND MAINTENANCE, MARINE CORPS RESERVE

Appropriations, 2019	\$271,570,000
Budget estimate, 2020	61,090,000
Committee recommendation	292,076,000

The Committee recommends an appropriation of \$292,076,000. This is \$230,986,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, MARINE CORPS RESERVE			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	EXPEDITIONARY FORCES			
10	OPERATING FORCES		106,484	+ 106,484
20	DEPOT MAINTENANCE		18,429	+ 18,429
30	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	47,516	47,516	
40	BASE OPERATING SUPPORT		106,073	+ 106,073
	TOTAL, BUDGET ACTIVITY 1	47,516	278,502	+ 230,986
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	ADMINISTRATION AND SERVICEWIDE ACTIVITIES			
60	ADMINISTRATION	13,574	13,574	
	TOTAL, BUDGET ACTIVITY 4	13,574	13,574	
	TOTAL, OPERATION & MAINTENANCE, MARINE CORPS RESERVE	61,090	292,076	+ 230,986

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Operating Forces		106,484	+ 106,484
	Transfer: From Title IX to Title II for base requirements			+ 106,484
1A3A	Depot Maintenance		18,429	+ 18,429
	Transfer: From Title IX to Title II for base requirements			+ 18,429
BSS1	Base Operating Support		106,073	+ 106,073
	Transfer: From Title IX to Title II for base requirements			+ 106,073

OPERATION AND MAINTENANCE, AIR FORCE RESERVE

Appropriations, 2019	\$3,191,734,000
Budget estimate, 2020	2,231,445,000
Committee recommendation	3,222,818,000

The Committee recommends an appropriation of \$3,222,818,000. This is \$991,373,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, AIR FORCE RESERVE			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	AIR OPERATIONS			
10	PRIMARY COMBAT FORCES	1,781,413	1,736,413	- 45,000
20	MISSION SUPPORT OPERATIONS	209,650	209,650	
30	DEPOT MAINTENANCE		494,235	+ 494,235

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
40	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	128,746	128,746	.....
70	CYBERSPACE ACTIVITIES	1,673	1,673	.....
50	CONTRACTOR LOGISTICS SUPPORT AND SYSTEM SUPPORT .....	.....	256,512	+ 256,512
60	BASE OPERATING SUPPORT .....	.....	380,626	+ 380,626
	TOTAL, BUDGET ACTIVITY 1	2,121,482	3,207,855	+ 1,086,373
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	ADMINISTRATION AND SERVICEWIDE ACTIVITIES			
70	ADMINISTRATION	69,436	69,436	.....
80	RECRUITING AND ADVERTISING	22,124	22,124	.....
90	MILITARY MANPOWER AND PERSONNEL MANAGEMENT	10,946	10,946	.....
100	OTHER PERSONNEL SUPPORT	7,009	7,009	.....
110	AUDIOVISUAL	448	448	.....
	TOTAL, BUDGET ACTIVITY 4	109,963	109,963	.....
	OVERESTIMATION OF CIVILIAN FTE TARGETS .....	.....	- 60,000	- 60,000
	PROGRAM REALIGNMENT UNACCOUNTED FOR .....	.....	- 35,000	- 35,000
	TOTAL, OPERATION AND MAINTENANCE, AIR FORCE RE-SERVE	2,231,445	3,222,818	+ 991,373

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
011A	Primary Combat Forces	1,781,413	1,736,413	- 45,000
	Maintain program affordability: Projected underexecution .....	.....	.....	- 45,000
011M	Depot Purchase Equipment Maintenance .....	.....	494,235	+ 494,235
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 494,235
011W	Contractor Logistics Support and System Support .....	.....	256,512	+ 256,512
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 256,512
011Z	Base Support .....	.....	380,626	+ 380,626
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	+ 414,626
	Improving funds management: Removal of one-time fiscal year 2019 increase .....	.....	.....	- 34,000
UNDIST	Maintain program affordability: Overestimation of civilian FTE targets .....	.....	- 60,000	- 60,000
UNDIST	Improving funds management: Program realignments unaccounted for .....	.....	- 35,000	- 35,000

OPERATION AND MAINTENANCE, ARMY NATIONAL GUARD

Appropriations, 2019	\$7,118,831,000
Budget estimate, 2020	3,335,755,000
Committee recommendation	7,588,903,000

The Committee recommends an appropriation of \$7,588,903,000. This is \$4,253,148,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, ARMY NATIONAL GUARD			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	LAND FORCES			
10	MANEUVER UNITS		775,671	+ 775,671
20	MODULAR SUPPORT BRIGADES		195,334	+ 195,334
30	ECHELONS ABOVE BRIGADE		771,048	+ 771,048
40	THEATER LEVEL ASSETS		94,726	+ 94,726
50	LAND FORCES OPERATIONS SUPPORT		33,696	+ 33,696
60	AVIATION ASSETS		981,819	+ 981,819
	LAND FORCES READINESS			
70	FORCE READINESS OPERATIONS SUPPORT	743,206	745,106	+ 1,900
80	LAND FORCES SYSTEMS READINESS	50,963	50,963	
90	LAND FORCES DEPOT MAINTENANCE		258,278	+ 258,278
	LAND FORCES READINESS SUPPORT			
100	BASE OPERATIONS SUPPORT		1,145,576	+ 1,145,576
110	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	1,113,475	1,113,475	
120	MANAGEMENT AND OPERATIONAL HEADQUARTERS	1,001,042	986,042	- 15,000
130	CYBERSPACE ACTIVITIES—CYBERSPACE OPERATIONS	8,448	8,448	
140	CYBERSPACE ACTIVITIES—CYBERSECURITY	7,768	7,768	
	TOTAL, BUDGET ACTIVITY 1	2,924,902	7,167,950	+ 4,243,048
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	ADMINISTRATION AND SERVICEWIDE ACTIVITIES			
130	SERVICEWIDE TRANSPORTATION	9,890	9,890	
140	ADMINISTRATION	71,070	71,070	
150	SERVICEWIDE COMMUNICATIONS	68,213	62,213	- 6,000
160	MANPOWER MANAGEMENT	8,628	8,628	
170	RECRUITING AND ADVERTISING	250,376	250,376	
180	REAL ESTATE MANAGEMENT	2,676	2,676	
	TOTAL, BUDGET ACTIVITY 4	410,853	404,853	- 6,000
	OVERESTIMATION OF CIVILIAN FTE TARGETS		- 20,000	- 20,000
	OPERATION GUARDIAN SUPPORT		36,100	+ 36,100
	TOTAL, OPERATION & MAINTENANCE, ARMY NATIONAL GUARD	3,335,755	7,588,903	+ 4,253,148

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
111	Maneuver Units		775,671	+ 775,671
	Transfer: From Title IX to Title II for base requirements			+ 805,671
	Improving funds management: Program decrease unaccounted for			- 30,000
112	Modular Support Brigades		195,334	+ 195,334
	Transfer: From Title IX to Title II for base requirements			+ 195,334
113	Echelons Above Brigade		771,048	+ 771,048
	Transfer: From Title IX to Title II for base requirements			+ 771,048
114	Theater Level Assets		94,726	+ 94,726
	Transfer: From Title IX to Title II for base requirements			+ 94,726
115	Land Forces Operations Support		33,696	+ 33,696
	Transfer: From Title IX to Title II for base requirements			+ 33,696
116	Aviation Assets		981,819	+ 981,819

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Transfer: From Title IX to Title II for base requirements			+ 981,819
121	Force Readiness Operations Support	743,206	745,106	+ 1,900
	Program increase: Advanced trauma training program			+ 900
	Program increase: Wildfire training			+ 1,000
123	Land Forces Depot Maintenance		258,278	+ 258,278
	Transfer: From Title IX to Title II for base requirements			+ 258,278
131	Base Operations Support		1,145,576	+ 1,145,576
	Transfer: From Title IX to Title II for base requirements			+ 1,153,076
	Maintain program affordability: Unjustified growth			- 20,000
	Program increase: PFAS remediation			+ 9,500
	Program increase: Preventative mental health			+ 3,000
133	Management and Operational Headquarters	1,001,042	986,042	- 15,000
	Improving funds management: Program decrease unaccounted for			- 15,000
432	Servicewide Communications	68,213	62,213	- 6,000
	Improving funds management: Program decrease unaccounted for			- 6,000
UNDIST	Maintain program affordability: Overestimation of civilian FTE targets		- 20,000	- 20,000
UNDIST	Program increase: Operation Guardian Support		36,100	+ 36,100

National Guard Preventative Mental Health Program.—The Committee recognizes the importance of building a holistic mental health fitness model to reduce suicide, remove stigma for help-seeking behavior, and fortify individuals before they experience high-stress events. The National Guard Bureau’s Warrior Readiness and Fitness program was created to coordinate and enhance mental health efforts across the National Guard at the Federal and State levels in order to improve readiness and build resiliency in servicemembers. The Committee recommends additional funding for National Guard preventative mental health programs and directs the Chief, National Guard Bureau to submit a report not later than 180 days after the enactment of this act with a plan to establish a permanent office for mental health that shall report to the Chief directly.

Large-Scale National Guard Exercises.—Full spectrum combat readiness for the National Guard is enhanced by participating in combined live fire exercises that emphasize close air support, joint fire support, air mobility, and ground maneuver components. Exercises such as Northern Strike, hosted annually by the Michigan National Guard, provide an opportunity to maximize the full-spectrum combat readiness of National Guard units through realistic, cost-effective joint fires training in an adaptable environment, with an emphasis on joint and coalition force cooperation. The Committee encourages the Chief, National Guard Bureau to continue to prioritize large-scale exercises that include international partners and align with the National Defense Strategy.

State Partnership Program.—The State Partnership Program [SPP] has been successfully building relationships for over 25 years by linking a State’s National Guard with the armed forces or equivalent of a partner country in a cooperative, mutually beneficial relationship. It includes 75 unique security partnerships involving 81 nations around the globe. The Committee recognizes the importance of SPP and encourages continued robust support of this important partnership program.

National Guard Chemical, Biological, Radiological, and Nuclear Response Forces.—Every state, especially those in close proximity to the National Capital Region, must be prepared for chemical, biological, radiological or nuclear [CBRN] threats. The Committee encourages the Secretary of Defense to continue to place a high priority on CBRN Response Forces to increase Department of Defense overall domestic disaster response readiness.

OPERATION AND MAINTENANCE, AIR NATIONAL GUARD

Appropriations, 2019	\$6,420,697,000
Budget estimate, 2020	3,612,156,000
Committee recommendation	6,732,792,000

The Committee recommends an appropriation of \$6,732,792,000. This is \$3,120,636,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	OPERATION AND MAINTENANCE, AIR NATIONAL GUARD			
	BUDGET ACTIVITY 1: OPERATING FORCES			
	AIR OPERATIONS			
10	AIRCRAFT OPERATIONS	2,497,967	2,482,967	- 15,000
20	MISSION SUPPORT OPERATIONS	600,377	612,477	+ 12,100
30	DEPOT MAINTENANCE		879,467	+ 879,467
40	FACILITIES SUSTAINMENT, RESTORATION & MODERNIZATION	400,734	401,902	+ 1,168
80	CYBERSPACE ACTIVITIES	25,507	25,507	.....
80	CYBERSPACE SUSTAINMENT		24,742	+ 24,742
50	CONTRACTOR LOGISTICS SUPPORT AND SYSTEM SUPPORT		1,299,089	+ 1,299,089
60	BASE OPERATING SUPPORT		945,270	+ 945,270
	TOTAL, BUDGET ACTIVITY 1	3,524,585	6,671,421	+ 3,146,836
	BUDGET ACTIVITY 4: ADMIN & SERVICEWIDE ACTIVITIES			
	SERVICEWIDE ACTIVITIES			
70	ADMINISTRATION	47,215	47,215	.....
80	RECRUITING AND ADVERTISING	40,356	40,356	.....
	TOTAL, BUDGET ACTIVITY 4	87,571	87,571	.....
	OVERESTIMATION OF CIVILIAN FTE TARGETS		- 30,000	- 30,000
	OPERATION GUARDIAN SUPPORT		3,800	+ 3,800
	TOTAL, OPERATION & MAINTENANCE, AIR NATIONAL GUARD	3,612,156	6,732,792	+ 3,120,636

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
011F	Aircraft Operations	2,497,967	2,482,967	- 15,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Maintain program affordability: Projected underexecution			- 15,000
011G	Mission Support Operations	600,377	612,477	+ 12,100
	Improving funds management: Program decrease unaccounted for			- 12,000
	Program increase: Joint Terminal Attack Controller training			+ 8,000
	Program increase: Tuition assistance			+ 10,800
	Program increase: Advanced trauma training program			+ 1,800
	Program increase: Wildfire training			+ 500
	Program increase: Preventative mental health			+ 3,000
011M	Depot Purchase Equipment Maintenance		879,467	+ 879,467
	Transfer: From Title IX to Title II for base requirements			+ 879,467
011R	Facilities Sustainment, Restoration & Modernization	400,734	401,902	+ 1,168
	Program increase: Range expansion			+ 1,168
011V	Cyberspace Sustainment		24,742	+ 24,742
	Transfer: From Title IX to Title II for base requirements			+ 24,742
011W	Contractor Logistics Support and System Support		1,299,089	+ 1,299,089
	Transfer: From Title IX to Title II for base requirements			+ 1,299,089
011Z	Base Support		945,270	+ 945,270
	Transfer: From Title IX to Title II for base requirements			+ 911,775
	Transfer: Air Force-requested transfer from O&M Air Force for environmental compliance			+ 4,495
	Program increase: PFAS remediation			+ 29,000
UNDIST	Maintain program affordability: Overestimation of civilian FTE targets		- 30,000	- 30,000
UNDIST	Program increase: Operation Guardian Support		3,800	+ 3,800

Air National Guard Tuition Assistance.—The Committee supports the establishment of an Air National Guard tuition assistance program similar to that of the Army National Guard and encourages the Chief, National Guard Bureau, to include the tuition assistance program for both the Army and Air Guard in its future budget requests.

Joint Force Headquarters Analysis Cells.—Intelligence Fusion Centers are information sharing hubs that provide threat-related information between Federal, State, local and tribal agencies. The Kansas Intelligence Fusion Center, established in 2009, is one such center whose mission focuses on counterterrorism, cybersecurity and biological threats through a decentralized approach where State direction allows private stakeholders the flexibility to determine which critical infrastructure areas merit the dedication of resources. The Committee recognizes that the National Guard Bureau is developing a Joint Force Headquarters Analysis Cell concept to expand State-level intelligence capabilities. As this work progresses, the Committee encourages the Chief, National Guard Bureau to consult with State-level entities such as the Kansas National Guard to integrate key aspects of concepts that have already proved successful at the State level.

Air National Guard C-17 Assault Strip.—Camp Shelby Auxiliary Field, owned by the Mississippi Air National Guard, includes an assault landing strip that was specifically designed and built to satisfy C-17 tactical training requirements. The assault landing training facility currently serves multiple C-17 units in the Midwest and Southeast region but it was originally constructed to meet the training demands of the Air National Guard's 172nd Airlift

Wing, which is responsible for funding its operational costs. The Committee encourages the Chief, National Guard Bureau to prioritize small investments necessary for annual operation and maintenance for assault landing strip facilities such as Camp Shelby Auxiliary Field to ensure future proficiency and long-term capability.

U.S. COURT OF APPEALS FOR THE ARMED FORCES

Appropriations, 2019	\$14,662,000
Budget estimate, 2020	14,771,000
Committee recommendation	14,771,000

The Committee recommends an appropriation of \$14,771,000. This is equal to the budget estimate.

ENVIRONMENTAL RESTORATION, ARMY

Appropriations, 2019	\$235,809,000
Budget estimate, 2020	207,518,000
Committee recommendation	209,218,000

The Committee recommends an appropriation of \$209,218,000. This is \$1,700,000 above the budget estimate to address costs associated with remediating contamination caused by perfluorinated chemicals.

ENVIRONMENTAL RESTORATION, NAVY

Appropriations, 2019	\$365,883,000
Budget estimate, 2020	335,932,000
Committee recommendation	335,932,000

The Committee recommends an appropriation of \$335,932,000. This is equal to the budget estimate.

ENVIRONMENTAL RESTORATION, AIR FORCE

Appropriations, 2019	\$365,808,000
Budget estimate, 2020	302,744,000
Committee recommendation	402,744,000

The Committee recommends an appropriation of \$402,744,000. This is \$100,000,000 above the budget estimate to address costs associated with remediating contamination caused by perfluorinated chemicals.

ENVIRONMENTAL RESTORATION, DEFENSE-WIDE

Appropriations, 2019	\$19,002,000
Budget estimate, 2020	9,105,000
Committee recommendation	9,105,000

The Committee recommends an appropriation of \$9,105,000. This is equal to the budget estimate.

ENVIRONMENTAL RESTORATION, FORMERLY USED DEFENSE SITES

Appropriations, 2019	\$248,673,000
Budget estimate, 2020	216,499,000
Committee recommendation	216,499,000

The Committee recommends an appropriation of \$216,499,000. This is equal to the budget estimate.

OVERSEAS HUMANITARIAN, DISASTER, AND CIVIC AID

Appropriations, 2019	\$117,663,000
Budget estimate, 2020	108,600,000
Committee recommendation	108,600,000

The Committee recommends an appropriation of \$108,600,000. This is equal to the budget estimate.

COOPERATIVE THREAT REDUCTION ACCOUNT

Appropriations, 2019	\$350,240,000
Budget estimate, 2020	338,700,000
Committee recommendation	338,700,000

The Committee recommends an appropriation of \$338,700,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

(In thousands of dollars)

Item	2020 budget estimate	Committee recommendation	Change from budget estimate
COOPERATIVE THREAT REDUCTION			
Strategic Offensive Arms Elimination	492	492	.....
Chemical Weapons Destruction	12,856	12,856	.....
Global Nuclear Security	33,919	33,919	.....
Biological Threat Reduction Program	183,642	183,642	.....
WMD Proliferation Prevention	79,869	79,869	.....
Other Assessments/Admin Costs	27,922	27,922	.....
Total, Cooperative Threat Reduction	338,700	338,700	.....

DEPARTMENT OF DEFENSE ACQUISITION WORKFORCE DEVELOPMENT FUND

Appropriations, 2019	\$450,000,000
Budget estimate, 2020	400,000,000
Committee recommendation	400,000,000

The Committee recommends an appropriation of \$400,000,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

(In thousands of dollars)

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Training and Development	239,200	239,200	.....
2	Retention and Recognition	20,000	20,000	.....
3	Recruiting and Hiring	140,800	140,800	.....
UNDIST	Planned carryover—Transfer to Department of Defense Acquisition Workforce Initiatives			—52,584

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
UNDIST	Execution delays—Transfer to Department of Defense Acquisition Workforce Initiatives			– 43,416
UNDIST	Department of Defense Acquisition Workforce Initiative: SMART Corps for civilian acquisition specialists			+ 26,600
UNDIST	Department of Defense Acquisition Workforce Initiative: DAU transformation			+ 48,000
UNDIST	Department of Defense Acquisition Workforce Initiative: Critical acquisition workforce skills hiring initiative			+ 21,400
	Total, Department of Defense Acquisition Workforce Development Fund	400,000	400,000	.....

Transition of the Department of Defense Acquisition Workforce Development Fund to a Department of Defense Acquisition Workforce Development Account.—The Committee recommends an appropriation of \$400,000,000 for the Department of Defense Acquisition Workforce Development Fund [DAWDF], consistent with the fiscal year 2020 President’s budget request. The Committee supports the proposal included in S. 1790, the National Defense Authorization Act for Fiscal Year 2020, as passed by the Senate, to transition the DAWDF to a traditional appropriations account, reflecting congressional action of the previous three fiscal years. The Committee notes that the establishment of a traditional appropriations account merely address funding mechanisms for DAWDF and does not impact other title 10 authorities related to the Department of Defense acquisition workforce.

Consistent with previous years, the Committee recommends appropriations for DAWDF and retains general provisions prohibiting the application of alternative funding mechanisms such as remittances and the transfer of expiring funds. The Committee reiterates its support for the Department of Defense acquisition workforce and expects the Under Secretary of Defense (Comptroller) and Director, Cost Assessment and Program Evaluation, to continue including funding requests for the Department of Defense acquisition workforce through regular appropriations in future budget submissions.

Department of Defense Acquisition Workforce Initiatives.—The Committee notes that the Department of Defense Acquisition Workforce Development Fund was established in 2008 to provide for the recruitment, training and retention of Department of Defense acquisition workforce personnel. The Committee further notes that the purpose, authorities and funding mechanisms for DAWDF have repeatedly been adjusted in recent years and that DAWDF now accounts for the funding of 5 percent of new hires into the acquisition workforce and less than 2 percent of overall Department of Defense acquisition workforce funding. The Committee understands that DAWDF funds are now primarily applied to increasing the readiness of the acquisition workforce in support of warfighter demands in accordance with the 2018 National Defense Strategy.

The Committee notes that the Under Secretary of Defense (Acquisition and Sustainment) has identified several critical acquisition workforce initiatives that are not included in the fiscal year 2020 President’s budget request. The Committee proposes to accel-

erate the implementation of these initiatives and recommends funding adjustments in fiscal year 2020 to DAWDF for the Department of Defense SMART CORPS, the transformation of the course curriculum at the Defense Acquisition University, and a critical skills hiring initiative, consistent with proposals provided to the congressional defense committees by the Under Secretary of Defense (Acquisition and Sustainment).

The Committee directs that no funds for these purposes may be obligated or expended until 30 days after the Under Secretary of Defense (Acquisition and Sustainment) provides updated implementation and execution plans to the congressional defense committees for these initiatives. Further, the Committee designates these initiatives as special interest items for the purposes of reprogramming guidance.

Department of Defense Acquisition Workforce Development Fund Reprogramming Guidance.—The Secretary of Defense is directed to follow reprogramming guidance for the Department of Defense Acquisition Workforce Development Fund consistent with reprogramming guidance for acquisition accounts detailed elsewhere in this report. The dollar threshold for reprogramming funds shall be \$10,000,000.

Department of Defense Acquisition Workforce Reporting Requirements.—The Committee directs the Under Secretary for Defense (Acquisition and Sustainment) to provide the Department of Defense Acquisition Workforce Development Fund annual report to the congressional defense committees not later than 30 days after submission of the fiscal year 2021 President's budget request. Further, the Under Secretary of Defense (Acquisition and Sustainment) is directed to provide the congressional defense committees, with the fiscal year 2021 President's budget request, additional details regarding total funding for the acquisition workforce by funding category and appropriations account, as previously requested.

**TITLE III
PROCUREMENT**

Funds appropriated under this title provide the resources required to purchase military equipment and hardware, including aircraft, ships, missiles, combat vehicles, ammunition, weapons, electronic sensors and communications equipment, and other procurement items.

The President's fiscal year 2020 budget requests a total of \$118,923,130,000 for procurement appropriations.

SUMMARY OF COMMITTEE ACTION

The Committee recommends procurement appropriations totaling \$132,837,153,000 for fiscal year 2020. This is \$13,914,023,000 above the budget estimate.

Committee recommended procurement appropriations for fiscal year 2020 are summarized below:

SUMMARY OF PROCUREMENT APPROPRIATIONS

[In thousands of dollars]

Account	2020 budget estimate	Committee recommendation	Change from budget estimate
Procurement:			
Aircraft Procurement, Army	3,696,429	3,766,529	+ 70,100
Missile Procurement, Army		3,030,944	+ 3,030,944
Procurement of Weapons and Tracked Combat Vehicles, Army	4,715,566	4,463,582	- 251,984
Procurement of Ammunition, Army		2,572,771	+ 2,572,771
Other Procurement, Army	7,443,101	7,220,947	- 222,154
Aircraft Procurement, Navy	18,522,204	18,573,560	+ 51,356
Weapons Procurement, Navy		3,963,067	+ 3,963,067
Procurement of Ammunition, Navy and Marine Corps		872,251	+ 872,251
Shipbuilding and Conversion, Navy	23,783,710	24,366,431	+ 582,721
Other Procurement, Navy	9,652,956	10,568,201	+ 915,245
Procurement, Marine Corps	3,090,449	3,045,749	- 44,700
Aircraft Procurement, Air Force	16,784,279	17,308,918	+ 524,639
Missile Procurement, Air Force	2,889,187	2,589,166	- 300,021
Space Procurement, Air Force	2,414,383	2,460,605	+ 46,222
Procurement of Ammunition, Air Force		1,625,661	+ 1,625,661
Other Procurement, Air Force	20,687,857	21,083,464	+ 395,607
Procurement, Defense-Wide	5,109,416	5,285,914	+ 176,498
Defense Production Act Purchases	34,393	39,393	+ 5,000
Joint Urgent Operational Needs Fund	99,200		- 99,200
Total	118,923,130	132,837,153	+ 13,914,023

REPROGRAMMING GUIDANCE FOR ACQUISITION ACCOUNTS

The Secretary of Defense is directed to continue to follow the reprogramming guidance as specified in the report accompanying the House version of the Department of Defense appropriations bill for fiscal year 2008 (House Report 110-279). Specifically, the dollar

threshold for reprogramming funds will remain at \$20,000,000 for procurement and \$10,000,000 for research, development, test and evaluation.

Also, the Under Secretary of Defense (Comptroller) is directed to continue to provide the congressional defense committees quarterly, spreadsheet-based DD Form 1416 reports for service and defense-wide accounts in titles III and IV of this act. Reports for titles III and IV shall comply with guidance specified in the explanatory statement accompanying the Department of Defense Appropriations Act for Fiscal Year 2006. The Department shall continue to follow the limitation that prior approval reprogrammings are set at either the specified dollar threshold or 20 percent of the procurement or research, development, test and evaluation line, whichever is less. These thresholds are cumulative from the base for reprogramming value as modified by any adjustments. Therefore, if the combined value of transfers into or out of a procurement (P-1), or a research, development, test and evaluation (R-1) line exceeds the identified threshold, the Secretary of Defense must submit a prior approval reprogramming to the congressional defense committees. In addition, guidelines on the application of prior approval reprogramming procedures for congressional special interest items are established elsewhere in this report.

FUNDING INCREASES

The funding increases outlined in the tables for each appropriation account shall be provided only for the specific purposes indicated in the tables.

PROCUREMENT SPECIAL INTEREST ITEMS

Items for which additional funds have been recommended or items for which funding is specifically reduced as shown in the tables detailing Committee recommended adjustments or in paragraphs using the phrase “only for” or “only to” are congressional special interest items for the purpose of the Base for Reprogramming (DD Form 1414). Each of these items must be carried on the DD Form 1414 at the stated amount, as specifically addressed in elsewhere in this report.

PROCUREMENT OVERVIEW

Army Organic Industrial Base.—The Committee directs the Secretary of the Army to provide 45-day written notification to the congressional defense committees prior to the Secretary approving civilian reductions in force that will result in an employment loss of 50 or more full-time employees at any Army organic industrial base facility. The notification shall include the impact that the proposed reduction in force will have on the ability to maintain the organic industrial base critical manufacturing capabilities as delineated in the Army Organic Industrial Base Strategy Report, a detailed accounting of the costs of implementing the reduction in force, and an assessment of the cost of, and time necessary, to restore any lost capability to meet future organic wartime manufacturing needs.

Arsenal Sustainment Initiative.—The Committee continues to support the Department of the Army's efforts to ensure that the critical manufacturing capabilities of the nation's organic industrial base are maintained, and commends the Army for issuing a definitive make-or-buy directive for the manufacturing arsenals. The new guidance ensures that the arsenals will be given fair consideration for every Army acquisition; provides for a 30-day review of all such decisions by the Army Acquisition Executive; requires all private sector companies to consider the arsenals as a potential supplier of component parts; and provides for an annual review of this overall process. The Committee encourages the Army to implement the new directive consistently to ensure the arsenals have the workload necessary to maintain the proficiency and capacity to meet the manufacturing needs of the nation during war and peacetime. The Committee notes that it has not yet received detailed recommendations from the Secretary of Defense on how the Air Force, Navy, and Marine Corps can better use the arsenals for their manufacturing needs, or what opportunities may exist for the arsenals to assist the services and the Defense Logistics Agency to procure for our spare parts inventory, as required by Senate Report 114-63.

AIRCRAFT PROCUREMENT, ARMY

Appropriations, 2019	\$4,299,566,000
Budget estimate, 2020	3,696,429,000
Committee recommendation	3,766,529,000

The Committee recommends an appropriation of \$3,766,529,000. This is \$70,100,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	AIRCRAFT PROCUREMENT, ARMY						
	AIRCRAFT						
	FIXED WING						
2	UTILITY F7W CARGO AIRCRAFT	1	16,000				- 16,000
4	RQ-11 (RAVEN)		23,510		13,210		- 10,300
	ROTARY						
5	TACTICAL UNMANNED AIRCRAFT SYSTEM (TUAS)		12,100		45,600		- 12,100
7	HELICOPTER, LIGHT UTILITY (LUH)				806,849		+ 45,600
8	AH-64 APACHE BLOCK IIIA REMAN	48	806,849	48	806,849		
9	AH-64 APACHE BLOCK IIIA REMAN (AP-CY)		190,870		190,870		
12	UH-60 BLACKHAWK (MYP)	73	1,411,540	73	1,397,740		- 13,800
13	UH-60 BLACKHAWK (MYP) (AP-CY)		79,572		79,572		
14	UH-60 BLACKHAWK A AND L MODELS	25	169,290	25	169,290		
15	CH-47 HELICOPTER	8	140,290	8	140,290		
16	CH-47 HELICOPTER (AP-CY)		18,186		46,186		+ 28,000
	TOTAL, AIRCRAFT		2,868,207		2,889,607		+ 21,400
	MODIFICATION OF AIRCRAFT						
	UNIVERSAL GROUND CONTROL EQUIPMENT						
19	GRAY EAGLE MODS2		2,090		2,090		
20	MULTI SENSOR ABN RECON (IMP)		14,699		28,699		+ 14,000
21	AH-64 MODS		35,189		35,189		
22	CH-47 CARGO HELICOPTER MODS		58,172		58,172		
23	GRCS SEMA MODS (IMP)		11,785		11,785		
24	ARL SEMA MODS (IMP)		5,677		5,677		
25	EMARSS SEMA MODS (MIP)		6,566		6,566		
26	UTILITY/CARGO AIRPLANE MODS		3,859		20,959		+ 17,100
27	NETWORK AND MISSION PLAN		15,476		15,476		
28	UTILITY HELICOPTER MODS		6,744		24,344		+ 17,600
29	COMMS, NAV SURVEILLANCE		105,442		105,442		
30	GATM ROLLUP		164,315		164,315		
32	RQ-7 UAV MODS		30,966		30,966		
33			8,983		8,983		

34	UAS MODS	10,205	.....	.....	10,205	.....	.....	.....
	TOTAL, MODIFICATION OF AIRCRAFT	480,168	.....	.....	528,868	.....	.....	+ 48,700
	SUPPORT EQUIPMENT AND FACILITIES							
	GROUND SUPPORT AVIONICS							
35	AIRCRAFT SURVIVABILITY EQUIPMENT	52,297	.....	.....	52,297	.....	.....	.....
36	SURVIVABILITY CM	8,388	.....	.....	8,388	.....	.....	.....
37	CMWS	13,999	.....	.....	13,999	.....	.....	.....
38	COMMON INFRARED COUNTERMEASURES	168,784	.....	.....	168,784	.....	.....	.....
	OTHER SUPPORT							
39	AVIONICS SUPPORT EQUIPMENT	1,777	.....	.....	1,777	.....	.....	.....
40	COMMON GROUND EQUIPMENT	18,624	.....	.....	18,624	.....	.....	.....
41	AIRCREW INTEGRATED SYSTEMS	48,255	.....	.....	48,255	.....	.....	.....
42	AIR TRAFFIC CONTROL	32,738	.....	.....	32,738	.....	.....	.....
44	LAUNCHER, 2.75 ROCKET	2,201	.....	.....	2,201	.....	.....	.....
45	LAUNCHER GUIDED MISSILE, LONGBOW HELLFIRE XM2	991	.....	9	991	.....	.....	.....
	TOTAL, SUPPORT EQUIPMENT AND FACILITIES	348,054	.....	.....	348,054	.....	.....	.....
	TOTAL, AIRCRAFT PROCUREMENT, ARMY	3,696,429	.....	.....	3,766,529	.....	.....	+ 70,100

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Utility FAW Aircraft	16,000	.....	- 16,000
	Insufficient budget justification: Lack of supporting justification .....	.....	.....	- 16,000
4	RQ-11 (RAVEN)	23,510	13,210	- 10,300
	Improving funds management: Prior year carryover .....	.....	.....	- 10,300
5	Tactical Unmanned Aircraft System [TUAS]	12,100	.....	- 12,100
	Insufficient budget justification: Poor justification materials .....	.....	.....	- 12,100
7	Helicopter, Light Utility [LUH] .....	.....	45,600	+ 45,600
	Program increase: Three aircraft .....	.....	.....	+ 27,000
	Program increase: Expandable rotorcraft diagnostics .....	.....	.....	+ 18,600
12	UH-60 Blackhawk M Model (MYP)	1,411,540	1,397,740	- 13,800
	Restoring acquisition accountability: Unit cost growth .....	.....	.....	- 13,800
16	CH-47 Helicopter—AP	18,186	46,186	+ 28,000
	Program increase .....	.....	.....	+ 28,000
20	Gray Eagle Mods2	14,699	28,699	+ 14,000
	Program increase .....	.....	.....	+ 14,000
26	EMARSS SEMA Mods (MIP)	3,859	20,959	+ 17,100
	Program increase: Performance enhancements .....	.....	.....	+ 17,100
28	Utility Helicopter Mods	6,744	24,344	+ 17,600
	Program increase: UH-72 life cycle sustainment and product improvements .....	.....	.....	+ 17,600

CH-47 Cargo Helicopter.—The Committee encourages the Army to accelerate retrofit of MH/CH-47 aircraft with vibration control systems to reduce aircrew fatigue, improve performance and increase operational time between maintenance of certain aircraft components.

CH-47F Block II program.—The Committee recommendation restores Advanced Procurement funds to support the Army's procurement of the CH-47F Block II program as certified in July 2017. Prior to submitting the fiscal year 2021 President's budget request, the Committee strongly encourages the Secretary of the Army to assess the increased cost, expected production issues as well as industrial base risks of delaying the successful acquisition program.

MISSILE PROCUREMENT, ARMY

Appropriations, 2019	\$3,145,256,000
Budget estimate, 2020	
Committee recommendation	3,030,944,000

The Committee recommends an appropriation of \$3,030,944,000. This is \$3,030,944,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	OTHER MISSILES						
	MISSILE PROCUREMENT, ARMY						
1	SURFACE-TO-AIR MISSILE SYSTEM				107,157		+ 107,157
2	SYSTEM INTEGRATION AND TEST PROCUREMENT			17	79,800	+17	+ 79,800
3	M-SHORAD—PROCUREMENT			138	664,499	+ 138	+ 664,499
4	MSE MISSILE				9,337		+ 9,337
6	INDIRECT FIRE PROTECTION CAPABILITY				193,284		+ 193,284
6	HELLFIRE SYS SUMMARY			1,870		+ 1,870	
	AIR-TO-SURFACE MISSILE SYSTEM						
7	JOINT AIR-TO-GROUND MISLS [JAGM]			609	220,766	+ 609	+ 220,766
	ANTI-TANK/ASSAULT MISSILE SYSTEM						
8	JAVELIN (AAWS-M) SYSTEM SUMMARY			672	138,405	+ 672	+ 138,405
9	TOW 2 SYSTEM SUMMARY			1,460	107,958	+ 1,460	+ 107,958
10	TOW 2 SYSTEM SUMMARY [AP-CY]				10,500		+ 10,500
11	GUIDED MLRS ROCKET [GMLRS]			6,489	744,810	+ 6,489	+ 744,810
12	MLRS REDUCED RANGE PRACTICE ROCKETS (RRPR)			2,982	27,555	+ 2,982	+ 27,555
14	ARMY TACTICAL MSL SYS [ATACMS]			146	170,013	+ 146	+ 170,013
	TOTAL, OTHER MISSILES				2,474,084		+ 2,474,084
	MODIFICATION OF MISSILES						
	MODIFICATIONS						
16	PATRIOT MODS				278,716		+ 278,716
17	ATACMS MODS				85,320		+ 85,320
18	GMLRS MOD				5,094		+ 5,094
19	STINGER MODS				81,615		+ 81,615
20	AVENGER MODS				14,107		+ 14,107
21	ITAS/TOW MODS				3,469		+ 3,469
22	MLRS MODS				39,019		+ 39,019
23	HIMARS MODIFICATIONS				12,483		+ 12,483
	TOTAL, MODIFICATION OF MISSILES				519,823		+ 519,823

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
24	SPARES AND REPAIR PARTS				26,444		+ 26,444
	SPARES AND REPAIR PARTS						
25	SUPPORT EQUIPMENT AND FACILITIES				10,593		+ 10,593
	AIR DEFENSE TARGETS						
	TOTAL, MISSILE PROCUREMENT, ARMY				3,030,944		+ 3,030,944

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	System Integration and Test Procurement		107,157	+ 107,157
	Transfer: From Title IX to Title III for base requirements			+ 113,857
	Improving funds management: Field Surveillance Program carryover			- 6,700
2	M-SHORAD—Procurement		79,800	+ 79,800
	Transfer: From Title IX to Title III for base requirements			+ 103,800
	Restoring acquisition accountability: Pricing adjustments for prototype rework vehicles			- 24,000
3	MSE Missile		664,499	+ 664,499
	Transfer: From Title IX to Title III for base requirements			+ 698,603
	Restoring acquisition accountability: AUR unit cost growth			- 34,104
4	INDIRECT FIRE PROTECTION CAPABILITY INC 2-I		9,337	+ 9,337
	Transfer: From Title IX to Title III for base requirements			+ 9,337
6	Hellfire Sys Summary		193,284	+ 193,284
	Transfer: From Title IX to Title III for base requirements			+ 193,284
7	Joint Air-To-Ground MsIs [JAGM]		220,766	+ 220,766
	Transfer: From Title IX to Title III for base requirements			+ 233,353
	Maintain program affordability: Unjustified test and evaluation support			- 12,587
8	Javelin (Aaws-M) System Summary		138,405	+ 138,405
	Transfer: From Title IX to Title III for base requirements			+ 138,405
9	Tow 2 System Summary		107,958	+ 107,958
	Transfer: From Title IX to Title III for base requirements			+ 114,340
	Maintain program affordability: Unjustified engineering growth			- 6,382
10	Tow 2 System Summary (AP-CY)		10,500	+ 10,500
	Transfer: From Title IX to Title III for base requirements			+ 10,500
11	Guided MLRS Rocket [GMLRS]		744,810	+ 744,810
	Transfer: From Title IX to Title III for base requirements			+ 797,213
	Restoring acquisition accountability: AUR unit cost growth			- 52,403
12	MLRS Reduced Range Practice Rockets [RRPR]		27,555	+ 27,555
	Transfer: From Title IX to Title III for base requirements			+ 27,555
14	Army Tactical Msl Sys [ATACMS]		170,013	+ 170,013
	Transfer: From Title IX to Title III for base requirements			+ 209,842
	Insufficient budget justification: Cost discrepancies between budget briefs and justification materials ..			- 39,829
16	Patriot Mods		278,716	+ 278,716
	Transfer: From Title IX to Title III for base requirements			+ 279,464
	Restoring acquisition accountability: RAM mod unit cost growth			- 748
17	ATACMS MODS		85,320	+ 85,320
	Transfer: From Title IX to Title III for base requirements			+ 85,320
18	GMLRS MOD		5,094	+ 5,094

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Transfer: From Title IX to Title III for base requirements			+ 5,094
19	Stinger Mods		81,615	+ 81,615
	Transfer: From Title IX to Title III for base requirements			+ 81,615
20	Avenger Mods		14,107	+ 14,107
	Transfer: From Title IX to Title III for base requirements			+ 14,107
21	Itas/Tow Mods		3,469	+ 3,469
	Transfer: From Title IX to Title III for base requirements			+ 3,469
22	MLRS Mods		39,019	+ 39,019
	Transfer: From Title IX to Title III for base requirements			+ 39,019
23	Himars Modifications		12,483	+ 12,483
	Transfer: From Title IX to Title III for base requirements			+ 12,483
24	Spares and Repair Parts		26,444	+ 26,444
	Transfer: From Title IX to Title III for base requirements			+ 26,444
25	Air Defense Targets		10,593	+ 10,593
	Transfer: From Title IX to Title III for base requirements			+ 10,593

**PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES,
ARMY**

Appropriations, 2019	\$4,486,402,000
Budget estimate, 2020	4,715,566,000
Committee recommendation	4,463,582,000

The Committee recommends an appropriation of \$4,463,582,000. This is \$251,984,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES (W&TCV), ARMY						
2	TRACKED COMBAT VEHICLES	65	264,040		230,307	-6	-33,733
	ARMORED MULTI PURPOSE VEHICLE (AMPV)			59			
3	MODIFICATION OF TRACKED COMBAT VEHICLES						
	STRYKER (MOD)		144,387		147,387		+3,000
4	STRYKER UPGRADE	152	550,000	152	513,858		-36,142
5	BRADLEY PROGRAM (MOD)		638,781		415,740		-223,041
6	M109 FOV MODIFICATIONS		25,756		25,756		
7	PALADIN PPM MOD IN SERVICE	53	553,425	53	553,425		
9	ASSAULT BRIDGE (MOD)		2,821		2,821		
10	ASSAULT BREACHER VEHICLE	6	31,697	6	31,697		
11	M88 FOV MODS		4,500		4,500		
12	JOINT ASSAULT BRIDGE	44	205,517	44	205,517		
13	M1 ABRAMS TANK (MOD)		348,800		348,800		
14	ABRAMS UPGRADE PROGRAM	165	1,752,784	165	1,752,784		
	TOTAL, TRACKED COMBAT VEHICLES		4,522,508		4,232,592		-289,916
	WEAPONS AND OTHER COMBAT VEHICLES						
15	M240 MEDIUM MACHINE GUN (7.62MM)		19,420		11,600		+11,600
16	MULTI-ROLE ANTI-ARMOR ANTI-PERSONNEL WEAPON		20,000		16,864		-2,556
17	GUN AUTOMATIC 30MM M230		14,907		14,085		-20,000
19	MORTAR SYSTEMS		191		191		-822
20	XM320 GRENADE LAUNCHER MODULE (GLM)		7,977		5,747		-2,230
21	PRECISION SNIPER RIFLE		9,860		9,860		
22	COMPACT SEMI-AUTOMATIC SNIPER SYSTEM		30,331		30,331		
23	CARBINE		8,060				-8,060
24	SMALL ARMS—FIRE CONTROL		24,007		24,007		
25	COMMON REMOTELY OPERATED WEAPONS STATION		6,174		6,174		
26	MODULAR HANDGUN SYSTEM						
	MOD OF WEAPONS AND OTHER COMBAT VEH						
28	MK-19 GRENADE MACHINE GUN MODS		3,737		3,737		
29	M777 MODS		2,367		12,367		+10,000

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
30	M4 CARBINE MODS		17,595		17,595		
33	M240 MEDIUM MACHINE GUN MODS		8,000		8,000		
34	SNIPER RIFLES MODIFICATIONS		2,426		2,426		
35	M119 MODIFICATIONS		6,269		56,269		+ 50,000
36	MORTAR MODIFICATION		1,693		1,693		
37	MODIFICATIONS LESS THAN \$5.0M (WOCV-WTCV)		4,327		4,327		
	SUPPORT EQUIPMENT AND FACILITIES						
38	ITEMS LESS THAN \$5.0M (WOCV-WTCV)		3,066		3,066		
39	PRODUCTION BASE SUPPORT (WOCV-WTCV)		2,651		2,651		
	TOTAL, WEAPONS AND OTHER COMBAT VEHICLES		193,058		230,990		+ 37,932
	TOTAL, PROCUREMENT OF W&TCV, ARMY		4,715,566		4,463,582		- 251,984

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Armored Multi Purpose Vehicle [AMPV]	264,040	230,307	− 33,733
	Restoring acquisition accountability: Revised vehicle pricing			− 15,997
	Restoring acquisition accountability: Vehicle carryover			− 17,736
3	Stryker (MOD)	144,387	147,387	+ 3,000
	Program increase: Stryker refurbishment kit			+ 3,000
4	Stryker Upgrade	550,000	513,858	− 36,142
	Improving funds management: Overestimation of ASL requirements			− 9,104
	Restoring acquisition accountability: ICVV unit cost growth			− 27,038
5	Bradley Program (MOD)	638,781	415,740	− 223,041
	Restoring acquisition accountability: Excess to need			− 223,041
15	M240 Medium Machine Gun (7.62MM)		11,600	+ 11,600
	Program increase			+ 11,600
16	MULTI-ROLE ANTI-ARMOR ANTI-PERSONNEL WEAPON S	19,420	16,864	− 2,556
	Restoring acquisition accountability: Fire control unit cost growth			− 880
	Improving funds management: Revised prior-year hardware costs			− 1,676
17	GUN AUTOMATIC 30MM M230	20,000		− 20,000
	Restoring acquisition accountability: Army-rescinded requirement			− 20,000
19	Mortar Systems	14,907	14,085	− 822
	Restoring acquisition accountability: Unit cost growth			− 822
21	Precision Sniper Rifle	7,977	5,747	− 2,230
	Insufficient budget justification: Unit cost discrepancy			− 2,230
24	Small Arms—Fire Control	8,060		− 8,060
	Improving funds management: Forward financing fire control contract			− 8,060
29	M777 Mods	2,367	12,367	+ 10,000
	Program increase: Self-propelled 155mm howitzers			+ 10,000
35	M119 Modifications	6,269	56,269	+ 50,000
	Program increase: Lightweight self-propelled 105mm howitzers			+ 50,000

Armored Multi-Purpose Vehicle Reporting Requirement.—As expressed in the report accompanying the House version of the Department of Defense Appropriations Act, 2017 (House Report 114–577), the Secretary of the Army is required to report quarterly on the cost, schedule, and performance of the Armored Multi-Purpose Vehicle [AMPV] program. The Committee notes that on January 25, 2019, the AMPV program successfully achieved its Milestone C and entry into Low-rate Initial Production. Therefore, the Committee rescinds the reporting requirement as directed to the Secretary of the Army and encourages the Assistant Secretary of the Army for Acquisition, Logistics and Technology to engage the congressional defense committees, outside of the standard program engagements, should changes to the acquisition strategy or significant issues arise.

Self-Propelled Howitzer.—The Committee is aware that the Field Artillery Squadron [FA SQDN], 2d Cavalry Regiment [2CR] has identified lethality and mobility capability gaps with the current M777A2 towed howitzer. The towed howitzer’s speed and mobility

limitations during cross-country traversal, along with emplacement and displacement timelines inhibit the FA SQDN’s ability to keep pace with the formation and place the crew’s survival at increased risk during a decisive action scenario against a peer adversary. As a result of these limitations, 2CR submitted an Operational Needs Statement for 24 155mm self-propelled howitzers operating in three batteries. Additionally, citing similar limitations, Forces Command endorsed a Capabilities Needs Statement, originating from the XVIII Airborne Corps, for a Wheeled Self-Propelled 105mm howitzer for employment across select Infantry Brigade Combat Teams [IBCT]. The Committee believes that these requirements support the National Defense Strategy and better enables 2CR and IBCTs to compete with peer adversaries. Therefore, the Committee recommends an additional \$60,000,000 and encourages the Secretary of the Army to rapidly field this critical capability.

PROCUREMENT OF AMMUNITION, ARMY

Appropriations, 2019	\$2,276,330,000
Budget estimate, 2020	
Committee recommendation	2,572,771,000

The Committee recommends an appropriation of \$2,572,771,000. This is \$2,572,771,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	AMMUNITION						
	SMALL/MEDIUM CAL AMMUNITION						
1	CTG. 5.56MM, ALL TYPES				65,520		+ 65,520
2	CTG. 7.62MM, ALL TYPES				114,228		+ 114,228
3	CTG. HANDGUN, ALL TYPES				17,807		+ 17,807
4	CTG. .50 CAL., ALL TYPES				62,860		+ 62,860
5	CTG. 20MM, ALL TYPES				35,920		+ 35,920
6	CTG. 25MM, ALL TYPES				8,990		+ 8,990
7	CTG. 30MM, ALL TYPES				66,471		+ 66,471
8	CTG. 40MM, ALL TYPES				103,952		+ 103,952
	MORTAR AMMUNITION						
9	60MM MORTAR, ALL TYPES				50,580		+ 50,580
10	81MM MORTAR, ALL TYPES				61,873		+ 61,873
11	120MM MORTAR, ALL TYPES				125,452		+ 125,452
	TANK AMMUNITION						
12	CTG TANK 105MM AND 120MM: ALL TYPES				111,659		+ 111,659
	ARTILLERY AMMUNITION						
13	CTG. ARTY. 7.5MM AND 10.5MM: ALL TYPES				44,675		+ 44,675
14	ARTILLERY PROJECTILE, 1.55MM, ALL TYPES				231,537		+ 231,537
15	PROJ. 155MM EXTENDED RANGE XM982			441	56,027		+ 56,027
16	ARTILLERY PROPELLANTS, FUZES AND PRIMERS, ALL TYPES				271,602		+ 271,602
	MINES						
17	MINES AND CLEARING CHARGES, ALL TYPES				38,639		+ 38,639
	ROCKETS						
18	SHOULDER LAUNCHED MUNITIONS, ALL TYPES				67,528		+ 67,528
19	ROCKET, HYDRA 70, ALL TYPES				175,994		+ 175,994
	OTHER AMMUNITION						
20	CAD/PAD ALL TYPES				7,595		+ 7,595
21	DEMOLITION MUNITIONS, ALL TYPES				51,651		+ 51,651

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
22	GRENADES, ALL TYPES				46,282		+ 46,282
23	SIGNALS, ALL TYPES				18,609		+ 18,609
24	SIMULATORS, ALL TYPES				16,054		+ 16,054
	MISCELLANEOUS						
25	AMMO COMPONENTS, ALL TYPES				2,661		+ 2,661
27	ITEMS LESS THAN \$5 MILLION				9,213		+ 9,213
28	AMMUNITION PECULIAR EQUIPMENT				10,044		+ 10,044
29	FIRST DESTINATION TRANSPORTATION (AMMO)				18,492		+ 18,492
	TOTAL, AMMUNITION				1,891,915		+ 1,891,915
	AMMUNITION PRODUCTION BASE SUPPORT						
	PRODUCTION BASE SUPPORT						
31	PROVISION OF INDUSTRIAL FACILITIES				474,511		+ 474,511
32	CONVENTIONAL MUNITIONS DEMILITARIZATION, ALL				202,512		+ 202,512
33	ARMS INITIATIVE				3,833		+ 3,833
	TOTAL, AMMUNITION PRODUCTION BASE SUPPORT				680,856		+ 680,856
	TOTAL, PROCUREMENT OF AMMUNITION, ARMY				2,572,771		+ 2,572,771

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Ctg, 5.56mm, All Types		65,520	+ 65,520
	Transfer: From Title IX to Title III for base requirements			+ 68,949
	Restoring acquisition accountability: M855A1 Clipped Bulk Pack unit cost growth			- 3,429
2	CTG, 7.62mm, All Types		114,228	+ 114,228
	Transfer: From Title IX to Title III for base requirements			+ 114,228
3	CTG, Handgun, All Types		17,807	+ 17,807
	Transfer: From Title IX to Title III for base requirements			+ 17,807
4	CTG, .50 Cal, All Types		62,860	+ 62,860
	Transfer: From Title IX to Title III for base requirements			+ 63,966
	Restoring acquisition accountability: Blank, M1A1 w/MP Link unit cost growth			- 1,106
5	CTG, 20mm, All Types		35,920	+ 35,920
	Transfer: From Title IX to Title III for base requirements			+ 35,920
6	CTG, 25mm, All Types		8,990	+ 8,990
	Transfer: From Title IX to Title III for base requirements			+ 8,990
7	CTG, 30mm, All Types		66,471	+ 66,471
	Transfer: From Title IX to Title III for base requirements			+ 68,813
	Restoring acquisition accountability: TP-T, MK239 Single unit cost growth			- 2,342
8	CTG, 40mm, All Types		103,952	+ 103,952
	Transfer: From Title IX to Title III for base requirements			+ 103,952
9	60MM Mortar, All Types		50,580	+ 50,580
	Transfer: From Title IX to Title III for base requirements			+ 50,580
10	81MM Mortar, All Types		61,873	+ 61,873
	Transfer: From Title IX to Title III for base requirements			+ 59,373
	Program increase: M819			+ 2,500
11	120MM Mortar, All Types		125,452	+ 125,452
	Transfer: From Title IX to Title III for base requirements			+ 125,452
12	Cartridges, Tank, 105MM and 120MM, All Types		111,659	+ 111,659
	Transfer: From Title IX to Title III for base requirements			+ 171,284
	Restoring acquisition accountability: HEMP-T XM1147 schedule delay			- 15,002
	Restoring acquisition accountability: APFSDS-T M829A4 schedule delay			- 44,623
13	Artillery Cartridges, 75MM & 105MM, All Types		44,675	+ 44,675
	Transfer: From Title IX to Title III for base requirements			+ 44,675
14	Artillery Projectile, 155MM, All Types		231,537	+ 231,537
	Transfer: From Title IX to Title III for base requirements			+ 266,037
	Restoring acquisition accountability: M795 IM Metal Part contract delay			- 4,500
	Restoring acquisition accountability: XM1113 early to need			- 30,000
15	Proj 155mm Extended Range M982		56,027	+ 56,027
	Transfer: From Title IX to Title III for base requirements			+ 57,434
	Restoring acquisition accountability: Product engineering growth			- 1,407
16	Artillery Propellants, Fuzes and Primers, All		271,602	+ 271,602
	Transfer: From Title IX to Title III for base requirements			+ 271,602
17	Mines & Clearing Charges, All Types		38,639	+ 38,639
	Transfer: From Title IX to Title III for base requirements			+ 55,433
	Restoring acquisition accountability: APOBS contract award delays			- 16,194
	Restoring acquisition accountability: FUZE PD M739 Series unit cost discrepancy			- 600
18	Shoulder Launched Munitions, All Types		67,528	+ 67,528
	Transfer: From Title IX to Title III for base requirements			+ 74,878
	Restoring acquisition accountability: BDM program delays			- 14,550
	Program increase: AT4CS Tandem Warhead			+ 7,200
19	Rocket, Hydra 70, All Types		175,994	+ 175,994

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Transfer: From Title IX to Title III for base requirements ...			+ 175,994
20	CAD/PAD, All Types		7,595	+ 7,595
	Transfer: From Title IX to Title III for base requirements ...			+ 7,595
21	Demolition Munitions, All Types		51,651	+ 51,651
	Transfer: From Title IX to Title III for base requirements ...			+ 51,651
22	Grenades, All Types		46,282	+ 46,282
	Transfer: From Title IX to Title III for base requirements ...			+ 40,592
	Restoring acquisition accountability: XM111 offensive hand grenade early to need			- 2,310
	Program increase			+ 8,000
23	Signals, All Types		18,609	+ 18,609
	Transfer: From Title IX to Title III for base requirements ...			+ 18,609
24	Simulators, All Types		16,054	+ 16,054
	Transfer: From Title IX to Title III for base requirements ...			+ 16,054
25	Ammo Components, All Types		2,661	+ 2,661
	Transfer: From Title IX to Title III for base requirements ...			+ 5,261
	Improving Funds Management: Prior year carryover			- 2,600
26	Non-Lethal Ammunition, All Types			
	Transfer: From Title IX to Title III for base requirements ...			+ 715
	Improving Funds Management: Prior year carryover			- 715
27	Items Less Than \$5 Million (AMMO)		9,213	+ 9,213
	Transfer: From Title IX to Title III for base requirements ...			+ 9,213
28	Ammunition Peculiar Equipment		10,044	+ 10,044
	Transfer: From Title IX to Title III for base requirements ...			+ 10,044
29	First Destination Transportation (AMMO)		18,492	+ 18,492
	Transfer: From Title IX to Title III for base requirements ...			+ 18,492
30	Closeout Liabilities			
	Transfer: From Title IX to Title III for base requirements ...			+ 99
	Improving Funds Management: Prior year carryover			- 99
31	Industrial Facilities		474,511	+ 474,511
	Transfer: From Title IX to Title III for base requirements ...			+ 474,511
32	Conventional Munitions Demilitarization		202,512	+ 202,512
	Transfer: From Title IX to Title III for base requirements ...			+ 202,512
33	Arms Initiative		3,833	+ 3,833
	Transfer: From Title IX to Title III for base requirements ...			+ 3,833

OTHER PROCUREMENT, ARMY

Appropriations, 2019	\$7,844,691,000
Budget estimate, 2020	7,443,101,000
Committee recommendation	7,220,947,000

The Committee recommends an appropriation of \$7,220,947,000. This is \$222,154,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	OTHER PROCUREMENT, ARMY						
	TACTICAL AND SUPPORT VEHICLES						
	TACTICAL VEHICLES						
1	TACTICAL TRAILERS/DOLLY SETS		12,993		12,993		
2	SEMITRAILERS, FLATBED		102,386		102,386		
3	HIGH MOBILITY MULTI-PURPOSE WHEELED VEHICLE (HMMWV)		127,271		127,271		
4	GROUND MOBILITY VEHICLES (GMV)		37,038		37,038		
6	JOINT LIGHT TACTICAL VEHICLE	2,530	996,007		972,407		-23,600
7	TRUCK, DUMP, 20t (CCE)		10,838		10,838		
8	FAMILY OF MEDIUM TACTICAL VEH [FMTV]		72,057		138,057		+66,000
9	FIRETRUCKS & ASSOCIATED FIREFIGHTING EQUIPMENT		28,048		25,037		-3,011
10	FAMILY OF HEAVY TACTICAL VEHICLES [FHTV]		9,969		9,969		
11	PLS ESP		6,280		6,280		
12	HEAVY EXPANDED MOBILE TACTICAL TRUCK EXT SERV		30,841		95,185		+64,344
13	HMMWV RECAPITALIZATION PROGRAM		5,734		5,734		
14	TACTICAL WHEELED VEHICLE PROTECTION KITS		45,113		45,113		
15	MODIFICATION OF IN SVC EQUIP		58,946		57,112		-1,834
	NON-TACTICAL VEHICLES						
17	HEAVY ARMORED SEDAN		791		791		
18	PASSENGER CARRYING VEHICLES		1,416		1,416		
19	NONTACTICAL VEHICLES, OTHER		29,891		28,804		-1,087
	TOTAL, TACTICAL AND SUPPORT VEHICLES		1,575,619		1,676,431		+100,812
	COMMUNICATIONS AND ELECTRONICS EQUIPMENT						
	COMM—JOINT COMMUNICATIONS						
21	SIGNAL MODERNIZATION PROGRAM		153,933		133,913		-20,020
22	TACTICAL NETWORK TECHNOLOGY MOD IN SERVICE		387,439		351,139		-36,300
23	SITUATION INFORMATION TRANSPORT		46,693		46,693		
25	JCSF EQUIPMENT (USREDCOM)		5,075		5,075		
	COMM—SATELLITE COMMUNICATIONS						
28	DEFENSE ENTERPRISE WIDEBAND SATCOM SYSTEMS		101,189		101,189		

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
29	TRANSPORTABLE TACTICAL COMMAND COMMUNICATIONS		77,141		99,641		+ 22,500
30	SHF TERM		16,054		16,054		
31	ASSURED POSITIONING, NAVIGATION AND TIMING		41,074		31,674		- 9,400
32	SMART-T (SPACE)		10,515		10,515		
33	GLOBAL BROADCAST SVC—GBS		11,800		11,800		
34	ENROUTE MISSION COMMAND (EMC)		8,609		8,609		
	COMM—C3 SYSTEM						
38	COE TACTICAL SERVER INFRASTRUCTURE (TSI)		77,533		31,672		- 45,861
	COMM—COMBAT COMMUNICATIONS						
39	HANDHELD MANPACK SMALL FORM FIT (HMS)		468,026		468,026		
40	RADIO TERMINAL SET, MIDS LVT(2)		23,778		23,778		
44	SPIDER FAMILY OF NETWORKED MUNITIONS INCREASE		10,930		10,930		
46	UNIFIED COMMAND SUITE		18,291		18,291		
47	COTS COMMUNICATIONS EQUIPMENT		55,630		55,630		+ 9,000
48	FAMILY OF MED COMM FOR COMBAT CASUALTY CARE		16,590		16,590		
49	ARMY COMMUNICATIONS & ELECTRONICS		43,457		37,856		- 5,601
	COMM—INTELLIGENCE COMM						
50	CI AUTOMATION ARCHITECTURE (MPI)		10,470		10,470		
51	DEFENSE MILITARY DECEPTION INITIATIVE		3,704		3,704		
	INFORMATION SECURITY						
53	FAMILY OF BIOMETRICS		1,000		1,000		
54	INFORMATION SYSTEM SECURITY PROGRAM—ISSP		3,600		3,600		
55	COMMUNICATIONS SECURITY (COMSEC)		160,899		147,097		- 13,802
56	DEFENSIVE CYBER OPERATIONS		61,962		56,962		- 5,000
57	INSIDER THREAT PROGRAM—UNIT ACTIVITY MONITOR		756		756		
58	PERSISTENT CYBER TRAINING ENVIRONMENT		3,000		3,000		
	COMM—LONG HAUL COMMUNICATIONS						
59	BASE SUPPORT COMMUNICATIONS		31,770		31,770		
	COMM—BASE COMMUNICATIONS						
60	INFORMATION SYSTEMS		159,009		159,009		
61	EMERGENCY MANAGEMENT MODERNIZATION PROGRAM		4,854		4,854		

62	HOME STATION MISSION COMMAND CENTERS (MSMCC)	47,174	47,174	47,174	47,174
63	INSTALLATION INFO INFRASTRUCTURE MOD PROGRAM	297,994	297,994	297,994	297,994
	ELECT EQUIP				
	ELECT EQUIP—TACT INT REL ACT (TIARA)				
66	JTT/CRBS-M [MIP]	7,686	7,686	7,686	7,686
68	DCGS-A [MIP]	180,350	180,350	146,568	— 33,782
70	TROJAN [MIP]	17,368	17,368	17,368	
71	MOD OF IN-SVC EQUIP (INTEL SPT) [MIP]	59,052	59,052	59,052	
	ELECT EQUIP—ELECTRONIC WARFARE (EW)				
77	LIGHTWEIGHT COUNTER MORTAR RADAR	5,400	5,400	5,400	
78	EW PLANNING AND MANAGEMENT TOOLS	7,568	7,568	7,568	
79	AIR VIGILANCE (AV)	8,953	8,953	8,953	
81	MULTI-FUNCTION ELECTRONIC WARFARE (MFEW) SYST	6,420	6,420	6,420	— 6,420
83	COUNTERINTELLIGENCE/SECURITY COUNTERMEASURES	501	501	501	
84	CI MODERNIZATION [MIP]	121	121	121	
	ELECT EQUIP—TACTICAL SURV. (TAC SURV)				
85	SENTINEL MODS	115,210	115,210	115,210	
86	NIGHT VISION DEVICES	236,604	236,604	64,017	— 172,587
88	SMALL TACTICAL OPTICAL RIFLE MOUNTED MLRF	22,623	22,623	22,623	
90	INDIRECT FIRE PROTECTION FAMILY OF SYSTEMS	29,127	29,127	29,127	
91	FAMILY OF WEAPON SIGHTS (FWS)	120,883	120,883	81,541	— 39,342
94	JOINT BATTLE COMMAND—PLATFORM [JBC-P]	265,667	265,667	256,546	— 9,121
95	JOINT EFFECTS TARGETING SYSTEM (JETS)	69,720	69,720	69,720	
96	MOD OF IN-SERVICE EQUIPMENT (LLDR)	6,044	6,044	6,044	
97	COMPUTER BALLISTICS: LHMCB XM32	3,268	3,268	3,268	
98	MORTAR FIRE CONTROL SYSTEM	13,199	13,199	13,199	
99	MORTAR FIRE CONTROL SYSTEM MODIFICATIONS	10,000	10,000	10,000	
100	COUNTERFIRE RADARS	16,416	16,416	16,416	
	ELECT EQUIP—TACTICAL C2 SYSTEMS				
102	FIRE SUPPORT C2 FAMILY	13,197	13,197	13,197	
103	AIR & MSL DEFENSE PLANNING & CONTROL SYS (AMD)	24,730	24,730	24,730	
104	FAMD BATTLE COMMAND SYSTEM	29,629	29,629	22,000	— 7,629
105	LIFE CYCLE SOFTWARE SUPPORT (LCSS)	6,774	6,774	6,774	
106	NETWORK MANAGEMENT INITIALIZATION AND SERVICE	24,448	24,448	24,448	
107	MANUEVER CONTROL SYSTEM (MCS)	260	260	260	
108	GLOBAL COMBAT SUPPORT SYSTEM—ARMY	17,962	17,962	8,815	— 9,147
109	INTEGRATED PERSONNEL AND PAY SYSTEM—ARMY	18,674	18,674	8,287	— 10,387
110	RECONNAISSANCE AND SURVEYING INSTRUMENT SET	11,000	11,000	11,000	

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
111	MOD OF IN-SERVICE EQUIPMENT (ENFIRE)		7,317		7,317		
	ELECT EQUIP—AUTOMATION						
112	ARMY TRAINING MODERNIZATION		14,578		14,578		
113	AUTOMATED DATA PROCESSING EQUIPMENT		139,342		128,542		-10,800
114	GENERAL FUND ENTERPRISE BUSINESS SYSTEM		15,802		15,802		
115	HIGH PERF COMPUTING MOD PROGRAM		67,610		87,610		+20,000
116	CONTRACT WRITING SYSTEM		15,000		6,000		-9,000
117	CSS COMMUNICATIONS		24,700		24,700		
118	RESERVE COMPONENT AUTOMATION SYS [RCAS]		27,879		27,879		
	ELECT EQUIP—AUDIO VISUAL SYS (AV)						
120	ITEMS LESS THAN \$5M (SURVEYING EQUIPMENT)		5,000		5,000		
	ELECT EQUIP—SUPPORT						
122	BCT EMERGING TECHNOLOGIES		22,302				-22,302
	TOTAL, COMMUNICATIONS AND ELECTRONICS EQUIPMENT		4,039,333		3,624,332		-415,001
	OTHER SUPPORT EQUIPMENT						
	CHEMICAL DEFENSIVE EQUIPMENT						
126	CBRN DEFENSE		25,828		22,607		-3,221
127	SMOKE & OBSCURANT FAMILY: SOF (NON AAO ITEM)		5,050		5,050		
	BRIDGING EQUIPMENT						
128	TACTICAL BRIDGING		59,821		59,821		
129	TACTICAL BRIDGE, FLOAT—RIBBON		57,661		57,661		
130	BRIDGE SUPPLEMENTAL SET		17,966		17,966		
131	COMMON BRIDGE TRANSPORTER RECAP		43,155		43,155		
	ENGINEER (NON-CONSTRUCTION) EQUIPMENT						
132	HANDHELD STANDOFF MINEFIELD DETECTION SYS—HST		7,570		7,570		
133	GROUND STANDOFF MINE DETECTION SYSTEM [GSTAMIDS]		37,025		37,025		
135	HUSKY MOUNTED DETECTION SYSTEM (HMDS)		83,082		76,897		-6,185
136	ROBOTIC COMBAT SUPPORT SYSTEM		2,000		2,000		
137	EOD ROBOTICS SYSTEMS RECAPITALIZATION		23,115		23,115		
138	ROBOTICS AND APPLIQUE SYSTEMS		101,056		99,037		-2,019

140	RENDER SAFE SETS KITS OUTFITS	18,684	18,684	.....	.....	.....
142	FAMILY OF BOATS AND MOTORS	8,245	8,245	.....	.....	.....
	COMBAT SERVICE SUPPORT EQUIPMENT					
143	HEATERS AND ECUS	7,336	7,336	.....	.....	.....
145	PERSONNEL RECOVERY SUPPORT SYSTEM (PRSS)	4,281	4,281	.....	.....	.....
146	GROUND SOLDIER SYSTEM	111,955	114,505	.....	.....	+ 2,550
147	MOBILE SOLDIER POWER	31,364	29,943	.....	.....	- 1,421
148	FORCE PROVIDER .....	.....	12,000	.....	.....	+ 12,000
149	FIELD FEEDING EQUIPMENT	1,673	15,973	.....	.....	+ 14,300
150	CARGO AERIAL DEL & PERSONNEL PARACHUTE SYSTEM	43,622	39,170	.....	.....	- 4,452
151	FAMILY OF ENGR COMBAT AND CONSTRUCTION SETS	11,451	11,451	.....	.....	.....
152	ITEMS LESS THAN \$5M (ENG SPT)	5,167	4,128	.....	.....	- 1,039
	PETROLEUM EQUIPMENT					
154	DISTRIBUTION SYSTEMS, PETROLEUM & WATER	74,867	72,118	.....	.....	- 2,749
	MEDICAL EQUIPMENT					
155	COMBAT SUPPORT MEDICAL	68,225	89,831	.....	.....	+ 21,606
	MAINTENANCE EQUIPMENT					
156	MOBILE MAINTENANCE EQUIPMENT SYSTEMS	55,053	80,053	.....	.....	+ 25,000
157	ITEMS LESS THAN \$5.0M (MAINT EQ)	5,608	5,608	.....	.....	.....
	CONSTRUCTION EQUIPMENT					
161	HYDRAULIC EXCAVATOR	500	500	.....	.....	.....
162	TRACTOR, FULL TRACKED	4,835	4,835	.....	.....	.....
163	ALL TERRAIN CRANES	23,936	23,003	.....	.....	- 933
164	HIGH MOBILITY ENGINEER EXCAVATOR (HMEE) FOS	27,188	27,188	.....	.....	.....
166	CONST EQUIP ESP	34,790	34,790	.....	.....	.....
167	ITEMS LESS THAN \$5.0M (CONST EQUIP)	4,381	4,381	.....	.....	.....
	RAIL FLOAT CONTAINERIZATION EQUIPMENT					
168	ARMY WATERCRAFT ESP	35,194	35,194	.....	.....	.....
169	MANEUVER SUPPORT VESSEL (MSV)	14,185	.....	.....	.....	- 14,185
170	ITEMS LESS THAN \$5.0M (FLOAT/RAIL)	6,920	6,920	.....	.....	.....
	GENERATORS					
171	GENERATORS AND ASSOCIATED EQUIPMENT	58,566	111,040	.....	.....	+ 52,474
172	TACTICAL ELECTRIC POWER RECAPITALIZATION	14,814	14,814	.....	.....	.....
	MATERIAL HANDLING EQUIPMENT					
173	FAMILY OF FORKLIFTS	14,864	13,864	.....	.....	- 1,000

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
174	TRAINING EQUIPMENT						
	COMBAT TRAINING CENTERS SUPPORT		123,411		123,411		
175	TRAINING DEVICES, NONSYSTEM		220,707		207,748		-12,959
176	SYNTHETIC TRAINING ENVIRONMENT (STE)		20,749				-20,749
178	AVIATION COMBINED ARMS TACTICAL TRAINER (AVCA)		4,840		4,840		
179	GAMING TECHNOLOGY IN SUPPORT OF ARMY TRAINING		15,463		15,463		
	TEST MEASURE AND DIG EQUIPMENT [TMD]						
180	CALIBRATION SETS EQUIPMENT		3,030		3,030		
181	INTEGRATED FAMILY OF TEST EQUIPMENT [IFTE]		76,980		76,980		
182	TEST EQUIPMENT MODERNIZATION [TEMOD]		16,415		15,132		-1,283
	OTHER SUPPORT EQUIPMENT						
184	RAPID EQUIPPING SOLDIER SUPPORT EQUIPMENT		9,877		9,877		
185	PHYSICAL SECURITY SYSTEMS (OPAS)		82,158		78,958		-3,200
186	BASE LEVEL COM'L EQUIPMENT		15,340		15,340		
187	MODIFICATION OF IN-SVC EQUIPMENT (OPA-3)		50,458		63,458		+13,000
189	BUILDING, PRE-FAB, RELOCATABLE		14,400		32,700		+18,300
190	SPECIAL EQUIPMENT FOR USER TESTING		9,821		9,821		
	TOTAL, OTHER SUPPORT EQUIPMENT		1,814,682		1,898,517		+83,835
192	INITIAL SPARES—C&E		9,757		9,757		
999	CLASSIFIED PROGRAMS		3,710		11,910		+8,200
	TOTAL, OTHER PROCUREMENT, ARMY		7,443,101		7,220,947		-222,154

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
6	Joint Light Tactical Vehicle	996,007	972,407	- 23,600
	Restoring acquisition accountability: Revised TADSS acquisition strategy			- 19,100
	Transfer: Army-requested transfer to RDT&E Line 169			- 4,500
8	Family of Medium Tactical Veh [FMTV]	72,057	138,057	+ 66,000
	Program increase			+ 66,000
9	Firetrucks & Associated Firefighting Equip	28,048	25,037	- 3,011
	Improving funds management: Requirements previously funded			- 3,011
12	Hvy Expanded Mobile Tactical Truck Ext Serv	30,841	95,185	+ 64,344
	Program increase			+ 64,344
15	Modification of In Svc Equip	58,946	57,112	- 1,834
	Improving funds management: Program management carryover			- 1,834
19	Nontactical Vehicles, Other	29,891	28,804	- 1,087
	Restoring acquisition accountability: Unit cost growth			- 1,087
21	Signal Modernization Program	153,933	133,913	- 20,020
	Restoring acquisition accountability: TROPO delay			- 20,020
22	Tactical Network Technology Mod In Svc	387,439	351,139	- 36,300
	Restoring acquisition accountability: SATCOM obsolescence-Satellite Transportable Terminals previously funded			- 36,300
29	Transportable Tactical Command Communications	77,141	99,641	+ 22,500
	Program increase			+ 22,500
31	Assured Positioning, Navigation and Timing	41,074	31,674	- 9,400
	Reduce duplication: Dismounted support funded in RDT&E,A			- 2,000
	Restoring acquisition accountability: Pseudolite program termination			- 7,400
38	COE Tactical Server Infrastructure [TSI]	77,533	31,672	- 45,861
	Restoring acquisition accountability: TSI acquisition strategy			- 45,861
46	Unified Command Suite	9,291	18,291	+ 9,000
	Program increase			+ 9,000
49	Army Communications & Electronics	43,457	37,856	- 5,601
	Classified adjustment			- 5,601
55	Communications Security [COMSEC]	160,899	147,097	- 13,802
	Insufficient budget justification: INE quantity discrepancies			- 9,867
	Insufficient budget justification: Secure voice quantity discrepancies			- 3,935
56	Defensive CYBER Operations	61,962	56,962	- 5,000
	Restoring acquisition accountability: Unjustified request-Rapid prototyping fund			- 2,000
	Insufficient budget justification: Inconsistent justification material			- 3,000
68	DCGS-A (MIP)	180,350	146,568	- 33,782
	Improving funds management: Capability drop 1 software previously funded			- 33,782
81	Multi-Function Electronic Warfare [MFEW] Syst	6,420		- 6,420
	Improving funds management: Early to need			- 6,420
86	Night Vision Devices	236,604	64,017	- 172,587
	Restoring acquisition accountability: ENVG-B ONS excess to need			- 64,344
	Restoring acquisition accountability: ENVG-B program of record unit cost growth			- 35,018
	Restoring acquisition accountability: IVAS early to need			- 76,225
	Program increase: Digital night vision test devices			+ 3,000
91	Family of Weapon Sights [FWS]	120,883	81,541	- 39,342

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: FWS-CS program delay			- 39,342
94	Joint Battle Command—Platform [JBC-P]	265,667	256,546	- 9,121
	Maintain program affordability: Unjustified fielding growth			- 3,653
	Maintain program affordability: Unjustified ancillary equipment growth			- 5,468
104	IAMD Battle Command System	29,629	22,000	- 7,629
	Improving funds management: Ahead of need			- 7,629
108	Global Combat Support System—Army [GCSS-A]	17,962	8,815	- 9,147
	Improving funds management: Forward financing increment 2 fielding			- 9,147
109	Integrated Personnel and Pay System—Army [IPPS-A]	18,674	8,287	- 10,387
	Restoring acquisition accountability: Release 3 ahead of need			- 5,813
	Restoring acquisition accountability: Excess to requirements			- 4,574
113	Automated Data Processing Equip	139,342	128,542	- 10,800
	Improving funds management: Accessions Information Environment early to need			- 10,000
	Restoring acquisition accountability: GFEBs unjustified growth			- 800
115	High Perf Computing Mod Pgm [HPCMP]	67,610	87,610	+ 20,000
	Program increase: Virtual prototyping			+ 20,000
116	Contract Writing System	15,000	6,000	- 9,000
	Improving funds management: Forward financing license requirements			- 9,000
122	BCT Emerging Technologies	22,302		- 22,302
	Insufficient budget justification: Lack of defined requirements			- 22,302
126	CBRN Defense	25,828	22,607	- 3,221
	Restoring acquisition accountability: MRDS Unit cost savings			- 3,221
135	Husky Mounted Detection System [HMDS]	83,082	76,897	- 6,185
	Insufficient budget justification: GPR unit cost savings ...			- 6,185
138	Robotics and Applique Systems	101,056	99,037	- 2,019
	Restoring acquisition accountability: MTRS requirement previously funded			- 2,019
146	Ground Soldier System	111,955	114,505	+ 2,550
	Improving funds management: Sustainment support carryover			- 4,950
	Program increase: Fire detection			+ 7,500
147	Mobile Soldier Power	31,364	29,943	- 1,421
	Restoring acquisition accountability: UBC unit cost growth			- 1,421
148	Force Provider		12,000	+ 12,000
	Program Increase: Expeditionary shelter protection system			+ 12,000
149	Field Feeding Equipment	1,673	15,973	+ 14,300
	Program increase: Multi-temperature refrigerated container system			+ 14,300
150	Cargo Aerial Del & Personnel Parachute System	43,622	39,170	- 4,452
	Restoring acquisition accountability: MC-6 unit cost adjustments			- 4,452
152	Items Less Than \$5M (Eng Spt)	5,167	4,128	- 1,039
	Maintain program affordability: Unjustified management growth			- 1,039
154	Distribution Systems, Petroleum & Water	74,867	72,118	- 2,749
	Restoring acquisition accountability: HIPPO unit cost growth			- 1,249
	Restoring acquisition accountability: Unjustified MTRS data growth			- 1,500
155	Combat Support Medical	68,225	89,831	+ 21,606
	Maintain program affordability: Laboratory science equipment unjustified growth			- 3,394
	Program increase: Enhanced rotary wing medical kits			+ 15,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Enhanced vehicle medical kits			+ 10,000
156	Mobile Maintenance Equipment Systems	55,053	80,053	+ 25,000
	Program increase: Next generation shop equipment			+ 25,000
163	All Terrain Cranes	23,936	23,003	- 933
	Restoring acquisition accountability: Unit cost growth			- 933
169	Maneuver Support Vessel [MSV]	14,185		- 14,185
	Improving funds management: TADDS early to need			- 14,185
171	Generators and Associated Equip	58,566	111,040	+ 52,474
	Program increase: Advanced Medium Mobile Power Sources			+ 52,474
173	Family of Forklifts	14,864	13,864	- 1,000
	Maintain program affordability: Unjustified fielding growth			- 1,000
175	Training Devices, Nonsystem	220,707	207,748	- 12,959
	Restoring acquisition accountability: V-TESS unit cost growth			- 2,429
	Maintain program affordability: Unjustified JPMRC growth			- 6,170
	Maintain program affordability: Unjustified NSTD furniture and fixtures growth			- 4,360
176	Synthetic Training Environment [STE]	20,749		- 20,749
	Restoring acquisition accountability: Acquisition strategy			- 20,749
182	Test Equipment Modernization [TEMOD]	16,415	15,132	- 1,283
	Restoring acquisition accountability: Oscilloscope contract delays			- 1,283
185	Physical Security Systems (OPA3)	82,158	78,958	- 3,200
	Maintain program affordability: Unjustified growth—Standardized Intrusion Detection System			- 3,200
187	Modification of In-Svc Equipment (OPA-3)	50,458	63,458	+ 13,000
	Program increase: Expeditionary solid-waste disposal systems			+ 13,000
189	Building, Pre-Fab, Relocatable	14,400	32,700	+ 18,300
	Transfer: Army-requested transfer to Title IX			- 14,400
	Program increase: Stryker vehicle protective shelters			+ 32,700
999	Classified Programs	3,710	11,910	+ 8,200
	Classified adjustment			+ 8,200

Joint Light Tactical Vehicle Trailers.—The Committee notes that the Joint Light Tactical Vehicle [JLTV] Multi-Service Operational Test & Evaluation, completed in April 2018, demonstrated that the Army's existing Light Tactical Trailer [LTT] is not compatible with the JLTV through its full mission profile speeds. As a result, the Army Requirements Oversight Council [AROC] issued a decision that restricted the mission profiles for JLTVs fielded with the LTT. Additionally, a JLTV Trailer Towing—Ground Safety Action was released on July 11, 2019, restricting users from employing the JLTV to tow trailers where the HMMWV is the prime mover, including the LTT, absent specific authorization from the Army Command/Army Service Component Command.

The Committee further notes that on June 7, 2019, an AROC determined that the JLTV should be fielded as a complete system with the JLTV Trailer [JLTV-T] and set an initial JLTV-T procurement quantity of 7,523. However, due to the sequencing of events, the President's fiscal year 2020 budget submission does not request funding for the Army's JLTV-T program. Given the safety concerns, the reduced mission profiles with existing trailers, and the Army's decision to pursue a JLTV-T program of record, the Committee supports the Secretary of the Army's pursuit of the JLTV-T and recognizes the disconnects from budget submission to

subsequent restrictions. Therefore, of the funds made available within budget line item 6, Joint Light Tactical Vehicle, up to \$66,100,000 may be made available to the Secretary of the Army for procurement of JLTV-Ts. The Secretary of the Army shall notify the congressional defense committees no later than 15-days prior to obligating funds on a contract, including the amount of funding repurposed, contract vehicle, and procurement quantity. Further, the Committee expects that the Army will resource the program within the fiscal year 2021 budget submission.

Standoff Robotic Explosive Detection System.—The Committee notes that the Standoff Robotic Explosive Detection System [SREHD] program consists of payload modules to be mounted on man-portable unmanned ground vehicles, providing dismounted soldiers with stand-off detection, marking and neutralization capability for mines and explosive hazards. The Committee further notes that despite procurement funding being appropriated in the Department of Defense Appropriations Act, 2019 (Public Law 115–245), the Army has decided to complete a final low-rate initial production buy with previously appropriated fiscal year 2018 resources and execute an orderly shutdown of the program. The Committee is concerned that this approach will eliminate a soldier’s capability to remain in a protective posture while detecting and neutralizing threats. Therefore, the Committee directs the Program Executive Office, Combat Support and Combat Service Support [PEO CS & CSS] to investigate the potential for integration of SREHD payload modules onto the Man Transportable Robotic System Increment II [MTRS Inc II] platform or other unmanned ground vehicles for future deployment. The Committee further directs PEO CS & CSS to provide a briefing to the congressional defense committees addressing the following: capabilities and limitations of SREHD payload modules; potential for integration of SREHD payload modules onto the MTRS Inc II or other unmanned ground platform; an overview of requirements for this capability; a breakout of similar capabilities being developed or procured within the Army; and a plan to resource integration efforts, if no such capabilities exist.

Advanced Medium Mobile Power Sources.—The Committee is pleased with the Department’s Mobile Electric Power program that aims to provide standardized and modern tactical electric power across the military services. The Committee further notes that a subcomponent of this effort, the Advanced Medium Mobile Power Sources [AMMPS] program, consisting of 30kW and 60kW trailer-mounted generators, includes a microgrid capability that allows up to six generators to automatically start and stop, matching load demand. This capability increases reliability and fuel-efficiency, thereby lowering operating costs. While the Committee is pleased with the overall approach of the Department, the Committee is concerned with the Department of the Army’s significant reduction to the AMMPS program in the fiscal year 2020 President’s budget request, attributable to the Army’s top-down reallocation effort to resource Army priorities under the purview of Army Futures Command and supporting Cross-Functional Teams. Therefore, the Committee recommends an additional \$52,474,000 for the AMMPS program and encourages each of the Service Secretaries to invest in

capabilities that improve fuel-efficiency or reduce the logistical burden of the operating forces.

Mine Resistant Ambush Protected Fleet.—The Committee supports the continued sustainment and modernization of the Army’s Mine Resistant Ambush Protected [MRAP] fleet and encourages the Secretary of the Army to continue investments in the MRAP fleet, as long as soldiers operate in environments where mines and improvised explosive devices are prevalent.

Advanced Manufacturing Center of Excellence.—Pursuant to section 229 of the National Defense Authorization Act for Fiscal Year 2019 (Public Law 115–232), the Under Secretary of Defense for Acquisition and Sustainment and the Under Secretary of Defense for Research and Engineering, in coordination with the Service Secretaries, were directed to establish advanced manufacturing activities within each military service. The Committee remains supportive of these endeavors and recognizes the Army for establishing a Center of Excellence for Advanced and Additive Manufacturing at the Rock Island Arsenal—Joint Manufacturing and Technology Center. Therefore, the Committee encourages the Service Secretaries to allocate the appropriate resources to sustain these initiatives throughout the next Future Years Defense Program.

AIRCRAFT PROCUREMENT, NAVY

Appropriations, 2019	\$20,092,199,000
Budget estimate, 2020	18,522,204,000
Committee recommendation	18,573,560,000

The Committee recommends an appropriation of \$18,573,560,000. This is \$51,356,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
AIRCRAFT PROCUREMENT, NAVY							
1	COMBAT AIRCRAFT						
2	F/A-18E/F (FIGHTER) HORNET [MYP]	24	1,748,934	24	1,721,134		- 27,800
3	F/A-18E/F (FIGHTER) HORNET [MYP] (AP)		55,128		55,128		
4	JOINT STRIKE FIGHTER CV	20	2,272,301	20	2,210,051		- 62,250
5	JOINT STRIKE FIGHTER CV [AP-CY]		339,053		339,053		
6	JSF STOVL	10	1,342,035	16	1,805,335	+ 6	+ 463,500
7	JSF STOVL [AP-CY]		291,804		177,558		- 114,246
8	CH-53K (HEAVY LIFT)	6	807,876	6	807,876		
9	CH-53K (HEAVY LIFT) [AP-CY]		215,014		215,014		
10	V-22 (MEDIUM LIFT)	10	966,666	10	966,666		
11	V-22 (MEDIUM LIFT) [AP-CY]		27,104		27,104		
12	UH-1YAH-1Z		62,003		62,003		
13	MH-60R		894		894		
14	P-8A POSEIDON	6	1,206,701	6	1,139,401		- 67,300
15	E-2D ADV HAWKEYE	4	744,484	4	727,184		- 17,300
16	E-2D ADV HAWKEYE [AP-CY]		190,204		190,204		
17	TOTAL, COMBAT AIRCRAFT		10,270,201		10,444,805		+ 174,604
18	TRAINER AIRCRAFT						
19	ADVANCED HELICOPTER TRAINING SYSTEM	32	261,160	32	261,160		
20	TOTAL, TRAINER AIRCRAFT		261,160		261,160		
OTHER AIRCRAFT							
21	KC-130J	3	240,840	3	240,840		
22	KC-130J [AP-CY]		66,061		66,061		
23	F-5	22	39,676	22	39,676		
24	MQ-4 TRITON	2	473,134	2	460,634		- 12,500
25	MQ-4 TRITON [AP-CY]		20,139		20,139		
26	MQ-8 UAV		44,957		44,957		
27	STUASLO UAV		43,819		43,819		
28	TOTAL, OTHER AIRCRAFT		848,585		848,585		
29	TOTAL, AIRCRAFT		11,118,786		11,293,390	+ 1	+ 14,300

28	VH-92A EXECUTIVE HELO	6	658,067	6	624,967	- 33,100
	TOTAL, OTHER AIRCRAFT		1,586,693		1,555,393	- 31,300
	MODIFICATION OF AIRCRAFT					
29	AEA SYSTEMS		44,470		44,470	
30	AV-8 SERIES		39,472		39,472	
31	ADVERSARY		3,415		3,415	
32	F-18 SERIES		1,207,089		1,139,670	- 67,419
33	H-53 SERIES		68,385		68,385	
34	MH-60 SERIES		149,797		147,297	- 2,500
35	H-1 SERIES		114,059		107,309	- 6,750
36	EP-3 SERIES		8,655		8,655	
38	E-2 SERIES		117,059		117,059	
39	TRAINER A/C SERIES		5,616		5,616	
40	C-2A		15,747		13,747	- 2,000
41	C-130 SERIES		122,671		85,266	- 37,405
42	FEWSG		509		509	
43	CARGO/TRANSPORT A/C SERIES		8,767		8,767	
44	E-6 SERIES		169,827		166,527	- 3,300
45	EXECUTIVE HELICOPTERS SERIES		8,933		8,933	
47	T-45 SERIES		186,022		171,722	- 14,300
48	POWER PLANT CHANGES		16,136		16,136	
49	JPATS SERIES		21,824		21,824	
50	AVIATION LIFE SUPPORT MODS		39,762		39,762	
51	COMMON ECM EQUIPMENT		162,839		159,539	- 3,300
52	COMMON AVIONICS CHANGES		102,107		102,107	
53	COMMON DEFENSIVE WEAPON SYSTEM		2,100		2,100	
54	ID SYSTEMS		41,437		41,437	
55	P-8 SERIES		107,539		74,610	- 32,929
56	MAGTF EW FOR AVIATION		26,536		26,536	
57	MQ-8 SERIES		34,686		34,686	
58	V-22 (TILT/ROTOR ACFT) OSPREY		325,367		325,367	
59	NEXT GENERATION JAMMER (NGJ)		6,223		6,223	
60	F-35 STOVL SERIES		65,385		61,585	- 4,000
61	F-35 CV SERIES		15,358		13,358	- 2,000
62	QUICK REACTION CAPABILITY (QRC)		165,016		165,016	
63	MQ-4 SERIES		27,994		27,994	
64	RQ-21 SERIES		66,282		61,032	- 5,250
	TOTAL, MODIFICATION OF AIRCRAFT		3,497,284		3,309,908	- 187,376

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
67	AIRCRAFT SPARES AND REPAIR PARTS		2,166,788		2,263,108		+ 96,320
	SPARES AND REPAIR PARTS						
	AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES						
68	COMMON GROUND EQUIPMENT		491,025		491,025		
69	AIRCRAFT INDUSTRIAL FACILITIES		71,335		71,335		
70	WAR CONSUMABLES		41,086		41,086		
72	SPECIAL SUPPORT EQUIPMENT		135,740		135,740		
73	FIRST DESTINATION TRANSPORTATION		892		892		- 892
	TOTAL, AIRCRAFT SUPPORT EQUIPMENT & FACILITIES		740,078		739,186		- 892
	TOTAL, AIRCRAFT PROCUREMENT, NAVY		18,522,204		18,573,560		+ 51,356

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	F/A-18E/F (Fighter) Hornet	1,748,934	1,721,134	- 27,800
	Restoring acquisition accountability: Contract award savings			- 27,800
3	Joint Strike Fighter CV	2,272,301	2,210,051	- 62,250
	Program increase: Alternate sourcing requirements			+ 2,750
	Restoring acquisition accountability: Unit cost savings			- 55,000
	Restoring acquisition accountability: Other corporate ops carryover			- 10,000
5	JSF STOVL	1,342,035	1,805,535	+ 463,500
	Program increase: Six aircraft			+ 747,150
	Program increase: Alternate sourcing requirements			+ 39,350
	Restoring acquisition accountability: Unit cost savings			- 43,000
	Restoring acquisition accountability: Other corporate ops carryover			- 10,000
	Restoring acquisition accountability: Excess support costs			- 270,000
6	JSF STOVL—AP	291,804	177,558	- 114,246
	Maintain program affordability: Excess advance procurement			- 114,246
14	P-8A Poseidon	1,206,701	1,139,401	- 67,300
	Maintain program affordability: Excess production engineering support given sustained production line			- 27,900
	Maintain program affordability: Excess other integrated logistics support given sustained production line			- 39,400
16	E-2D Adv Hawkeye	744,484	727,184	- 17,300
	Restoring acquisition accountability: Anticipated unit cost contract award savings			- 5,000
	Maintain program affordability: Unjustified growth in peculiar ground support equipment			- 12,300
23	MQ-4 Triton	473,134	460,634	- 12,500
	Maintain program affordability: Unjustified unit cost growth			- 12,500
27	Other Support Aircraft		14,300	+ 14,300
	Program increase: Additional UC-12W for USMC			+ 14,300
28	VH-92A Executive Helo	658,067	624,967	- 33,100
	Maintain program affordability: Unjustified request for airframe and contractor funded equipment			- 19,000
	Maintain program affordability: Excess support costs			- 14,100
32	F-18 Series	1,207,089	1,139,670	- 67,419
	Restoring acquisition accountability: IRST modifications early to need			- 67,419
34	MH-60 Series	149,797	147,297	- 2,500
	Maintain program affordability: MC/FMC B kits excess to need			- 2,500
35	H-1 Series	114,059	107,309	- 6,750
	Maintain program affordability: Unjustified growth (OSIP 013-14)			- 6,750
40	C-2A	15,747	13,747	- 2,000
	Maintain program affordability: ARC-210 radio program cancellation			- 2,000
41	C-130 Series	122,671	85,266	- 37,405
	Restoring acquisition accountability: Block 8.1 upgrade program delay (OSIP 019-14)			- 37,405
44	E-6 Series	169,827	166,527	- 3,300
	Maintain program affordability: Unjustified growth in training (OSIP 013-10)			- 3,300
47	T-45 Series	186,022	171,722	- 14,300
	Maintain program affordability: Prior year carryover			- 14,300
51	Common ECM Equipment	162,839	159,539	- 3,300

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Maintain program affordability: Install Equip AN/APR-39 MV-22 unit cost growth			- 3,300
55	P-8 Series	107,539	74,610	- 32,929
	Restoring acquisition accountability: Increment 3 ECP 6 early to need			- 32,929
59	Next Generation Jammer [NGJ]	6,223		- 6,223
	Restoring acquisition accountability: Procurement early to need			- 6,223
60	F-35 STOVL Series	65,585	61,585	- 4,000
	Restoring acquisition accountability: Block 4 upgrade funding ahead of need			- 4,000
61	F-35 CV Series	15,358	13,358	- 2,000
	Restoring acquisition accountability: Block 4 upgrade funding ahead of need			- 2,000
64	RQ-21 Series	66,282	61,032	- 5,250
	Maintain program affordability: Unjustified growth in B kits (OSIP 004-20)			- 5,250
67	Spares and Repair Parts	2,166,788	2,263,108	+ 96,320
	Program increase: F/A-18E/F engine spares			+ 52,000
	Program increase: F-35B spares			+ 44,820
	Program increase: F-35B engine spare			+ 28,800
	Maintain program affordability: CH-53K spares excess growth			- 29,300
73	First Destination Transportation	892		- 892
	Maintain program affordability: Prior year carryover			- 892

WEAPONS PROCUREMENT, NAVY

Appropriations, 2019	\$3,711,576,000
Budget estimate, 2020	
Committee recommendation	3,963,067,000

The Committee recommends an appropriation of \$3,963,067,000. This is \$3,963,067,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	WEAPONS PROCUREMENT, NAVY						
	BALLISTIC MISSILES						
	MODIFICATION OF MISSILES						
1	TRIDENT II MODS				1,177,251		+ 1,177,251
2	SUPPORT EQUIPMENT AND FACILITIES				7,142		+ 7,142
	MISSILE INDUSTRIAL FACILITIES						
	TOTAL, BALLISTIC MISSILES				1,184,393		+ 1,184,393
	OTHER MISSILES						
	STRATEGIC MISSILES						
3	TOMAHAWK			90	355,556	+ 90	+ 355,556
	TACTICAL MISSILES						
4	AMIRAM				211,827	+ 169	+ 211,827
5	SIDEWINDER			169	115,473	+ 292	+ 115,473
7	STANDARD MISSILE			125	404,523	+ 125	+ 404,523
8	STANDARD MISSILE (AP-CY)				96,085		+ 96,085
9	SMALL DIAMETER BOMB II			750	108,452	+ 750	+ 108,452
10	RAM			120	106,765	+ 120	+ 106,765
12	HELLFIRE			29	1,525	+ 29	+ 1,525
15	AERIAL TARGETS				145,880		+ 145,880
17	OTHER MISSILE SUPPORT				3,388		+ 3,388
18	LRASM			24	72,544	+ 24	+ 72,544
19	LCS 0TH MISSILE			18	38,137	+ 18	+ 38,137
	MODIFICATION OF MISSILES						
20	ESSM				110,059	+ 60	+ 110,059
21	HARPOON MODS			60	25,447		+ 25,447
22	HARM MODS				183,740		+ 183,740
23	STANDARD MISSILES MODS				2,500		+ 2,500
	SUPPORT EQUIPMENT AND FACILITIES						
24	WEAPONS INDUSTRIAL FACILITIES				12,006		+ 12,006

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
25	FLEET SATELLITE COMM FOLLOW-ON				67,380		+ 67,380
	ORDNANCE SUPPORT EQUIPMENT						
27	ORDNANCE SUPPORT EQUIPMENT				42,027		+ 42,027
	TOTAL, OTHER MISSILES				2,103,314		+ 2,103,314
	TORPEDOES AND RELATED EQUIPMENT						
	TORPEDOES AND RELATED EQUIP						
28	SSTD				5,561		+ 5,561
29	MK-48 TORPEDO			71	130,000		+ 130,000
30	ASW TARGETS				15,095		+ 15,095
	MOD OF TORPEDOES AND RELATED EQUIP						
31	MK-54 TORPEDO MODS				103,860		+ 103,860
32	MK-48 TORPEDO ADCAP MODS				39,508		+ 39,508
33	QUICKSTRIKE MINE				5,183		+ 5,183
	SUPPORT EQUIPMENT						
34	TORPEDO SUPPORT EQUIPMENT				68,225		+ 68,225
35	ASW RANGE SUPPORT				3,890		+ 3,890
	DESTINATION TRANSPORTATION						
36	FIRST DESTINATION TRANSPORTATION				3,803		+ 3,803
	TOTAL, TORPEDOES AND RELATED EQUIPMENT				375,125		+ 375,125
	OTHER WEAPONS						
	GUNS AND GUN MOUNTS						
37	SMALL ARMS AND WEAPONS				13,607		+ 13,607
	MODIFICATION OF GUNS AND GUN MOUNTS						
38	CWS MODS				44,126		+ 44,126
39	COAST GUARD WEAPONS				43,927		+ 43,927
40	GUN MOUNT MODS				62,579		+ 62,579
41	LCS MODULE WEAPONS			90	10,998		+ 10,998

43	AIRBORNE MINE NEUTRALIZATION SYSTEMS .....	.....	.....	.....	.....	.....	7,160	.....	+ 7,160
	TOTAL, OTHER WEAPONS .....	.....	.....	.....	.....	.....	182,397	.....	+ 182,397
45	SPARES AND REPAIR PARTS .....	.....	.....	.....	.....	.....	117,838	.....	+ 117,838
	TOTAL, WEAPONS PROCUREMENT, NAVY .....	.....	.....	.....	.....	.....	3,963,067	.....	+ 3,963,067

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Trident II Mods		1,177,251	+ 1,177,251
	Transfer: From Title IX to Title III for base requirements			+ 1,177,251
2	Missile Industrial Facilities		7,142	+ 7,142
	Transfer: From Title IX to Title III for base requirements			+ 7,142
3	Tomahawk		355,556	+ 355,556
	Transfer: From Title IX to Title III for base requirements			+ 386,730
	Restoring acquisition accountability: Support equipment requirements previously funded			- 13,380
	Restoring acquisition accountability: NAV/COMMs kits early to need			- 8,370
	Restoring acquisition accountability: Recertifications early to need			- 9,424
4	AMRAAM		211,827	+ 211,827
	Transfer: From Title IX to Title III for base requirements			+ 224,502
	Restoring acquisition accountability: AUR unit cost growth			- 12,675
5	Sidewinder		115,473	+ 115,473
	Transfer: From Title IX to Title III for base requirements			+ 119,456
	Restoring acquisition accountability: AUR unit cost growth			- 3,983
7	Standard Missile		404,523	+ 404,523
	Transfer: From Title IX to Title III for base requirements			+ 404,523
8	Standard Missile (AP)		96,085	+ 96,085
	Transfer: From Title IX to Title III for base requirements			+ 96,085
9	Small Diameter Bomb II		108,452	+ 108,452
	Transfer: From Title IX to Title III for base requirements			+ 118,466
	Restoring acquisition accountability: AUR unit cost growth			- 10,014
10	Ram		106,765	+ 106,765
	Transfer: From Title IX to Title III for base requirements			+ 106,765
12	Hellfire		1,525	+ 1,525
	Transfer: From Title IX to Title III for base requirements			+ 1,525
15	Aerial Targets		145,880	+ 145,880
	Transfer: From Title IX to Title III for base requirements			+ 145,880
16	Drones And Decoys			+ 20,000
	Transfer: From Title IX to Title III for base requirements			+ 20,000
	Restoring acquisition accountability: Accelerated acquisition strategy			- 20,000
17	Other Missile Support		3,388	+ 3,388
	Transfer: From Title IX to Title III for base requirements			+ 3,388
18	LRASM		72,544	+ 72,544
	Transfer: From Title IX to Title III for base requirements			+ 143,200
	Restoring acquisition accountability: Contract delay			- 70,656
19	LCS OTH Missile		38,137	+ 38,137
	Transfer: From Title IX to Title III for base requirements			+ 38,137
20	ESSM		110,059	+ 110,059
	Transfer: From Title IX to Title III for base requirements			+ 128,059
	Restoring acquisition accountability: AUR unit cost adjustment			- 18,000
21	Harpoon Mods		25,447	+ 25,447
	Transfer: From Title IX to Title III for base requirements			+ 25,447
22	Harm Mods		183,740	+ 183,740
	Transfer: From Title IX to Title III for base requirements			+ 183,740
23	Standard Missiles Mods		2,500	+ 2,500
	Transfer: From Title IX to Title III for base requirements			+ 22,500
	Maintain program affordability: Unjustified component improvement request			- 20,000
24	Weapons Industrial Facilities		12,006	+ 12,006
	Transfer: From Title IX to Title III for base requirements			+ 1,958

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: NIROP facilitization			+ 10,048
25	Fleet Satellite Comm Follow-On		67,380	+ 67,380
	Transfer: From Title IX to Title III for base requirements			+ 67,380
27	Ordnance Support Equipment		42,027	+ 42,027
	Transfer: From Title IX to Title III for base requirements			+ 109,427
	Classified adjustment			- 67,400
28	SSTD		5,561	+ 5,561
	Transfer: From Title IX to Title III for base requirements			+ 5,561
29	MK-48 Torpedo		130,000	+ 130,000
	Transfer: From Title IX to Title III for base requirements			+ 114,000
	Program increase: Additional munitions			+ 16,000
30	ASW Targets		15,095	+ 15,095
	Transfer: From Title IX to Title III for base requirements			+ 15,095
31	MK-54 Torpedo Mods		103,860	+ 103,860
	Transfer: From Title IX to Title III for base requirements			+ 119,453
	Restoring acquisition accountability: HAAWC unit cost growth			- 15,593
32	MK-48 Torpedo ADCAP Mods		39,508	+ 39,508
	Transfer: From Title IX to Title III for base requirements			+ 39,508
33	Quickstrike Mine		5,183	+ 5,183
	Transfer: From Title IX to Title III for base requirements			+ 5,183
34	Torpedo Support Equipment		68,225	+ 68,225
	Transfer: From Title IX to Title III for base requirements			+ 79,028
	Improving funds management: Prior year carryover			- 10,803
35	ASW Range Support		3,890	+ 3,890
	Transfer: From Title IX to Title III for base requirements			+ 3,890
36	First Destination Transportation		3,803	+ 3,803
	Transfer: From Title IX to Title III for base requirements			+ 3,803
37	Small Arms and Weapons		13,607	+ 13,607
	Transfer: From Title IX to Title III for base requirements			+ 14,797
	Restoring acquisition accountability: CSASS previously funded			- 1,190
38	CIWS Mods		44,126	+ 44,126
	Transfer: From Title IX to Title III for base requirements			+ 44,126
39	Coast Guard Weapons		43,927	+ 43,927
	Transfer: From Title IX to Title III for base requirements			+ 44,980
	Maintain program affordability: Unjustified ILS growth			- 1,053
40	Gun Mount Mods		62,579	+ 62,579
	Transfer: From Title IX to Title III for base requirements			+ 66,376
	Maintain program affordability: Unjustified growth—Medium caliber gun mounts			- 1,127
	Maintain program affordability: Unjustified growth—MK 38			- 2,670
41	LCS Module Weapons		10,998	+ 10,998
	Transfer: From Title IX to Title III for base requirements			+ 14,585
	Improving funds management: AURs early to need			- 3,587
43	Airborne Mine Neutralization Systems		7,160	+ 7,160
	Transfer: From Title IX to Title III for base requirements			+ 7,160
45	Spares and Repair Parts		117,838	+ 117,838
	Transfer: From Title IX to Title II for base requirements			+ 126,138
	Improving funds management: Prior year carryover			- 8,300

PROCUREMENT OF AMMUNITION, NAVY AND MARINE CORPS

Appropriations, 2019	\$952,682,000
Budget estimate, 2020	
Committee recommendation	872,251,000

The Committee recommends an appropriation of \$872,251,000. This is \$872,251,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	PROC AMMO, NAVY						
	NAVY AMMUNITION						
1	GENERAL PURPOSE BOMBS				34,997		+ 34,997
2	JDM			2,844	70,413		+ 70,413
3	AIRBORNE ROCKETS, ALL TYPES				27,684		+ 27,684
4	MACHINE GUN AMMUNITION				4,793		+ 4,793
5	PRACTICE BOMBS				34,708		+ 34,708
6	CARTRIDGES & CART ACTUATED DEVICES				45,738		+ 45,738
7	AIR EXPENDABLE COUNTERMEASURES				77,301		+ 77,301
8	JATOS				7,262		+ 7,262
9	5 INCH/54 GUN AMMUNITION				19,161		+ 19,161
10	INTERMEDIATE CALIBER GUN AMMUNITION				37,193		+ 37,193
11	OTHER SHIP GUN AMMUNITION				39,291		+ 39,291
12	SMALL ARMS & LANDING PARTY AMMO				47,896		+ 47,896
13	PYROTECHNIC AND DEMOLITION				10,621		+ 10,621
15	AMMUNITION LESS THAN \$5 MILLION				2,386		+ 2,386
	TOTAL, PROC AMMO, NAVY				459,444		+ 459,444
	PROC AMMO, MARINE CORPS						
	MARINE CORPS AMMUNITION						
16	MORTARS				55,543		+ 55,543
17	DIRECT SUPPORT MUNITIONS				61,906		+ 61,906
18	INFANTRY WEAPONS AMMUNITION				52,088		+ 52,088
19	COMBAT SUPPORT MUNITIONS				40,048		+ 40,048
20	AMMO MODERNIZATION				14,325		+ 14,325
21	ARTILLERY MUNITIONS				184,376		+ 184,376
22	ITEMS LESS THAN \$5 MILLION				4,521		+ 4,521
	TOTAL, PROC AMMO, MARINE CORPS				412,807		+ 412,807
	TOTAL, PROCUREMENT OF AMMO, NAVY & MARINE CORPS				872,251		+ 872,251

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	General Purpose Bombs		34,997	+ 34,997
	Transfer: From Title IX to Title III for base requirements			+ 36,028
	Restoring acquisition accountability: Q2192 BLU-110 unit cost growth			- 1,031
2	JDAM		70,413	+ 70,413
	Transfer: From Title IX to Title III for base requirements			+ 70,413
3	Airborne Rockets, All Types		27,684	+ 27,684
	Transfer: From Title IX to Title III for base requirements			+ 31,756
	Restoring acquisition accountability: MK 66 unit cost growth			- 4,072
4	Machine Gun Ammunition		4,793	+ 4,793
	Transfer: From Title IX to Title III for base requirements			+ 4,793
5	Practice Bombs		34,708	+ 34,708
	Transfer: From Title IX to Title III for base requirements			+ 34,708
6	Cartridges & Cart Actuated Devices		45,738	+ 45,738
	Transfer: From Title IX to Title III for base requirements			+ 45,738
7	Air Expendable Countermeasures		77,301	+ 77,301
	Transfer: From Title IX to Title III for base requirements			+ 77,301
8	JATOS		7,262	+ 7,262
	Transfer: From Title IX to Title III for base requirements			+ 7,262
9	5 Inch/54 Gun Ammunition		19,161	+ 19,161
	Transfer: From Title IX to Title III for base requirements			+ 22,594
	Restoring acquisition accountability: MK 187 contract delay			- 3,433
10	Intermediate Caliber Gun Ammunition		37,193	+ 37,193
	Transfer: From Title IX to Title III for base requirements			+ 37,193
11	Other Ship Gun Ammunition		39,291	+ 39,291
	Transfer: From Title IX to Title III for base requirements			+ 39,491
	Restoring acquisition accountability: 20MM DUMMY contract award delay			- 200
12	Small Arms & Landing Party Ammo		47,896	+ 47,896
	Transfer: From Title IX to Title III for base requirements			+ 47,896
13	Pyrotechnic and Demolition		10,621	+ 10,621
	Transfer: From Title IX to Title III for base requirements			+ 10,621
15	Ammunition Less Than \$5 Million		2,386	+ 2,386
	Transfer: From Title IX to Title III for base requirements			+ 2,386
16	Mortars		55,543	+ 55,543
	Transfer: From Title IX to Title III for base requirements			+ 55,543
17	Direct Support Munitions		61,906	+ 61,906
	Transfer: From Title IX to Title III for base requirements			+ 131,765
	Insufficient budget justification: CZ11 Multipurpose round			- 30,053
	Insufficient budget justification: HB25 Complete Round			- 27,000
	Insufficient budget justification: HB26 Complete Round			- 12,000
	Improving Funds Management: CA30 complete round unit cost discrepancy			- 806
18	Infantry Weapons Ammunition		52,088	+ 52,088
	Transfer: From Title IX to Title III for base requirements			+ 78,056
	Improving Funds Management: Marine Corps identified excess to need			- 25,968
19	Combat Support Munitions		40,048	+ 40,048
	Transfer: From Title IX to Title III for base requirements			+ 40,048
20	Ammo Modernization		14,325	+ 14,325
	Transfer: From Title IX to Title III for base requirements			+ 14,325
21	Artillery Munitions		184,376	+ 184,376
	Transfer: From Title IX to Title III for base requirements			+ 188,876
	Restoring acquisition accountability: NA29 unit cost growth			- 2,500
	Improving Funds Management: Marine Corps identified excess to need			- 2,000
22	Items Less Than \$5 Million		4,521	+ 4,521

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Transfer: From Title IX to Title III for base requirements ....	.....	.....	+ 4,521

SHIPBUILDING AND CONVERSION, NAVY

Appropriations, 2019	\$24,150,087,000
Budget estimate, 2020	23,783,710,000
Committee recommendation	24,366,431,000

The Committee recommends an appropriation of \$24,366,431,000. This is \$582,721,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
SHIPBUILDING & CONVERSION, NAVY							
1	FLEET BALLISTIC MISSILE SHIPS						
	OHIO REPLACEMENT SUBMARINE [AP-CY]		1,698,907		1,821,907		+123,000
OTHER WARSHIPS							
2	CARRIER REPLACEMENT PROGRAM (CVN 80)		2,347,000		1,062,000		-1,285,000
XX	CARRIER REPLACEMENT PROGRAM (CVN 81)				1,174,750		+1,174,750
3	VIRGINIA CLASS SUBMARINE	3	7,155,946	2	5,355,946	-1	-1,800,000
4	VIRGINIA CLASS SUBMARINE [AP-CY]		2,769,552		2,969,552		+200,000
5	CVN REFUELING OVERHAUL	1	647,926	1	614,626		-33,300
6	CVN REFUELING OVERHAULS [AP-CY]				16,900		+16,900
7	DDG 1000		155,944		155,944		
8	DDG-51	3	5,099,295	3	5,099,295		
9	DDG-51 [AP-CY]		224,028		779,028		+555,000
11	FFG-FRIGATE	1	1,281,177	1	1,281,177		
	TOTAL, OTHER WARSHIPS		19,680,868		18,509,218		-1,171,650
AMPHIBIOUS SHIPS							
12	LPD FLIGHT II			1	747,100	+1	+747,100
13	LPD FLIGHT II (AP)		247,100				-247,100
15	LHA REPLACEMENT	1		1	650,000	+1	+650,000
17	EXPEDITIONARY FAST TRANSPORT	1		1	261,000	+1	+261,000
	TOTAL, AMPHIBIOUS SHIPS		247,100		1,658,100		+1,411,000
AUXILIARIES, CRAFT, AND PRIOR-YEAR PROGRAM COSTS							
18	TAO FLEET OILER	2	981,215	2	981,215		
19	TAO FLEET OILER [AP-CY]		73,000		73,000		
20	TOWING, SALVAGE, AND RESCUE SHIP (ATS)	2	150,282	1	88,204	-1	-62,078
22	LCU 1700	4	85,670	4	85,670		
23	OUTFITTING		754,679		714,428		-40,251
25	SERVICE CRAFT		56,289	1	81,789	+1	+25,500
28	COMPLETION OF PY SHIPBUILDING PROGRAMS		55,700		104,700		+49,000

XX	TOTAL, AUXILIARIES, CRAFT, AND PRIOR-YEAR PROGRAM	2,156,835	.....	2,129,006	.....	- 27,829
	UNMANNED SURFACE VESSELS .....	.....	.....	248,200	+ 2	+ 248,200
	TOTAL, SHIPBUILDING & CONVERSION, NAVY	23,783,710	.....	24,366,431	.....	+ 582,721

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	OHIO Replacement Submarine (AP-CY)	1,698,907	1,821,907	+ 123,000
	Program increase: Submarine industrial base expansion			+ 123,000
2	Carrier Replacement Program (CVN 80)	2,347,000	1,062,000	- 1,285,000
	Restoring acquisition accountability: Transfer CVN-81 only to line 2X			- 1,285,000
2X	Carrier Replacement Program (CVN 81)		1,174,750	+ 1,174,750
	Restoring acquisition accountability: Transfer from line 2 for CVN-81 only			+ 1,285,000
	Insufficient budget justification: Growth for non-propulsion equipment			- 110,250
3	Virginia Class Submarine	7,155,946	5,355,946	- 1,800,000
	Restoring acquisition accountability: Transfer from SSN-812 to SSN-804 and SSN-805 full funding with Virginia Payload Modules per revised multi-year procurement contract cost estimate			- 3,100,000
	Restoring acquisition accountability: Transfer from SSN-812 to Research and Development, Navy, line 132 for SSN-812 design risk reduction			- 100,000
	Improving funds management: Transfer from SSN-812 to SSN-804 and SSN-805 per revised multi-year procurement contract cost estimate, including Virginia Payload Modules			+ 1,400,000
4	Virginia Class Submarine (AP-CY)	2,769,552	2,969,552	+ 200,000
	Restoring acquisition accountability: Transfer from SSN-812 to Advance Procurement in support of 10th multi-year procurement contract option ship only			+ 200,000
5	CVN Refueling Overhauls	647,926	614,626	- 33,300
	Transfer to line 6 only for CVN 75 RCOH			- 16,900
	Restoring acquisition accountability: Temporary systems unjustified request			- 16,400
6	CVN Refueling Overhauls (AP-CY)		16,900	+ 16,900
	Transfer from line 5 only for CVN 75 RCOH			+ 16,900
9	DDG-51 (AP-CY)	224,028	779,028	+ 555,000
	Program increase: Long lead time material for fiscal year 2021 DDG 51 Flight III ships			+ 390,000
	Program increase: Surface combatant supplier base			+ 130,000
	Program increase: Hybrid electric drive			+ 35,000
12	LPD Flight II		747,100	+ 747,100
	Improving funds management: Transfer from line 13 for LPD 31			+ 247,100
	Program increase: LPD 31			+ 500,000
13	LPD Flight II (AP-CY)	247,100		- 247,100
	Improving funds management: Transfer to line 12 for LPD 31			- 247,100
15	LHA Replacement		650,000	+ 650,000
	Program increase: LHA 9			+ 650,000
17	Expeditionary Fast Transport [EPF]		261,000	+ 261,000
	Program increase: Additional ship			+ 261,000
20	Towing, Salvage, and Rescue Ship (ATS)	150,282	88,204	- 62,078
	Restoring acquisition accountability: Contract award delays			- 62,078
23	Outfitting	754,679	714,428	- 40,251
	Restoring acquisition accountability: CVN 79 outfitting early to need			- 37,539
	Restoring acquisition accountability: T-AO outfitting early to need			- 2,712
25	Service Craft	56,289	81,789	+ 25,500
	Program increase: Accelerate YP-703 Flight II			+ 25,500
28	Completion of PY Shipbuilding Programs	55,700	104,700	+ 49,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
XX	Program increase: EPF-14 Expeditionary Medical Transport conversion .....	.....	.....	+ 49,000
	Unmanned Surface Vesels .....	.....	248,200	+ 248,200
	Transfer from RDN, line 34 to Unmanned Surface Vesels .....	.....	.....	+ 209,200
	Transfer from RDN, line 34 to Unmanned Surface Vesels C4 LLTM only .....	.....	.....	+ 39,000

Congressional Reporting on Submarine Construction Programs.—Consistent with direction accompanying the Department of Defense Appropriations Act, 2016, the Assistant Secretary of the Navy (Research, Development and Acquisition) submits to the congressional defense committees quarterly reports describing actions the Navy is taking to minimize costs on the Virginia Payload Module [VPM] program. Additionally, the Program Executive Officer, Submarines provides quarterly construction metrics on the *Columbia* Class Submarine, *Virginia* Class Submarine and VPM programs. The Committee directs the Assistant Secretary of the Navy (Research, Development and Acquisition) to consolidate and update these reporting requirements in accordance with congressional guidance regarding key metrics for these programs beginning in the second quarter, fiscal year 2020.

CVN 80 and CVN 81 Budget Justification Materials.—The fiscal year 2020 President’s budget request includes \$2,347,000,000 for the incrementally funded procurement of CVN 80 and CVN 81 in accordance with contract authorities provided by the Congress and implemented by the Department of Defense in fiscal year 2019. The Committee notes that the Navy did not update its congressional budget justification or briefing materials in support of this acquisition and strategy, which has fiscal implications well into the 2030s. The Committee finds this unsatisfactory and directs the Assistant Secretary of the Navy (Financial Management and Comptroller) to provide not later than 30 days after enactment of this Act, proposals for updated CVN 78 Class congressional budget justification documents to the congressional defense committees in support of future budget submissions, to be implemented with the fiscal year 2021 President’s budget request.

Virginia Class Submarine.—The fiscal year 2020 President’s budget request includes \$9,925,498,000 for the procurement of *Virginia* Class Submarines [VCS] under multi-year procurement authority for Block V VCS provided by the Congress in fiscal years 2018 and 2019. The Committee notes that conditions for multi-year procurement authority include stable requirements, funding availability and stability, design stability, as well as realistic cost estimates. The Committee further notes that with submission of the fiscal year 2020 President’s budget request, the Navy violated several of these tenets, in particular with respect to program requirements and funding stability, thus needlessly introducing uncertainty to the Navy’s acquisition enterprise and the submarine industrial base. Following extensive discussions with the Navy and the industrial base team, the Committee understands that challenges in the execution of the current Block IV VCS multi-year pro-

curement contract as well as updated estimates for labor hours required for the construction and delivery of 10 Block V VCS with 9 Virginia Payload Modules from fiscal years 2019 to 2023 require adjustments to the fiscal year 2020 budget request for VCS.

The Committee retains its strong support for VCS, long considered a successful shipbuilding program after overcoming earlier challenges. Further, the Committee is aware of the industrial base synergies between the VCS and *Columbia* Class Submarine [CLB] programs and is strongly concerned about any negative perturbations the VCS could have on the CLB program. Therefore, informed by discussions with the Navy and the shipbuilder, the Committee recommends several adjustments to the fiscal year 2020 budget request for VCS in support of a 10-VCS multi-year procurement contract, as delineated in the table of Committee Recommended Adjustments accompanying this section. This includes a recommendation of \$100,000,000 in Research, Development, Test and Evaluation, Navy for design risk reduction of SSN-812; as well as an additional \$200,000,000 in advance procurement for a 10th VCS with VPM, per the agreement between the Navy and the shipbuilder. The Assistant Secretary of the Navy (Research, Development and Acquisition) is directed to provide to the congressional defense committees an updated acquisition strategy for VCS Block V and SSN-812 no less than 30 days prior to the obligation and expenditure of those funds.

LPD Flight II.—The fiscal year 2020 President’s budget request includes \$247,100,000 for advance procurement [AP] of LPD 31. The Committee notes that \$350,000,000 was appropriated in AP for this ship in fiscal year 2019, but the Navy delayed the procurement of LPD 31 and has not obligated or expended these funds. Therefore, the Committee recommends adjusting previously appropriated AP in accordance with the Navy’s requirements and recommends \$747,100,000 for LPD 31 in fiscal year 2020.

OTHER PROCUREMENT, NAVY

Appropriations, 2019	\$9,097,138,000
Budget estimate, 2020	9,652,956,000
Committee recommendation	10,568,201,000

The Committee recommends an appropriation of \$10,568,201,000. This is \$915,245,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	OTHER PROCUREMENT, NAVY						
	SHIPS SUPPORT EQUIPMENT						
	SHIP PROPULSION EQUIPMENT						
1	SURFACE POWER EQUIPMENT		14,490		14,490		
	GENERATORS						
2	SURFACE COMBATANT HM&E		31,583		31,561		-22
	NAVIGATION EQUIPMENT						
3	OTHER NAVIGATION EQUIPMENT		77,404		77,404		
	PERISCOPES						
4	SUB PERISCOPES AND IMAGING SUPPORT EQUIPMENT PROGRAM		160,803		160,803		
	OTHER SHIPBOARD EQUIPMENT						
5	DDG MOD		566,140		561,140		-5,000
6	FIREFIGHTING EQUIPMENT		18,223		18,223		
7	COMMAND AND CONTROL SWITCHBOARD		2,086		2,086		
8	LHA/LHD MIDLIFE		95,651		95,651		
9	POLLUTION CONTROL EQUIPMENT		23,910		23,910		
10	SUBMARINE SUPPORT EQUIPMENT		44,895		44,895		
11	VIRGINIA CLASS SUPPORT EQUIPMENT		28,465		28,465		
12	LCS CLASS SUPPORT EQUIPMENT		19,426		19,426		
13	SUBMARINE BATTERIES		26,290		24,590		-1,700
14	LPD CLASS SUPPORT EQUIPMENT		46,945		46,945		
15	DDG-1000 SUPPORT EQUIPMENT		9,930		8,530		-1,400
16	STRATEGIC PLATFORM SUPPORT EQUIP		14,331		14,331		
17	DSSP EQUIPMENT		2,909		2,909		
18	CRUISER MODERNIZATION		193,990		193,990		
19	LCAC		3,392		3,392		
20	UNDERWATER EOD PROGRAMS		71,240		71,240		
21	ITEMS LESS THAN \$5 MILLION		102,543		102,543		
22	CHEMICAL WARFARE DETECTORS		2,961		2,961		
23	SUBMARINE LIFE SUPPORT SYSTEM		6,635		6,635		
	X SHIP MAINTENANCE, REPAIR AND MODERNIZATION				1,200,000		+1,200,000

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
24	REACTOR PLANT EQUIPMENT		5,340		5,340		
25	REACTOR POWER UNITS		465,726		462,749		-2,977
26	OCEAN ENGINEERING		11,854		11,854		
27	DIVING AND SALVAGE EQUIPMENT		79,102		79,102		
	SMALL BOATS						
	STANDARD BOATS		79,102		79,102		
28	PRODUCTION FACILITIES EQUIPMENT		202,238		202,238		
	OPERATING FORCES IPE						
	OTHER SHIP SUPPORT						
29	LCS COMMON MISSION MODULES EQUIPMENT		51,553		51,553		
30	LCS MCM MISSION MODULES		197,129		134,157		-62,972
31	LCS ASW MISSION MODULES		27,754		27,754		
32	LCS SUW MISSION MODULES		26,566		26,566		
33	LCS IN-SERVICE MODERNIZATION		84,972		82,000		-2,972
	LOGISTICS SUPPORT						
34	SMALL & MEDIUM UUV		40,547		39,047		-1,500
35	LSD MIDLIFE AND MODERNIZATION		40,269		40,269		
	SUBTOTAL		40,269		40,269		
	TOTAL, SHIPS SUPPORT EQUIPMENT		2,797,292		3,918,749		+1,121,457
	COMMUNICATIONS AND ELECTRONICS EQUIPMENT						
36	SHIP SONARS						
	SPQ-9B RADAR		26,195		26,195		
37	AN/SQQ-89 SURF ASW COMBAT SYSTEM		125,237		125,237		
38	SSN ACOUSTICS EQUIPMENT		366,968		378,968		+12,000
39	UNDERSEA WARFARE SUPPORT EQUIPMENT		8,967		8,967		
	ASW ELECTRONIC EQUIPMENT						
40	SUBMARINE ACOUSTIC WARFARE SYSTEM		23,545		23,545		

41	SSID	12,439	12,439	12,439	12,439
42	FIXED SURVEILLANCE SYSTEM	128,441	128,441	128,441	128,441
43	SURTASS	21,923	21,923	21,923	21,923
	ELECTRONIC WARFARE EQUIPMENT				
44	AWSLQ-32	420,154	420,154	346,544	-73,610
	RECONNAISSANCE EQUIPMENT				
45	SHIPBOARD IW EXPLOIT	194,758	194,758	188,486	-6,272
46	AUTOMATED IDENTIFICATION SYSTEM (AIS)	5,368	5,368	5,368	
	OTHER SHIP ELECTRONIC EQUIPMENT				
47	COOPERATIVE ENGAGEMENT CAPABILITY	35,128	35,128	35,128	
48	NAVAL TACTICAL COMMAND SUPPORT SYSTEM (NTCSS)	15,154	15,154	15,154	
49	ATDLS	52,753	52,753	52,753	
50	NAVY COMMAND AND CONTROL SYSTEM (NCCS)	3,390	3,390	3,390	
51	MINESWEEPING SYSTEM REPLACEMENT	19,448	19,448	19,448	
52	SHALLOW WATER MCM	8,730	8,730	8,730	
53	NAVSTAR GPS RECEIVERS (SPACE)	32,674	32,674	23,294	-9,380
54	ARMED FORCES RADIO AND TV	2,617	2,617	2,617	
55	STRATEGIC PLATFORM SUPPORT EQUIP	7,973	7,973	7,973	
	AVIATION ELECTRONIC EQUIPMENT				
56	ASHORE ATC EQUIPMENT	72,406	72,406	72,406	
57	AFLAOT ATC EQUIPMENT	67,410	64,910	64,910	-2,500
58	ID SYSTEMS	26,059	26,059	26,059	
59	JOINT PRECISION APPROACH AND LANDING SYSTEM	92,695	78,195	78,195	-14,500
60	NAVAL MISSION PLANNING SYSTEMS	15,296	15,296	15,296	
	OTHER SHORE ELECTRONIC EQUIPMENT				
61	TACTICAL/MOBILE C4I SYSTEMS	36,226	36,226	36,226	
62	DOGS-N	21,788	19,038	19,038	-2,750
63	CANES	426,654	395,154	395,154	-31,500
64	RADIAC	6,450	6,450	6,450	
65	CANES-INTELL	52,713	52,713	52,713	
66	GPETE	13,028	13,028	13,028	
67	MASF	5,193	5,193	5,193	
68	INTEG COMBAT SYSTEM TEST FACILITY	6,028	6,028	6,028	
69	EMI CONTROL INSTRUMENTATION	4,209	4,209	4,209	
70	ITEMS LESS THAN \$5 MILLION	168,436	139,436	139,436	-29,000
	SHIPBOARD COMMUNICATIONS				
71	SHIPBOARD TACTICAL COMMUNICATIONS	55,853	50,053	50,053	-5,800

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
72	SHIP COMMUNICATIONS AUTOMATION		137,861		131,461		-6,400
73	COMMUNICATIONS ITEMS UNDER \$5M		35,093		31,493		-3,600
74	SUBMARINE COMMUNICATIONS		50,833		50,833		
75	SUBMARINE BROADCAST SUPPORT		69,643		69,643		
76	SUBMARINE COMMUNICATION EQUIPMENT						
76	SATELLITE COMMUNICATIONS		45,841		45,841		
77	SATELLITE COMMUNICATIONS SYSTEMS		88,021		81,785		-6,236
77	NAVY MULTIBAND TERMINAL (NMT)						
78	SHORE COMMUNICATIONS		4,293		4,293		
78	JCS COMMUNICATIONS EQUIPMENT						
79	CRYPTOGRAPHIC EQUIPMENT		166,540		166,540		
79	INFO SYSTEMS SECURITY PROGRAM (ISSP)		968		968		
80	MIO INTEL EXPLOITATION TEAM						
81	CRYPTOLOGIC EQUIPMENT		13,090		13,090		
81	CRYPTOLOGIC COMMUNICATIONS EQUIP						
83	OTHER ELECTRONIC SUPPORT		61,370		61,370		
83	COAST GUARD EQUIPMENT						
	TOTAL, COMMUNICATIONS AND ELECTRONICS EQUIPMENT		3,255,859		3,076,311		-179,548
	AVIATION SUPPORT EQUIPMENT						
85	SONOBUOYS		260,644		310,644		+ 50,000
85	SONOBUOYS—ALL TYPES						
86	AIRCRAFT SUPPORT EQUIPMENT		5,000		5,000		
86	MINOTAUR		101,843		101,843		
87	WEAPONS RANGE SUPPORT EQUIPMENT		145,601		145,601		
88	AIRCRAFT SUPPORT EQUIPMENT		4,725		4,725		
89	ADVANCED ARRESTING GEAR (AAG)		14,687		12,407		-2,280
90	METEOROLOGICAL EQUIPMENT		19,250		18,918		-332
92	AIRBORNE MINE COUNTERMEASURES		792		792		
93	LAMPS EQUIPMENT						

94	AVIATION SUPPORT EQUIPMENT	55,415	55,415	55,415	55,415	55,415	27,000	-27,000
95	UMCS-UNMAN CARRIER AVIATION (UCA) MISSION CONTROL	32,668	32,668	32,668	5,668	5,668	20,388	+20,388
	TOTAL, AVIATION SUPPORT EQUIPMENT	640,625	640,625	640,625	661,013	661,013		
	ORDNANCE SUPPORT EQUIPMENT							
96	SHIP GUN SYSTEM EQUIPMENT	5,451	5,451	5,451	5,451	5,451		
	SHIP GUN SYSTEMS EQUIPMENT							
97	SHIP MISSILE SYSTEMS EQUIPMENT	1,100	1,100	1,100	1,100	1,100		
98	HARPOON SUPPORT EQUIPMENT	228,104	228,104	228,104	293,104	293,104		+65,000
99	SHIP MISSILE SUPPORT EQUIPMENT	78,593	78,593	78,593	57,593	57,593		-21,000
	TOMAHAWK SUPPORT EQUIPMENT							
100	FBM SUPPORT EQUIPMENT	280,510	280,510	280,510	280,510	280,510		
	STRATEGIC MISSILE SYSTEMS EQUIP							
	ASW SUPPORT EQUIPMENT							
101	SSN COMBAT CONTROL SYSTEMS	148,547	148,547	148,547	148,547	148,547		
102	ASW SUPPORT EQUIPMENT	21,130	21,130	21,130	21,130	21,130		
	OTHER ORDNANCE SUPPORT EQUIPMENT							
103	EXPLOSIVE ORDNANCE DISPOSAL EQUIP	15,244	15,244	15,244	15,244	15,244		
104	ITEMS LESS THAN \$5 MILLION	5,071	5,071	5,071	5,071	5,071		
	OTHER EXPENDABLE ORDNANCE							
105	ANTI-SHIP MISSILE DECOY SYSTEM	41,962	41,962	41,962	37,318	37,318		-4,644
106	SUBMARINE TRAINING DEVICE MODS	75,057	75,057	75,057	75,057	75,057		
107	SURFACE TRAINING EQUIPMENT	233,175	233,175	233,175	222,647	222,647		-10,528
	TOTAL, ORDNANCE SUPPORT EQUIPMENT	1,133,944	1,133,944	1,133,944	1,162,772	1,162,772		+28,828
	CIVIL ENGINEERING SUPPORT EQUIPMENT							
108	PASSENGER CARRYING VEHICLES	4,562	4,562	4,562	4,562	4,562		
109	GENERAL PURPOSE TRUCKS	10,974	10,974	10,974	9,474	9,474		-1,500
110	CONSTRUCTION & MAINTENANCE EQUIP	43,191	43,191	43,191	43,191	43,191		
111	FIRE FIGHTING EQUIPMENT	21,142	21,142	21,142	21,142	21,142		
112	TACTICAL VEHICLES	33,432	33,432	33,432	33,432	33,432		
114	POLLUTION CONTROL EQUIPMENT	2,633	2,633	2,633	2,633	2,633		
115	ITEMS UNDER \$5 MILLION	53,467	53,467	53,467	53,467	53,467		
116	PHYSICAL SECURITY VEHICLES	1,173	1,173	1,173	1,173	1,173		
	TOTAL, CIVIL ENGINEERING SUPPORT EQUIPMENT	170,574	170,574	170,574	169,074	169,074		-1,500

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
117	SUPPLY SUPPORT EQUIPMENT		16,730		16,730		
118	SUPPLY EQUIPMENT		5,389		5,389		
119	FIRST DESTINATION TRANSPORTATION		654,674		593,574		-61,100
	SPECIAL PURPOSE SUPPLY SYSTEMS						
	TOTAL, SUPPLY SUPPORT EQUIPMENT		676,793		615,693		-61,100
	PERSONNEL AND COMMAND SUPPORT EQUIPMENT						
	TRAINING DEVICES						
120	TRAINING SUPPORT EQUIPMENT		3,633		3,633		
121	TRAINING AND EDUCATION EQUIPMENT		97,636		94,356		-3,280
	COMMAND SUPPORT EQUIPMENT						
122	COMMAND SUPPORT EQUIPMENT		66,102		56,102		-10,000
123	MEDICAL SUPPORT EQUIPMENT		3,633		3,633		
125	NAVAL MIP SUPPORT EQUIPMENT		6,097		6,097		
126	OPERATING FORCES SUPPORT EQUIPMENT		16,905		16,905		
127	CAISR EQUIPMENT		30,146		30,146		
128	ENVIRONMENTAL SUPPORT EQUIPMENT		21,986		21,986		
129	PHYSICAL SECURITY EQUIPMENT		160,046		160,046		
130	ENTERPRISE INFORMATION TECHNOLOGY		56,899		56,899		
133	NEXT GENERATION ENTERPRISE SERVICE		122,832		122,832		
	TOTAL, PERSONNEL AND COMMAND SUPPORT EQUIPMENT		585,915		572,635		-13,280
134	SPARES AND REPAIR PARTS		375,608		375,608		
	CLASSIFIED PROGRAMS		16,346		16,346		
	TOTAL, OTHER PROCUREMENT, NAVY		9,652,956		10,568,201		+915,245

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Surface Combatant HM&E	31,583	31,561	- 22
	Restoring acquisition accountability: Twisted rudder installation ahead of need			- 22
5	DDG Mod	566,140	561,140	- 5,000
	Restoring acquisition accountability: Aegis modernization testing excess execution funds			- 5,000
	Restoring acquisition accountability: Combat system ship qualification trials excess execution funds			- 9,000
	Program increase: Integrated training and maintenance support system			+ 9,000
13	Submarine Batteries	26,290	24,590	- 1,700
	Restoring acquisition accountability: Unit cost growth			- 1,700
15	DDG 1000 Class Support Equipment	9,930	8,530	- 1,400
	Restoring acquisition accountability: Maritime strike tomahawk integration ahead of need			- 1,400
23x	Ship Maintenance, Repair and Modernization		1,200,000	+ 1,200,000
	Transfer: From Operation and Maintenance, Navy line 1B4B for Pacific Fleet ship maintenance pilot program			+ 1,200,000
25	Reactor Components	465,726	462,749	- 2,977
	Restoring acquisition accountability: Unit cost growth			- 2,977
30	LCS MCM Mission Modules	197,129	134,157	- 62,972
	Restoring acquisition accountability: Unmanned surface vehicles excess growth before test completion			- 35,196
	Restoring acquisition accountability: Minesweeping payload delivery system excess growth before test completion			- 2,277
	Restoring acquisition accountability: Minehunting payload delivery systems excess growth before test completion			- 11,499
	Improving funds management: Reduce one knifefish system due to contract delay			- 14,000
33	LCS In-Service Modernization	84,972	82,000	- 2,972
	Restoring acquisition accountability: Habitability modification cost growth			- 2,972
34	Small & Medium UUV	40,547	39,047	- 1,500
	Restoring acquisition accountability: Knifefish unit cost growth			- 1,500
38	SSN Acoustic Equipment	366,968	378,968	+ 12,000
	Program increase			+ 12,000
44	AN/SLQ-32	420,154	346,544	- 73,610
	Restoring acquisition accountability: Solid state product support integrator funding ahead of need			- 1,778
	Restoring acquisition accountability: Block 3 multi-purpose reconfigurable training systems ahead of need			- 1,410
	Restoring acquisition accountability: Block 1B3 installations previously funded			- 2,300
	Restoring acquisition accountability: Excess Block 3 systems			- 65,758
	Restoring acquisition accountability: Block 3 installation funding ahead of need			- 2,364
45	Shipboard IW Exploit	194,758	188,486	- 6,272
	Restoring acquisition accountability: SSEE modifications unit cost growth			- 1,472

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: SSEE modifications installation previously funded			- 4,800
53	Navstar GPS Receivers (SPACE)	32,674	23,294	- 9,380
	Improving funds management: GPNTS excess growth			- 9,380
57	Afloat ATC Equipment	67,410	64,910	- 2,500
	Restoring acquisition accountability: AN/SPN-50(V)1 excess support costs			- 2,500
59	Joint Precision Approach And Landing System	92,695	78,195	- 14,500
	Improving funds management: Excess growth			- 14,500
62	DCGS-N	21,788	19,038	- 2,750
	Restoring acquisition accountability: Installation funding ahead of need			- 2,750
63	CANES	426,654	395,154	- 31,500
	Restoring acquisition accountability: Installations previously funded			- 31,500
70	Items Less Than \$5 Million	168,436	139,436	- 29,000
	Restoring acquisition accountability: Next generation surface search radar unit cost growth			- 2,500
	Restoring acquisition accountability: Next generation surface ship radar installation early to need			- 26,500
71	Shipboard Tactical Communications	55,853	50,053	- 5,800
	Improving funds management: Prior year carryover			- 5,800
72	Ship Communications Automation	137,861	131,461	- 6,400
	Restoring acquisition accountability: STACC unit cost growth			- 6,400
73	Communications Items Under 5M	35,093	31,493	- 3,600
	Improving funds management: Prior year carryover			- 3,600
77	Navy Multiband Terminal [NMT]	88,021	81,785	- 6,236
	Restoring acquisition accountability: Afloat prior year contract savings			- 4,055
	Restoring acquisition accountability: Ashore kit previously funded			- 2,181
85	Sonobuoys—All Types	260,644	310,644	+ 50,000
	Program increase			+ 50,000
90	Meteorological Equipment	14,687	12,407	- 2,280
	Restoring acquisition accountability: ASOS upgrades cost growth			- 2,280
92	Legacy Airborne MCM	19,250	18,918	- 332
	Improving funds management: Prior year contract savings			- 332
95	UMCS-Unman Carrier Aviation [UCA] Mission Cntrl	32,668	5,668	- 27,000
	Restoring acquisition accountability: Funding ahead of need			- 27,000
98	Ship Missile Support Equipment	228,104	293,104	+ 65,000
	Program increase: High energy laser and integrated optical-dazzler with surveillance [HELIOS]			+ 65,000
99	Tomahawk Support Equipment	78,593	57,593	- 21,000
	Restoring acquisition accountability: TMPC 7.0 funding ahead of need			- 21,000
105	Anti-Ship Missile Decoy System	41,962	37,318	- 4,644
	Restoring acquisition accountability: Nulka decoy unit cost growth			- 4,644
107	Surface Training Equipment	233,175	222,647	- 10,528
	Restoring acquisition accountability: LCS Integrated Tactics Trainer modernization funding ahead of need			- 6,133
	Restoring acquisition accountability: BFFT ship sets installation funding excess			- 1,515
	Restoring acquisition accountability: BFFT upgrade kits installation funding ahead of need			- 2,880
109	General Purpose Trucks	10,974	9,474	- 1,500
	Improving funds management: Prior year carryover			- 1,500
119	Special Purpose Supply Systems	654,674	593,574	- 61,100
	Classified adjustment			- 61,100

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
121	Training and Education Equipment	97,636	94,356	- 3,280
	Restoring acquisition accountability: A2AD training equipment unit cost growth			- 180
	Restoring acquisition accountability: Fleet training wholeness excess growth			- 3,100
122	Command Support Equipment	66,102	56,102	- 10,000
	Restoring acquisition accountability: Fleet Forces Command equipment excess growth			- 10,000

Bromine-Free Water Purification Systems.—The Committee has previously encouraged and provided funding for the Navy to explore and pilot bromine-free shipboard water disinfectant systems in destroyers, as it does with large deck ships. The Committee understands that technology improvements make bromine-free systems more practical for smaller ships and that the current variants of the Littoral Combat Ship [LCS] use bromine-based disinfectant methods under a waiver from the Navy’s Bureau of Medicine and Surgery [BUMED]. The Committee encourages the Navy to accelerate the use of bromine-free water disinfectant systems in both destroyers and LCS in order to remove hazardous materials from ships and eliminate the need for continued BUMED waivers.

Unmanned Underwater Vehicles.—The Committee is encouraged by the Navy’s ongoing efforts to explore, demonstrate, and prove the utility of Unmanned Underwater Vehicles [UUVs] across multiple concepts of operation and further encourages the Navy to consider the use of ship-launched UUVs for the anti-submarine warfare mission set.

PROCUREMENT, MARINE CORPS

Appropriations, 2019	\$2,719,870,000
Budget estimate, 2020	3,090,449,000
Committee recommendation	3,045,749,000

The Committee recommends an appropriation of \$3,045,749,000. This is \$44,700,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	PROCUREMENT, MARINE CORPS						
	WEAPONS AND COMBAT VEHICLES						
	TRACKED COMBAT VEHICLES						
1	AAV7A1 PIP	56	39,495	56	39,495		
2	AMPHIBIOUS COMBAT VEHICLE 1.1		317,935		300,935		-17,000
3	LAV PIP		60,734		60,734		
	ARTILLERY AND OTHER WEAPONS						
4	155MM LIGHTWEIGHT TOWED HOWITZER		25,065		25,065		
5	ARTILLERY WEAPONS SYSTEM		100,002		100,002		
6	WEAPONS AND COMBAT VEHICLES UNDER \$5 MILLION		31,945		31,945		
	OTHER SUPPORT						
7	MODIFICATION KITS		22,760		22,760		
	TOTAL, WEAPONS AND COMBAT VEHICLES		597,936		580,936		-17,000
	GUIDED MISSILES AND EQUIPMENT						
	GUIDED MISSILES						
8	GROUND BASED AIR DEFENSE		175,998		175,998		
9	JAVELIN	97	20,207	97	20,207		
10	FOLLOW ON TO SWAW/FOAWIS		21,913		21,913		
11	ANTI-ARMOR WEAPONS SYSTEM-HEAVY (AAMS-H)/TOW		60,501		60,501		
12	GUIDED MLRS ROCKET (GMLRS)	210	29,062	210	29,062		
	TOTAL, GUIDED MISSILES AND EQUIPMENT		307,681		307,681		
	COMMUNICATIONS AND ELECTRONICS EQUIPMENT						
	COMMAND AND CONTROL SYSTEMS						
13	COMMON AVIATION COMMAND AND CONTROL SYS		37,203		37,203		
	REPAIR AND TEST EQUIPMENT						
14	REPAIR AND TEST EQUIPMENT		55,156		55,156		
15	MODIFICATION KITS		4,945		4,945		

16	OTHER SUPPORT (TEL)							
17	COMMAND AND CONTROL ITEMS UNDER \$5 MILLION (COMM & ELEC)	112,124	112,124	82,424	82,424			- 29,700
18	AIR OPERATIONS C2 SYSTEMS	17,408	17,408	17,408	17,408			
19	RADAR + EQUIPMENT (NON-TEL)							
20	RADAR SYSTEMS	329	329	329	329			
21	GROUND/AIR TASK ORIENTED RADAR	273,022	273,022	273,022	273,022			
22	INTEL/COMM EQUIPMENT (NON-TEL)							
23	GGSS-MC	4,484	4,484	4,484	4,484			
24	FIRE SUPPORT SYSTEM	35,488	35,488	35,488	35,488			
25	INTELLIGENCE SUPPORT EQUIPMENT	56,896	56,896	56,896	56,896			
26	UNMANNED AIR SYSTEMS (INTEL)	34,711	34,711	34,711	34,711			
27	DGGS-MC	32,562	32,562	32,562	32,562			
28	OTHER SUPPORT (NON-TEL)							
29	NEXT GENERATION ENTERPRISE NETWORK (NGEN)	114,901	114,901	114,901	114,901			
30	COMMON COMPUTER RESOURCES	51,094	51,094	51,094	51,094			
31	COMMAND POST SYSTEMS	108,897	108,897	108,897	108,897			
32	RADIO SYSTEMS	227,320	227,320	229,320	229,320			+ 2,000
33	COMM SWITCHING & CONTROL SYSTEMS	31,685	31,685	31,685	31,685			
34	COMM & ELEC INFRASTRUCTURE SUPPORT	21,140	21,140	21,140	21,140			
35	CYBERSPACE ACTIVITIES	27,632	27,632	27,632	27,632			
36	TOTAL, COMMUNICATIONS AND ELECTRONICS EQUIPMENT	1,246,997	1,246,997	1,219,297	1,219,297			- 27,700
37	SUPPORT VEHICLES							
38	ADMINISTRATIVE VEHICLES							
39	COMMERCIAL CARGO VEHICLES	28,913	28,913	28,913	28,913			
40	TACTICAL VEHICLES							
41	MOTOR TRANSPORT MODIFICATIONS	19,234	19,234	19,234	19,234			
42	JOINT LIGHT TACTICAL VEHICLE	588,107	588,107	588,107	588,107			
43	FAMILY OF TACTICAL TRAILERS	2,693	2,693	2,693	2,693			
44	TOTAL, SUPPORT VEHICLES	608,947	608,947	608,947	608,947			
45	ENGINEER AND OTHER EQUIPMENT							
46	ENGINEER AND OTHER EQUIPMENT	495	495	495	495			
47	ENVIRONMENTAL CONTROL EQUIP ASSORT	52	52	52	52			
48	TACTICAL FUEL SYSTEMS							

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
43	POWER EQUIPMENT ASSORTED .....	.....	22,441	.....	22,441	.....	.....
44	AMPHIBIOUS SUPPORT EQUIPMENT .....	.....	7,101	.....	7,101	.....	.....
45	EOD SYSTEMS .....	.....	44,700	.....	44,700	.....	.....
46	MATERIALS HANDLING EQUIPMENT .....	.....	15,404	.....	15,404	.....	.....
	PHYSICAL SECURITY EQUIPMENT .....	.....		.....		.....	.....
	GENERAL PROPERTY .....	.....		.....		.....	.....
47	FIELD MEDICAL EQUIPMENT .....	.....	2,898	.....	2,898	.....	.....
48	TRAINING DEVICES .....	.....	149,567	.....	149,567	.....	.....
49	FAMILY OF CONSTRUCTION EQUIPMENT .....	.....	35,622	.....	35,622	.....	.....
50	FAMILY OF INTERNALLY TRANSPORTABLE VEHICLE (ITV) .....	.....	647	.....	647	.....	.....
	OTHER SUPPORT .....	.....		.....		.....	.....
51	ITEMS LESS THAN \$5 MILLION .....	.....	10,956	.....	10,956	.....	.....
	TOTAL, ENGINEER AND OTHER EQUIPMENT .....	.....	289,883	.....	289,883	.....	.....
52	SPARES AND REPAIR PARTS .....	.....	33,470	.....	33,470	.....	.....
	CLASSIFIED PROGRAMS .....	.....	5,535	.....	5,535	.....	.....
	TOTAL, PROCUREMENT, MARINE CORPS .....	.....	3,090,449	.....	3,045,749	.....	-44,700

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Amphibious Combat Vehicle 1.1	317,935	300,935	- 17,000
	Improving funds management: Forward financing .....	.....	.....	- 15,000
	Restoring acquisition accountability: Unit cost growth ..	.....	.....	- 2,000
16	Items Under \$5 Million (Comm & Elec)	112,124	82,424	- 29,700
	Maintain program affordability: Maintain level of effort .....	.....	.....	- 29,700
33	Radio Systems	227,320	229,320	+ 2,000
	Program increase: GBS receive suite .....	.....	.....	+ 2,000

AIRCRAFT PROCUREMENT, AIR FORCE

Appropriations, 2019	\$17,112,337,000
Budget estimate, 2020	16,784,279,000
Committee recommendation	17,308,918,000

The Committee recommends an appropriation of \$17,308,918,000. This is \$524,639,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
AIRCRAFT PROCUREMENT, AIR FORCE							
COMBAT AIRCRAFT							
TACTICAL FORCES							
1	F-35	48	4,274,359	60	5,286,259	+12	+1,011,900
2	F-35 [AP-CY]		655,500		811,500		+156,000
3	F-15E	8	1,050,000	6	628,000	-2	-422,000
	TOTAL, COMBAT AIRCRAFT		5,979,859		6,725,759		+745,900
AIRLIFT AIRCRAFT/TACTICAL AIRLIFT							
5	KC-46A TANKER	12	2,234,529	12	2,127,755		-106,774
OTHER AIRLIFT							
6	C-130J		12,156		12,156		
8	MC-130J	8	871,207	9	857,607	+1	-13,600
9	MC-130J (AP)		40,000		40,000		
	TOTAL, AIRLIFT AIRCRAFT		3,157,892		3,037,518		-120,374
OTHER AIRCRAFT							
HELICOPTERS							
10	COMBAT RESCUE HELICOPTER	12	884,235		856,735	-12	-27,500
MISSION SUPPORT AIRCRAFT							
11	C-37A	2	161,000	2	147,500		-13,500
12	CIVIL AIR PATROL A/C	4	2,767	4	11,000		+8,233
OTHER AIRCRAFT							
14	TARGET DRONES	37	130,837	37	130,837		
15	COMPASS CALL	1	114,095	2	254,895	+1	+140,800
16	OBSERVATION ATTACK REPLACEMENT (OA-X) LIGHT ATTACK	6		6	210,000	+6	+210,000
17	MQ-9	3	189,205	3	106,560		-82,645
	TOTAL, OTHER AIRCRAFT		1,482,139		1,717,527		+235,388

MODIFICATION OF INSERVICE AIRCRAFT								
19	STRATEGIC AIRCRAFT							
20	B-2A	9,582	9,582					
21	B-1B	22,111	12,958					-9,153
22	B-52	69,648	36,001					-33,647
	LARGE AIRCRAFT INFRARED COUNTERMEASURES	43,758	43,758					
	TACTICAL AIRCRAFT							
23	A-10	132,069	125,825					-6,244
24	E-11 BACN/HAG	70,027	70,027					
25	F-15	481,073	474,767					-6,306
26	F-16	234,782	283,000					+48,218
28	F-22A	323,597	157,597					-166,000
30	F-35 MODIFICATIONS	343,590	299,590					-44,000
31	F-15 EPAW	149,047	125,417					-23,630
32	INCREMENT 3.2b	20,213	14,913					-5,300
33	KC-46A MODS	10,213	10,213					
	AIRLIFT AIRCRAFT							
34	C-5	73,550	57,937					-15,613
36	C-17A	60,244	60,244					
37	C-21	216	216					
38	C-32A	11,511	11,511					
39	C-37A	435	435					
	TRAINER AIRCRAFT							
40	GLIDER MODS	138	138					
41	T-1	11,826	11,826					
42	T-1	26,787	26,787					
43	T-38	37,341	37,341					
	OTHER AIRCRAFT							
44	U-2 MODS	86,896	31,563					-55,333
45	KC-10A (ATCA)	2,108	2,108					
46	C-12	3,021	3,021					
47	VC-25A MOD	48,624	37,724					-10,900
48	C-40	256	256					
49	C-130	52,066	181,066					+129,000
50	C130J MODS	141,686	128,399					-13,287
51	C-135	124,491	115,226					-9,265
53	COMPASS CALL MODS	110,754	282,247					+171,493
54	COMBAT FLIGHT INSPECTION (CFIN)	508	508					

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
55	RC-135	.....	227,673	.....	224,310	.....	-3,363
56	E-3	.....	216,299	.....	105,326	.....	-110,973
57	E-4	.....	58,477	.....	58,477	.....	.....
58	E-8	.....	28,778	.....	48,778	.....	+20,000
59	AIRBORNE WARNING AND CONTROL SYSTEM	.....	36,000	.....	32,821	.....	-3,179
60	FAMILY OF BEYOND LINE-OF-SIGHT TERMINALS	.....	7,910	.....	2,367	.....	-5,543
61	H-1	.....	3,817	.....	3,817	.....	.....
62	H-60	.....	20,879	.....	32,879	.....	+12,000
63	RQ-4 UAV MODS	.....	1,704	.....	1,704	.....	.....
64	HC/MC-130 MODIFICATIONS	.....	51,482	.....	34,850	.....	-16,632
65	OTHER AIRCRAFT	.....	50,098	.....	50,098	.....	.....
66	MQ-9 MODS	.....	383,594	.....	197,915	.....	-185,679
68	CV-22 MODS	.....	65,348	.....	65,348	.....	.....
	TOTAL, MODIFICATION OF INSERVICE AIRCRAFT	.....	3,854,227	.....	3,510,891	.....	-343,336
69	AIRCRAFT SPARES AND REPAIR PARTS	.....	708,230	.....	711,430	.....	+3,200
	INITIAL SPARES/REPAIR PARTS	.....	708,230	.....	711,430	.....	+3,200
	TOTAL, AIRCRAFT SPARES AND REPAIR PARTS	.....	708,230	.....	711,430	.....	+3,200
72	AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES	.....	84,938	.....	84,938	.....	.....
	COMMON SUPPORT EQUIPMENT	.....	84,938	.....	84,938	.....	.....
	AIRCRAFT REPLACEMENT SUPPORT EQUIP	.....	84,938	.....	84,938	.....	.....
	POST PRODUCTION SUPPORT	.....	1,403	.....	1,403	.....	.....
73	B-2A	.....	42,234	.....	42,234	.....	.....
74	B-2B	.....	4,641	.....	2,341	.....	-2,300
75	B-52	.....	124,805	.....	124,805	.....	.....
76	C-17A	.....	2,589	.....	2,589	.....	.....
79	F-15	.....	15,348	.....	11,402	.....	-3,946
81	F-16 POST PRODUCTION SUPPORT	.....	47,246	.....	47,246	.....	.....
84	RQ-4 POST PRODUCTION CHARGES	.....	17,705	.....	17,705	.....	.....
	INDUSTRIAL PREPAREDNESS	.....	17,705	.....	17,705	.....	.....
86	INDUSTRIAL PREPAREDNESS	.....	17,705	.....	17,705	.....	.....

87	WAR CONSUMABLES	32,102	32,102	32,102			
	WAR CONSUMABLES						
	OTHER PRODUCTION CHARGES	1,194,728	1,194,728	1,204,835			+ 10,107
88	OTHER PRODUCTION CHARGES						
	TOTAL, AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES	1,567,739	1,567,739	1,571,600			+ 3,861
	CLASSIFIED PROGRAMS	34,193	34,193	34,193			
	TOTAL, AIRCRAFT PROCUREMENT, AIR FORCE	16,784,279	16,784,279	17,308,918			+ 524,639

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	F-35	4,274,359	5,286,259	+ 1,011,900
	Restoring acquisition accountability: Unit cost savings ..			- 146,400
	Restoring acquisition accountability: Other corporate ops carryover			- 10,000
	Program increase: Twelve aircraft			+ 960,000
	Program increase: Alternate sourcing requirements			+ 208,300
2	F-35 (AP-CY)	655,500	811,500	+ 156,000
	Program increase			+ 156,000
3	F-15E	1,050,000	628,000	- 422,000
	Transfer two test aircraft and NRE funds to RDAF line 180			- 364,400
	Restoring acquisition accountability: NRE funding excess to need			- 57,600
5	KC-46A Tanker	2,234,529	2,127,755	- 106,774
	Restoring acquisition accountability: Unit cost growth			- 47,950
	Restoring acquisition accountability: WARP kits cost growth			- 10,280
	Restoring acquisition accountability: Excess depot standup funding due to delivery delays			- 48,544
8	MC-130J	871,207	857,607	- 13,600
	Restoring acquisition accountability: Excess unit cost growth			- 13,600
10	Combat Rescue Helicopter	884,235	856,735	- 27,500
	Improving funds management: Engineering change orders excess			- 17,500
	Improving funds management: Program management excess growth			- 10,000
11	C-37A	161,000	147,500	- 13,500
	Restoring acquisition accountability: Unit cost growth			- 13,500
12	Civil Air Patrol A/C	2,767	11,000	+ 8,233
	Program increase			+ 8,233
15	Compass Call	114,095	254,895	+ 140,800
	Program increase: Accelerate EC-37B baseline 4 aircraft			+ 140,800
16	Observation Attack Replacement (OA-X) Light Attack Aircraft		210,000	+ 210,000
	Program increase: Six aircraft			+ 210,000
17	MQ-9	189,205	106,560	- 82,645
	Restoring acquisition accountability: Block 50 ground control stations ahead of testing			- 46,845
	Restoring acquisition accountability: Block 50 ground control station simulator ahead of need			- 35,800
20	B-1B	22,111	12,958	- 9,153
	Restoring acquisition accountability: ADS-B out ahead of need			- 9,153
21	B-52	69,648	36,001	- 33,647
	Restoring acquisition accountability: Bomber tactical data link ahead of need			- 15,925
	Restoring acquisition accountability: Crypto modernization funding ahead of need			- 17,722
23	A-10	132,069	125,825	- 6,244
	Restoring acquisition accountability: Prior year carryover			- 6,244
25	F-15	481,073	474,767	- 6,306
	Restoring acquisition accountability: APG-82 installation cost growth			- 10,300
	Restoring acquisition accountability: ADCP II-C installation funding ahead of need			- 3,006
	Program increase: Anti-jam capability			+ 7,000
26	F-16	234,782	283,000	+ 48,218
	Restoring acquisition accountability: Modular mission computer funding ahead of need			- 14,530

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: Digital radar warning receiver funding ahead of need			- 4,315
	Restoring acquisition accountability: AIFF mode 5 funding excess to requirement			- 7,937
	Program increase: AESA radar upgrades for the Air National Guard			+ 75,000
28	F-22A	323,597	157,597	- 166,000
	Improving funds management: Link 16 delays			- 14,300
	Transfer F-22A modernization: Air Force requested to RDAF line 182			- 50,000
	Restoring acquisition accountability: Sensor enhancement funding ahead of need			- 101,700
30	F-35 Modifications	343,590	299,590	- 44,000
	Restoring acquisition accountability: Concurrency ICS excess growth			- 14,000
	Restoring acquisition accountability: Correction of deficiencies excess support costs			- 16,000
	Restoring acquisition accountability: Block 4 modification funding ahead of need			- 14,000
31	F-15 EPAW	149,047	125,417	- 23,630
	Restoring acquisition accountability: Unit cost growth			- 17,400
	Restoring acquisition accountability: Installation funding ahead of need			- 6,230
32	Increment 3.2b	20,213	14,913	- 5,300
	Restoring acquisition accountability: Installation cost growth			- 5,300
34	C-5	73,550	57,937	- 15,613
	Restoring acquisition accountability: CMC weather radar contract delays			- 15,613
44	U-2 Mods	86,896	31,563	- 55,333
	Restoring acquisition accountability: Electronic warfare systems delay			- 7,000
	Restoring acquisition accountability: Egress funding ahead of need			- 3,000
	Restoring acquisition accountability: Airframe sensors and data recorder delays			- 11,900
	Restoring acquisition accountability: ASARS-2B funding ahead of need			- 33,433
47	VC-25A Mod	48,624	37,724	- 10,900
	Improving funds management: Excess funds due to limited aircraft availability			- 10,900
49	C-130	52,066	181,066	+ 129,000
	Program increase: Engine enhancement program			+ 74,000
	Program increase: Eight-blade propeller upgrade			+ 55,000
50	C-130J Mods	141,686	128,399	- 13,287
	Restoring acquisition accountability: Block 8.1 cost growth			- 2,990
	Restoring acquisition accountability: Block 8.1 excess support costs			- 6,500
	Restoring acquisition accountability: Center wing replacement installation cost growth			- 3,797
51	C-135	124,491	115,226	- 9,265
	Improving funds management: Block 45 installation funding ahead of need			- 4,465
	Improving funds management: RTIC installation funding carryover			- 4,800
53	Compass Call Mods	110,754	282,247	+ 171,493
	Restoring acquisition accountability: B kit cost growth			- 4,207
	Program increase: Accelerate EC-37B baseline 4 aircraft			+ 175,700
55	RC-135	227,673	224,310	- 3,363
	Restoring acquisition accountability: Cobra Ball B kit unit cost growth			- 3,363
56	E-3	216,299	105,326	- 110,973

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: Mode 5 acceleration funding ahead of need			- 2,343
	Restoring acquisition accountability: Communications network upgrade funding ahead of need			- 10,423
	Restoring acquisition accountability: Dragon installation funding ahead of need			- 10,900
	Transfer AWACS modernization projects: Air Force requested to line 88			- 87,307
58	E-8	28,778	48,778	+ 20,000
	Program increase			+ 20,000
59	Airborne Warning and Control System	36,000	32,821	- 3,179
	Restoring acquisition accountability: Block 40/45 installation cost growth			- 3,179
60	Family of Beyond Line-of-Sight Terminals	7,910	2,367	- 5,543
	Improving funds management: Support cost carryover			- 5,543
62	H-60	20,879	32,879	+ 12,000
	Program increase: Operational loss replacement kits			+ 12,000
64	HC/MC-130 Modifications	51,482	34,850	- 16,632
	Restoring acquisition accountability: Block 8.1 funds ahead of need			- 16,632
66	MQ-9 Mods	383,594	197,915	- 185,679
	Restoring acquisition accountability: MQ-9 field retrofit delays			- 20,000
	Restoring acquisition accountability: GCS block 30 modernization cost growth			- 7,579
	Restoring acquisition accountability: DAS-4 contract delays and excess growth			- 158,000
	Restoring acquisition accountability: SLAM funding ahead of need			- 100
69	Initial Spares/Repair Parts	708,230	711,430	+ 3,200
	Improving funds management: F-15 spares excess to requirement			- 30,000
	Improving funds management: E-3 spares excess to requirement			- 24,200
	Improving funds management: MQ-9 spares excess to requirement			- 63,600
	Program increase: F-35 spares			+ 96,000
	Program increase: RQ-4 spares			+ 25,000
75	B-52	4,641	2,341	- 2,300
	Improving funds management: Prior year carryover			- 2,300
81	F-16	15,348	11,402	- 3,946
	Restoring acquisition accountability: Digital radar warning receiver funding ahead of need			- 3,946
88	Other Production Charges	1,194,728	1,204,835	+ 10,107
	Restoring acquisition accountability: F-22A squadrons excess to need			- 60,000
	Restoring acquisition accountability: MQ-9 prior year carryover			- 4,500
	Classified adjustment			- 12,700
	Transfer AWACS modernization projects: Air Force requested from line 56			+ 87,307

MC-130J Procurement Quantities.—The Committee understands that the Air Force is negotiating a third multi-year procurement contract for C-130J aircraft that will utilize fiscal year 2019 through 2023 funding. Currently, negotiations have resulted in significant anticipated unit cost savings for the fiscal year 2019 and fiscal year 2020 aircraft purchases, and the Air Force has briefed the Committee on a plan to apply these savings to accelerate acquisition of one trainer in fiscal year 2019 and one additional MC-130J aircraft in fiscal year 2020. The Committee is supportive of

this approach and directs the Secretary of the Air Force to follow through with the planned procurement of a ninth MC-130J aircraft with fiscal year 2020 funding.

MQ-9 Procurement Profile.—The Committee is concerned with the procurement profile for MQ-9 Reapers through the future years defense program as well as the quantity requested in the fiscal year 2020 President’s budget request. With the additional aircraft added by Congress in fiscal year 2019, the Air Force estimates a unit cost of \$15,900,000 for 24 aircraft. The Committee was dismayed to receive a fiscal year 2020 request for 12 aircraft at a unit cost of approximately \$20,000,000, which includes a 20 percent economic order quantity penalty for a quantity buy below the optimized rate of 16 aircraft per year. The Committee also understands that the Air Force is not appropriately budgeting for attrition reserve requirements and recommends an additional \$26,700,000 for MQ-9 Reapers. The Committee expects the Air Force to utilize this additional funding along with the savings realized on the 12 budgeted aircraft to procure an additional four aircraft in order to reach the optimized production rate of 16 aircraft.

Battlefield Airborne Communications Node.—The Committee notes that the Battlefield Airborne Communications Node [BACN] provides critical battlespace awareness as well as data transfer, resilient communication sharing, and bridging across disparate networks and platforms, including with partner nations. The Committee commends the Secretary of the Air Force for continuing to transition the BACN program to a program of record and integrating sustainment, modernization, and future year budget planning in the fiscal year 2020 President’s budget request. The Committee encourages the Secretary of the Air Force to continue development of a modernization plan for the BACN system that addresses anticipated future requirements as well as near, mid-term, and future threats across the full spectrum of joint operational communications. The plan should support multi-domain and multi-level security command and control architectures, high capacity backbone, combat cloud, and data networking requirements in order to support operational requirements across multiple theaters and combatant commands supporting the joint force.

C-130J Aircraft for the Air National Guard.—The Committee directs the Secretary of the Air Force to provide a report to the congressional defense committees not later than 180 days after the enactment of this act with an updated beddown plan that transitions Air National Guard C-130H aircraft to C-130J aircraft by fiscal year and location. The plan shall include efforts to preserve Air National Guard missions during the transition period between aircraft and includes data on impacts on workforce and manufacturing capacity of the existing industrial base supporting the C-130 program.

MISSILE PROCUREMENT, AIR FORCE

Appropriations, 2019	\$2,585,004,000
Budget estimate, 2020	2,889,187,000
Committee recommendation	2,589,166,000

The Committee recommends an appropriation of \$2,589,166,000. This is \$300,021,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	MISSILE PROCUREMENT, AIR FORCE						
	BALLISTIC MISSILES						
	MISSILE REPLACEMENT EQUIPMENT—BALLISTIC						
1	MISSILE REPLACEMENT EQ—BALLISTIC		55,888		55,888		
	OTHER MISSILES						
	TACTICAL						
2	REPLAC EQUIP & WAR CONSUMABLES		9,100		4,500		-4,600
3	JOINT AIR-TO-GROUND MUNITION	60	15,000	60	15,000		
4	JOINT AIR-SURFACE STANDOFF MISSILE (JASSM)	411	482,525	411	482,525		
6	SIDEWINDER (AIM-9X)	355	160,408	355	155,289		-5,119
7	AWRAAM	220	332,250	220	311,730		-20,520
8	PREDATOR HELIFIRE MISSILE	1,531	118,860	1,531	118,860		
9	SMALL DIAMETER BOMB	7,078	275,438	7,078	275,438		
10	SMALL DIAMETER BOMB II	1,175	212,434	1,175	183,279		-29,155
	INDUSTRIAL FACILITIES						
11	INDUSTRIAL PREPAREDNESS/POLLUTION PREVENTION		801		801		
	TOTAL, OTHER MISSILES		1,606,816		1,547,422		-59,394
	MODIFICATION OF INSERVICE MISSILES						
	CLASS IV						
12	ICBM FUZE MOD	6	5,000				-5,000
13	ICBM FUZE MOD		14,497		14,497		
14	MM III MODIFICATIONS		50,831		50,831		
15	AGM-65D MAVERICK		294		294		
16	AIR LAUNCH CRUISE MISSILE		77,387		68,513		-8,874
	TOTAL, MODIFICATION OF INSERVICE MISSILES		148,009		134,135		-13,874
	SPARES AND REPAIR PARTS						
18	INITIAL SPARES/REPAIR PARTS		1,910		1,910		

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
19	REPLEN SPARES/REPAIR PARTS		82,490		72,490		— 10,000
	TOTAL, SPARES AND REPAIR PARTS		84,400		74,400		— 10,000
23	SPECIAL PROGRAMS		144,553		134,553		— 10,000
	SPECIAL UPDATE PROGRAMS		849,521		642,768		— 206,753
	CLASSIFIED PROGRAMS		994,074		777,321		— 216,753
	TOTAL, SPECIAL PROGRAMS		2,889,187		2,589,166		— 300,021
	TOTAL, MISSILE PROCUREMENT, AIR FORCE						

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Replac Equip & War Consumables	9,100	4,500	- 4,600
	Insufficient budget justification: Lack of justification			- 4,600
6	Sidewinder (AIM-9X)	160,408	155,289	- 5,119
	Restoring acquisition accountability: AUR unit cost growth			- 5,119
7	AMRAAM	332,250	311,730	- 20,520
	Maintain program affordability: Unjustified production test support			- 4,020
	Restoring acquisition accountability: AUR unit cost growth			- 16,500
10	SMALL DIAMETER BOMB II	212,434	183,279	- 29,155
	Restoring acquisition accountability: AUR unit cost adjustment			- 29,155
12	ICBM FUZE MOD	5,000		- 5,000
	Improving funds management: Request early to need			- 5,000
16	Air Launch Cruise Missile [ALCM]	77,387	68,513	- 8,874
	Restoring acquisition accountability: Excess to requirement			- 8,874
19	Replen Spares/Repair Parts	82,490	72,490	- 10,000
	Improving funds management: Historical underexecution			- 10,000
23	Special Update Programs	144,553	134,553	- 10,000
	Classified adjustment			- 10,000
999	Classified Programs	849,521	642,768	- 206,753
	Classified adjustment			- 206,753

SPACE PROCUREMENT, AIR FORCE

Appropriations, 2019	\$2,343,642,000
Budget estimate, 2020	2,414,383,000
Committee recommendation	2,460,605,000

The Committee recommends an appropriation of \$2,460,605,000. This is \$46,222,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	SPACE PROGRAMS						
1	ADVANCED EHF		31,894		21,894		-10,000
2	AF SATELLITE COMM SYSTEM		56,298		56,298		
4	COUNTERSPACE SYSTEMS		5,700		5,700		
5	FAMILY OF BEYOND LINE-OF-SIGHT TERMINALS		34,020		29,020		-5,000
7	GENERAL INFORMATION TECHNOLOGY—SPACE		3,244		3,244		
8	GPS III FOLLOW ON	1	414,625		394,625		-20,000
9	GPS III SPACE SEGMENT		31,466		31,466		
12	SPACE COMMUNICATIONS SECURITY		32,031		32,031		
13	MILSATCOM TERMINALS		11,096		11,096		
15	EVOLVED EXPENDABLE LAUNCH VEHICLE	4	1,237,635		1,237,635		
16	SBIR HIGH (SPACE)		233,952		233,952		
17	NUDET DETECTION SYSTEM SPACE		7,432		7,432		
18	ROCKET SYSTEM LAUNCH PROGRAM		11,473		11,473		
19	SPACE FENCE		71,784		51,784		-20,000
20	SPACE MODS SPACE		106,330		106,330		
21	SPACE/LIFT RANGE SYSTEM SPACE		118,140		118,140		
XX	EO/IR WEATHER				101,222		+101,222
	SPARES AND REPAIR PARTS						
22	INITIAL SPARES/REPAIR PARTS		7,263		7,263		
	TOTAL, SPACE PROCUREMENT, AIR FORCE		2,414,383		2,460,605		+46,222

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Advanced EHF	31,894	21,894	- 10,000
	Improving funds management: Anticipated cost savings			- 10,000
5	Family of Beyond Line-of-Sight Terminals	34,020	29,020	- 5,000
	Improving funds management: Installation and depot activation delays			- 5,000
8	GPSIII Follow On	414,625	394,625	- 20,000
	Maintain program affordability: Excess to need			- 20,000
19	Space Fence	71,784	51,784	- 20,000
	Maintain program affordability: Excess to need			- 20,000
23	EO/IR Weather		101,222	+ 101,222
	Transfer from RDTE AF Space, EO/IR Weather			+ 101,222

PROCUREMENT OF AMMUNITION, AIR FORCE

Appropriations, 2019	\$1,485,856,000
Budget estimate, 2020	
Committee recommendation	1,625,661,000

The Committee recommends an appropriation of \$1,625,661,000. This is \$1,625,661,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
PROCUREMENT OF AMMUNITION, AIR FORCE							
1	ROCKETS				132,968		+132,968
2	CARTRIDGES				140,449		+140,449
BOMBS							
3	PRACTICE BOMBS				29,313		+29,313
4	GENERAL PURPOSE BOMBS				85,885		+85,885
6	JOINT DIRECT ATTACK MUNITION			37,000	1,034,224		+1,034,224
7	B61			533	70,773		+70,773
FLARE, IR MU-7B							
9	CAD/PAD				47,069		+47,069
10	EXPLOSIVE ORDNANCE DISPOSAL [EOD]				6,133		+6,133
11	SPARES AND REPAIR PARTS				533		+533
12	MODIFICATIONS				1,291		+1,291
13	ITEMS LESS THAN \$5,000,000				1,677		+1,677
FLARES/FUZES							
15	FLARES				36,116		+36,116
16	FUZES				1,734		+1,734
TOTAL, PROCUREMENT OF AMMO, AIR FORCE							
					1,588,165		+1,588,165
WEAPONS							
17	SMALL ARMS				37,496		+37,496
TOTAL, PROCUREMENT OF AMMUNITION, AIR FORCE							
					1,625,661		+1,625,661

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Rockets		132,968	+ 132,968
	Transfer: From Title IX to Title III for base requirements			+ 133,268
	Restoring acquisition accountability: APKWS production support growth			- 300
2	Cartridges		140,449	+ 140,449
	Transfer: From Title IX to Title III for base requirements			+ 140,449
3	Practice Bombs		29,313	+ 29,313
	Transfer: From Title IX to Title III for base requirements			+ 29,313
4	General Purpose Bombs		85,885	+ 85,885
	Transfer: From Title IX to Title III for base requirements			+ 85,885
6	Joint Direct Attack Munition		1,034,224	+ 1,034,224
	Transfer: From Title IX to Title III for base requirements			+ 1,066,224
	Insufficient budget justification: JDAM Tailkit unit cost adjustment			- 32,000
7	B61		70,773	+ 70,773
	Transfer: From Title IX to Title III for base requirements			+ 80,773
	Restoring acquisition accountability: TKA contract delays			- 10,000
9	Cad/Pad		47,069	+ 47,069
	Transfer: From Title IX to Title III for base requirements			+ 47,069
10	Explosive Ordnance Disposal [EOD]		6,133	+ 6,133
	Transfer: From Title IX to Title III for base requirements			+ 6,133
11	Spares And Repair Parts		533	+ 533
	Transfer: From Title IX to Title III for base requirements			+ 533
12	Modifications		1,291	+ 1,291
	Transfer: From Title IX to Title III for base requirements			+ 1,291
13	Items Less Than \$5,000,000		1,677	+ 1,677
	Transfer: From Title IX to Title III for base requirements			+ 1,677
15	Flares		36,116	+ 36,116
	Transfer: From Title IX to Title III for base requirements			+ 36,116
16	Fuzes		1,734	+ 1,734
	Transfer: From Title IX to Title III for base requirements			+ 1,734
17	Small Arms		37,496	+ 37,496
	Transfer: From Title IX to Title III for base requirements			+ 37,496

OTHER PROCUREMENT, AIR FORCE

Appropriations, 2019	\$20,884,225,000
Budget estimate, 2020	20,687,857,000
Committee recommendation	21,083,464,000

The Committee recommends an appropriation of \$21,083,464,000. This is \$395,607,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	OTHER PROCUREMENT, AIR FORCE						
	VEHICULAR EQUIPMENT						
	PASSENGER CARRYING VEHICLES						
1	PASSENGER CARRYING VEHICLE		15,238		15,238		
	CARGO + UTILITY VEHICLES						
2	FAMILY MEDIUM TACTICAL VEHICLE		34,616		34,616		
3	CAP VEHICLES		1,040		1,700		+ 660
4	ITEMS LESS THAN \$5M (CARGO AND UTILITY VEHICLES)		23,133		23,133		
	SPECIAL PURPOSE VEHICLES						
5	JOINT LIGHT TACTICAL VEHICLE		32,027		32,027		
6	SECURITY AND TACTICAL VEHICLES		1,315		1,315		
7	ITEMS LESS THAN \$5M (SPECIAL PURPOSE VEHICLES)		14,593		14,593		
	FIRE FIGHTING EQUIPMENT						
8	FIRE FIGHTING/CRASH RESCUE VEHICLES		28,604		12,004		- 16,600
	MATERIALS HANDLING EQUIPMENT						
9	ITEMS LESS THAN \$5M (MATERIALS HANDLING EQUIPMENT)		21,848		21,848		
	BASE MAINTENANCE SUPPORT						
10	RUNWAY SNOW REMOVAL & CLEANING EQUIP		2,925		2,925		
11	ITEMS LESS THAN \$5M (BASE MAINTENANCE SUPPORT VEHICLES)		55,776		55,776		
	TOTAL, VEHICULAR EQUIPMENT		231,115		215,175		- 15,940
	ELECTRONICS AND TELECOMMUNICATIONS EQUIP						
	COMM SECURITY EQUIPMENT(COMSEC)						
13	COMSEC EQUIPMENT		91,461		81,461		- 10,000
	INTELLIGENCE PROGRAMS						
14	INTERNATIONAL INTEL TECH AND ARCHITECTURES		11,386		11,386		
15	INTELLIGENCE TRAINING EQUIPMENT		7,619		7,619		
16	INTELLIGENCE COMM EQUIP		35,558		35,558		

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	TOTAL, ELECTRONICS AND TELECOMMUNICATIONS EQUIP		1,538,374		1,505,124		- 33,250
	OTHER BASE MAINTENANCE AND SUPPORT EQUIP						
54	PERSONAL SAFETY AND RESCUE EQUIP		50,634		50,634		
	ITEMS LESS THAN \$5,000,000 (SAFETY)						
	DEPOT PLANT + MATERIALS HANDLING EQ		11,000		11,000		
55	POWER CONDITIONING EQUIPMENT		11,901		11,901		
56	MECHANIZED MATERIAL HANDLING						
	BASE SUPPORT EQUIPMENT						
57	BASE PROCURED EQUIPMENT		23,963		23,963		
58	ENGINEERING AND EOD EQUIPMENT		34,124		34,124		
59	MOBILITY EQUIPMENT		26,439		26,439		
60	FUELS SUPPORT EQUIPMENT (FSE)		24,255		24,255		
61	ITEMS LESS THAN \$5M (BASE SUPPORT)		38,986		38,986		
	SPECIAL SUPPORT PROJECTS						
63	DARP RC135		26,716		26,716		
64	DISTRIBUTED GROUND SYSTEMS		116,055		116,055		
66	SPECIAL UPDATE PROGRAM		835,148		835,148		
	TOTAL, OTHER BASE MAINTENANCE AND SUPPORT EQUIP		1,199,221		1,199,221		
	SPARE AND REPAIR PARTS						
67	SPARES AND REPAIR PARTS		81,340		81,340		
	CLASSIFIED PROGRAMS		17,637,807		18,082,604		+ 444,797
	TOTAL, OTHER PROCUREMENT, AIR FORCE		20,687,857		21,083,464		+ 395,607

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
3	Cap Vehicles	1,040	1,700	+ 660
	Program increase: CAP vehicles			+ 660
8	Fire Fighting/Crash Rescue Vehicles	28,604	12,004	- 16,600
	Insufficient budget justification: Poor justification materials			- 16,600
13	Comsec Equipment	91,461	81,461	- 10,000
	Improving funds management: Unobligated balances			- 10,000
17	Air Traffic Control & Landing Sys	17,939	29,939	+ 12,000
	Program increase: Deployable instrument landing system			+ 12,000
26	Integrated Strat Plan & Analy Network [ISPAN]	9,901	8,601	- 1,300
	Restoring acquisition accountability: Unit cost growth			- 1,300
32	Combat Training Ranges	233,993	282,893	+ 48,900
	Program increase: Joint threat emitters			+ 28,000
	Program increase: F-35 advanced threat systems			+ 20,900
34	Wide Area Surveillance [WAS]	80,818	42,118	- 38,700
	Restoring acquisition accountability: Schedule slips			- 38,700
36	Integrated Personnel and Pay System	20,900		- 20,900
	Restoring acquisition accountability: Acquisition strategy			- 20,900
43	Base Information Transport Infrast [BITI] Wired	69,530	62,280	- 7,250
	Restoring acquisition accountability			- 7,250
44	AFNET	147,063	131,063	- 16,000
	Maintain program affordability: Maintain level of effort			- 4,000
	Improving funds management: Prior year carryover			- 7,000
	Insufficient budget justification: Poor justification materials			- 5,000
999	Classified Programs	17,637,807	18,082,604	+ 444,797
	Classified adjustment			+ 444,797

Cold Weather Aviation System.—The Committee supports fielding the Cold Weather Aviation System to both the Air Force and the Air National Guard and encourages the Air Force Secretary to work with the Chief, National Guard Bureau to evaluate simultaneously fielding the uniform to reduce unit costs and to protect air crews.

PROCUREMENT, DEFENSE-WIDE

Appropriations, 2019	\$6,822,180,000
Budget estimate, 2020	5,109,416,000
Committee recommendation	5,285,914,000

The Committee recommends an appropriation of \$5,285,914,000. This is \$176,498,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	PROCUREMENT, DEFENSE-WIDE						
	MAJOR EQUIPMENT						
2	MAJOR EQUIPMENT, DCMA		2,432		2,432		
	MAJOR EQUIPMENT						
3	MAJOR EQUIPMENT, DHRA		5,030		5,030		
	PERSONNEL ADMINISTRATION						
8	MAJOR EQUIPMENT, DISA		3,318		4,718		+ 1,400
9	INFORMATION SYSTEMS SECURITY		25,103		25,103		
	TELEPORT PROGRAM		26,416		26,416		
10	ITEMS LESS THAN \$5M		17,574		17,574		
12	DEFENSE INFORMATION SYSTEMS NETWORK		45,079		45,079		
14	WHITE HOUSE COMMUNICATION AGENCY		78,669		87,669		+ 9,000
15	SENIOR LEADERSHIP ENTERPRISE		88,000		88,000		
16	JOINT REGIONAL SECURITY STACKS (JRSS)		107,907		107,907		
17	JOINT SERVICE PROVIDER						
	MAJOR EQUIPMENT, DLA						
19	MAJOR EQUIPMENT		8,122		8,122		
	MAJOR EQUIPMENT, DMACT						
20	A—WEAPON SYSTEM COST		10,961		10,961		
	MAJOR EQUIPMENT, DODEA						
21	AUTOMATION/EDUCATIONAL SUPPORT & LOGISTICS		1,320		1,320		
	MAJOR EQUIPMENT, DPAA						
22	MAJOR EQUIPMENT, DPAA	32	1,504	32	1,504		
	MAJOR EQUIPMENT, DSS						
23	MAJOR EQUIPMENT		496		496		
	MAJOR EQUIPMENT, DEFENSE THREAT REDUCTION AGENCY						
25	VEHICLES		211		211		
26	OTHER MAJOR EQUIPMENT		11,521		11,521		

28	MAJOR EQUIPMENT, MDA	37	425,863	37	388,543		-37,320
29	THAAD SYSTEM	9,471			352,471		+343,000
31	GROUND BASED MIDCOURSE	37	600,773	30	327,374	-7	-273,399
32	AEGIS BMD			7	238,000	+7	+238,000
33	AEGIS BMD SM-3 BLOCK IIA		96,995		96,995		
34	BMDs AN/TPY-2 RADARS		10,046		10,046		
35	ISRAELI PROGRAMS	1	55,000	1	55,000		
36	SHORT RANGE BALLISTIC MISSILE DEFENSE (SRBMD)	1	50,000	1	50,000		
37	AEGIS ASHORE PHASE III	1	25,659	1	25,659		
38	IRON DOME SYSTEM	1	95,000	1	95,000		
	AEGIS BMD HARDWARE AND SOFTWARE	36	124,986	36	124,986		
44	MAJOR EQUIPMENT, NSA		1,533		133		-1,400
45	INFORMATION SYSTEMS SECURITY PROGRAM [ISSP]						
46	MAJOR EQUIPMENT, OSD		43,705		43,705		
47	MAJOR EQUIPMENT, IJS		6,905		6,905		
48	MAJOR EQUIPMENT, TJS		1,458		1,458		
49	MAJOR EQUIPMENT, WHS		507		507		
	TOTAL, MAJOR EQUIPMENT		1,981,564		2,260,845		+279,281
SPECIAL OPERATIONS COMMAND							
AVIATION PROGRAMS							
53	SOF ROTARY WING UPGRADES AND SUSTAINMENT		172,020		158,920		-13,100
54	UNMANNED ISR		15,208		15,208		
55	NON-STANDARD AVIATION		32,310		32,310		
56	SOF U-28		10,898		10,898		
57	MH-47 CHINOOK		173,812		173,812		
58	CY-22 SOF MODIFICATION		17,256		17,256		
59	MQ-9 UNMANNED AERIAL VEHICLE		5,338		5,338		
60	PRECISION STRIKE PACKAGE		232,930		232,930		
61	AC/MC-130J		173,419		131,819		-41,600
62	C-130 MODIFICATIONS		15,582		15,582		
63	SHIPBUILDING						
	UNDERWATER SYSTEMS		58,991		58,991		

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
64	AMMUNITION PROGRAMS						
	SOF ORDNANCE ITEMS UNDER \$5,000,000		279,992		246,592		-33,400
	OTHER PROCUREMENT PROGRAMS						
65	SOF INTELLIGENCE SYSTEMS		100,641		100,641		
66	DGGS-SOF		12,522		12,522		
67	OTHER ITEMS UNDER \$5,000,000		103,910		103,910		
68	SOF COMBATANT CRAFT SYSTEMS		33,088		33,088		
69	SPECIAL PROGRAMS		63,467		63,467		
70	TACTICAL VEHICLES		77,832		107,832		+30,000
71	WARRIOR SYSTEMS UNDER \$5,000,000		298,480		298,480		
72	COMBAT MISSION REQUIREMENTS		19,702		19,702		
73	SOF GLOBAL VIDEO SURVEILLANCE ACTIVITIES		4,787		4,787		
74	SOF OPERATIONAL ENHANCEMENTS INTELLIGENCE		8,175		8,175		
75	SOF OPERATIONAL ENHANCEMENTS		282,532		282,532		
	TOTAL, SPECIAL OPERATIONS COMMAND		2,192,892		2,134,792		-58,100
	CHEMICAL/BIOLOGICAL DEFENSE						
76	CHEMICAL BIOLOGICAL SITUATIONAL AWARENESS		162,406		154,673		-7,733
77	CB PROTECTION AND HAZARD MITIGATION		188,188		170,788		-17,400
	TOTAL, CHEMICAL/BIOLOGICAL DEFENSE		350,594		325,461		-25,133
	CLASSIFIED PROGRAMS		564,366		564,816		+19,550
	TOTAL, PROCUREMENT, DEFENSE-WIDE		5,109,416		5,285,914		+176,498

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
8	Information Systems Security (DISA)	3,318	4,718	+ 1,400
	Transfer from line 44 for Sharkseer			+ 1,400
15	Senior Leadership Enterprise (DISA)	78,669	87,669	+ 9,000
	Program increase			+ 9,000
28	THAAD (MDA)	425,863	388,543	- 37,320
	Improving funds management: Unit cost savings			- 37,320
29	Ground Based Midcourse (MDA)	9,471	352,471	+ 343,000
	RKV program termination funding transfer: 6 boosters to maintain deployed 44 GBIs			+ 217,000
	RKV program termination funding transfer: 22 missile field launch support systems for missile fields 1 and 4			+ 45,000
	RKV program termination funding transfer: 44 missile field launch support systems replacement			+ 90,000
	RKV program termination: Early to need			- 9,000
31	Aegis BMD (MDA)	600,773	327,374	- 273,399
	SM-3 Block IB multiyear unit cost savings			- 35,399
	Transfer to line XX for SM-3 Block IIA interceptors			- 238,000
XX	AEGIS BMD SM-3 Block IIA		238,000	+ 238,000
	Transfer from line 31 for SM-3 Block IIA interceptors			+ 238,000
44	Information Systems Security Program [ISSP] (NSA)	1,533	133	- 1,400
	Transfer to line 8 for Sharkseer			- 1,400
53	Rotary Wing Upgrades and Sustainment (SOCOM)	172,020	158,920	- 13,100
	Restoring acquisition accountability: Installations ahead of need			- 13,100
61	AC/MC-130J (SOCOM)	173,419	131,819	- 41,600
	SOCOM requested transfer to RDDW, Line 256: RFCM			- 8,400
	Restoring acquisition accountability: RFCM ahead of need			- 33,200
64	Ordnance Items <\$5M (SOCOM)	279,992	246,592	- 33,400
	Restoring acquisition accountability: SOPGM unit cost adjustment			- 11,900
	Restoring acquisition accountability: Excess carryover			- 21,500
70	Tactical Vehicles (SOCOM)	77,832	107,832	+ 30,000
	Program increase: Ground Mobility Vehicles			+ 30,000
76	Chemical Biological Situational Awareness (CBDP)	162,406	154,673	- 7,733
	Program increase: CBRN dismantled reconnaissance system			+ 5,000
	Restoring acquisition accountability: EMBD maintain level of effort			- 1,500
	MMPRDS			- 3,245
	JCAD			- 4,493
	Restoring acquisition accountability: CSIRP Acquisition strategy			- 3,495
77	CB Protection & Hazard Mitigation (CBDP)	188,188	170,788	- 17,400
	Program increase: CB protective shelter			+ 5,000
	Program increase: Joint service lightweight integrated suit technology			+ 2,000
	Restoring acquisition accountability: JSAM RW Schedule slips			- 18,700
	Restoring acquisition accountability: AAS Schedule slips			- 2,200
	Restoring acquisition accountability: VAC BOT Schedule slips			- 3,000
	Restoring acquisition accountability: VAC PLG Schedule slips			- 500
999	Classified Programs	584,366	564,816	- 19,550
	Classified adjustment			- 19,550

Procurement of Standard Missile-3 Block IB and Block IIA Interceptors.—The fiscal year 2020 President’s budget request includes \$459,768,000 in Procurement, Defense-Wide for the procurement of no less than 30 Standard Missile-3 [SM–3] Block IB interceptors using previously granted multi-year procurement authority, which includes \$96,995,000 in Advance Procurement [AP] for economic order quantity items. The Committee recommends full funding of AP for SM–3 Block IB interceptors and understands that this will result in unit cost savings above those included in the President’s budget request due to additional cost saving opportunities identified by the Government and industry team. The Committee further understands that this will provide opportunities to increase procurement quantities over the multi-year procurement without additional costs to the Government.

The Committee notes that under existing law, a multi-year procurement contract may not be entered into until thirty days after the Secretary of Defense certifies in writing to the congressional defense committees that certain conditions are satisfied, and directs that concurrent with such certification the Under Secretary of Defense (Research and Engineering) shall certify to the congressional defense committees the design and technology readiness levels of critical SM–3 Block IB interceptor components.

The Committee understands that opportunities to upgrade the SM–3 Block IIA interceptor exist and directs that no funds for the procurement of SM–3 Block IIA interceptors in fiscal year 2020 may be obligated or expended until thirty days after the Under Secretary of Defense (Research and Engineering) certifies to the congressional defense committees the design and technology readiness levels of critical SM–3 Block IIA interceptor components; as well as identifies additional upgrades to the SM–3 Block IIA interceptor under consideration and associated costs.

In addition, the Committee notes that the approved acquisition objective [AAO] for the SM–3 interceptor is under review. The Committee directs the Director, MDA, in conjunction with the Assistant Secretary of the Navy (Research, Development and Acquisition) to provide to the congressional defense committees the updated AAO for SM–3 interceptors, consistent with the format provided in response to such direction in fiscal year 2017, not later than with submission of the fiscal year 2021 President’s budget request.

Chemical Protective Suits.—The Committee recognizes the importance of maintaining warfighter capability during contingency operations involving the hostile deployment of chemical weapons and recommends continued support of the organic industrial base for chemical protective suits.

DEFENSE PRODUCTION ACT PURCHASES

Appropriations, 2019	\$53,578,000
Budget estimate, 2020	34,393,000
Committee recommendation	39,393,000

The Committee recommends an appropriation of \$39,393,000. This is \$5,000,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
1	DEFENSE PRODUCTION ACT PURCHASES	.....	34,393	.....	39,393	.....	+ 5,000
	TOTAL, DEFENSE PRODUCTION ACT PURCHASES	.....	34,393	.....	39,393	.....	+ 5,000

Additional Funding.—The Committee recognizes the critical role that the DPA title III program serves in strengthening the U.S. defense industrial base, including its support of Executive Order 13806, Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States. The Committee encourages the DPA program to continue supporting Executive Order 13806, as well as efforts to strengthen domestic fabric suppliers, and will continue to monitor execution of funds and drawdown of the DPA fund balance. Therefore, the Committee increases funding for DPA by \$5,000,000 over the budget request. The Committee directs that the additional funding be competitively awarded to new initiatives and priority consideration should be given to completion of DPA projects initiated in prior years. Furthermore, the Committee directs the Under Secretary of Defense (Acquisition and Sustainment) to inform the congressional defense committees 30 days prior to any obligation or expenditure of these funds.

JOINT URGENT OPERATIONAL NEEDS FUND

Appropriations, 2019	
Budget estimate, 2020	\$99,200,000
Committee recommendation	

The Committee recommends no funding for the Joint Urgent Operational Needs Fund.

TITLE IV

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

Funds appropriated under this title provide the resources required to conduct a program of research, development, test and evaluation, including research in basic science, applied research, advanced technology development, demonstration and validation, engineering and manufacturing development, and operational systems development.

The President's fiscal year 2020 budget requests a total of \$102,647,545,000 for research, development, test and evaluation appropriations.

SUMMARY OF COMMITTEE ACTION

The Committee recommends research, development, test and evaluation appropriations totaling \$104,282,139,000 for fiscal year 2020. This is \$1,634,594,000 above the budget estimate.

Committee recommended research, development, test and evaluation appropriations for fiscal year 2020 are summarized below:

SUMMARY OF RESEARCH, DEVELOPMENT, TEST AND EVALUATION APPROPRIATIONS

[In thousands of dollars]

Account	2020 budget estimate	Committee recommendation	Change from budget estimate
Research, Development, Test and Evaluation:			
Research, Development, Test and Evaluation, Army	12,192,771	12,412,845	+ 220,074
Research, Development, Test and Evaluation, Navy	20,270,499	19,818,218	- 452,281
Research, Development, Test and Evaluation, Air Force	45,616,122	45,446,727	- 169,395
Research, Development, Test and Evaluation, Defense-Wide	24,346,953	26,371,649	+ 2,024,696
Operational Test and Evaluation, Defense	221,200	232,700	+ 11,500
Total	102,647,545	104,282,139	+ 1,634,594

REPROGRAMMING GUIDANCE FOR ACQUISITION ACCOUNTS

The Secretary of Defense is directed to continue to follow the reprogramming guidance as specified in the report accompanying the House version of the Department of Defense appropriations bill for fiscal year 2008 (House Report 110-279). Specifically, the dollar threshold for reprogramming funds will remain at \$20,000,000 for procurement and \$10,000,000 for research, development, test and evaluation.

Also, the Under Secretary of Defense (Comptroller) is directed to continue to provide the congressional defense committees quarterly, spreadsheet-based DD Form 1416 reports for service and defense-wide accounts in titles III and IV of this act. Reports for titles III and IV shall comply with guidance specified in the explanatory statement accompanying the Department of Defense Appropria-

tions Act for Fiscal Year 2006. The Department shall continue to follow the limitation that prior approval reprogrammings are set at either the specified dollar threshold or 20 percent of the procurement or research, development, test and evaluation line, whichever is less. These thresholds are cumulative from the base for reprogramming value as modified by any adjustments. Therefore, if the combined value of transfers into or out of a procurement (P-1), or a research, development, test and evaluation (R-1) line exceeds the identified threshold, the Secretary of Defense must submit a prior approval reprogramming to the congressional defense committees. In addition, guidelines on the application of prior approval reprogramming procedures for congressional special interest items are established elsewhere in this report.

FUNDING INCREASES

The funding increases outlined in the tables for each appropriation account shall be provided only for the specific purposes indicated in the tables.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION SPECIAL INTEREST ITEMS

Items for which additional funds have been recommended or items for which funding is specifically reduced as shown in the tables detailing Committee recommended adjustments or in paragraphs using the phrase “only for” or “only to” are congressional special interest items for the purpose of the Base for Reprogramming [DD Form 1414]. Each of these items must be carried on the DD Form 1414 at the stated amount, as specifically addressed in elsewhere in this report.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION OVERVIEW

Basic Research.—The Committee understands that basic research is the foundation for Department of Defense innovation and future technologies. As the Under Secretary of Defense (Research and Engineering) has in the past testified before the Committee: “The Department of Defense has the third largest investment among Federal agencies in basic research at U.S. universities, who have, through years of continued investments, been the source of many of today’s transformational technologies. Traditionally, the Department has viewed the role of universities as producing the research innovation, the Department of Defense labs as the mechanism to nurture these findings and to render them defense-applicable, and the defense industrial base to integrate these new technologies into acquisition programs.” Accordingly, the Committee recommends an increase of \$307,820,000 above the fiscal year 2020 budget request. This includes an additional \$122,000,000 in Research, Development, Test and Evaluation, Army; \$76,500,000 in Research, Development, Test and Evaluation, Navy; \$50,000,000 in Research, Development, Test and Evaluation, Air Force; and \$59,320,000 in Research, Development, Test and Evaluation, Defense-Wide.

Test and Evaluation Infrastructure for Technologies Critical to the National Defense Strategy.—House Report 115–952, the Joint

Explanatory Statement of the Committee of Conference accompanying the Department of Defense Appropriations Act, 2019 directed the Under Secretary of Defense (Research and Engineering), in conjunction with the Director, Operational Test and Evaluation, and the Secretaries of the Army, Navy and Air Force, to conduct an in-depth assessment of the Department of Defense test and evaluation infrastructure and to identify improvements required to address future warfighting capabilities. The Committee understands that the assessment discovered shortfalls in test and evaluation infrastructure of several technologies that are critical for implementing the 2018 National Defense Strategy, such as hypersonics, space, directed energy and cyber. Therefore, the Committee recommends an additional \$235,250,000 in Research, Development, Test and Evaluation, Defense-Wide, program element 0604940D8Z, only for those purposes, as delineated in the accompanying table of Committee Recommended Adjustments.

The Committee directs that none of these funds may be obligated or expended until 30 days after the Under Secretary of Defense (Research and Engineering) provides a briefing to the congressional defense committees on the assessment requested in fiscal year 2019, as well as an execution plan developed, in conjunction with the Director, Operational Test and Evaluation, and the Secretaries of the Army, Navy and Air Force, for the additional funds recommended by the Committee.

Defense Industrial Base.—The Committee has reviewed the “Executive Order 13806 on Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States” report, which identified risks and challenges to a healthy and resilient defense industrial base. The Committee is encouraged by efforts led by the Under Secretary of Defense (Acquisition and Sustainment) to protect the defense industrial base in response to vulnerabilities identified in the 13806 report. Further, the Committee notes efforts by the Department of Defense to strengthen oversight of the Committee on Foreign Investment in the United States, which include expanding its jurisdiction in accordance with congressional direction. However, the Committee is concerned by the apparent lack of common visibility and coordination among the military services and the Under Secretary of Defense (Acquisition and Sustainment) regarding the supply chain for critical technologies that affect acquisition programs, to include the submarine industrial base; the modernization of nuclear command and control; and manufacturing efforts.

Therefore, the Committee recommends additional funds in Research, Development, Test and Evaluation, Defense-Wide for industrial base analysis and sustainment and directs the Deputy Secretary of Defense, in conjunction with the Under Secretary of Defense (Acquisition and Sustainment) and the Secretaries of the Army, Navy and Air Force, to submit to the congressional defense committees with the fiscal year 2021 President’s budget the combined resource and policy strategy to address U.S. defense industrial base vulnerabilities.

Submarine Workforce Development.—The Committee notes the need to enhance the workforce pipeline for manufacturing in the defense sector for certain technical professions, including welding,

pipefitting, electrical, machining, shipfitting, carpentry, and others specialties to support the 2018 National Defense Strategy. The Committee believes that expanding and improving the capability and capacity of the submarine industrial base workforce is critical to keep pace with current Navy shipbuilding programs. However, the Committee is concerned that the Navy-certified welding workforce may be insufficient to meet Navy demands for the submarine build plan on time with the required quality. In particular, the Committee notes the current shortfall in the *Virginia* and *Columbia*-class technical workforce and supports increased submarine industrial base workforce training and education to address this shortfall. Therefore, the Committee recommends an increase of \$8,000,000 in Research, Development, Test and Evaluation, Defense-Wide for submarine workforce development, and directs the Secretary of Defense to work with the Secretaries of Labor, Education, and Commerce to develop and implement a strategy for strengthening the workforce pipeline for critical defense industries, including new submarine construction.

Use of Research, Development, Test and Evaluation funding for Military Construction.—The fiscal year 2020 President’s budget request includes \$111,000,000 in research, development, test and evaluation [RDTE], Air Force funding to support three projects authorized by the Fiscal Year 2019 National Defense Authorization Act (Public Law 115–232) for the fiscal year 2017 Defense Laboratory Modernization Pilot Program. The Committee supports the three projects, but transfers the funding from the Defense appropriations bill to the Military Construction appropriations bill for more appropriate execution and oversight. The Committee understands the Department of Defense’s challenge in prioritizing small, but critical laboratory construction projects with larger, higher profile construction projects. However, the Committee encourages the Department of Defense to appropriately request the funding in the Military Construction appropriations bill.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

Appropriations, 2019	\$11,083,824,000
Budget estimate, 2020	12,192,771,000
Committee recommendation	12,412,845,000

The Committee recommends an appropriation of \$12,412,845,000. This is \$220,074,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY			
	BASIC RESEARCH			
2	DEFENSE RESEARCH SCIENCES	297,976	391,976	+ 94,000
3	UNIVERSITY RESEARCH INITIATIVES	65,858	65,858	.....
4	UNIVERSITY AND INDUSTRY RESEARCH CENTERS	86,164	114,164	+ 28,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
5	CYBER COLLABORATIVE RESEARCH ALLIANCE	4,982	4,982	.....
	TOTAL, BASIC RESEARCH	454,980	576,980	+ 122,000
	APPLIED RESEARCH			
10	LETHALITY TECHNOLOGY	26,961	61,961	+ 35,000
11	ARMY APPLIED RESEARCH	25,319	25,319	.....
12	SOLDIER LETHALITY TECHNOLOGY	115,274	137,774	+ 22,500
13	GROUND TECHNOLOGY	35,199	137,699	+ 102,500
14	NEXT GENERATION COMBAT VEHICLE TECHNOLOGY	219,047	245,047	+ 26,000
15	NETWORK C3I TECHNOLOGY	114,516	140,016	+ 25,500
16	LONG RANGE PRECISION FIRES TECHNOLOGY	74,327	127,327	+ 53,000
17	FUTURE VERTICAL LIFT TECHNOLOGY	93,601	95,359	+ 1,758
18	AIR AND MISSILE DEFENSE TECHNOLOGY	50,771	90,771	+ 40,000
20	C3I APPLIED CYBER	18,947	18,947	.....
38	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY	20,873	20,873	.....
40	MEDICAL TECHNOLOGY	99,155	101,155	+ 2,000
	TOTAL, APPLIED RESEARCH	893,990	1,202,248	+ 308,258
	ADVANCED TECHNOLOGY DEVELOPMENT			
42	MEDICAL ADVANCED TECHNOLOGY	42,030	52,030	+ 10,000
47	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY	11,038	11,038	.....
50	ARMY ADVANCED TECHNOLOGY DEVELOPMENT	63,338	66,338	+ 3,000
51	SOLDIER LETHALITY ADVANCED TECHNOLOGY	118,468	129,468	+ 11,000
52	GROUND ADVANCED TECHNOLOGY	12,593	152,793	+ 140,200
59	C3I CYBER ADVANCED DEVELOPMENT	13,769	13,769	.....
60	HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM	184,755	224,755	+ 40,000
61	NEXT GENERATION COMBAT VEHICLE ADVANCED TECHNOLOGY	160,035	222,035	+ 62,000
62	NETWORK C3I ADVANCED TECHNOLOGY	106,899	133,899	+ 27,000
63	LONG RANGE PRECISION FIRES ADVANCED TECHNOLOGY	174,386	189,386	+ 15,000
64	FUTURE VERTICAL LIFT ADVANCED TECHNOLOGY	151,640	148,892	- 2,748
65	AIR AND MISSILE DEFENSE ADVANCED TECHNOLOGY	60,613	108,613	+ 48,000
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	1,099,564	1,453,016	+ 353,452
	DEMONSTRATION & VALIDATION			
73	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION	10,987	62,487	+ 51,500
74	AIR AND MISSILE DEFENSE SYSTEMS ENGINEERING	15,148	70,148	+ 55,000
75	LANDMINE WARFARE AND BARRIER—ADV DEV	92,915	66,215	- 26,700
77	TANK AND MEDIUM CALIBER AMMUNITION	82,146	77,696	- 4,450
78	ARMORED SYSTEM MODERNIZATION—ADV DEV	157,656	129,756	- 27,900
79	SOLDIER SUPPORT AND SURVIVABILITY	6,514	6,514	.....
80	TACTICAL ELECTRONIC SURVEILLANCE SYSTEM—AD	34,890	27,490	- 7,400
81	NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT	251,011	222,791	- 28,220
82	ENVIRONMENTAL QUALITY TECHNOLOGY	15,132	19,561	+ 4,429
83	NATO RESEARCH AND DEVELOPMENT	5,406	5,406	.....
84	AVIATION—ADV DEV	459,290	447,940	- 11,350
85	LOGISTICS AND ENGINEER EQUIPMENT—ADV DEV	6,254	6,254	.....
86	MEDICAL SYSTEMS—ADV DEV	31,175	36,175	+ 5,000
87	SOLDIER SYSTEMS—ADVANCED DEVELOPMENT	22,113	22,113	.....
88	ROBOTICS DEVELOPMENT	115,222	68,601	- 46,621
90	ELECTRONIC WARFARE TECHNOLOGY MATURATION (MIP)	18,043	27,043	+ 9,000
91	ANALYSIS OF ALTERNATIVES	10,023	10,023	.....
92	FUTURE TACTICAL UNMANNED AIRCRAFT SYSTEM (FUAS)	40,745	17,745	- 23,000
93	LOWER TIER AIR MISSILE DEFENSE (LTAMID) SENSOR	427,772	379,772	- 48,000
94	TECHNOLOGY MATURATION INITIATIVES	196,676	194,676	- 2,000
95	MANEUVER—SHORT RANGE AIR DEFENSE (M-SHORAD)	33,100	35,400	+ 2,300
97	ARMY ADVANCED COMPONENT DEVELOPMENT & PROTOTYPING	115,116	112,806	- 2,310
99	SYNTHETIC TRAINING ENVIRONMENT REFINEMENT AND PROTOTYPING	136,761	57,121	- 79,640
100	HYPERSONICS	228,000	378,610	+ 150,610
102	FUTURE INTERCEPTOR	8,000	4,000	- 4,000
103	UNIFIED NETWORK TRANSPORT	39,600	29,700	- 9,900

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
104	MOBILE MEDIUM RANGE MISSILE	20,000	10,000	-10,000
106	CYBERSPACE OPERATIONS FORCES AND FORCE SUPPORT	52,102	42,202	-9,900
107	ASSURED POSITIONING, NAVIGATION AND TIMING [PNT]	192,562	136,110	-56,452
108	ARMY SPACE SYSTEMS INTEGRATION	104,996	104,996	.....
	TOTAL, DEMONSTRATION & VALIDATION	2,929,355	2,809,351	-120,004
	ENGINEERING & MANUFACTURING DEVELOPMENT			
109	AIRCRAFT AVIONICS	29,164	8,414	-20,750
110	ELECTRONIC WARFARE DEVELOPMENT	70,539	57,539	-13,000
113	INFANTRY SUPPORT WEAPONS	106,121	80,279	-25,842
114	MEDIUM TACTICAL VEHICLES	2,152	.....	-2,152
115	JAVELIN	17,897	14,997	-2,900
116	FAMILY OF HEAVY TACTICAL VEHICLES	16,745	13,125	-3,620
117	AIR TRAFFIC CONTROL	6,989	5,781	-1,208
118	LIGHT TACTICAL WHEELED VEHICLES	10,465	2,965	-7,500
119	ARMORED SYSTEMS MODERNIZATION [ASM]—ENG DEV	310,152	301,324	-8,828
120	NIGHT VISION SYSTEMS—SDD	181,732	156,537	-25,195
121	COMBAT FEEDING, CLOTHING, AND EQUIPMENT	2,393	2,393	.....
122	NON-SYSTEM TRAINING DEVICES—SDD	27,412	35,412	+8,000
123	AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE—SDD	43,502	23,502	-20,000
124	CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT	11,636	11,636	.....
125	AUTOMATIC TEST EQUIPMENT DEVELOPMENT	10,915	10,915	.....
126	DISTRIBUTIVE INTERACTIVE SIMULATIONS [DIS]—SDD	7,801	7,801	.....
127	BRILLIANT ANTI-ARMOR SUBMUNITION [BAT]	25,000	25,000	.....
128	COMBINED ARMS TACTICAL TRAINER [CATT] CORE	9,241	9,241	.....
129	BRIGADE ANALYSIS, INTEGRATION AND EVALUATION	42,634	42,634	.....
130	WEAPONS AND MUNITIONS—SDD	181,023	163,701	-17,322
131	LOGISTICS AND ENGINEER EQUIPMENT—SDD	103,226	100,826	-2,400
132	COMMAND, CONTROL, COMMUNICATIONS SYSTEMS—SDD	12,595	12,595	.....
133	MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT	48,264	48,264	.....
134	LANDMINE WARFARE/BARRIER—SDD	39,208	39,208	.....
135	ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE	140,637	143,974	+3,337
136	RADAR DEVELOPMENT	105,243	95,720	-9,523
137	GENERAL FUND ENTERPRISE BUSINESS SYSTEM [GFEB]	46,683	42,883	-3,800
138	FIREFINDER	17,294	17,294	.....
139	SOLDIER SYSTEMS—WARRIOR DEM/VAL	5,803	5,803	.....
140	SUITE OF SURVIVABILITY ENHANCEMENT SYSTEMS—EMD	98,698	85,198	-13,500
141	ARTILLERY SYSTEMS	15,832	15,832	.....
142	INFORMATION TECHNOLOGY DEVELOPMENT	126,537	55,689	-70,848
143	INTEGRATED PERSONNEL AND PAY SYSTEM—ARMY [IPPS-A]	142,773	92,073	-50,700
144	ARMORED MULTI-PURPOSE VEHICLE	96,730	83,830	-12,900
145	INTEGRATED GROUND SECURITY SURVEILLANCE RESPONSE CAPABILITY [IGSSR-C]	6,699	6,699	.....
146	JOINT TACTICAL NETWORK CENTER [JTNC]	15,882	15,882	.....
147	JOINT TACTICAL NETWORK [JTN]	40,808	40,808	.....
149	GROUND-BASED OPERATIONAL SURVEILLANCE SYSTEM—EXPENDITARY [GBOSS-E]	3,847	3,847	.....
150	TACTICAL SECURITY SYSTEM [TSS]	6,928	6,928	.....
151	COMMON INFRARED COUNTERMEASURES [CIRCM]	34,488	23,179	-11,309
152	COMBATING WEAPONS OF MASS DESTRUCTION [CWMD]	10,000	10,000	.....
154	NUCLEAR BIOLOGICAL CHEMICAL RECONNAISSANCE VEHICLE	6,054	6,054	.....
155	DEFENSIVE CYBER TOOL DEVELOPMENT	62,262	45,662	-16,600
156	TACTICAL NETWORK RADIO SYSTEMS (LOW-TIER)	35,654	29,254	-6,400
157	CONTRACT WRITING SYSTEM	19,682	17,082	-2,600
158	MISSILE WARNING SYSTEM MODERNIZATION [MWSM]	1,539	1,539	.....
159	AIRCRAFT SURVIVABILITY DEVELOPMENT	64,557	55,057	-9,500
160	INDIRECT FIRE PROTECTION CAPABILITY INC 2—BLOCK 1	243,228	236,428	-6,800
161	GROUND ROBOTICS	41,308	26,104	-15,204
162	EMERGING TECHNOLOGY INITIATIVES	45,896	12,996	-32,900
163	ARMY SYSTEM DEVELOPMENT & DEMONSTRATION	164,883	164,883	.....
165	JOINT AIR-TO-GROUND MISSILE [JAGM]	9,500	6,585	-2,915
166	ARMY INTEGRATED AIR AND MISSILE DEFENSE [AIAMD]	208,938	223,638	+14,700

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
167	MANNED GROUND VEHICLE	378,400	319,864	-58,536
168	NATIONAL CAPABILITIES INTEGRATION	7,835	7,835	.....
169	JOINT LIGHT TACTICAL VEHICLE ENG AND MANUFACTURING	2,732	7,232	+4,500
170	AVIATION GROUND SUPPORT EQUIPMENT	1,664	1,664	.....
172	TROJAN—RH12	3,936	3,936	.....
174	ELECTRONIC WARFARE DEVELOPMENT	19,675	15,232	-4,443
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	3,549,431	3,100,773	-448,658
	RDT&E MANAGEMENT SUPPORT			
176	THREAT SIMULATOR DEVELOPMENT	14,117	59,117	+45,000
177	TARGET SYSTEMS DEVELOPMENT	8,327	28,327	+20,000
178	MAJOR T&E INVESTMENT	136,565	146,565	+10,000
179	RAND ARROYO CENTER	13,113	13,113	.....
180	ARMY KWAJALEIN ATOLL	238,691	238,691	.....
181	CONCEPTS EXPERIMENTATION PROGRAM	42,922	36,922	-6,000
183	ARMY TEST RANGES AND FACILITIES	334,468	361,468	+27,000
184	ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS	46,974	74,774	+27,800
185	SURVIVABILITY/LETHALITY ANALYSIS	35,075	35,075	.....
186	AIRCRAFT CERTIFICATION	3,461	3,461	.....
187	METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES	6,233	6,233	.....
188	MATERIEL SYSTEMS ANALYSIS	21,342	21,342	.....
189	EXPLOITATION OF FOREIGN ITEMS	11,168	11,168	.....
190	SUPPORT OF OPERATIONAL TESTING	52,723	52,723	.....
191	ARMY EVALUATION CENTER	60,815	60,815	.....
192	ARMY MODELING AND SIMULATION X-CMD COLLABORATION AND INTEG	2,527	2,527	.....
193	PROGRAMWIDE ACTIVITIES	58,175	58,175	.....
194	TECHNICAL INFORMATION ACTIVITIES	25,060	25,060	.....
195	MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY	44,458	49,458	+5,000
196	ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT	4,681	4,681	.....
197	MANAGEMENT HEADQUARTERS (RESEARCH AND DEVELOPMENT)	53,820	53,820	.....
198	MILITARY GROUND-BASED CREW TECHNOLOGY	4,291	2,141	-2,150
199	RONALD REAGAN BALLISTIC MISSILE DEFENSE TEST SITE	62,069	62,069	.....
200	COUNTERINTEL AND HUMAN INTEL MODERNIZATION	1,050	1,050	.....
201	ASSESSMENTS AND EVALUATIONS CYBER VULNERABILITIES	4,500	4,500	.....
	TOTAL, RDT&E MANAGEMENT SUPPORT	1,286,625	1,413,275	+126,650
	OPERATIONAL SYSTEMS DEVELOPMENT			
204	MLRS PRODUCT IMPROVEMENT PROGRAM	22,877	19,877	-3,000
206	ANTI-TAMPER TECHNOLOGY SUPPORT	8,491	8,491	.....
207	WEAPONS AND MUNITIONS PRODUCT IMPROVEMENT PROGRAMS	15,645	15,645	.....
209	LONG RANGE PRECISION FIRES (LRPF)	164,182	164,182	.....
211	BLACKHAWK RECAP/MODERNIZATION	13,039	13,039	.....
212	CHINOOK HELICOPTER PRODUCT IMPROVEMENT PROGRAM	174,371	168,171	-6,200
213	FIXED WING AIRCRAFT	4,545	.....	-4,545
214	IMPROVED TURBINE ENGINE PROGRAM	206,434	206,434	.....
216	AVIATION ROCKET SYSTEM PRODUCT IMPROVEMENT AND DEVELOPMENT	24,221	21,130	-3,091
217	UNMANNED AIRCRAFT SYSTEM UNIVERSAL PRODUCTS	32,016	18,132	-13,884
218	APACHE FUTURE DEVELOPMENT	5,448	5,448	.....
219	ARMY OPERATIONAL SYSTEMS DEVELOPMENT	49,526	45,026	-4,500
220	FAMILY OF BIOMETRICS	1,702	1,702	.....
221	PATRIOT PRODUCT IMPROVEMENT	96,430	63,630	-32,800
222	JOINT AUTOMATED DEEP OPERATION COORDINATION SYSTEM	47,398	47,398	.....
223	COMBAT VEHICLE IMPROVEMENT PROGRAMS	334,463	306,044	-28,419
225	155MM SELF-PROPELLED HOWITZER IMPROVEMENTS	214,246	199,274	-14,972
226	AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAMS	16,486	13,778	-2,708
227	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	144	144	.....
228	DIGITIZATION	5,270	5,270	.....
229	MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM	1,287	1,287	.....
234	ENVIRONMENTAL QUALITY TECHNOLOGY—OPERATIONAL SYSTEM	732	10,000	+9,268
235	LOWER TIER AIR AND MISSILE DEFENSE (AMD) SYSTEM	107,746	99,746	-8,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
236	GUIDED MULTIPLE-LAUNCH ROCKET SYSTEM (GMLRS)	138,594	127,294	- 11,300
238	SECURITY AND INTELLIGENCE ACTIVITIES	13,845	13,845	.....
239	INFORMATION SYSTEMS SECURITY PROGRAM	29,185	25,710	- 3,475
240	GLOBAL COMBAT SUPPORT SYSTEM	68,976	48,376	- 20,600
241	WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM	2,073	2,073	.....
245	INTEGRATED BROADCAST SERVICE (IBS)	459	459	.....
246	TACTICAL UNMANNED AERIAL VEHICLES	5,097	5,097	.....
247	AIRBORNE RECONNAISSANCE SYSTEMS	11,177	11,177	.....
248	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	38,121	28,821	- 9,300
250	RQ-11 UAV	3,218	3,218	.....
251	RQ-7 UAV	7,817	7,817	.....
252	BIOMETRICS ENABLED INTELLIGENCE	2,000	2,000	.....
253	END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES	59,848	98,348	+ 38,500
254	SATCOM GROUND ENVIRONMENT (SPACE)	34,169	34,169	.....
255	JOINT TACTICAL GROUND SYSTEM	10,275	7,677	- 2,598
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	1,971,553	1,849,929	- 121,624
9999	CLASSIFIED PROGRAMS	7,273	7,273	.....
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY	12,192,771	12,412,845	+ 220,074

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Defense Research Sciences	297,976	391,976	+ 94,000
	Basic research program increase .....	.....	.....	+ 50,000
	Program increase: Advanced hemostat products .....	.....	.....	+ 15,000
	Program increase: Multi-fuel ignition, chemistry and control strategies for unmanned aircraft systems hybrid propulsion .....	.....	.....	+ 9,000
	Program increase: Transmission electron microscope .....	.....	.....	+ 20,000
4	University and Industry Research Centers	86,164	114,164	+ 28,000
	Program increase: Army artificial intelligence innovation institute .....	.....	.....	+ 6,000
	Program increase: Materials in extreme dynamic environments .....	.....	.....	+ 5,000
	Program increase: Catalyst .....	.....	.....	+ 10,000
	Program increase: Autonomous vehicles mobility .....	.....	.....	+ 5,000
	Program increase: University assisted hypervelocity testing .....	.....	.....	+ 2,000
10	Lethality Technology	26,961	61,961	+ 35,000
	Program increase: Multimission medium range railgun weapon system .....	.....	.....	+ 20,000
	Program increase: Mobile environment contaminant sensors .....	.....	.....	+ 5,000
	Program increase: Hybrid additive manufacturing .....	.....	.....	+ 10,000
12	Soldier Lethality Technology	115,274	137,774	+ 22,500
	Program increase: Active and passive camouflage, concealment and deception .....	.....	.....	+ 3,000
	Program increase: Human systems integration .....	.....	.....	+ 10,000
	Program increase: Expeditionary mobile base camp technology .....	.....	.....	+ 5,000
	Program increase: Harnessing emerging research opportunities to empower soldiers .....	.....	.....	+ 4,500
13	Ground Technology	35,199	137,699	+ 102,500
	Program increase: Materials manufacturing processes .....	.....	.....	+ 10,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Highly durable advanced polymers for lightweight armor			+ 8,000
	Program increase: Cellulose nanocomposites research			+ 10,000
	Program increase: Countermine program			+ 5,000
	Program increase: Materials research			+ 17,500
	Program increase: Additive manufacturing and materials processing			+ 15,000
	Program increase: Cold weather military research			+ 3,000
	Program increase: Environmentally friendly coatings technology			+ 5,000
	Program increase: Sensing technologies for rapid hazard detection			+ 4,000
	Program increase: Cold spray technologies			+ 15,000
	Program increase: Center for research in extreme batteries			+ 10,000
14	Next Generation Combat Vehicle Technology	219,047	245,047	+ 26,000
	Program increase: Structural thermoplastics			+ 6,000
	Program increase: Advanced materials development for survivability			+ 10,000
	Program increase: Autonomous vehicle mobility			+ 10,000
15	Network C3I Technology	114,516	140,016	+ 25,500
	Program increase: Radioisotope power systems			+ 5,000
	Program increase: Anti-tamper technology development			+ 15,000
	Program increase: Next generation synthetic aperture radar			+ 5,500
16	Long Range Precision Fires Technology	74,327	127,327	+ 53,000
	Program increase			+ 20,000
	Program increase: Composite tube and propulsion prototyping			+ 20,000
	Program increase: Novel printed armament components			+ 13,000
17	Future Vertical Lift Technology	93,601	95,359	+ 1,758
	Restoring acquisition accountability: A15 Next gen tactical UAS demo canceled			- 9,242
	Program increase: Rotary wing adaptive flight control technology			+ 6,000
	Program increase: Technology transfer and innovation			+ 5,000
18	Air and Missile Defense Technology	50,771	90,771	+ 40,000
	Program increase: COE in high-energy laser and optical technology			+ 5,000
	Program increase: Cybersecurity and supply chain risk management			+ 15,000
	Program increase: High-energy laser hardware in the loop lab			+ 20,000
40	Medical Technology	99,155	101,155	+ 2,000
	Program increase: Safety and performance of female warfighters in extreme heat			+ 2,000
42	Medical Advanced Technology	42,030	52,030	+ 10,000
	Program increase: Peer-reviewed military burn research			+ 10,000
50	Army Advanced Technology Development	63,338	66,338	+ 3,000
	Program increase: Sensor and wireless communications denial capabilities			+ 3,000
51	Soldier Lethality Advanced Technology	118,468	129,468	+ 11,000
	Program increase: Rapid safe advanced materials			+ 6,000
	Program increase: Multi-spectral sensor mitigation			+ 5,000
52	Ground Advanced Technology	12,593	152,793	+ 140,200
	Program increase: Lead-acid battery life extension			+ 10,000
	Program increase: Anticipating threats to natural systems			+ 6,000
	Program increase: Robotic construction equipment			+ 9,700

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Terrain conditions forecasting			+ 6,000
	Program increase: Environmental sensors for explosives			+ 3,000
	Program increase: Robotic 4-D printing of geopolymer-based composites			+ 2,000
	Program increase: Waste to energy disposal			+ 3,000
	Program increase: Advanced polymer development for force protection			+ 4,500
	Program increase: Micrometeorological-soil synthetic test environment			+ 2,000
	Program increase: Partnership and technology transfer			+ 5,000
	Program increase: Sensor systems for underground detection			+ 5,000
	Program increase: UAS mounted hostile threat detection			+ 5,000
	Program increase: Electrical system safety and reliability			+ 2,000
	Program increase: Infrastructure sustainment			+ 2,000
	Program increase: Army visual and tactical arctic reconnaissance			+ 2,000
	Program increase: Heavy load simulator			+ 6,000
	Program increase: Measurement and control of frozen surface properties			+ 4,000
	Program increase: Air-drop extended range munitions			+ 15,000
	Program increase: Resilient energy systems			+ 2,500
	Program increase: Urban subterranean mapping technology			+ 3,000
	Program increase: Operations in permafrost environment			+ 4,000
	Program increase: Power generation technologies in cold regions			+ 5,000
	Program increase: Sensing and prediction of arctic maritime coastal ice conditions			+ 5,000
	Program increase: Thermosyphons			+ 2,000
	Program increase: Materials and manufacturing technology for cold environments			+ 3,500
	Program increase: Energy technology research in cold and arctic regions			+ 4,000
	Program increase: Research facility modernization			+ 4,000
	Program increase: Lightweight airfield matting			+ 10,000
	Program increase: Coastal ice sensing			+ 5,000
60	High Performance Computing Modernization Program	184,755	224,755	+ 40,000
	Program increase			+ 40,000
61	Next Generation Combat Vehicle Advanced Technology	160,035	222,035	+ 62,000
	Program increase: Advanced high strength and lightweight steels			+ 3,000
	Program increase: Combat vehicle weight reduction initiative			+ 20,000
	Program increase: Virtual and physical prototyping			+ 10,000
	Program increase: HMMWV augmented reality system			+ 5,000
	Program increase: Health usage monitoring system for HMMWV			+ 3,000
	Program increase: HMMWV autonomy			+ 5,000
	Program increase: HMMWV torque monitoring			+ 2,000
	Program increase: HMMWV automotive enhancements			+ 10,000
	Program increase: Additive manufacturing			+ 4,000
62	Network C3I Advanced Technology	106,899	133,899	+ 27,000
	Program increase: Sensor advanced technology			+ 10,000
	Program increase: Assured position, navigation, and timing			+ 9,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Payload and ground segment research and development for small satellite science and security applications			+ 8,000
63	Long Range Precision Fires Advanced Technology	174,386	189,386	+ 15,000
	Program increase: Missile rapid demonstration capability			+ 15,000
64	Future Vertical Lift Advanced Technology	151,640	148,892	- 2,748
	Restoring acquisition accountability: A16 Next gen tactical UAS demo canceled			- 21,748
	Program increase: UAV fuel systems enhancements ..			+ 2,000
	Program increase: Surface tolerant advanced adhesives			+ 5,000
	Program increase: Ferrium steels for improved drive systems			+ 4,000
	Program increase: Stretch broken composite material forms			+ 8,000
65	Air and Missile Defense Advanced Technology	60,613	108,613	+ 48,000
	Program increase: Advanced explosion resistant window systems			+ 5,000
	Program increase: Silicon carbide power electronics packaging			+ 8,000
	Program increase: Enterprise science and technology demonstration prototyping			+ 10,000
	Program increase: High-energy laser development for all-terrain vehicles			+ 25,000
73	Army Missile Defense Systems Integration	10,987	62,487	+ 51,500
	Program increase: Conventional mission capabilities			+ 8,000
	Program increase: Hypersonic advanced technology testbed			+ 15,000
	Program increase: Integrated environmental control and power			+ 16,000
	Program increase: Pragmatic artificial intelligence and new technology laboratory			+ 12,500
74	Air and Missile Defense Systems Engineering	15,148	70,148	+ 55,000
	Program increase: Accelerating cyber and supply chain resiliency			+ 15,000
	Program increase: Artificial intelligence and machine learning			+ 20,000
	Program increase: Joint interoperability of integrated air and missile defense center			+ 20,000
75	Landmine Warfare and Barrier—Adv Dev	92,915	66,215	- 26,700
	Restoring acquisition accountability: EK7 Area denial capability development contract delay			- 26,700
77	Tank and Medium Caliber Ammunition	82,146	77,696	- 4,450
	Restoring acquisition accountability: FG1 C—DAEM concurrency			- 4,450
78	Armored System Modernization—Adv Dev	157,656	129,756	- 27,900
	Improving funds management: Prior year carryover ...			- 25,900
	Restoring acquisition accountability: Powertrain maturation efforts duplication			- 2,000
80	Tactical Electronic Surveillance System—Adv Dev	34,890	27,490	- 7,400
	Restoring acquisition accountability: Advanced miniaturized data acquisition system contract delay ..			- 7,400
81	Night Vision Systems Advanced Development	251,011	222,791	- 28,220
	Restoring acquisition accountability: BQ5 Capability set 3 unit cost growth			- 5,220
	Improving funds management: BQ5 Funding carryover			- 21,500
	Improving funds management: V77 soldier maneuver sensors prior year carryover			- 1,500
82	Environmental Quality Technology—Dem/Val	15,132	19,561	+ 4,429
	Improving funds management: Prior year carryover ...			- 3,571
	Program increase: Biopolymers for military infrastructure			+ 3,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Protective coatings			+ 5,000
84	Aviation—Adv Dev	459,290	447,940	- 11,350
	Restoring acquisition accountability: FARA excess growth			- 71,250
	Improving funds management: FARA excess funding for unawarded sixth vendor			- 20,700
	Program increase: Future long-range assault aircraft			+ 75,600
	Program increase: University partnerships			+ 5,000
86	Medical Systems—Adv Dev	31,175	36,175	+ 5,000
	Program increase: Transport telemedicine technology			+ 5,000
88	Robotics Development	115,222	68,601	- 46,621
	Restoring acquisition accountability: RCV phase 2 excess growth			- 15,780
	Restoring acquisition accountability: RCV phase 2 test funding ahead of need			- 3,726
	Restoring acquisition accountability: RCV phase 3 funding ahead of need			- 27,115
90	Electronic Warfare Technology Maturation [MIP]	18,043	27,043	+ 9,000
	Program increase: Counter drone RF-signal based targeting			+ 9,000
92	Future Tactical Unmanned Aircraft System [FTUAS]	40,745	17,745	- 23,000
	Restoring acquisition accountability: Air Launched Effects funding early to need			- 15,000
	Restoring acquisition accountability: Multi Domain Task Force UAS demo delay			- 8,000
93	Lower Tier Air Missile Defense [LTAMD] Sensor	427,772	379,772	- 48,000
	Restoring acquisition accountability: Funds excess to requirement			- 48,000
94	Technology Maturation Initiatives	196,676	194,676	- 2,000
	Restoring acquisition accountability: AX6 Validation of APS layered protection funding ahead of need			- 2,000
95	Maneuver—Short Range Air Defense (M—SHORAD)	33,100	35,400	+ 2,300
	Transfer from title IX			+ 6,000
	Improving funds management: Prior year carryover due to test delay			- 3,700
97	Army Advanced Component Development & Prototyping	115,116	112,806	- 2,310
	Classified adjustment			- 2,310
99	Synthetic Training Environment Refinement & Prototyping	136,761	57,121	- 79,640
	Improving funds management: SD6 Synthetic training environment prior year carryover			- 20,000
	Restoring acquisition accountability: SV1 Soldier/squad virtual trainer funds excess to life cycle cost estimate			- 59,640
100	Hypersonics	228,000	378,610	+ 150,610
	Program increase			+ 130,610
	Program increase: Hypersonic and strategic materials and structures center of excellence			+ 20,000
102	Future Interceptor	8,000	4,000	- 4,000
	Restoring acquisition accountability: Funds excess to requirement			- 4,000
103	Unified Network Transport	39,600	29,700	- 9,900
	Improving funds management: Funds excess to requirement			- 9,900
104	Mobile Medium Range Missile	20,000	10,000	- 10,000
	Restoring acquisition accountability: Funds excess to requirement			- 10,000
106	Cyberspace Operations Forces and Force Support	52,102	42,202	- 9,900
	Improving funds management: Prior year carryover ...			- 9,900
107	Assured Positioning, Navigation and Timing [PNT]	192,562	136,110	- 56,452
	Restoring acquisition accountability: Pseudolites project terminated			- 42,452
	Improving funds management: Excess growth			- 14,000
109	Aircraft Avionics	29,164	8,414	- 20,750

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: Degraded visual environment lack of strategy			-14,500
	Improving funds management: Prior year carryover			-6,250
110	Electronic Warfare Development	70,539	57,539	-13,000
	Improving funds management: MFEW Phase II excess funding			-13,000
113	Infantry Support Weapons	106,121	80,279	-25,842
	Restoring acquisition accountability: FF2 Small Arms Fire Control legacy weapons excess funding			-12,163
	Restoring acquisition accountability: S63 excess new weapons systems development funding			-4,379
	Restoring acquisition accountability: S64 CROWS funding excess			-9,300
114	Medium Tactical Vehicles	2,152		-2,152
	Improving funds management: Prior year carryover			-2,152
115	JAVELIN	17,897	14,997	-2,900
	Restoring acquisition accountability: Lightweight CLU delays			-2,900
116	Family of Heavy Tactical Vehicles	16,745	13,125	-3,620
	Improving funds management: Prior year carryover			-3,620
117	Air Traffic Control	6,989	5,781	-1,208
	Improving funds management: Prior year carryover			-1,208
118	Light Tactical Wheeled Vehicles	10,465	2,965	-7,500
	Restoring acquisition accountability: HMMWV UAH recapitalization unjustified			-7,500
119	Armored Systems Modernization (ASM)—Eng Dev	310,152	301,324	-8,828
	Restoring acquisition accountability: Training aids and devices development ahead of need			-6,468
	Improving funds management: Program management carryover			-2,360
120	Night Vision Systems—Eng Dev	181,732	156,537	-25,195
	Restoring acquisition accountability: BQ6 Excess test funding			-4,500
	Improving funds management: BQ6 Funding carryover			-11,300
	Restoring acquisition accountability: L67 Enhanced Night Vision Goggle contract delay			-5,000
	Restoring acquisition accountability: L76 Lightweight Laser Designator Range Finder development funding excess to need			-2,995
	Improving funds management: L79 Joint Effects Targeting Systems prior year carryover			-1,400
122	Non-System Training Devices—Eng Dev	27,412	35,412	+8,000
	Program increase: RF threat emitters for Army combat training centers			+8,000
123	Air Defense Command, Control and Intelligence—Eng Dev	43,502	23,502	-20,000
	Restoring acquisition accountability: ALPS lack of strategy			-20,000
130	Weapons and Munitions—Eng Dev	181,023	163,701	-17,322
	Restoring acquisition accountability: S36 Precision guidance kit EMD delay			-12,850
	Restoring acquisition accountability: EU6 XM1113 EMD delay			-4,472
131	Logistics and Engineer Equipment—Eng Dev	103,226	100,826	-2,400
	Restoring acquisition accountability: EJ9 Maneuver support vessel light EMD delay			-7,400
	Restoring acquisition accountability: H02 Tactical bridging delays			-5,000
	Program increase: Mobile camouflage net systems			+10,000
135	Army Tactical Command & Control Hardware & Software ..	140,637	143,974	+3,337
	Improving funds management: EJ5 Mounted computing environment prior year carryover			-2,200
	Improving funds management: EJ6 Tactical enhancement prior year carryover			-1,853

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: ER9 Command post integrated infrastructure contract delay			- 6,610
	Program increase: Ultra-mobile remote ground terminal			+ 14,000
136	Radar Development	105,243	95,720	- 9,523
	Improving funds management: Excess A4 growth and prior year carryover			- 9,523
137	General Fund Enterprise Business System [GFEB]S	46,683	42,883	- 3,800
	Improving funds management: GFEBs prior year carryover			- 3,800
140	Suite of Survivability Enhancement Systems—EMD	98,698	85,198	- 13,500
	Restoring acquisition accountability: FE8 Laser warning receiver efforts delayed			- 5,000
	Restoring acquisition accountability: Abrams V3 test funding excess			- 5,000
	Restoring acquisition accountability: Bradley delays			- 8,500
	Program increase: Radar sensor technology			+ 5,000
142	Information Technology Development	126,537	55,689	- 70,848
	Restoring acquisition accountability: Accessions information environment contract delay			- 15,000
	Restoring acquisition accountability: HRC Accessioning IT unjustified request			- 3,848
	Restoring acquisition accountability: Army training information system unjustified growth			- 30,000
	Improving funds management: Prior year carryover			- 22,000
143	Integrated Personnel and Pay System—Army (IPPS—A)	142,773	92,073	- 50,700
	Improving funds management: Prior year carryover			- 24,000
	Restoring acquisition accountability: Program delay due to change in strategy			- 26,700
144	Armored Multi-Purpose Vehicle [AMPV]	96,730	83,830	- 12,900
	Improving funds management: EMD carryover			- 8,300
	Improving funds management: Program management excess			- 4,600
151	Common Infrared Countermeasures [CIRCM]	34,488	23,179	- 11,309
	Restoring acquisition accountability: Prototype manufacturing and S&T funding excess			- 9,010
	Improving funds management: Test funding carryover			- 2,299
155	Defensive CYBER Tool Development	62,262	45,662	- 16,600
	Restoring acquisition accountability: Contract delays			- 10,000
	Improving funds management: Excess growth			- 6,600
156	Tactical Network Radio Systems (Low-Tier)	35,654	29,254	- 6,400
	Improving funds management: Excess growth			- 6,400
157	Contract Writing System	19,682	17,082	- 2,600
	Improving funds management: Prior year carryover			- 2,600
159	Aircraft Survivability Development	64,557	55,057	- 9,500
	Restoring acquisition accountability: ER7 program delay			- 9,500
160	Indirect Fire Protection Capability Inc 2—Block 1	243,228	236,428	- 6,800
	Restoring acquisition accountability: Funds excess to requirement			- 6,800
161	Ground Robotics	41,308	26,104	- 15,204
	Restoring acquisition accountability: FB4 Common robotic system testing previously funded			- 2,400
	Improving funds management: FB6 SMET excess to requirement			- 12,804
162	Emerging Technology Initiatives	45,896	12,996	- 32,900
	Restoring acquisition accountability: Optical augmentation program canceled			- 2,100
	Insufficient budget justification: Unjustified request			- 20,800
	Restoring acquisition accountability: Program management excess			- 10,000
165	Joint Air-to-Ground Missile [JAGM]	9,500	6,585	- 2,915

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Improving funds management: Funds excess to requirement			- 2,915
166	Army Integrated Air and Missile Defense (AIAMD)	208,938	223,638	+ 14,700
	Improving funds management: Prior year carryover due to test delays			- 15,300
	Program increase: Accelerated integration to counter emerging threats			+ 30,000
167	Manned Ground Vehicle	378,400	319,864	- 58,536
	Restoring acquisition accountability: Excess funding ahead of finalized acquisition strategy			- 82,250
	Restoring acquisition accountability: Program management excess			- 15,964
	Restoring acquisition accountability: Test funding ahead of need			- 7,822
	Program increase: XM-913 systems			+ 40,000
	Program increase: Tactical communications			+ 7,500
169	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	2,732	7,232	+ 4,500
	Transfer: Army-requested transfer from OPA line 6 ...			+ 4,500
174	Electronic Warfare Development	19,675	15,232	- 4,443
	Improving funds management: Excess growth			- 4,443
176	Threat Simulator Development	14,117	59,117	+ 45,000
	Program increase: Cyber threat and vulnerability assessments			+ 20,000
	Program increase: Cyber threat simulation enhancement initiative			+ 3,000
	Program increase: Cybersecurity operations center ...			+ 22,000
177	Target Systems Development	8,327	28,327	+ 20,000
	Program increase: UAS swarm threat and mitigation			+ 20,000
178	Major T&E Investment	136,565	146,565	+ 10,000
	Program increase: High-powered microwave test and evaluation assets			+ 10,000
181	Concepts Experimentation Program	42,922	36,922	- 6,000
	Improving funds management: Excess growth			- 6,000
183	Army Test Ranges and Facilities	334,468	361,468	+ 27,000
	Program increase: Distributed environment for system-of-system cybersecurity testing			+ 25,000
	Program increase: Soil research for Army training ranges			+ 2,000
184	Army Technical Test Instrumentation and Targets	46,974	74,774	+ 27,800
	Program increase: Cybersecurity of space and missile defense assets			+ 24,500
	Program increase: Expandable rotorcraft diagnostics			+ 3,300
195	Munitions Standardization, Effectiveness and Safety	44,458	49,458	+ 5,000
	Program increase: X-ray technologies			+ 5,000
198	Military Ground-Based CREW Technology	4,291	2,141	- 2,150
	Improving funds management: Prior year carryover ...			- 2,150
204	MLRS Product Improvement Program	22,877	19,877	- 3,000
	Improving funds management: Prior year carryover ...			- 3,000
212	Chinook Product Improvement Program	174,371	168,171	- 6,200
	Restoring acquisition accountability: EMD unjustified growth			- 10,000
	Restoring acquisition accountability: Program excess			- 2,700
	Program increase: Block II lightweight improvements			+ 6,500
213	Fixed Wing Product Improvement Program	4,545		- 4,545
	Improving funds management: Prior year carryover ...			- 4,545
216	Aviation Rocket System Product Improvement and Development	24,221	21,130	- 3,091
	Improving funds management: Prior year carryover ...			- 3,091
217	Unmanned Aircraft System Universal Products	32,016	18,132	- 13,884
	Improving funds management: Prior year carryover ...			- 13,884
219	Army Operational Systems Development	49,526	45,026	- 4,500
	Classified adjustment			- 4,500
221	Patriot Product Improvement	96,430	63,630	- 32,800

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: Excess growth ..			- 32,800
223	Combat Vehicle Improvement Programs	334,463	306,044	- 28,419
	Restoring acquisition accountability: Bradley im-			
	provements excess funding			- 12,292
	Improving funds management: Bradley test funding			
	carryover			- 3,215
	Restoring acquisition accountability: Stryker ECP2			
	carryover			- 10,200
	Improving funds management: Stryker program man-			
	agement carryover			- 2,712
225	155mm Self-Propelled Howitzer Improvements	214,246	199,274	- 14,972
	Restoring acquisition accountability: Funding excess			
	to requirement			- 4,972
	Improving funds management: Prior year carryover ...			- 10,000
226	Aircraft Modifications/Product Improvement Programs	16,486	13,778	- 2,708
	Improving funds management: Prior year carryover ...			- 2,708
234	Environmental Quality Technology—Operational System			
	Dev	732	10,000	+ 9,268
	Improving funds management: Prior year carryover ...			- 732
	Program increase: Securing the availability of green,			
	enhanced coatings			+ 10,000
235	Lower Tier Air and Missile Defense [AMD] System	107,746	99,746	- 8,000
	Improving funds management: Prior year carryover ...			- 8,000
236	Guided Multiple-Launch Rocket System [GMLRS]	138,594	127,294	- 11,300
	Restoring acquisition accountability: Extended range			
	development contract delay			- 11,300
239	Information Systems Security Program	29,185	25,710	- 3,475
	Restoring acquisition accountability: DV4 Next gen-			
	eration load device funding ahead of need			- 1,500
	Improving funds management: DV5 Crypto mod-			
	ernization prior year carryover			- 1,975
240	Global Combat Support System	68,976	48,376	- 20,600
	Restoring acquisition accountability: Inc 2 contract			
	delays			- 14,100
	Restoring acquisition accountability: Inc 2 test fund-			
	ing ahead of need			- 6,500
248	Distributed Common Ground/Surface Systems	38,121	28,821	- 9,300
	Restoring acquisition accountability: CD2 contract			
	delay			- 6,300
	Improving funds management: Test funding excess			
	growth			- 3,000
253	End Item Industrial Preparedness Activities	59,848	98,348	+ 38,500
	Program increase: Power take-off hybridization			+ 7,000
	Program increase: Tungsten manufacturing afford-			
	ability initiative for armaments			+ 10,000
	Program increase: Manufacturing technology pro-			
	gram			+ 5,000
	Program increase: Transparent armor			+ 4,000
	Program increase: Nanoscale materials manufac-			
	turing			+ 12,500
255	Joint Tactical Ground System	10,275	7,677	- 2,598
	Improving funds management: Prior year carryover ...			- 2,598

Improved Turbine Engine Program.—The Committee understands that the Army is pursuing an Improved Turbine Engine Program [ITEP] that will deliver a next generation turbo-shaft engine for Future Attack Reconnaissance Aircraft [FARA] as well as current Black Hawk (H-60) and Apache (AH-64E) helicopter fleets. From its inception in fiscal year 2016, the ITEP program has experienced multiple delays, most recently a 1 month delay on the Engineering, Manufacturing, and Development contract followed by a

3 month delay due to a contract protest. The Committee understands that these delays have slowed the execution of funds and made a portion of the fiscal year 2020 President's budget request excess to need. However, the Committee also understands the importance of timing in ITEP development to ensure engines are available in fiscal year 2022 to meet the FARA flight test schedule. Therefore, the Committee recommends fully funding the fiscal year 2020 budget request and encourages the Army to maintain its current program schedule despite previous delays.

Medical Simulation Training.—The Committee supports development and expanded use of next generation, simulation-based medical training, which can improve readiness while reducing cost and increasing flexibility of where and when training is delivered. The Committee encourages the Army to make continued investments in the development and efficacy analysis of medical simulation training, tools, technologies, and techniques.

Carbon Fiber and Graphite Foam Technology.—The Committee understands that low-cost mesophase pitch carbon fiber and graphitic carbon foam components may reduce vehicle weight and fuel consumption, increase payload capacity, extend service life, reduce vehicle signatures, improve survivability, and utilize additive manufacturing technology to reduce cost in the Next Generation Combat Vehicle program and encourages the Army to continue efforts in this area.

Hostile Environment Outerwear.—As the Department continues operations in hostile environments, the Committee believes that improving the clothing of soldiers is a necessity. The Committee encourages the Army to rapidly develop superior cold weather and Arctic clothing for soldiers, expedite the evaluation and integration of technologies and prototype systems from the laboratory to operational use, and integrate fabrics that reduce weight and increase mobility and comfort in combat. This should include hand wear, footwear, and cold/wet protective clothing systems.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY

Appropriations, 2019	\$18,510,564,000
Budget estimate, 2020	20,270,499,000
Committee recommendation	19,818,218,000

The Committee recommends an appropriation of \$19,818,218,000. This is \$452,281,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY			
	BASIC RESEARCH			
1	UNIVERSITY RESEARCH INITIATIVES	116,850	137,850	+ 21,000
2	IN-HOUSE LABORATORY INDEPENDENT RESEARCH	19,121	19,121	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
3	DEFENSE RESEARCH SCIENCES	470,007	525,507	+ 55,500
	TOTAL, BASIC RESEARCH	605,978	682,478	+ 76,500
	APPLIED RESEARCH			
4	POWER PROJECTION APPLIED RESEARCH	18,546	52,546	+ 34,000
5	FORCE PROTECTION APPLIED RESEARCH	119,517	202,517	+ 83,000
6	MARINE CORPS LANDING FORCE TECHNOLOGY	56,604	64,104	+ 7,500
7	COMMON PICTURE APPLIED RESEARCH	49,297	49,297	.....
8	WARFIGHTER SUSTAINMENT APPLIED RESEARCH	63,825	86,825	+ 23,000
9	ELECTROMAGNETIC SYSTEMS APPLIED RESEARCH	83,497	88,497	+ 5,000
10	OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH	63,894	82,082	+ 18,188
11	JOINT NON-LETHAL WEAPONS APPLIED RESEARCH	6,346	6,346	.....
12	UNDERSEA WARFARE APPLIED RESEARCH	57,075	93,075	+ 36,000
13	FUTURE NAVAL CAPABILITIES APPLIED RESEARCH	154,755	156,195	+ 1,440
14	MINE AND EXPEDITIONARY WARFARE APPLIED RESEARCH	36,074	48,074	+ 12,000
15	INNOVATIVE NAVAL PROTOTYPES [INP] APPLIED RESEARCH	153,062	165,385	+ 12,323
16	SCIENCE AND TECHNOLOGY MANAGEMENT—ONR HEAD- QUARTERS	73,961	73,961	.....
	TOTAL, APPLIED RESEARCH	936,453	1,168,904	+ 232,451
	ADVANCED TECHNOLOGY DEVELOPMENT			
17	FORCE PROTECTION ADVANCED TECHNOLOGY	35,286	35,286	.....
18	ELECTROMAGNETIC SYSTEMS ADVANCED TECHNOLOGY	9,499	9,499	.....
19	MARINE CORPS ADVANCED TECHNOLOGY DEMONSTRATION [ATD]	172,847	197,347	+ 24,500
20	JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT	13,307	13,307	.....
21	FUTURE NAVAL CAPABILITIES ADVANCED TECHNOLOGY DEV	231,907	233,107	+ 1,200
22	MANUFACTURING TECHNOLOGY PROGRAM	60,138	65,138	+ 5,000
23	WARFIGHTER PROTECTION ADVANCED TECHNOLOGY	4,849	9,849	+ 5,000
25	NAVY WARFIGHTING EXPERIMENTS AND DEMONSTRATIONS	67,739	67,739	.....
26	MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY ..	13,335	13,335	.....
27	INNOVATIVE NAVAL PROTOTYPES [INP] ADVANCED TECHNOLOGY	133,303	136,003	+ 2,700
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	742,210	780,610	+ 38,400
	DEMONSTRATION & VALIDATION			
28	AIR/OCEAN TACTICAL APPLICATIONS	32,643	42,643	+ 10,000
29	AVIATION SURVIVABILITY	11,919	11,919	.....
30	AIRCRAFT SYSTEMS	1,473	1,473	.....
31	ASW SYSTEMS DEVELOPMENT	7,172	7,172	.....
32	TACTICAL AIRBORNE RECONNAISSANCE	3,419	3,419	.....
33	ADVANCED COMBAT SYSTEMS TECHNOLOGY	64,694	61,144	- 3,550
34	SURFACE AND SHALLOW WATER MINE COUNTERMEASURES	507,000	148,600	- 358,400
35	SURFACE SHIP TORPEDO DEFENSE	15,800	7,242	- 8,558
36	CARRIER SYSTEMS DEVELOPMENT	4,997	4,997	.....
37	PILOT FISH	291,148	186,328	- 104,820
38	RETRACT LARCH	11,980	11,980	.....
39	RETRACT JUNIPER	129,163	129,163	.....
40	RADIOLOGICAL CONTROL	689	689	.....
41	SURFACE ASW	1,137	1,137	.....
42	ADVANCED SUBMARINE SYSTEM DEVELOPMENT	148,756	116,604	- 32,152
43	SUBMARINE TACTICAL WARFARE SYSTEMS	11,192	11,192	.....
44	SHIP CONCEPT ADVANCED DESIGN	81,846	81,846	.....
45	SHIP PRELIMINARY DESIGN & FEASIBILITY STUDIES	69,084	22,534	- 46,550
46	ADVANCED NUCLEAR POWER SYSTEMS	181,652	181,652	.....
47	ADVANCED SURFACE MACHINERY SYSTEMS	25,408	157,408	+ 132,000
48	CHALK EAGLE	64,877	64,877	.....
49	LITTORAL COMBAT SHIP [LCS]	9,934	16,934	+ 7,000
50	COMBAT SYSTEM INTEGRATION	17,251	17,251	.....
51	OHIO REPLACEMENT PROGRAM	419,051	434,051	+ 15,000
52	LITTORAL COMBAT SHIP [LCS] MISSION MODULES	108,505	108,505	.....
53	AUTOMATED TEST AND RE-TEST	7,653	7,653	.....
54	FRIGATE DEVELOPMENT	59,007	59,007	.....
55	CONVENTIONAL MUNITIONS	9,988	9,988	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
56	MARINE CORPS GROUND COMBAT/SUPPORT SYSTEM	86,464	70,264	- 16,200
57	JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT	33,478	33,478	.....
58	OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT	5,619	5,619	.....
59	ENVIRONMENTAL PROTECTION	20,564	20,564	.....
60	NAVY ENERGY PROGRAM	26,514	43,014	+ 16,500
61	FACILITIES IMPROVEMENT	3,440	3,440	.....
62	CHALK CORAL	346,800	310,400	- 36,400
63	NAVY LOGISTIC PRODUCTIVITY	3,857	3,857	.....
64	RETRACT MAPLE	258,519	192,019	- 66,500
65	LINK PLUMERIA	403,909	396,509	- 7,400
66	RETRACT ELM	63,434	63,434	.....
67	LINK EVERGREEN	184,110	184,110	.....
68	NATO RESEARCH AND DEVELOPMENT	7,697	7,697	.....
69	LAND ATTACK TECHNOLOGY	9,086	5,900	- 3,186
70	JOINT NONLETHAL WEAPONS TESTING	28,466	28,466	.....
71	JOINT PRECISION APPROACH AND LANDING SYSTEMS	51,341	51,341	.....
72	DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS	118,169	118,169	.....
73	F/A-18 INFRARED SEARCH AND TRACK (IRST)	113,456	113,456	.....
74	DIGITAL WARFARE OFFICE	50,120	40,120	- 10,000
75	SMALL AND MEDIUM UNMANNED UNDERSEA VEHICLES	32,527	29,077	- 3,450
76	UNMANNED UNDERSEA VEHICLE CORE TECHNOLOGIES	54,376	54,376	.....
77	RAPID PROTOTYPING, EXPERIMENTATION AND DEMONSTRATION	36,197	36,197	.....
78	LARGE UNMANNED UNDERSEA VEHICLES	68,310	68,310	.....
79	GERALD R. FORD CLASS NUCLEAR AIRCRAFT CARRIER	121,310	114,756	- 6,554
80	LITTORAL AIRBORNE MCM	17,248	17,248	.....
81	SURFACE MINE COUNTERMEASURES	18,735	18,735	.....
82	TACTICAL AIR DIRECTIONAL INFRARED COUNTERMEASURES	68,346	68,346	.....
84	NEXT GENERATION LOGISTICS	4,420	14,420	+ 10,000
85	RAPID TECHNOLOGY CAPABILITY PROTOTYPE	4,558	4,558	.....
86	LX (R)	12,500	12,500	.....
87	ADVANCED UNDERSEA PROTOTYPING	181,967	201,967	+ 20,000
88	COUNTER UNMANNED AIRCRAFT SYSTEMS [C-UAS]	5,500	3,100	- 2,400
89	PRECISION STRIKE WEAPONS DEVELOPMENT PROGRAM	718,148	688,148	- 30,000
90	SPACE & ELECTRONIC WARFARE [SEW] ARCHITECTURE/ENGINE	5,263	5,263	.....
91	OFFENSIVE ANTI-SURFACE WARFARE WEAPON DEVELOPMENT	65,419	115,419	+ 50,000
92	ASW SYSTEMS DEVELOPMENT—MIP	9,991	9,991	.....
93	ADVANCED TACTICAL UNMANNED AIRCRAFT SYSTEM	21,157	45,407	+ 24,250
95	ELECTRONIC WARFARE DEVELOPMENT—MIP	609	609	.....
	TOTAL, DEMONSTRATION & VALIDATION	5,559,062	5,107,692	- 451,370
	ENGINEERING & MANUFACTURING DEVELOPMENT			
96	TRAINING SYSTEM AIRCRAFT	15,514	15,514	.....
97	OTHER HELO DEVELOPMENT	28,835	38,835	+ 10,000
98	AV-8B AIRCRAFT—ENG DEV	27,441	27,441	.....
100	STANDARDS DEVELOPMENT	3,642	3,642	.....
101	MULTI-MISSION HELICOPTER UPGRADE DEVELOPMENT	19,196	19,196	.....
104	WARFARE SUPPORT SYSTEM	8,601	8,601	.....
105	TACTICAL COMMAND SYSTEM	77,232	77,232	.....
106	ADVANCED HAWKEYE	232,752	235,252	+ 2,500
108	H-1 UPGRADES	65,359	65,359	.....
109	ACOUSTIC SEARCH SENSORS	47,013	47,013	.....
110	V-22A	185,105	198,455	+ 13,350
111	AIR CREW SYSTEMS DEVELOPMENT	21,172	21,172	.....
112	EA-18	143,585	143,585	.....
113	ELECTRONIC WARFARE DEVELOPMENT	116,811	116,811	.....
114	EXECUTIVE HELO DEVELOPMENT	187,436	187,436	.....
116	NEXT GENERATION JAMMER [NGJ]	524,261	524,261	.....
117	JOINT TACTICAL RADIO SYSTEM—NAVY [JTRS—Navy]	192,345	192,345	.....
118	NEXT GENERATION JAMMER [NGJ] INCREMENT II	111,068	90,922	- 20,146
119	SURFACE COMBATANT COMBAT SYSTEM ENGINEERING	415,625	375,875	- 39,750
120	LPD-17 CLASS SYSTEMS INTEGRATION	640	640	.....
121	SMALL DIAMETER BOMB [SDB]	50,096	50,096	.....
122	STANDARD MISSILE IMPROVEMENTS	232,391	200,296	- 32,095

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
123	AIRBORNE MCM	10,916	10,916	.....
124	NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR SYSTEMS ENG	33,379	33,379	.....
125	ADVANCED ABOVE WATER SENSORS	34,554	34,554	.....
126	SSN-688 AND TRIDENT MODERNIZATION	84,663	84,663	.....
127	AIR CONTROL	44,923	44,923	.....
128	SHIPBOARD AVIATION SYSTEMS	10,632	14,632	+ 4,000
129	COMBAT INFORMATION CENTER CONVERSION	16,094	16,094	.....
130	AIR AND MISSILE DEFENSE RADAR [AMDR] SYSTEM	55,349	26,669	- 28,680
131	ADVANCED ARRESTING GEAR [AAG]	123,490	123,490	.....
132	NEW DESIGN SSN	121,010	221,010	+ 100,000
133	SUBMARINE TACTICAL WARFARE SYSTEM	62,426	62,426	.....
134	SHIP CONTRACT DESIGN/LIVE FIRE T&E	46,809	46,809	.....
135	NAVY TACTICAL COMPUTER RESOURCES	3,692	3,692	.....
137	MINE DEVELOPMENT	28,964	76,464	+ 47,500
138	LIGHTWEIGHT TORPEDO DEVELOPMENT	148,349	93,249	- 55,100
139	JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT	8,237	8,237	.....
140	USMC GROUND COMBAT/SUPPORTING ARMS SYSTEMS—ENG DEV	22,000	22,000	.....
141	PERSONNEL, TRAINING, SIMULATION, AND HUMAN FACTORS	5,500	5,500	.....
142	JOINT STANDOFF WEAPON SYSTEMS	18,725	18,725	.....
143	SHIP SELF DEFENSE (DETECT & CONTROL)	192,603	178,603	- 14,000
144	SHIP SELF DEFENSE (ENGAGE: HARD KILL)	137,268	121,630	- 15,638
145	SHIP SELF DEFENSE (ENGAGE: SOFT KILL/EW)	97,363	97,363	.....
146	INTELLIGENCE ENGINEERING	26,710	46,710	+ 20,000
147	MEDICAL DEVELOPMENT	8,181	8,181	.....
148	NAVIGATION/ID SYSTEM	40,755	45,755	+ 5,000
149	JOINT STRIKE FIGHTER [JSF]—EMD	1,710	1,710	.....
150	JOINT STRIKE FIGHTER [JSF]	1,490	1,490	.....
153	INFORMATION TECHNOLOGY DEVELOPMENT	1,494	1,494	.....
154	INFORMATION TECHNOLOGY DEVELOPMENT	384,162	267,753	- 116,409
155	ANTI-TAMPER TECHNOLOGY SUPPORT	4,882	4,882	.....
156	CH-53K	516,955	506,955	- 10,000
158	MISSION PLANNING	75,886	75,886	.....
159	COMMON AVIONICS	43,187	43,187	.....
160	SHIP TO SHORE CONNECTOR [SSC]	4,909	19,909	+ 15,000
161	T-AO (X)	1,682	1,682	.....
162	UNMANNED CARRIER AVIATION	671,258	657,098	- 14,160
163	JOINT AIR-TO-GROUND MISSILE [JAGM]	18,393	18,393	.....
165	MULTI-MISSION MARITIME AIRCRAFT [MMA]	21,472	21,472	.....
166	MULTI-MISSION MARITIME AIRCRAFT [MMA] INCREMENT 3	177,234	149,234	- 28,000
167	MARINE CORPS ASSAULT VEHICLES SYSTEM DEVELOPMENT AND DEMO	77,322	50,222	- 27,100
168	JOINT LIGHT TACTICAL VEHICLE [JLTV] SYSTEM DEVELOPMENT AND DEMO	2,105	2,105	.....
169	DDG-1000	111,435	111,435	.....
172	TACTICAL CRYPTOLOGIC SYSTEMS	101,339	101,339	.....
173	CYBER OPERATIONS TECHNOLOGY DEVELOPMENT	26,406	26,406	.....
	TOTAL, ENGINEERING & MANUFACTURING DEVELOP- MENT	6,332,033	6,148,305	- 183,728
	RDT&E MANAGEMENT SUPPORT			
174	THREAT SIMULATOR DEVELOPMENT	66,678	66,678	.....
175	TARGET SYSTEMS DEVELOPMENT	12,027	12,027	.....
176	MAJOR T&E INVESTMENT	85,348	85,348	.....
178	STUDIES AND ANALYSIS SUPPORT—NAVY	3,908	3,908	.....
179	CENTER FOR NAVAL ANALYSES	47,669	47,669	.....
180	NEXT GENERATION FIGHTER	20,698	5,100	- 15,598
182	TECHNICAL INFORMATION SERVICES	988	988	.....
183	MANAGEMENT, TECHNICAL & INTERNATIONAL SUPPORT	102,401	122,401	+ 20,000
184	STRATEGIC TECHNICAL SUPPORT	3,742	3,742	.....
186	RDT&E SHIP AND AIRCRAFT SUPPORT	93,872	93,872	.....
187	TEST AND EVALUATION SUPPORT	394,020	394,020	.....
188	OPERATIONAL TEST AND EVALUATION CAPABILITY	25,145	25,145	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
189	NAVY SPACE AND ELECTRONIC WARFARE [SEW] SUPPORT	15,773	15,773	.....
190	SEW SURVEILLANCE/RECONNAISSANCE SUPPORT	8,402	8,402	.....
191	MARINE CORPS PROGRAM WIDE SUPPORT	37,265	37,265	.....
192	MANAGEMENT HEADQUARTERS—R&D	39,673	39,673	.....
193	WARFARE INNOVATION MANAGEMENT	28,750	28,750	.....
196	INSIDER THREAT	2,645	2,645	.....
197	MANAGEMENT HEADQUARTERS (DEPARTMENTAL SUPPORT ACTIVITIES)	1,460	1,460	.....
	TOTAL, RDT&E MANAGEMENT SUPPORT	990,464	994,866	+ 4,402
	OPERATIONAL SYSTEMS DEVELOPMENT			
202	HARPOON MODIFICATIONS	2,302	2,302	.....
203	F-35 C2D2	422,881	358,367	- 64,514
204	F-35 C2D2	383,741	325,199	- 58,542
205	COOPERATIVE ENGAGEMENT CAPABILITY [CEC]	127,924	127,924	.....
207	STRATEGIC SUB & WEAPONS SYSTEM SUPPORT	157,676	119,766	- 37,910
208	SSBN SECURITY TECHNOLOGY PROGRAM	43,354	43,354	.....
209	SUBMARINE ACOUSTIC WARFARE DEVELOPMENT	6,815	6,815	.....
210	NAVY STRATEGIC COMMUNICATIONS	31,174	31,174	.....
211	F/A-18 SQUADRONS	213,715	193,715	- 20,000
213	SURFACE SUPPORT	36,389	36,389	.....
214	TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER [TMPC]	320,134	226,234	- 93,900
215	INTEGRATED SURVEILLANCE SYSTEM	88,382	100,382	+ 12,000
216	SHIP-TOWED ARRAY SURVEILLANCE SYSTEMS	14,449	14,449	.....
217	AMPHIBIOUS TACTICAL SUPPORT UNITS	6,931	6,931	.....
218	GROUND/AIR TASK ORIENTED RADAR	23,891	28,891	+ 5,000
219	CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT	129,873	129,873	.....
221	ELECTRONIC WARFARE [EW] READINESS SUPPORT	82,325	82,325	.....
222	HARM IMPROVEMENT	138,431	129,829	- 8,602
224	SURFACE ASW COMBAT SYSTEM INTEGRATION	29,572	29,572	.....
225	MK-48 ADCAP	85,973	85,973	.....
226	AVIATION IMPROVEMENTS	125,461	125,461	.....
227	OPERATIONAL NUCLEAR POWER SYSTEMS	106,192	106,192	.....
228	MARINE CORPS COMMUNICATIONS SYSTEMS	143,317	147,707	+ 4,390
229	COMMON AVIATION COMMAND AND CONTROL SYSTEM	4,489	4,489	.....
230	MARINE CORPS GROUND COMBAT/SUPPORTING ARMS SYSTEMS	51,788	51,788	.....
231	MARINE CORPS COMBAT SERVICES SUPPORT	37,761	45,761	+ 8,000
232	USMC INTELLIGENCE/ELECTRONIC WARFARE SYSTEMS (MIP)	21,458	27,886	+ 6,428
233	AMPHIBIOUS ASSAULT VEHICLE	5,476	5,476	.....
234	TACTICAL AIM MISSILES	19,488	19,488	.....
235	ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE [AMRAAM]	39,029	39,029	.....
239	SATELLITE COMMUNICATIONS (SPACE)	34,344	34,344	.....
240	CONSOLIDATED AFLOAT NETWORK ENTERPRISE SERVICES	22,873	22,873	.....
241	INFORMATION SYSTEMS SECURITY PROGRAM	41,853	46,353	+ 4,500
243	JOINT MILITARY INTELLIGENCE PROGRAMS	8,913	8,913	.....
244	TACTICAL UNMANNED AERIAL VEHICLES	9,451	9,451	.....
245	UAS INTEGRATION AND INTEROPERABILITY	42,315	42,315	.....
246	DISTRIBUTED COMMON GROUND SYSTEMS/SURFACE SYSTEMS	22,042	22,042	.....
248	MQ-4C TRITON	11,784	11,784	.....
249	MQ-8 UAV	29,618	29,618	.....
250	RQ-11 UAV	509	509	.....
251	SMALL (LEVEL 0) TACTICAL UAS [STUASLO]	11,545	11,545	.....
252	RQ-21A	10,914	10,914	.....
253	MULTI-INTELLIGENCE SENSOR DEVELOPMENT	70,612	70,612	.....
254	UNMANNED AERIAL SYSTEMS [UAS] PAYLOADS (MIP)	3,704	10,004	+ 6,300
255	RQ-4 MODERNIZATION	202,346	185,446	- 16,900
256	MODELING AND SIMULATION SUPPORT	7,119	7,119	.....
257	DEPOT MAINTENANCE (NON-IF)	38,182	48,182	+ 10,000
258	MARITIME TECHNOLOGY [MARITECH]	6,779	26,779	+ 20,000
259	SATELLITE COMMUNICATIONS (SPACE)	15,868	15,868	.....
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	3,491,162	3,267,412	- 223,750

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
9999	CLASSIFIED PROGRAMS	1,613,137	1,667,951	+ 54,814
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY	20,270,499	19,818,218	- 452,281

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	University Research Initiatives	116,850	137,850	+ 21,000
	Program increase: University research initiatives			+ 5,000
	Program increase: Advanced digital radars			+ 8,000
	Program increase: Aircraft fleet readiness and sustainment			+ 8,000
3	Defense Research Sciences	470,007	525,507	+ 55,500
	Program increase: Navy ROTC cybersecurity training program			+ 5,500
	Basic research program increase			+ 50,000
4	Power Projection Applied Research	18,546	52,546	+ 34,000
	Program increase: Microwave systems for counter-UAS defense			+ 14,000
	Program increase: Hypersonic testing and related technology development			+ 20,000
5	Force Protection Applied Research	119,517	202,517	+ 83,000
	Program increase: Lithium-ion battery safety and performance improvements			+ 3,000
	Program increase: Electric propulsion for military craft and advanced planing hulls			+ 8,500
	Program increase: Hybrid composite structures research for enhanced mobility			+ 5,000
	Program increase: Test bed for autonomous ship systems			+ 8,000
	Program increase: Talent and technology for Navy power and energy systems			+ 9,500
	Program increase: Compact high flow fan			+ 4,000
	Program increase: Network cyber security and resiliency			+ 4,000
	Program increase: Navy alternative energy research, development, testing and deployment			+ 20,000
	Program increase: Data-model fusion for naval platforms and systems			+ 5,000
	Program increase: Energy resilience			+ 8,000
	Program increase: Blue carbon capture/direct air capture			+ 8,000
6	Marine Corps Landing Force Technology	56,604	64,104	+ 7,500
	Program increase: Interdisciplinary expeditionary cybersecurity research			+ 7,500
8	Warfighter Sustainment Applied Research	63,825	86,825	+ 23,000
	Program increase: Laser peening technology			+ 4,000
	Program increase: Lightweight anti-corrosion nanotechnology coating enhancement			+ 5,000
	Program increase: Polymer coatings for reduced ice and fouling adhesion			+ 6,000
	Program increase: Undersea domain human performance requirements			+ 3,000
	Program increase: Engineered systems to prevent hearing loss			+ 5,000
9	Electromagnetic Systems Applied Research	83,497	88,497	+ 5,000
	Program increase: Electromagnetic systems applied research			+ 5,000
10	Ocean Warfighting Environment Applied Research	63,894	82,082	+ 18,188

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Improving funds management: Unjustified growth			- 3,812
	Program increase: Naval special warfare			+ 10,000
	Program increase: Arctic geospatial information			+ 5,000
	Program increase: Task Force Ocean			+ 7,000
12	Undersea Warfare Applied Research	57,075	93,075	+ 36,000
	Program increase: Navy and academia submarine partnerships			+ 10,000
	Program increase: Machine discovery and invention			+ 4,000
	Program increase: Instrumented tow cable			+ 5,000
	Program increase: Navy undersea warfare science and technology strategy			+ 2,000
	Program increase: Energetics technology			+ 8,000
	Program increase: Autonomous undersea robotics systems			+ 7,000
13	Future Naval Capabilities Applied Research	154,755	156,195	+ 1,440
	Improving funds management: Advanced analytics and decision making unjustified growth			- 2,560
	Program increase: C4ISR and special projects			+ 4,000
14	Mine and Expeditionary Warfare Applied Research	36,074	48,074	+ 12,000
	Program increase: Underwater mine defeat capabilities urgent operational need			+ 12,000
15	Innovative Naval Prototypes [INP] Applied Research	153,062	165,385	+ 12,323
	Restoring acquisition accountability: MDUSV program of record maturation			- 1,677
	Program increase: Thermoplastic carbon-fiber composite materials research			+ 4,000
	Program increase: Thermoplastic tailorable universal feedstock composites			+ 10,000
19	USMC Advanced Technology Demonstration [ATD]	172,847	197,347	+ 24,500
	Program increase: Robotic protection system			+ 5,000
	Program increase: Expeditionary mission planning enabled by high fidelity simulation			+ 10,000
	Program increase: Extended range 155mm projectile			+ 2,500
	Program increase: Adaptive threat force			+ 7,000
21	Future Naval Capabilities Advanced Technology Development	231,907	233,107	+ 1,200
	Program increase: Automated critical care system			+ 1,200
22	Manufacturing Technology Program	60,138	65,138	+ 5,000
	Program increase: Modern shipbuilding manufacturing			+ 5,000
23	Warfighter Protection Advanced Technology	4,849	9,849	+ 5,000
	Program increase: Novel therapeutic intervention			+ 5,000
27	Innovative Naval Prototypes [INP] Advanced Technology Development	133,303	136,003	+ 2,700
	Improving funds management: Funds excess to requirements			- 12,300
	Program increase: Advanced thermal and power technology for improved DEW SWAP			+ 15,000
28	Air/Ocean Tactical Applications	32,643	42,643	+ 10,000
	Program increase: Long duration autonomous hydrographic survey			+ 10,000
33	Advanced Combat Systems Technology	64,694	61,144	- 3,550
	Restoring acquisition accountability: Project 3422 unit cost growth and excessive continuous prototyping			- 3,550
34	Surface and Shallow Water Mine Countermeasures	507,000	148,600	- 358,400
	Restoring acquisition accountability: Project 3066 transfer USV procurement to Shipbuilding and Conversion, Navy			- 209,200
	Restoring acquisition accountability: Project 3066 LUSV VLS concept design			- 70,000
	Restoring acquisition accountability: Project 3066 transfer USV C4 LLTM procurement to Shipbuilding and Conversion, Navy			- 39,200
	Restoring acquisition accountability: Project 3066 VLS LLTM early to need			- 40,000
35	Surface Ship Torpedo Defense	15,800	7,242	- 8,558

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: Excess sundown costs			- 8,558
37	PILOT FISH	291,148	186,328	- 104,820
	Program adjustment			- 104,820
42	Advanced Submarine System Development	148,756	116,604	- 32,152
	Restoring acquisition accountability: Project 2096 material purchases growth early to need			- 3,135
	Restoring acquisition accountability: Project 9710 lack of acquisition strategies			- 29,017
45	Ship Preliminary Design & Feasibility Studies	69,084	22,534	- 46,550
	Restoring acquisition accountability: Project 0411 FSC concept development early to need			- 46,550
47	Advanced Surface Machinery Systems	25,408	157,408	+ 132,000
	Program increase: Silicon carbide electronics systems			+ 7,000
	Program increase: Surface combatant component-level prototyping			+ 125,000
49	Littoral Combat Ship [LCS]	9,934	16,934	+ 7,000
	Program increase: Integrated fire control land-based test asset			+ 7,000
51	Ohio Replacement	419,051	434,051	+ 15,000
	Program increase: Materials for submarine propulsor applications			+ 15,000
56	Marine Corps Ground Combat/Support System	86,464	70,264	- 16,200
	Restoring acquisition accountability: Project 1558 prototype manufacturing early to need			- 6,000
	Restoring acquisition accountability: Project 7400 Sea Mob Amphibious Reconnaissance Capability product development			- 10,200
60	Navy Energy Program	26,514	43,014	+ 16,500
	Program increase: Marine energy systems for sensors and microgrids			+ 11,500
	Program increase: Navy energy program/shore energy			+ 5,000
62	CHALK CORAL	346,800	310,400	- 36,400
	Program adjustment			- 36,400
64	RETRACT MAPLE	258,519	192,019	- 66,500
	Program adjustment			- 66,500
65	LINK PLUMERIA	403,909	396,509	- 7,400
	Program adjustment			- 7,400
69	Land Attack Technology	9,086	5,900	- 3,186
	Restoring acquisition accountability: Project 3401 lack of acquisition strategy			- 3,186
74	Digital Warfare Office	50,120	40,120	- 10,000
	Restoring acquisition accountability: Artificial intelligence development operations unjustified growth			- 10,000
75	Small and Medium Unmanned Undersea Vehicles	32,527	29,077	- 3,450
	Project 3123 improving funds management: Delay and Block II concurrency			- 3,450
79	Gerald R. Ford Class Nuclear Aircraft Carrier (CVN 78-80)	121,310	114,756	- 6,554
	Improving funds management: Revised test schedule			- 6,554
84	Next Generation Logistics	4,420	14,420	+ 10,000
	Program increase: Large-scale 3D printing robotic system			+ 10,000
87	Advanced Undersea Prototyping	181,967	201,967	+ 20,000
	Program increase: XLUUV competitive risk reduction			+ 20,000
88	Counter Unmanned Aircraft Systems [C-UAS]	5,500	3,100	- 2,400
	Reduce duplication: System development			- 2,400
89	Precision Strike Weapons Development Program	718,148	688,148	- 30,000
	Restoring acquisition accountability: Project 3334 acquisition and contract strategy			- 30,000
91	Offensive Anti-Surface Warfare Weapon Development	65,419	115,419	+ 50,000
	Program increase: LRASM 1.1 capability improvements ..			+ 50,000
93	Advanced Tactical Unmanned Aircraft System	21,157	45,407	+ 24,250
	Restoring acquisition accountability: Project 3135 acquisition and funding strategy			- 8,250

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Large unmanned logistics systems—air development			+ 18,500
	Program increase: Secure and resilient battlefield networking capabilities			+ 14,000
97	Other Helo Development	28,835	38,835	+ 10,000
	Program increase: Attack and utility replacement aircraft			+ 10,000
106	Advanced Hawkeye	232,752	235,252	+ 2,500
	Restoring acquisition accountability: DSSC-6			- 9,500
	Program increase: E-2D Hawkeye radar			+ 12,000
110	V-22A	185,105	198,455	+ 13,350
	Program increase: Active vibration control system			+ 5,000
	Program increase: Common lightweight cargo system			+ 8,350
118	Next Generation Jammer [NGJ] Increment II	111,068	90,922	- 20,146
	Restoring acquisition accountability: Change in acquisition strategy			- 20,146
119	Surface Combatant Combat System Engineering	415,625	375,875	- 39,750
	Restoring acquisition accountability: AEGIS BL 9 unjustified scope expansion			- 39,750
122	Standard Missile Improvements	232,391	200,296	- 32,095
	Restoring acquisition accountability: Project 2063 contract award delays			- 39,095
	Program increase: Advanced carbon nanotube materials research			+ 7,000
128	Shipboard Aviation Systems	10,632	14,632	+ 4,000
	Program increase: Aircraft launch and recovery equipment software improvements			+ 4,000
130	Air and Missile Defense Radar [AMDR] System	55,349	26,669	- 28,680
	Restoring acquisition accountability: Advanced distributed radar development and integration concurrency			- 28,680
132	New Design SSN	121,010	221,010	+ 100,000
	Restoring acquisition accountability: Transfer from Shipbuilding and Conversion, Navy line 3, SSN-812 for SSN-812 design risk reduction			+ 100,000
137	Mine Development	28,964	76,464	+ 47,500
	Program increase: Quick strike joint direct attack munition			+ 47,500
138	Lightweight Torpedo Development	148,349	93,249	- 55,100
	Improving funds management: Project 3418 program delays			- 55,100
143	Ship Self Defense (Detect & Control)	192,603	178,603	- 14,000
	Project 2178: CSEA contract award delays			- 14,000
144	Ship Self Defense (Engage: Hard Kill)	137,268	121,630	- 15,638
	Restoring acquisition accountability: Project 2070 excess test assets			- 15,638
146	Intelligence Engineering	26,710	46,710	+ 20,000
	Program increase: Command and control satellite systems cyber security			+ 20,000
148	Navigation/ID System	40,755	45,755	+ 5,000
	Program increase: Development of lightweight security identification Friend or Foe transmitter			+ 5,000
154	Information Technology Development	384,162	267,753	- 116,409
	Improving funds management: Project 2901 ePS contract award delay			- 11,877
	Improving funds management: Project 2905 SPOE contract award delay			- 9,869
	Restoring acquisition accountability: Project 2905 NP2 rapid fielding pilot concurrency			- 51,805
	Insufficient budget justification: Project 2905 unjustified budget increase			- 4,804
	Improving funds management: Project 9406 contract award delay			- 14,703
	Improving funds management: execution delays			- 33,351
	Program increase: NAVSEA readiness and logistics information technology digital transformation plan			+ 10,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
156	CH-53K RDTE	516,955	506,955	- 10,000
	Improving funds management: Early to need			- 10,000
160	Ship to Shore Connector [SSC]	4,909	19,909	+ 15,000
	Program increase: Advanced materials and manufacturing for naval hovercraft applications			+ 15,000
162	Unmanned Carrier Aviation [UCA]	671,258	657,098	- 14,160
	Improving funds management: CVN/UMCS unjustified growth			- 14,160
166	Multi-Mission Maritime [MMA] Increment III	177,234	149,234	- 28,000
	Restoring acquisition accountability: Engineering change proposal 6 unjustified increase			- 28,000
167	Marine Corps Assault Vehicles System Development & Demonstration	77,322	50,222	- 27,100
	Restoring acquisition accountability: Design concurrency for additional ACV variants			- 6,900
	Restoring acquisition accountability: Procurement of ACV-30 variants early to need			- 18,500
	Improving funds management: Technical support acceleration			- 1,700
180	Next Generation Fighter	20,698	5,100	- 15,598
	Restoring acquisition accountability: Next Gen Advanced Engines funding requested early to need			- 15,598
183	Management, Technical & International Support	102,401	122,401	+ 20,000
	Program increase: Naval research laboratory facilities modernization			+ 20,000
203	Operational F-35 C2D2	422,881	358,367	- 64,514
	Prior year execution delays			- 64,514
204	Operational F-35 C2D2	383,741	325,199	- 58,542
	Prior year execution delays			- 58,542
207	Strategic Sub & Weapons System Support	157,676	119,766	- 37,910
	Restoring acquisition accountability: Project 2228 D5LE2 technology maturation concurrency with system architecture and trade analysis			- 49,910
	Program increase: High temperature composite material capacity expansion			+ 12,000
211	F/A-18 Squadrons	213,715	193,715	- 20,000
	Restoring acquisition accountability: Project 1662 USMC capability upgrades undefined requirement			- 20,000
214	Tomahawk and Tomahawk Mission Planning Center [TMPC]	320,134	226,234	- 93,900
	Restoring acquisition accountability: Project 4034 program acceleration			- 93,900
215	Integrated Surveillance System	88,382	100,382	+ 12,000
	Program increase: Transformational Reliable Acoustic Path Systems			+ 12,000
218	Ground/Air Task Oriented Radar [G/ATOR]	23,891	28,891	+ 5,000
	Program increase: Low, slow, small targets			+ 5,000
222	HARM Improvement	138,431	129,829	- 8,602
	Improving funds management: Project 2189 contract award delay			- 8,602
228	Marine Corps Communications Systems	143,317	147,707	+ 4,390
	Program increase: Shipboard integration and AI networking/NOTM			+ 4,390
231	Marine Corps Combat Services Support	37,761	45,761	+ 8,000
	Program increase: Airborne power generation technology development			+ 5,000
	Program increase: UAV alternative power generation technologies			+ 3,000
232	USMC Intelligence/Electronic Warfare Systems (MIP)	21,458	27,886	+ 6,428
	Program increase: Advanced electronic warfare digital payload			+ 6,428
241	Information Systems Security Program	41,853	46,353	+ 4,500
	Program increase: High assurance infrastructure in defense systems			+ 4,500
254	Unmanned Aerial Systems [UAS] Payloads (MIP)	3,704	10,004	+ 6,300

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Spectral and reconnaissance imagery for tactical exploitation			+ 6,300
255	RQ-4 Modernization	202,346	185,446	- 16,900
	Restoring acquisition accountability: IFC 5.0 concurrency			- 16,900
257	Depot Maintenance (Non-IF)	38,182	48,182	+ 10,000
	Program increase: High pressure cold spray systems			+ 10,000
258	Maritime Technology [MARITECH]	6,779	26,779	+ 20,000
	Program increase: Advanced additive technologies for sustainment of Navy assets			+ 20,000
999	Classified Programs	1,613,137	1,667,951	+ 54,814
	Program increase: Marine Corps Modernization for C2 in a degraded environment			+ 47,000
	Classified adjustment			+ 7,814

Prototyping for End Items.—The fiscal year 2020 President’s budget request includes more than \$1,750,000,000 in Research, Development, Test and Evaluation, Navy for 30 programs that apply acquisition authorities and contracting strategies enabled by legislative authorities provided for the rapid development, rapid prototyping, rapid acquisition, accelerated acquisition, or mid-tier acquisition (“section 804”) of warfighter capabilities. The spectrum of programs exercising these types of acquisition authorities ranges from existing programs that have already deployed prototypes to new programs that by virtue of their scope and cost would otherwise be subject to reporting requirements and acquisition regulations applicable to traditional major acquisition category I programs.

While supportive of efforts to deliver capability to the warfighter in an accelerated manner, the Committee is concerned that the growing trend toward acquisition-by-prototyping approach limits the Navy’s ability to successfully manage its acquisition programs in the long-term by reducing full understanding of long-term program costs; unnecessarily narrowing down the industrial base early in the acquisition process; and eliminating opportunities for future innovation by reducing competitive opportunities over the course of the acquisition.

The Assistant Secretary of the Navy (Research, Development and Acquisition) is directed to submit to the congressional defense committees with submission of the fiscal year 2021 President’s budget request a complete list of approved Navy acquisition programs utilizing prototyping or accelerated acquisition authorities, along with a rationale for each selected acquisition strategy, as well as a cost estimate. Further, the Assistant Secretary of the Navy (Research, Development and Acquisition) is directed to provide, for each such approved program, an assessment of the industrial base at the component- and system-level, as well as for system-level integration, to include opportunities for competition in the acquisition. The Assistant Secretary of the Navy (Financial Management and Comptroller) is directed to certify full funding of the acquisition strategies for these programs in the fiscal year 2021 President’s budget request, and the Director, Operational Test and Evaluation is directed to certify the appropriateness of the Navy’s planned test strategies for such programs, to include a risk assessment.

Maritime Accelerated Acquisitions.—The fiscal year 2020 President's budget request includes \$1,327,301,000 for programs designated as Maritime Accelerated Acquisitions by the Assistant Secretary of the Navy (Research, Development and Acquisition) and the Chief of Naval Operations through the Accelerated Acquisitions Board of Directors [AABOD]. The Committee continues its support of efforts to support Combatant Command and Fleet urgent and priority needs and recommends \$1,294,046,000 for these programs, consistent with prudent financial management practices.

The Committee notes that in accordance with previous direction, the Assistant Secretary of the Navy (Financial Management and Comptroller) and the Assistant Secretary of the Navy (Research, Development and Acquisition) provided with submission of the fiscal year 2020 President's budget request the acquisition strategy for each designated accelerated acquisition program, to include the associated test strategies as agreed to by the Chief of Naval Operations, the Assistant Secretary of the Navy (Research, Development and Acquisition) and the Director, Operational Test and Evaluation; and certified that the fiscal year 2020 President's budget request fully funds the respective acquisition strategies for each designated accelerated acquisition program. The Committee retains this direction for accelerated acquisition programs with submission of the fiscal year 2021 President's budget request.

Further, the Assistant Secretary of the Navy (Research, Development and Acquisition) and the Director, Operational Test and Evaluation are directed to update the congressional defense committees in a timely manner on any modifications to the test plans for these programs submitted with the fiscal year 2020 President's budget in the year of execution, to include impact on schedule and cost.

Industrial Base for Unmanned and Autonomous Programs.—The fiscal year 2020 President's budget request includes \$1,078,823,000 in Research, Development, Test and Evaluation, Navy for unmanned systems programs, an increase of \$412,697,000 over amounts enacted in fiscal year 2019. The Committee believes that remotely piloted, unmanned and autonomous technologies can provide valuable capability to the warfighter by augmenting higher-end platforms through additional capability or capacity; reducing risk to the warfighter; and expanding the industrial base, to include commercial and non-traditional vendors.

Therefore, the Committee is concerned that for several unmanned programs the Navy is pursuing acquisition strategies that would limit future competitive opportunities by awarding system-level prototypes early in the acquisition process and failing to articulate capability, requirements or technology roadmaps to encourage industrial innovation. The Assistant Secretary of the Navy (Research, Development and Acquisition) is directed to submit to the congressional defense committees with the fiscal year 2021 President's budget request such acquisition roadmaps for each unmanned acquisition program that include no less than mission requirements, program requirements for each increment, key technologies, acquisition strategies, test strategies, sub-system and system-level prototyping plans, and cost estimates.

Budgeting for Weapon Systems Modernization.—The fiscal year 2020 President's budget request includes \$232,800,000 in Research,

Development, Test and Evaluation, Navy for continued modernization of the E-2D Advanced Hawkeye. The Navy has been modernizing the E-2D Advanced Hawkeye through a series of Delta Systems Software Configuration [DSSC] builds in order to stay ahead of advancing threats. For fiscal year 2020, the Navy is requesting \$39,000,000 to initiate DSSC #6, which will require at least 6 years of development, integration and test and is estimated to cost approximately \$1,700,000,000 for development and production. The Committee notes that the estimated development cost alone for DSSC #6 would breach the acquisition category I threshold for a new acquisition program.

The Navy is taking a similar incremental modernization approach for several other aviation platforms, to include the P-8A Poseidon and F/A-18E/F Super Hornet. The Committee recognizes the need for continuous capability upgrades in light of a constantly evolving threat environment, but is concerned that a lack of full definition of modernization requirements, costs and schedules challenges oversight of these efforts; as well as reduces opportunities to innovate and save costs through competition. Further the Committee has repeatedly identified changes in scope or content of various modernization increments or spirals, as well as test, delivery and fielding schedules, but struggles to identify the corresponding adjustments in respective annual budget requests. Therefore, Assistant Secretary of the Navy (Research, Development and Acquisition) is directed to provide to the congressional defense committees with the fiscal year 2021 President's budget request baselined modernization programs by incremental or spiral, as applicable, for the E-2D Advanced Hawkeye, F/A-18E/F and P-8 Poseidon identifying requirements, acquisition strategies, decision milestones and criteria, costs, schedules and contracting strategies.

MQ-25A Stingray.—The fiscal year 2020 President's budget request includes \$671,300,000 in Research, Development, Test and Evaluation, Navy for continued development, integration and test of the MQ-25A Stingray. This includes \$63,000,000 for the acquisition of three System Development Test Article [SDTA] aircraft planned for the first quarter of fiscal year 2020, following successful completion of the system design review [SDR]. The Committee notes that in accordance with previous congressional direction, the Assistant Secretary of the Navy (Research, Development and Acquisition) and the Assistant Secretary of the Navy (Financial Management and Comptroller) submitted to the congressional defense committees with the fiscal year 2020 President's budget request the acquisition strategy for MQ-25A Stingray; as well as a certification that the fiscal year 2020 President's budget request fully funds the acquisition strategy, to include the test strategies as agreed to by the Chief, Naval Operations and the Director, Operational Test and Evaluation [DOTE]. The Committee understands that the current MQ-25A Stingray Test and Evaluation Master Plan [TEMP] is limited to developmental test only and is being updated to reflect operational test requirements. The Committee directs that DOTE provides a briefing to the congressional defense committees on the revised TEMP, and the Assistant Secretary of the Navy (Financial Management and Comptroller) brief the congressional defense com-

mittees on the Navy's resourcing strategy for the updated TEMP not later than 15 days after the SDR.

Surface Navy Laser Weapon System.—The fiscal year 2020 President's budget request includes \$89,234,000 in Research, Development, Test and Evaluation, Navy for further development, integration and test of one Surface Navy Laser Weapon System [SNLWS] Increment I unit onto a DDG 51 class Flight IIA destroyer in fiscal year 2021. Further, the Chief of Naval Operations submitted a fiscal year 2020 unfunded requirement of \$80,000,000 in Other Procurement, Navy for the procurement and installation of one additional SNLWS unit.

The Committee recommends \$65,000,000 in Other Procurement, Navy for the procurement of one additional SNLWS unit in fiscal year 2020 and directs that none of the funds may be obligated or expended until thirty days after the Assistant Secretary of the Navy (Research, Development and Acquisition) provides a briefing to the congressional defense committees detailing the results of the Critical Design Review for SNLWS Increment I as well as the acquisition strategy for future SNLWS increments and other Navy Laser Family of Systems programs. Further, the Assistant Secretary of the Navy (Financial Management and Comptroller) is directed to certify to the congressional defense committees with submission of the fiscal year 2021 President's budget request full funding for the first SNLWS production laser weapon system, Government-furnished equipment, Government-furnished information, engineering, support costs and installation. Finally, the Director, Operational Test and Evaluation, is directed to certify to the congressional defense committees, not later than with submission of the fiscal year 2021 President's budget request, appropriate execution of the previously agreed-to test approach for SNLWS.

Office of Naval Research Budget Structure.—The fiscal year 2020 President's budget request includes \$2,284,641,000 for science and technology research, a reduction of \$267,028,000 from amounts enacted in fiscal year 2019. The Committee continues to believe it is critical to invest in Navy foundational research to ensure U.S. technical superiority in the coming decades and recommends \$2,631,992,000 for Navy science and technology research in fiscal year 2020, an increase of \$347,351,000, or 15 percent, over the budget request.

The Committee notes that consistent with congressional direction, the fiscal year 2020 President's budget request for the Office of Naval Research [ONR] retains the previously agreed-upon program element structure for Navy science and technology projects. The Committee continues to support this budget structure. Further, the Committee believes that based on lessons learned, prototyping efforts managed by ONR require additional acquisition-type oversight, fiscal clarity and adherence to financial management practices in order to avoid the schedule and cost growth seen in the Solid State Laser-Technology Maturation program. The Assistant Secretary of the Navy (Financial Management and Comptroller) is directed to present a plan to the congressional defense committees to establish appropriate project units within the current ONR budget structure for such projects.

Office of Naval Research Budget Justification Materials.—The Committee notes the Chief, Naval Research’s information security concerns with respect to certain technology development plans and concurs with the need to appropriately manage the security posture relative to these efforts. However, the Committee notes that the timely and transparent transmission of details associated with these efforts to the congressional defense committees remains highly unsatisfactory. Therefore, the Committee directs the Assistant Secretary of the Navy (Financial Management and Comptroller) to coordinate with the Chief, Naval Research, to ensure that for the projects in question, specific information required by the congressional defense committees for their budget review be provided concurrent with submission of the President’s budget in the appropriate format.

Task Force Ocean.—The fiscal year 2020 President’s budget request includes \$19,052,000, an increase of \$16,978,000 over amounts enacted for fiscal year 2019, for ocean acoustics science and technology efforts that will enable tactical maneuver for the future submarine force. The Committee supports these efforts and recommends an additional \$7,000,000 for these efforts. Further, the Committee directs the Chief, Naval Research, to provide with submission of the fiscal year 2021 President’s budget request a report detailing activities conducted with these funds by project, to include transition plans.

Unmanned Surface Vessels.—The fiscal year 2020 President’s budget request includes \$446,800,000 in Research, Development, Test and Evaluation, Navy for Medium [MUSV] and Large Unmanned Surface Vessels [LUSV] and associated enabling capabilities. The Committee fully supports additional investments in unmanned and autonomous technologies, systems and sub-systems, including surface and sub-surface vessels. However, the Committee is concerned with the proposed acquisition and funding strategies for the MUSV and LUSV in this budget request, to include the Future Years Defense Program. Therefore, the Committee recommends several adjustments, as detailed elsewhere in this report, and directs the Assistant Secretary of the Navy (Research, Development and Acquisition) to review the acquisition strategies for these programs to address congressional concerns, as appropriately balanced with warfighter needs.

Future Surface Combatant Force.—The fiscal year 2020 President’s budget request includes \$80,145,000 for continued studies and analyses of the Future Surface Combatant Force [FSCF], to include concept refinement, trade studies, hull and power design efforts and draft specification development of a Large Surface Combatant [LSC]. The Committee understands that the Navy plans to begin procuring a LSC in fiscal year 2025, shortly after conclusion of the current DDG–51 Flight III multi-year procurement program and the planned delivery of the first ship under that multi-year procurement contract in fiscal year 2024. The Committee finds this acquisition strategy high-risk and recommends a reduction of \$46,550,000 to the FSCF request.

Further, the Committee is aware of the Navy’s Surface Capability Evolution Plan [SCEP], including the LSC, that informs the FSCF, and directs the Assistant Secretary of the Navy (Research,

Development and Acquisition) to provide with the fiscal year 2021 President's budget request the acquisition strategies for each element of the SCEP, as previously requested. Further, the Assistant Secretary of the Navy (Financial Management and Comptroller) is directed to provide with the fiscal year 2021 President's budget request cost estimates for each element of the SCEP, and to certify full funding in the budget request for each respective acquisition strategy of the SCEP elements.

CVN 78 Sortie Generation Rate.—Consistent with direction contained in Senate Report 115–290, accompanying the Department of Defense Appropriations Act, 2019, the Program Executive Officer, Aircraft Carriers, in coordination with the Director, Operational Test and Evaluation, provided an updated plan to the congressional defense committees for the CVN 78 Sortie Generation Rate [SGR] demonstration schedule and test requirements. Further, the Assistant Secretary of the Navy (Financial Management and Comptroller) certified SGR demonstration full funding in the fiscal year 2020 President's budget request. The Committee notes the completed plans for sustained SGR and that the plan for addressing the SGR surge pace was to be developed by September 2019. Noting potential delays to the CVN 78 schedule since submission of the fiscal year 2020 President's budget request, the Program Executive Officer, Aircraft Carriers, and the Director, Operational Test and Evaluation, are directed to provide the congressional defense committees an update on plans for addressing SGR surge pace not later than October 1, 2019.

Conventional Prompt Strike.—The fiscal year 2020 President's budget request includes \$593,120,000 for the continued development of a Conventional Prompt Strike [CPS] capability. The Committee notes that the Navy's CPS program will build on efforts previously funded by the Department of Defense with the intent of providing an initial CPS capability for a sea-based platform in fiscal year 2025. The Committee further notes that the Assistant Secretary of the Navy (Research, Development and Acquisition) has approved Section 804 Middle Tier Acquisition rapid prototyping authority as the acquisition strategy for this program. The Committee supports the investment in technologies to address the evolving hypersonic threat, and notes that under a 2018 Memorandum of Agreement with the Army, Air Force, and Missile Defense Agency, the Navy is tasked with designing an intermediate range conventional prompt strike common hypersonic glide body for transition to the Army for production.

The Committee is concerned that the Navy is accelerating the CPS program in a near-sole source environment without a clear understanding of technology and schedule risks, as well as costs. The Committee notes that the Director, Cost Assessment and Program Evaluation [CAPE], has not conducted an Independent Cost Estimate [ICE] for CPS and that the Navy continues to refine its cost estimate. The Committee further notes that the Navy plans to invest in excess of \$5,500,000,000 in CPS and associated efforts and procure a significant number of CPS all up rounds prior to making a production decision.

The Committee directs the Director, CAPE, to provide with submission of the fiscal year 2021 President's budget request an ICE

for CPS. Further, the Committee directs the Assistant Secretary of the Navy (Research, Development and Acquisition) to submit to the congressional defense committees, not later than with submission of the fiscal year 2021 President's budget request, the service cost position for CPS, as well as the test strategy. Concurrently, the Assistant Secretary of the Navy (Financial Management and Comptroller) is directed to certify full funding of the acquisition requirements, and the Director, Operational Test and Evaluation, is directed to certify the equivalent of the test and evaluation master plan to the congressional defense committees.

AEGIS Baselines Budget Estimates.—The fiscal year 2020 President's budget request includes \$74,400,000 in Research, Development, Test and Evaluation, Navy and \$43,600,000 in Research, Development, Test and Evaluation, Defense-Wide for AEGIS Baseline 9 upgrades, an increase of \$89,000,000 over amounts projected to be required for such efforts in fiscal year 2020 in the previous budget request. While cautiously optimistic that the Navy and Missile Defense Agency have improved the common understanding and definitions of AEGIS baseline capabilities, the Committee remains concerned by constant changes to AEGIS baseline scope and requirements, many of which are based on the introduction of new capabilities to the warfighter, but not identified as such. The Committee is concerned that the true development and fielding costs of new or additional warfighter capabilities are obfuscated by the lack of identification of associated costs levied on enabling programs such as AEGIS. The Committee recommends a 10 percent increase for AEGIS Baseline 9 over amounts enacted for fiscal year 2019.

CH-53K System Demonstration Test Article Aircraft.—The Committee notes that at the request of the Marine Corps, two System Demonstration Test Article [SDTA] aircraft were added to the CH-53K development program in fiscal year 2015, which already included one ground test vehicle, four engineering development models, and four SDTA aircraft. In January 2019, the Committee was informed that the Marine Corps issued a 'stop work' for the 5th and 6th SDTA aircraft due to cost, schedule and technical challenges, and that the Marine Corps restructured the development and test schedule for the CH-53K program.

The Committee notes that the 5th and 6th SDTA aircraft were incrementally funded with research, development, test and evaluation funding and that the reallocation of those parts to production aircraft at this time would be inappropriate. The Assistant Secretary of the Navy (Research, Development and Acquisition) is directed to provide an update to the congressional defense committees on the Marine Corps' plans for the previously procured parts of the 5th and 6th SDTA aircraft no less than thirty days prior to the execution of any such plans, and the Assistant Secretary of the Navy (Financial Management and Comptroller) is directed to certify to the congressional defense committees the appropriate use of funds for any such plans.

Offensive Anti-Surface Warfare/Long Range Anti-Ship Missile 1.1.—The fiscal year 2020 President's budget request includes \$65,400,000 in Research, Development, Test and Evaluation, Navy for continued development of the Offensive Anti-Surface Warfare/Long Range Anti-Ship Missile 1.1 [LRASM 1.1] capability. The

Committee notes that with submission of the fiscal year 2020 President's budget request, the Navy reduced the scope of LRASM capability improvements, previously included in LRASM 1.1. Given the evolving threat environment, the Committee does not concur with this approach and recommends \$50,000,000 to address those shortfalls, including but not limited to beyond line of sight capabilities, survivability enhancements, range improvements and obsolescence upgrades.

The Committee directs the Director, Operational Test and Evaluation to provide to the congressional defense committees with the fiscal year 2021 President's budget request, an updated plan for LRASM 1.0 and LRASM 1.1 full independent operational test [IOT&E] to include an identification of the required IOT&E rounds as well as an updated test and evaluation master plan; and directs the Assistant Secretary of the Navy (Research, Development and Acquisition) to submit an acquisition strategy that supports that test strategy. Further, the Assistant Secretary of the Navy (Financial Management and Comptroller) is directed to certify that the fiscal year 2021 President's budget request for LRASM 1.0 and LRASM 1.1 fully funds the development of capability improvements and the associated test strategies.

Amphibious Combat Vehicle.—The fiscal year 2020 President's budget request includes \$77,322,000 for continued development of the Amphibious Combat Vehicle [ACV] 1.1 and 1.2, which were merged into a single acquisition program subsequent to the budget submission. The ACV program consists of a personnel variant, as well as three additional supporting mission role variants for command and control, gun and recovery/maintenance missions. The Committee notes that in fiscal year 2019, the Marine Corps accelerated the development of the command and control mission variant by 1 year. The Committee understands that the Marine Corps also plans to accelerate the development of the gun mission role variant by 1 year in fiscal year 2020. Given the Marine Corps' long and troubled acquisition history to replace and modernize the Assault Amphibious Vehicle, the risk of destabilizing the industrial base, as well as reports by the Director, Operational Test and Evaluation, the Committee finds this additional proposed acceleration risky and recommends no funds for the procurement of the gun mission role variant in fiscal year 2020.

Advanced Digital Radar Basic Research.—The Committee notes the advances in the field of radar development with respect to phased array radar technology in a digital design. The Committee encourages the Navy to continue to support partnerships with laboratory-based antenna test facilities that will help the Navy understand, characterize, and calibrate advanced all-digital radars. The Committee further notes that the development of this technology is a critical enabler for the Navy in the development of tools to increase target detection, as well as to improve electronic warfare and adaptive sensing capabilities and recommends an additional \$8,000,000 for these development efforts.

Aircraft Fleet Readiness and Sustainment.—The Committee remains concerned about the long-term critical challenges facing the Navy in maintaining the readiness of air vehicle fleets and extending the useful life of aging aircraft. The Committee continues to

support the role and expertise university research institutions can provide in performing basic research and development that can translate into technological capabilities to assist the Navy with addressing current and future technical and engineering challenges in these areas. The Committee recommends an additional \$8,000,000 for basic university research in support of the Navy's long-term, air vehicle fleet readiness and sustainment conducted at university institutions with state-of-the art research and development capabilities in structures and materials.

Lithium-ion Battery Safety and Performance Improvements.—The Committee continues to support Navy investments in power generation and energy storage research. The Committee understands that development and deployment of lithium-ion batteries are critical to Department of Defense missions, but that safety incidents restrict their operational use. Therefore, the Committee believes that the development and qualification of materials technologies, including non-flammable electrolytes, to reduce the risk of thermal runaway and improve safety and performance in lithium-ion batteries should be a research priority.

Electric Propulsion for Military Craft and Advanced Planing Hulls.—The Committee notes with appreciation the high operational tempo of Naval Special Warfare maritime units, such as the Special Warfare Combatant Craft and Coastal Riverine Force squadrons, in the performance of national missions that require technological advantage, unsurpassed equipment performance, and stealth. These units are equipped with a variety of surface craft for transit to and from mission areas, almost all of which are fossil fuel powered. The Committee is aware that U.S. Special Operations Command has identified mission-critical capability objectives for hybrid propulsion technologies and low signature management that, in the face of increasingly technologically advanced adversaries, make it critical that such systems are fielded without delay. Therefore, the Committee recommends an additional \$8,500,000 for the design, development and testing of a complete marine electric propulsion system.

Talent and Technology for Navy Power and Energy Systems.—The Committee has supported the Navy's investment in next-generation combat systems such as directed energy weapons. While directed energy weapons are part of a strategy to maintain military technological advantage, they also create new energy challenges for the ships and submarines deploying them. Therefore, the Committee recommends an increase of \$9,500,000 for a combination of workforce talent and technology development efforts in support of Navy power and energy systems, such as bridge-to-university programs for underprepared university enrollees and digital twin research.

Energy Resilience.—The Committee recognizes the need for additional research to assist the Secretary of the Navy in efforts to create a more robust energy infrastructure. To achieve military energy resiliency, the Committee believes that these challenges can be best met by leveraging experienced energy university researchers in concert with industry partners and the Navy. Specific areas of interest include addressing electrical power intermittency, integrating renewable energy sources into the grid, energy storage, im-

proved micro-grids, grid security, local generation of zero-carbon fuels, and the inspection and structural health monitoring of critical energy infrastructure.

Navy Alternative Energy Research.—The Committee recommends an increase of \$20,000,000 for Navy alternative energy research. The Committee notes the value of investing in energy research and encourages the Navy to continue research, development, testing and deployment of advanced energy systems with the potential to reduce the cost of energy and increase energy security, reliability, and resiliency at Department of Defense facilities while pursuing longer-term emphasis on grid-connected power generation. The Committee understands that the integration of emerging land and ocean-based energy generation and end-use energy efficiency technologies has the potential to improve Navy resilience. Further, the Committee encourages the Navy to invest in energy demonstration activities relating to Department of Defense facilities and activities in coordination with other Federal agencies and entities.

Noise Induced Hearing Loss.—The Committee supports the Department's noise induced hearing loss research and development initiative and encourages the Navy to expand research and development of a novel noise-level enabled drug dosing and delivery system designed to shield the ear tissue from mechanical stimuli that would otherwise cause temporary or permanent hearing loss.

Energetics Research.—The Committee is concerned about advances adversaries are making in advanced energetics and believes that there is a need for a renewed, long-term investment in research and development for advanced energetics to increase the lethality, range and speed of weapons, develop new leap-ahead capabilities, and to grow the national energetics workforce. Therefore, the Committee recommends an increase of \$8,000,000 for energy technology research. The Committee encourages the Department of the Navy to execute the funding for the necessary efforts with the naval research and development establishment best suited to advance the overall knowledge, expertise and capability of energetics and to incorporate these developments into advanced weapon systems.

Instrumented Tow Cable.—The Committee recognizes the importance of accurate, real-time water temperature and other environmental data to the operations of the Navy's submarine force. The Committee remains concerned that there are capability gaps and unmet requirements with existing temperature and environmental data measurement that the fleet uses to generate this information, including reliance on a single point measurement system. Therefore, the Committee encourages the Navy to complete a comprehensive review examining the current system's limitations and explore the efficacy of deploying a more sophisticated instrumented cable system technology that enables real-time, multisource collection to improve accuracy and fleet operations.

Resident Autonomous Undersea Robotics.—The Committee encourages the Secretary of the Navy to continue supporting the cost-effective development of resident autonomous undersea robotic systems, including research, testing, and demonstration of technologies that will support persistent surveillance, security and related fleet readiness requirements. The Committee believes that

university-based research and innovation centered on the development of resident autonomous undersea robotic technologies will be essential in maintaining competitive advantage in the future.

Automated Critical Care System.—The fiscal year 2020 President's budget request includes no funds to conclude development of an automated critical care system. The Committee notes that advanced medical care for marines and sailors deployed in remote locations or on ships poses a serious and unique challenge. The potential deterioration of these injured service members while being stabilized, especially in prolonged field care scenarios and during transport to a facility possessing high-level medical care, especially in remote austere deployments, is concerning. The Committee believes that incorporation of state-of-the-art medical device technologies such as automated critical care systems with decision support may be the difference between life and death and will have a significant impact in medical care for both the military and civilian communities dealing with mass casualties. Therefore, the Committee recommends \$1,200,000 for additional development of an automated critical care system.

Shipbuilding Manufacturing.—The Committee recognizes the importance of building strong partnerships among Department of Navy research labs, academia and naval shipyards that construct our nation's submarines. The Committee encourages the Navy to coordinate manufacturing efforts with industrial base partners to ensure that funded research projects are relevant to specific engineering and manufacturing needs, as well as defined systems capabilities. Partnerships with academia should focus on well-defined submarine and autonomous undersea vehicle research needs, accelerated technology transition projects and workforce development to help ensure a sustainable industrial base. The Committee believes that all manufacturing efforts should focus on reducing the cost of manufacturing and sustaining the submarine fleet.

Silicon Carbide Electronics Systems.—The Committee understands that use of silicon carbide power modules may reduce the size and weight of power conversion modules and other electronic systems necessary for advanced sensors and weapon systems. Therefore, the Committee recommends \$7,000,000 for silicon carbide electronics systems research and encourages the Secretary of the Navy to continue to invest in advanced power and energy technology, and accelerate the qualification of silicon carbide power modules to be used on high power, mission-critical Navy platforms accelerated through the use of virtual system architecture in testing.

Marine Energy Systems for Sensors and Microgrids.—The Committee recognizes that a broader range of experimentation, prototyping, and development is necessary for powering maritime security systems, at-sea persistent surveillance and communications systems and for charging unmanned undersea vehicles. The Committee encourages the Secretary of the Navy to collaborate with affiliated research facilities to accelerate the development and incorporation of new novel energy technologies, such as marine hydrokinetic energy converters, for autonomous systems and tactical energy solutions.

Active Vibration Control System.—The Committee encourages the Navy and Marine Corps to consider the benefits of reducing vibration in the V-22 engine nacelle to reduce maintenance degraders and increase operational readiness of the aircraft. Therefore, the Committee recommends an additional \$5,000,000 to demonstrate and optimize an active vibration control solution within the overall nacelle improvement program.

Command and Control Satellite Systems Cyber Security.—The Committee recognizes the vast, rapidly evolving space-based cybersecurity threat facing the U.S. and the direct threats this poses against the U.S. Government, critical infrastructure components, and the general economy for security critical functions. Therefore, the Committee recommends an additional \$20,000,000 for the development of Command and Control Satellite Systems Cyber Security.

Spectral and Reconnaissance Imagery for Tactical Exploitation.—The Committee recognizes the versatility and broad application spectral and reconnaissance imagery for tactical exploitation brings to the warfighter supporting intelligence, surveillance and reconnaissance mission requirements. The Committee understands that certain capabilities are available for integration and testing on the Navy's RQ-21A Blackjack unmanned aircraft prior to completion of an entire end-to-end system. Therefore, the Committee recommends an additional \$6,300,000 to prototype payloads for development into mission kits for the RQ-21A Blackjack. Additionally, these funds will provide for the field user evaluations and other operational testing requirements.

High Pressure Cold Spray Systems.—The Committee notes that sustainment drives significant acquisition costs to ships and submarines, and understands that the utilization of high pressure cold spray systems for ship and submarine maintenance and repairs can result in significant cost savings. Therefore, the Committee recommends an additional \$10,000,000 for this purpose.

Advanced Additive Technologies for Sustainment of Navy Assets.—The Committee understands that to accelerate the delivery of technical capabilities for the warfighter in a timely manner, additional development of additive manufacturing is required. The Committee recommends an additional \$20,000,000 for this purpose.

Cyber Vulnerability Assessments and Evaluations.—The Committee recognizes the importance of the Cyber Vulnerability Assessments and Evaluations program within Research, Development, Test and Evaluation, Navy, which is intended to assess cyber vulnerabilities of major Navy weapons systems and critical shore infrastructure. The Committee supports full funding for these activities.

Arctic Mobility.—The Committee notes that the Arctic Ocean continues to increase in strategic importance. The Committee understands that a new generation of capabilities is necessary to address the Navy's need for Arctic mobility, to include power projection, search and rescue, humanitarian and disaster relief, and logistical support for scientific research, particularly in remote regions. Therefore, the Committee directs the Secretary of the Navy to complete a comprehensive review no later than 90 days after enactment of this Act of the Navy's unmet requirements for the Arctic

region and to provide a plan to the congressional defense committees to research, develop, prototype, test and evaluate materials and components capable of allowing sustained operation of advanced amphibious vehicles in Arctic, sub-zero temperature conditions.

Nuclear Sea-launched Cruise Missile Analysis of Alternatives.—The Committee notes that the Navy’s budget request includes \$5,000,000 to begin an analysis of alternatives [AoA] for a new Nuclear Sea-launched Cruise Missile [SLCM–N] pursuant to the 2018 Nuclear Posture Review’s call for the “rapid development of a modern SLCM.” The recommendation includes full funding for this request. The Committee directs the Director, Cost Analysis and Program Evaluation [CAPE] to brief the congressional defense and appropriations committees not later than 90 days after the enactment of this Act on the scope and terms of the AoA, to include evaluation criteria thereof. Further, the Committee directs the Comptroller General of the Government Accountability Office [GAO] to review these AoA scope and terms, and brief the congressional defense and appropriations committees not later than 60 days following the Director, CAPE briefings to the congressional defense and appropriations committees of the GAO findings.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE

Appropriations, 2019	\$41,229,475,000
Budget estimate, 2020	45,616,122,000
Committee recommendation	45,446,727,000

The Committee recommends an appropriation of \$45,446,727,000. This is \$169,395,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE			
	BASIC RESEARCH			
1	DEFENSE RESEARCH SCIENCES	356,107	406,107	+ 50,000
2	UNIVERSITY RESEARCH INITIATIVES	158,859	158,859	.....
3	HIGH ENERGY LASER RESEARCH INITIATIVES	14,795	14,795	.....
	TOTAL, BASIC RESEARCH	529,761	579,761	+ 50,000
	APPLIED RESEARCH			
4	MATERIALS	128,851	210,351	+ 81,500
5	AEROSPACE VEHICLE TECHNOLOGIES	147,724	157,724	+ 10,000
6	HUMAN EFFECTIVENESS APPLIED RESEARCH	131,795	134,795	+ 3,000
7	AEROSPACE PROPULSION	198,775	219,775	+ 21,000
8	AEROSPACE SENSORS	202,912	214,912	+ 12,000
10	SCIENCE AND TECHNOLOGY MANAGEMENT—MAJOR HEAD- QUARTERS	7,968	7,968	.....
12	CONVENTIONAL MUNITIONS	142,772	142,772	.....
13	DIRECTED ENERGY TECHNOLOGY	124,379	124,379	.....
14	DOMINANT INFORMATION SCIENCES AND METHODS	181,562	211,062	+ 29,500
15	HIGH ENERGY LASER RESEARCH	44,221	49,221	+ 5,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
16	SPACE TECHNOLOGY	124,667	154,667	+ 30,000
	TOTAL, APPLIED RESEARCH	1,435,626	1,627,626	+ 192,000
	ADVANCED TECHNOLOGY DEVELOPMENT			
17	ADVANCED MATERIALS FOR WEAPON SYSTEMS	36,586	50,086	+ 13,500
18	SUSTAINMENT SCIENCE AND TECHNOLOGY [S&T]	16,249	16,249	.....
19	ADVANCED AEROSPACE SENSORS	38,292	42,292	+ 4,000
20	AEROSPACE TECHNOLOGY DEV/DEMO	102,949	202,949	+ 100,000
21	AEROSPACE PROPULSION AND POWER TECHNOLOGY	113,973	155,973	+ 42,000
22	ELECTRONIC COMBAT TECHNOLOGY	48,408	48,408	.....
23	ADVANCED SPACECRAFT TECHNOLOGY	70,525	80,525	+ 10,000
24	MAUI SPACE SURVEILLANCE SYSTEM [MSSS]	11,878	11,878	.....
25	HUMAN EFFECTIVENESS ADVANCED TECHNOLOGY DEVELOPMENT	37,542	37,542	.....
26	CONVENTIONAL WEAPONS TECHNOLOGY	225,817	225,817	.....
27	ADVANCED WEAPONS TECHNOLOGY	37,404	37,404	.....
28	MANUFACTURING TECHNOLOGY PROGRAM	43,116	105,716	+ 62,600
29	BATTLESPACE KNOWLEDGE DEVELOPMENT & DEMONSTRATION ..	56,414	56,414	.....
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	839,153	1,071,253	+ 232,100
	ADVANCED COMPONENT DEVELOPMENT			
31	INTELLIGENCE ADVANCED DEVELOPMENT	5,672	5,672	.....
32	COMBAT IDENTIFICATION TECHNOLOGY	27,085	27,085	.....
33	NATO RESEARCH AND DEVELOPMENT	4,955	4,955	.....
34	IBCM DLM/VAL	44,109	44,109	.....
35	POLLUTION PREVENTION-DEM/VAL .....	.....	3,000	+ 3,000
36	AIR FORCE WEATHER SERVICES RESEARCH	772	772	.....
37	ADVANCED ENGINE DEVELOPMENT	878,442	608,442	- 270,000
38	LONG RANGE STRIKE	3,003,899	2,898,099	- 105,800
39	DIRECTED ENERGY PROTOTYPING	10,000	24,000	+ 14,000
40	HYPERSONICS PROTOTYPING	576,000	576,000	.....
41	INTEGRATED AVIONICS PLANNING AND DEVELOPMENT	92,600	92,600	.....
42	ADVANCED TECHNOLOGY AND SENSORS	23,145	23,145	.....
43	NATIONAL AIRBORNE OPS CENTER [NAOC] RECAP	16,669	12,669	- 4,000
44	TECHNOLOGY TRANSFER	23,614	27,614	+ 4,000
45	HARD AND DEEPLY BURIED TARGET DEFEAT SYSTEM	113,121	113,121	.....
46	CYBER RESILIENCY OF WEAPON SYSTEMS-ACS	56,325	56,325	.....
47	DEPLOYMENT AND DISTRIBUTION ENTERPRISE R&D	28,034	28,034	.....
48	TECH TRANSITION PROGRAM	128,476	179,476	+ 51,000
49	GROUND BASED STRATEGIC DETERRENT	570,373	657,495	+ 87,122
50	LIGHT ATTACK ARMED RECONNAISSANCE [LAAR] SQUADRONS ...	35,000	2,000	- 33,000
51	NEXT GENERATION AIR DOMINANCE	1,000,000	960,000	- 40,000
52	THREE DIMENSIONAL LONG-RANGE RADAR	37,290	23,190	- 14,100
53	UNIFIED PLATFORM [UP]	10,000	10,000	.....
54	COMMON DATA LINK EXECUTIVE AGENT [CDL EA]	36,910	36,910	.....
55	CYBERSPACE OPERATIONS FORCES AND FORCE SUPPORT	35,000	35,000	.....
56	MISSION PARTNER ENVIRONMENTS	8,550	8,550	.....
57	CYBER OPERATIONS TECHNOLOGY DEVELOPMENT	198,864	240,064	+ 41,200
58	ENABLED CYBER ACTIVITIES	16,632	16,632	.....
60	CONTRACTING INFORMATION TECHNOLOGY SYSTEM	20,830	20,830	.....
61	GLOBAL POSITIONING SYSTEM USER EQUIPMENT (SPACE)	329,948	320,598	- 9,350
62	EO/IR WEATHER SYSTEMS	101,222	.....	- 101,222
63	WEATHER SYSTEM FOLLOW-ON	225,660	205,660	- 20,000
64	SPACE SITUATION AWARENESS SYSTEMS	29,776	24,776	- 5,000
65	SPACE SYSTEMS PROTOTYPE TRANSITIONS [SSPT]	142,045	142,045	.....
67	SPACE CONTROL TECHNOLOGY	64,231	59,231	- 5,000
68	SPACE SECURITY AND DEFENSE PROGRAM	56,385	46,385	- 10,000
69	PROTECTED TACTICAL ENTERPRISE SERVICE [PTES]	105,003	105,003	.....
70	PROTECTED TACTICAL SERVICE [PTS]	173,694	163,694	- 10,000
71	EVOLVED STRATEGIC SATCOM [ESS]	172,206	172,206	.....
72	SPACE RAPID CAPABILITIES OFFICE	33,742	9,000	- 24,742
	TOTAL, ADVANCED COMPONENT DEVELOPMENT	8,436,279	7,984,387	- 451,892

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	ENGINEERING & MANUFACTURING DEVELOPMENT			
73	FUTURE ADVANCED WEAPON ANALYSIS & PROGRAMS	246,200	5,000	-241,200
74	INTEGRATED AVIONICS PLANNING AND DEVELOPMENT	67,782	67,782	.....
75	NUCLEAR WEAPONS SUPPORT	4,406	4,406	.....
76	ELECTRONIC WARFARE DEVELOPMENT	2,066	2,066	.....
77	TACTICAL DATA NETWORKS ENTERPRISE	229,631	189,631	-40,000
78	PHYSICAL SECURITY EQUIPMENT	9,700	9,700	.....
79	SMALL DIAMETER BOMB [SDB]	31,241	55,241	+24,000
80	AIRBORNE ELECTRONIC ATTACK	2	.....	-2
81	ARMAMENT/ORDNANCE DEVELOPMENT	28,043	28,043	.....
82	SUBMUNITIONS	3,045	3,045	.....
83	AGILE COMBAT SUPPORT	19,944	26,944	+7,000
84	LIFE SUPPORT SYSTEMS	8,624	8,624	.....
85	COMBAT TRAINING RANGES	37,365	52,365	+15,000
86	F-35—EMD	7,628	7,628	.....
87	LONG RANGE STANDOFF WEAPON	712,539	712,539	.....
88	ICBM FUZE MODERNIZATION	161,199	161,199	.....
89	JOINT TACTICAL NETWORK CENTER [JTNC]	2,414	2,414	.....
91	OPEN ARCHITECTURE MANAGEMENT	30,000	30,000	.....
93	KC-46	59,561	94,561	+35,000
94	ADVANCED PILOT TRAINING	348,473	332,173	-16,300
95	COMBAT RESCUE HELICOPTER	247,047	247,047	.....
98	B-2 DEFENSIVE MANAGEMENT SYSTEM	294,400	250,100	-44,300
99	NUCLEAR WEAPONS MODERNIZATION	27,564	27,564	.....
100	MINUTEMAN SQUADRONS	1	1	.....
101	F-15 EPAWSS	47,322	47,322	.....
102	STAND IN ATTACK WEAPON	162,840	162,840	.....
103	FULL COMBAT MISSION TRAINING	9,797	9,797	.....
106	C-32 EXECUTIVE TRANSPORT RECAPITALIZATION	9,930	9,930	.....
107	PRESIDENTIAL AIRCRAFT REPLACEMENT	757,923	757,923	.....
108	AUTOMATED TEST SYSTEMS	2,787	2,787	.....
109	COMBAT SURVIVOR EVADER LOCATOR	2,000	2,000	.....
110	GPS III FOLLOW ON [GPS III F]	462,875	447,875	-15,000
111	SPACE SITUATION AWARENESS OPERATIONS	76,829	56,829	-20,000
112	COUNTERSPACE SYSTEMS	29,037	29,037	.....
113	WEATHER SYSTEM FOLLOW-ON	2,237	2,237	.....
114	SILENT BARKER	412,894	362,894	-50,000
116	ADVANCED EHF MILSATCOM (SPACE)	117,290	117,290	.....
117	POLAR MILSATCOM (SPACE)	427,400	401,400	-26,000
118	WIDEBAND GLOBAL SATCOM (SPACE)	1,920	1,920	.....
119	SPACE BASED INFRARED SYSTEM [SBIRS] HIGH EMD	1	1	.....
120	NEXT—GENERATION OPIR	1,395,278	1,930,778	+535,500
122	NATIONAL SECURITY SPACE LAUNCH EMD	432,009	462,009	+30,000
122A	TACTICALLY RESPONSIVE LAUNCH OPERATIONS .....	.....	22,000	+22,000
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	6,929,244	7,144,942	+215,698
	RDT&E MANAGEMENT SUPPORT			
123	THREAT SIMULATOR DEVELOPMENT	59,693	59,693	.....
124	MAJOR T&E INVESTMENT	181,663	75,663	-106,000
125	RAND PROJECT AIR FORCE	35,258	35,258	.....
127	INITIAL OPERATIONAL TEST & EVALUATION	13,793	13,793	.....
128	TEST AND EVALUATION SUPPORT	717,895	717,895	.....
129	ACQ WORKFORCE—GLOBAL POWER	258,667	255,667	-3,000
130	ACQ WORKFORCE—GLOBAL VIG & COMBAT SYS	251,992	249,992	-2,000
131	ACQ WORKFORCE—GLOBAL REACH	149,191	149,191	.....
132	ACQ WORKFORCE—CYBER, NETWORK, & BUS SYS	235,360	235,360	.....
133	ACQ WORKFORCE—GLOBAL BATTLE MGMT	160,196	160,196	.....
134	ACQ WORKFORCE—CAPABILITY INTEGRATION	220,255	228,255	+8,000
135	ACQ WORKFORCE—ADVANCED PRGM TECHNOLOGY	42,392	39,392	-3,000
136	ACQ WORKFORCE—NUCLEAR SYSTEMS	133,231	133,231	.....
137	MANAGEMENT HQ—R&D	5,590	5,590	.....
138	FACILITIES RESTORATION & MODERNIZATION—TEST & EVAL	88,445	88,445	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
139	FACILITIES SUSTAINMENT—TEST AND EVALUATION SUPPORT	29,424	29,424	.....
140	REQUIREMENTS ANALYSIS AND MATURATION	62,715	80,715	+ 18,000
141	MANAGEMENT HQ—T&E	5,013	5,013	.....
142	ENTERPRISE INFORMATION SERVICES (EIS)	17,128	10,628	- 6,500
143	ACQUISITION AND MANAGEMENT SUPPORT	5,913	5,913	.....
144	GENERAL SKILL TRAINING	1,475	6,475	+ 5,000
146	INTERNATIONAL ACTIVITIES	4,071	4,071	.....
147	SPACE TEST AND TRAINING RANGE DEVELOPMENT	19,942	19,942	.....
148	SPACE AND MISSILE CENTER (SMC) CIVILIAN WORKFORCE	167,810	167,810	.....
149	SPACE & MISSILE SYSTEMS CENTER—MHA	10,170	10,170	.....
150	ROCKET SYSTEMS LAUNCH PROGRAM (SPACE)	13,192	13,192	.....
151	SPACE TEST PROGRAM (STP)	26,097	26,097	.....
	TOTAL, RDT&E MANAGEMENT SUPPORT	2,916,571	2,827,071	- 89,500
	OPERATIONAL SYSTEMS DEVELOPMENT			
152	ADVANCED BATTLE MANAGEMENT SYSTEM (ABMS)	35,611	43,611	+ 8,000
154	SPECIALIZED UNDERGRADUATE FLIGHT TRAINING	2,584	2,584	.....
156	DEPLOYMENT & DISTRIBUTION ENTERPRISE R&D	903	903	.....
157	F-35 C2D2	694,455	588,511	- 105,944
158	AIR FORCE INTEGRATED MILITARY HUMAN RESOURCES SYSTEM	40,567	40,567	.....
159	ANTI-TAMPER TECHNOLOGY EXECUTIVE AGENCY	47,193	47,193	.....
160	FOREIGN MATERIEL ACQUISITION AND EXPLOITATION	70,083	70,083	.....
161	HC/MC-130 RECAP RDT&E	17,218	17,218	.....
162	NC3 INTEGRATION	25,917	25,917	.....
164	B-52 SQUADRONS	325,974	329,974	+ 4,000
165	AIR-LAUNCHED CRUISE MISSILE (ALCM)	10,217	10,217	.....
166	B-1B SQUADRONS	1,000	1,000	.....
167	B-2 SQUADRONS	97,276	98,076	+ 800
168	MINUTEMAN SQUADRONS	128,961	104,219	- 24,742
170	WORLDWIDE JOINT STRATEGIC COMMUNICATIONS	18,177	22,177	+ 4,000
171	INTEGRATED STRATEGIC PLANNING & ANALYSIS NETWORK	24,261	24,261	.....
172	ICBM REENTRY VEHICLES	75,571	41,271	- 34,300
174	UH-1N REPLACEMENT PROGRAM	170,975	170,975	.....
176	MQ-9 UAV	154,996	127,296	- 27,700
178	A-10 SQUADRONS	36,816	31,916	- 4,900
179	F-16 SQUADRONS	193,013	193,013	.....
180	F-15E SQUADRONS	336,079	694,229	+ 358,150
181	MANNED DESTRUCTIVE SUPPRESSION	15,521	15,521	.....
182	F-22 SQUADRONS	496,298	546,298	+ 50,000
183	F-35 SQUADRONS	99,943	99,943	.....
184	TACTICAL AIM MISSILES	10,314	10,314	.....
185	ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)	55,384	55,384	.....
186	COMBAT RESCUE—PARARESCUE	281	281	.....
187	AF TENCAP	21,365	21,365	.....
188	PRECISION ATTACK SYSTEMS PROCUREMENT	10,696	10,696	.....
189	COMPASS CALL	15,888	31,888	+ 16,000
190	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	112,505	112,505	.....
191	JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)	78,498	78,498	.....
192	AIR AND SPACE OPERATIONS CENTER (AOC)	114,864	114,864	.....
193	CONTROL AND REPORTING CENTER (CRC)	8,109	8,109	.....
194	AIRBORNE WARNING AND CONTROL SYSTEM (AWACS)	67,996	67,996	.....
195	TACTICAL AIRBORNE CONTROL SYSTEMS	2,462	2,462	.....
197	COMBAT AIR INTELLIGENCE SYSTEM ACTIVITIES	13,668	13,668	.....
198	TACTICAL AIR CONTROL PARTY—MOD	6,217	4,117	- 2,100
200	DCAPES	19,910	19,910	.....
201	NATIONAL TECHNICAL NUCLEAR FORENSICS	1,788	1,788	.....
202	SEEK EAGLE	28,237	28,237	.....
203	USAF MODELING AND SIMULATION	15,725	15,725	.....
204	WARGAMING AND SIMULATION CENTERS	4,316	4,316	.....
205	BATTLEFIELD ABN COMM NODE (BACN)	26,946	26,946	.....
206	DISTRIBUTED TRAINING AND EXERCISES	4,303	4,303	.....
207	MISSION PLANNING SYSTEMS	71,465	71,465	.....
208	TACTICAL DECEPTION	7,446	7,446	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
209	OPERATIONAL HG—CYBER	7,602	7,602	.....
210	DISTRIBUTED CYBER WARFARE OPERATIONS	35,178	35,178	.....
211	AF DEFENSIVE CYBERSPACE OPERATIONS	16,609	44,109	+ 27,500
212	JOINT CYBER COMMAND AND CONTROL [JCC2]	11,603	11,603	.....
213	UNIFIED PLATFORM [UP]	84,702	84,702	.....
219	GEOBASE	2,723	2,723	.....
220	NUCLEAR PLANNING AND EXECUTION SYSTEM [NPES]	44,190	44,190	.....
226	AIR FORCE SPACE AND CYBER NON-TRADITIONAL ISR FOR BATTLESPACE AWARENESS	3,575	3,575	.....
227	E-4B NATIONAL AIRBORNE OPERATIONS CENTER [NAOC]	70,173	42,623	- 27,550
228	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK	13,543	13,543	.....
229	HIGH FREQUENCY RADIO SYSTEMS	15,881	15,881	.....
230	INFORMATION SYSTEMS SECURITY PROGRAM	27,726	27,726	.....
232	GLOBAL FORCE MANAGEMENT—DATA INITIATIVE	2,210	2,210	.....
234	MULTI DOMAIN COMMAND AND CONTROL [MDC2]	150,880	110,880	- 40,000
235	AIRBORNE SIGINT ENTERPRISE	102,667	102,667	.....
236	COMMERCIAL ECONOMIC ANALYSIS	3,431	3,431	.....
239	C2 AIR OPERATIONS SUITE—C2 INFO SERVICES	9,313	9,313	.....
240	CCMD INTELLIGENCE INFORMATION TECHNOLOGY	1,121	1,121	.....
241	ISR MODERNIZATION & AUTOMATION DVMT [IMAD]	19,000	19,000	.....
242	GLOBAL AIR TRAFFIC MANAGEMENT [GATM]	4,544	4,544	.....
243	WEATHER SERVICE	25,461	27,461	+ 2,000
244	AIR TRAFFIC CONTROL, APPROACH, & LANDING SYSTEM [ATC] ..	5,651	5,651	.....
245	AERIAL TARGETS	7,448	7,448	.....
248	SECURITY AND INVESTIGATIVE ACTIVITIES	425	425	.....
249	ARMS CONTROL IMPLEMENTATION	54,546	54,546	.....
250	DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES	6,858	6,858	.....
252	INTEGRATED BROADCAST SERVICE	8,728	8,728	.....
253	DRAGON U-2	38,939	33,839	- 5,100
254	ENDURANCE UNMANNED AERIAL VEHICLES .....	.....	15,000	+ 15,000
255	AIRBORNE RECONNAISSANCE SYSTEMS	122,909	122,909	.....
256	MANNED RECONNAISSANCE SYSTEMS	11,787	11,787	.....
257	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	25,009	25,009	.....
258	RQ-4 UAV	191,733	191,733	.....
259	NETWORK-CENTRIC COLLABORATIVE TARGET [TIARA]	10,757	10,757	.....
260	NATO AGS	32,567	32,567	.....
261	SUPPORT TO DCGS ENTERPRISE	37,774	37,774	.....
262	INTERNATIONAL INTELLIGENCE TECHNOLOGY AND ARCHITEC- TURES	13,515	13,515	.....
263	RAPID CYBER ACQUISITION	4,383	4,383	.....
264	PERSONNEL RECOVERY COMMAND & CTRL [PRC2]	2,133	2,133	.....
265	INTELLIGENCE MISSION DATA [IMD]	8,614	8,614	.....
266	C-130 AIRLIFT SQUADRON	140,425	101,425	- 39,000
267	C-5 AIRLIFT SQUADRONS	10,223	10,223	.....
268	C-17 AIRCRAFT	25,101	25,101	.....
269	C-130J PROGRAM	8,640	8,640	.....
270	LARGE AIRCRAFT IR COUNTERMEASURES [LAIRCM]	5,424	5,424	.....
272	KC-10S	20	20	.....
274	CV-22	17,906	17,906	.....
276	SPECIAL TACTICS/COMBAT CONTROL	3,629	3,629	.....
277	DEPOT MAINTENANCE (NON-IF)	1,890	1,890	.....
278	MAINTENANCE, REPAIR & OVERHAUL SYSTEM	10,311	10,311	.....
279	LOGISTICS INFORMATION TECHNOLOGY [LOGIT]	16,065	16,065	.....
280	SUPPORT SYSTEMS DEVELOPMENT	539	539	.....
281	OTHER FLIGHT TRAINING	2,057	2,057	.....
282	OTHER PERSONNEL ACTIVITIES	10	10	.....
283	JOINT PERSONNEL RECOVERY AGENCY	2,060	2,060	.....
284	CIVILIAN COMPENSATION PROGRAM	3,809	3,809	.....
285	PERSONNEL ADMINISTRATION	6,476	4,376	- 2,100
286	AIR FORCE STUDIES AND ANALYSIS AGENCY	1,443	1,443	.....
287	FINANCIAL MANAGEMENT INFORMATION SYSTEMS DEVELOPMENT	9,323	9,323	.....
288	DEFENSE ENTERPRISE ACNTNG AND MGT SYS [DEAMS]	46,789	42,789	- 4,000
289	GLOBAL SENSOR INTEGRATED ON NETWORK [GSIN]	3,647	3,647	.....
290	SERVICE SUPPORT TO STRATCOM—SPACE ACTIVITIES	988	988	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
291	SERVICE SUPPORT TO SPACECOM ACTIVITIES	11,863	11,863	.....
293	FAMILY OF ADVANCED BLOS TERMINALS (FAB-T)	197,388	177,388	- 20,000
294	SATELLITE CONTROL NETWORK (SPACE)	61,891	56,891	- 5,000
297	SPACE AND MISSILE TEST AND EVALUATION CENTER	4,566	4,566	.....
298	SPACE INNOVATION, INTEGRATION AND RAPID TECHNOLOGY DEVELOPMENT	43,292	38,292	- 5,000
300	SPACELIFT RANGE SYSTEM (SPACE)	10,837	20,837	+ 10,000
301	GPS III SPACE SEGMENT	42,440	42,440	.....
302	SPACE SUPERIORITY INTELLIGENCE	14,428	14,428	.....
303	SPACE C2	72,762	72,762	.....
304	NATIONAL SPACE DEFENSE CENTER	2,653	2,653	.....
306	BALLISTIC MISSILE DEFENSE RADARS	15,881	15,881	.....
308	NUDET DETECTION SYSTEM (SPACE)	49,300	49,300	.....
309	SPACE SITUATION AWARENESS OPERATIONS	17,834	14,834	- 3,000
310	GLOBAL POSITIONING SYSTEM III—OPERATIONAL CONTROL SEGMENT	445,302	445,302	.....
311	ENTERPRISE GROUND SERVICES	138,870	88,870	- 50,000
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	6,499,982	6,594,996	+ 95,014
9999	CLASSIFIED PROGRAMS	18,029,506	17,616,691	- 412,815
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE	45,616,122	45,446,727	- 169,395

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Defense Research Sciences	356,107	406,107	+ 50,000
	Basic research program increase			+ 50,000
4	Materials	128,851	210,351	+ 81,500
	Program increase: Additive manufacturing			+ 20,000
	Program increase: Thermal protection for hypersonic vehicles			+ 10,000
	Program increase: High performance materials			+ 8,000
	Program increase: Minority leaders program			+ 8,500
	Program increase: Certification of advanced composites			+ 15,000
	Program increase: Advanced aerospace composite structures			+ 10,000
	Program increase: Coating technologies			+ 10,000
5	Aerospace Vehicle Technologies	147,724	157,724	+ 10,000
	Program increase: Hypersonic vehicle structures			+ 10,000
6	Human Effectiveness Applied Research	131,795	134,795	+ 3,000
	Program increase: Advanced technology development			+ 3,000
7	Aerospace Propulsion	198,775	219,775	+ 21,000
	Program increase: Next generation Hall thrusters			+ 14,000
	Program increase: Thermal management technologies			+ 7,000
8	Aerospace Sensors	202,912	214,912	+ 12,000
	Program increase: RF spectrum situational awareness			+ 12,000
14	Dominant Information Sciences and Methods	181,562	211,062	+ 29,500
	Program increase: Artificial intelligence/machine learning accelerator			+ 8,000
	Program increase: Combat cloud technology			+ 2,500

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Quantum Computing Center of Excellence			+ 8,000
	Program increase: Quantum communications			+ 4,000
	Program increase: Quantum cryptography			+ 7,000
15	High Energy Laser Research	44,221	49,221	+ 5,000
	Program increase: Directed energy fiber lasers			+ 5,000
16	Space Technology	124,667	154,667	+ 30,000
	Program increase: Repurposed upper stage spacecraft bus			+ 10,000
	Program increase: Resilient space structure architecture			+ 15,000
	Program increase: Space situational awareness research			+ 5,000
17	Advanced Materials for Weapon Systems	36,586	50,086	+ 13,500
	Program increase: Advanced ballistic eyewear			+ 2,500
	Program increase: Artificial intelligence enhanced life cycle management			+ 2,000
	Program increase: Composites technology			+ 9,000
19	Advanced Aerospace Sensors	38,292	42,292	+ 4,000
	Program increase: Sensor integration to support ISR operations			+ 4,000
20	Aerospace Technology Dev/Demo	102,949	202,949	+ 100,000
	Program increase: Low cost attritable aircraft technology			+ 100,000
21	Aerospace Propulsion and Power Technology	113,973	155,973	+ 42,000
	Program increase: Silicon carbide research			+ 15,000
	Program increase: Chemical apogee engines			+ 5,000
	Program increase: Space propulsion technologies			+ 2,000
	Program increase: Upper stage engine technology			+ 20,000
23	Advanced Spacecraft Technology	70,525	80,525	+ 10,000
	Program increase: Radiation hardened memory			+ 10,000
28	Manufacturing Technology Program	43,116	105,716	+ 62,600
	Program increase: Materials development research			+ 5,000
	Program increase: F-35 battery technology			+ 9,800
	Program increase: Low cost manufacturing methods for hypersonic vehicle components			+ 8,000
	Program increase: Flexible hybrid electronics			+ 5,000
	Program increase: Aerospace composite structures			+ 5,000
	Program increase: Certification of bonded aircraft structures			+ 5,000
	Program increase: Industrialization of ceramic matrix composites for hypersonic weapons			+ 10,000
	Program increase: Thermal batteries			+ 4,800
	Program increase: Technologies to repair fastener holes			+ 5,000
	Program increase: Modeling technology for small turbine engines			+ 5,000
35	Pollution Prevention—Dem/Val		3,000	+ 3,000
	Program increase: Alternative energy aircraft tugs ..			+ 3,000
37	Advanced Engine Development	878,442	608,442	- 270,000
	Maintain program affordability: Funding excess to need			- 270,000
38	Long Range Strike—Bomber	3,003,899	2,898,099	- 105,800
	Classified adjustment			- 105,800
39	Directed Energy Prototyping	10,000	24,000	+ 14,000
	Program increase: Counter-UAS targeting solution			+ 14,000
43	National Airborne Ops Center (NAOC) Recap	16,669	12,669	- 4,000
	Maintain program affordability: Unjustified growth			- 4,000
44	Technology Transfer	23,614	27,614	+ 4,000
	Program increase: Technology partnerships			+ 4,000
48	Tech Transition Program	128,476	179,476	+ 51,000
	Program increase: Rapid sustainment office			+ 20,000
	Program increase: Reliable power for critical infrastructure			+ 6,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Logistics technologies			+ 12,000
	Program increase: Small satellite manufacturing			+ 8,000
	Program increase: Directed energy experimentation			+ 5,000
49	Ground Based Strategic Deterrent	570,373	657,495	+ 87,122
	Program increase: Risk reduction			+ 65,100
	Air Force requested transfer from line 168			+ 22,022
50	Light Attack Armed Reconnaissance [LAAR] Squadrons ...	35,000	2,000	- 33,000
	Restoring acquisition accountability: Unclear acquisition strategy			- 33,000
51	Next Generation Air Dominance	1,000,000	960,000	- 40,000
	Classified adjustment			- 40,000
52	Three Dimensional Long-Range Radar [3DELRR]	37,290	23,190	- 14,100
	Restoring acquisition accountability: Schedule slip			- 14,100
57	Cyber Operations Technology Development	198,864	240,064	+ 41,200
	Program increase: Joint common access platform ...			+ 20,500
	Program increase: Cyber National Mission Force capability acceleration plan			+ 13,600
	Program increase: ETERNALDARKNESS			+ 7,100
61	Global Positioning System User Equipment (SPACE)	329,948	320,598	- 9,350
	Maintain program affordability: Unjustified growth			- 9,350
62	EO/IR Weather Systems	101,222		- 101,222
	Transfer to SPAF: EO/IR weather			- 101,222
63	Weather System Follow-on	225,660	205,660	- 20,000
	Maintain program affordability: Unjustified growth			- 20,000
64	Space Situation Awareness Systems	29,776	24,776	- 5,000
	Maintain program affordability: Management services unjustified growth			- 5,000
67	Space Control Technology	64,231	59,231	- 5,000
	Improving funds management: Prior year carryover			- 5,000
68	Space Security and Defense Program	56,385	46,385	- 10,000
	Maintain program affordability: Unjustified growth			- 10,000
70	Protected Tactical Service [PTS]	173,694	163,694	- 10,000
	Maintain program affordability: Unjustified growth			- 10,000
72	Space Rapid Capabilities Office	33,742	9,000	- 24,742
	Program termination: ORS-8			- 24,742
73	Future Advanced Weapon Analysis & Programs	246,200	5,000	- 241,200
	Restoring acquisition accountability: Program termination			- 241,200
77	Tactical Data Networks Enterprise	229,631	189,631	- 40,000
	Improving funds management: Forward financed			- 40,000
79	Small Diameter Bomb [SDB] —EMD	31,241	55,241	+ 24,000
	Program increase: Precise navigation			+ 4,000
	Program increase: Seeker cost reduction initiative ..			+ 20,000
80	Airborne Electronic Attack	2		- 2
	Maintain program affordability: Unjustified request			- 2
83	Agile Combat Support	19,944	26,944	+ 7,000
	Program increase: Multi-modal threat detection and mitigation			+ 7,000
85	Combat Training Ranges	37,365	52,365	+ 15,000
	Program increase: F-35 advanced threat simulator			+ 15,000
93	KC-46	59,561	94,561	+ 35,000
	Program increase: Boom telescope actuator			+ 35,000
94	Advanced Pilot Training	348,473	332,173	- 16,300
	Improving funds management: Forward financed			- 16,300
98	B-2 Defensive Management System	294,400	250,100	- 44,300
	Maintain program affordability: Unjustified growth in management services			- 34,300
	Restoring acquisition accountability: Test and evaluation funding early to need			- 10,000
110	GPS III Follow-On [GPS IIIF]	462,875	447,875	- 15,000
	Restoring acquisition accountability: Early to need			- 15,000
111	Space Situation Awareness Operations	76,829	56,829	- 20,000
	Restoring acquisition accountability: Forward financed			- 20,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
114	Silent Barker	412,894	362,894	- 50,000
	Restoring acquisition accountability: Phase II phasing			- 50,000
117	Polar MILSATCOM (SPACE)	427,400	401,400	- 26,000
	Restoring acquisition accountability: Prior year carryover			- 26,000
120	Next Generation OPIR	1,395,278	1,930,778	+ 535,500
	Program increase			+ 535,500
122	National Security Space Launch Program (SPACE)—EMD	432,009	462,009	+ 30,000
	Program increase: Next Generation Rocket Engine Risk Reduction			+ 30,000
122A	Tactically Responsive Launch Operations		22,000	+ 22,000
	Program increase: Venture Class Launch Service			+ 22,000
124	Major T&E Investment	181,663	75,663	- 106,000
	Program increase: Avionics cyber range			+ 5,000
	Transfer to Military Construction Appropriations bill for three projects utilizing the FY 2017 Defense Laboratory Modernization Pilot Program			- 111,000
129	Acq Workforce- Global Power	258,667	255,667	- 3,000
	Transfer: Air Force requested to RDTE line 134			- 3,000
130	Acq Workforce- Global Vig & Combat Sys	251,992	249,992	- 2,000
	Transfer: Air Force requested to RDTE line 134			- 2,000
134	Acq Workforce- Capability Integration	220,255	228,255	+ 8,000
	Transfer: Air Force requested from RDTE lines 129, 130, and 135			+ 8,000
135	Acq Workforce- Advanced Prgm Technology	42,392	39,392	- 3,000
	Transfer: Air Force requested to RDTE line 134			- 3,000
140	Requirements Analysis and Maturation	62,715	80,715	+ 18,000
	Program increase: Nuclear deterrence research			+ 10,000
	Program increase: Nuclear modernization analytics			+ 8,000
142	ENTEPRISE INFORMATION SERVICES [EIS]	17,128	10,628	- 6,500
	Improving funds management: Forward financed			- 6,500
144	General Skill Training	1,475	6,475	+ 5,000
	Program increase: Integrated training and maintenance support systems			+ 5,000
152	Advanced Battle Management System [ABMS]	35,611	43,611	+ 8,000
	Program increase: Requirements refinement and technology identification			+ 8,000
157	F-35 C2D2	694,455	588,511	- 105,944
	Maintain program affordability: Prior year execution delays			- 105,944
164	B-52 Squadrons	325,974	329,974	+ 4,000
	Program increase: Global Strike Innovation Hub			+ 4,000
167	B-2 Squadrons	97,276	98,076	+ 800
	Program increase: B-2 training modernization			+ 10,000
	Restoring acquisition accountability: Airspace compliance schedule delay			- 9,200
168	Minuteman Squadrons	128,961	104,219	- 24,742
	Air Force requested transfer to line 49			- 22,022
	Maintain program affordability: Launch Control Center Block Upgrade excess to need			- 2,720
170	Worldwide Joint Strategic Communications	18,177	22,177	+ 4,000
	Program increase: NC3 architecture development			+ 8,000
	Maintain program affordability: Unjustified growth in the Strategic Automated Command and Control System Replacement program			- 4,000
172	ICBM Reentry Vehicles	75,571	41,271	- 34,300
	Restoring acquisition accountability: Change in acquisition strategy			- 34,300
176	MQ-9 UAV	154,996	127,296	- 27,700
	Maintain program affordability: Upgrade Program excess to need			- 27,700
178	A-10 Squadrons	36,816	31,916	- 4,900
	Improving funds management: Forward financed			- 4,900

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
180	F-15E Squadrons	336,079	694,229	+ 358,150
	Program increase: GPS anti-jam technology			+ 10,000
	Maintain program affordability: Unjustified growth in the Mobile User Objective System			- 16,250
	Transfer of two test aircraft and non-recurring engineering from APAF Line 3			+ 364,400
182	F-22A Squadrons	496,298	546,298	+ 50,000
	Transfer F-22A Modernization: AF requested from APAF Line 28			+ 50,000
189	Compass Call	15,888	31,888	+ 16,000
	Program increase: Accelerate EC-37B baseline 4 aircraft			+ 16,000
198	Tactical Air Control Party-Mod	6,217	4,117	- 2,100
	Improving funds management: Forward financed			- 2,100
211	AF Defensive Cyberspace Operations	16,609	44,109	+ 27,500
	Program increase: Critical infrastructure cyber security			+ 12,500
	Program increase: Cyber resilient space architecture			+ 15,000
227	E-4B National Airborne Operations Center [NAOC]	70,173	42,623	- 27,550
	Restoring acquisition accountability: Unclear acquisition strategy			- 27,550
234	Multi Domain Command and Control [MDC2]	150,880	110,880	- 40,000
	Transfer: Air Force requested to OMAF SAG 11C			- 40,000
243	Weather Service	25,461	27,461	+ 2,000
	Program increase: Research on atmospheric rivers			+ 2,000
253	Dragon U-2	38,939	33,839	- 5,100
	Restoring acquisition accountability: Avionics tech refresh schedule delays			- 5,100
254	Endurance Unmanned Aerial Vehicles		15,000	+ 15,000
	Program Increase: Ultra-long endurance aircraft			+ 15,000
266	C-130 Airlift Squadron	140,425	101,425	- 39,000
	Maintain program affordability: Contract award savings			- 39,000
285	Personnel Administration	6,476	4,376	- 2,100
	Improving funds management: Forward financed			- 2,100
288	Defense Enterprise Acntng and Mgt Sys [DEAMS]	46,789	42,789	- 4,000
	Restoring acquisition accountability: Increment 1 schedule delay			- 4,000
293	Family of Advanced BLoS Terminals [FAB-T]	197,388	177,388	- 20,000
	Restoring acquisition accountability: FET schedule slip			- 20,000
294	Satellite Control Network (SPACE)	61,891	56,891	- 5,000
	Maintain program affordability: DCO-S unjustified growth			- 5,000
298	Space Innovation, Integration and Rapid Technology Development	43,292	38,292	- 5,000
	Restoring acquisition accountability: Forward financed			- 5,000
300	Spacelift Range System (SPACE)	10,837	20,837	+ 10,000
	Program Increase: Space launch range services and capabilities			+ 10,000
309	Space Situation Awareness Operations	17,834	14,834	- 3,000
	Restoring acquisition accountability: Contract award delay GSW			- 3,000
311	Enterprise Ground Services	138,870	88,870	- 50,000
	Restoring acquisition accountability: Contract award delay			- 50,000
	Classified Programs	18,029,506	17,616,691	- 412,815
	Classified adjustment			- 412,815

Warfighter Physiological Performance.—The Committee recognizes that physiological performance is a key factor in warfighter

mission readiness. The Committee supports efforts to utilize sensor technologies to monitor the physiological condition of warfighters but notes a capability gap in predicting operational human performance. The Committee encourages the Secretary of the Air Force to develop and refine physiological algorithms to provide measures of real-time human performance and operational readiness when accompanied with current and future sensor technologies.

Counter Unmanned Aerial Systems Research.—The Committee recognizes the critical importance of developing new technologies to detect and counter adversarial unmanned aerial systems [UAS] as individual or swarm threats. The Committee notes that countering UAS operations presents a special series of unmet communications, command and control, cyber, and computation and intelligence challenges at the tactical edge. The Committee encourages the Air Force Research Laboratory Information Directorate to continue research and development into the detection and countering of UAS using advanced technologies to facilitate geo-location detection, determine individual and swarm behavior, dissect swarms to identify critical nodes, situational awareness, and mission intent.

Thermal Protection Systems.—The Committee understands that thermal protection systems are critical for future hypersonic and space vehicles. The Secretary of the Air Force is encouraged to consider the production processes needed to manufacture such capabilities and make key investments that will further develop and transition novel thermal protection systems into weapon systems.

Advanced Engine.—The fiscal year 2020 President's budget request includes \$878,442,000 for the Adaptive Engine Transition Program [AETP]. The Committee continues to support research and development in the next generation of turbine engine technology that will provide fighter aircraft more thrust and range, while being more energy efficient. The Committee understands that the Department plans to conclude the AETP program in fiscal year 2021 with the ground testing of prototype engines. Despite the Committee encouraging the Air Force to identify current and future programs for this technology insertion (Senate Report 114–263), no programs, including the F–35 Joint Strike Fighter, are either signaling a demand for the next generation engine or budgeting appropriate resources to transition the engine in the future years defense program. Failure to transition the AETP program into production would constitute a severely missed opportunity to capitalize on more than \$4,000,000,000 in research and development, and open the door to our adversaries to eclipse fielded U.S. engine technology in the coming years. The Committee finds these consequences to be unacceptable. Therefore, the Committee recommends a reduction of \$270,000,000 to reflect the lack of a transition plan and directs the Secretary of the Air Force to provide, as part of the Department's fiscal year 2021 budget submission, a roadmap to transition the research and development accomplished under AETP and the previous Adaptive Engine Technology Development Program. The roadmap should clearly articulate the way forward with an advanced engine and provide updated cost, schedule, competition, and transition plans to other programs that will

support advanced engine development, engineering and manufacturing development, and/or production activities.

Technology Transfer.—The Committee recognizes the importance of technology transfer between the Federal Government and non-Federal entities, such as academia, nonprofit organizations, and State and local governments. Technology transfer lowers the cost of new defense-related technology development and ensures that taxpayer investments in research and development benefit the economy and the industrial base. The Committee encourages the Secretary of Defense to continue support of technology transfer programs by allocating sufficient funding and leveraging the work being performed by Federal laboratories.

Light Attack Aircraft.—The fiscal year 2020 President’s budget request includes \$35,000,000 in research, development, test and evaluation funding to continue and expand the Light Attack Program experimentation campaign. The Air Force began to experiment with light attack aircraft in 2017 to consider ways to lessen the operational requirements of 4th and 5th generation fighter aircraft in more permissive and austere environments and to strengthen international partner capabilities, both goals supported in the 2018 National Defense Strategy. The Air Force determined that non-developmental, turbo-prop aircraft provided a low-cost and rapid fielding option, while supporting the intended mission sets of the experiment. Following the two experiments, it was also the Committee’s understanding that the Air Force planned to leverage section 804 authority to release a Request for Proposal [RFP] before the end of 2018, award a procurement contract for light attack aircraft before the end of 2019, and begin fielding a capability by fiscal year 2022. However, the RFP was never released, and the fiscal year 2020 President’s budget requested funding to continue and expand the experiment but delayed procurement of aircraft to fiscal year 2022.

The Committee does not support a continued or expanded experiment and only recommends \$2,000,000 in RDT&E funding to support the continued development of a secure and exportable tactical network, which compliments a light attack capability. If the Air Force wants to consider other platforms, such as rotary-wing or unmanned aircraft, neither of which tend to be exportable to foreign partners nor offset the need for high-end aircraft, the Committee encourages the Air Force to first develop a requirement, rather than rely on undefined experiments to determine a requirement.

The Committee recently supported a reprogramming request to shift prior year congressional add funding to the Aircraft Procurement, Air Force account in order for the Air Force to be able to execute its current plan to procure six turbo-prop aircraft with fiscal year 2018 and 2019 funding. The Committee directs the Secretary of the Air Force to carry out this plan and to provide necessary certifications of both types of turbo-prop aircraft used in the second experiment. Further, the Committee recommends an additional \$210,000,000 in procurement funding to procure six additional turbo-prop aircraft and encourages the Air Force to revert back to the fiscal year 2019 plan and fund the acquisition program in fiscal year 2021 budget request. The Committee also directs the Secretary of the Air Force to submit a report to the congressional de-

fense committees not later than 90 days after enactment of this act on a revised light attack aircraft program plan, to include updated costs, schedules, and procurement profiles as well as the intended missions to be supported with a light attack capability.

Advanced Battle Management System.—The Committee continues to support the Air Force’s new approach to command and control in anti-access/area denial locations, the Advanced Battle Management System [ABMS]. The Committee notes the Air Force’s efforts to outline the short, medium, and long-term phases of the program and establish an architect to oversee multiple programs across domains. The Committee supports the Air Force’s long-term vision of resilient and survivable networks against near peer competitors. However, the Committee is concerned with the near-term requirements of the first phase, given disconnects between the Air Force’s congressional reports on ABMS and the fiscal year 2020 budget request. Therefore, the Committee recommends an additional \$8,000,000 for requirements refinement and technology identification.

Further, with the submission of the fiscal year 2021 budget request, the Committee directs the Secretary of the Air Force to submit a report summarizing all related programs in communications, battle management command and control, and sensors that fall within the ABMS umbrella across the future years defense program. The report should reference program element funding lines and clearly link all activities with funding lines in the fiscal year 2021 budget justification documents. It should also clearly articulate all phase one efforts, including initial operational capability timelines, the status of related legacy activities, and linkages to classified activities.

UH-1N Replacement Program.—The Committee supports the UH-1N Replacement Program that will replace the Air Force fleet of UH-1N aircraft with modern helicopters and close significant mission capability gaps, including range, speed, endurance, and troop capacity. The Committee is pleased that the Air Force awarded a UH-1N replacement procurement contract in 2018 to improve the security and surveillance of U.S. nuclear missile fields and nuclear weapons convoys as well as support the U.S. government continuity of operations mission in the National Capital Region. The Committee encourages the Air Force to maintain the current test and fielding plan to achieve an initial operational capability in 2023 and consider efforts to accelerate the schedule, when appropriate.

SPACE PROGRAMS

National Security Space Launch.—The Committee supports the Air Force’s acquisition strategy for next generation launch vehicles and launch service procurement for National Security Space Launch as the best path forward for transitioning from the Russian RD-180 engine, increasing competition, and reducing launch costs, while maintaining assured access to space. In particular, the Committee supports the requirement that launch providers must be able to meet all national security space launch requirements, including the delivery into space of any national security payload designated by the Secretary of Defense or the Director of National

Intelligence, as is codified in 10 U.S.C. 2273. The Committee is concerned that efforts to legislatively alter the competitive and transparent source selection process would undermine the integrity of the previously awarded Launch Service Agreement development contracts and risk delaying transition from the RD-180 engine and critical integration timelines of national security missions with new launch systems. Therefore, the Committee urges the Department to maintain the current acquisition schedule and mission performance requirements. The Committee opposes modifications to the Air Force strategy that would confine the Phase 2 launch service procurement to fewer than the planned 34 missions. Such a change would increase per-launch costs while simultaneously introducing risks and costs for certain national security payloads.

Next-Generation Overhead Persistent Infrared.—The Committee remains supportive of the Air Force's efforts to provide improved missile warning capabilities that are more survivable against emerging threats. However, the Committee is concerned that appropriately funding Next-Generation Overhead Persistent Infrared [Next-Gen OPIR] to achieve the program's rapid acquisition goals has not been a priority for the Department of Defense. While the AF requested \$1,395,278,000, a substantial increase over the fiscal year 2019 budget of \$643,126,000, the request was still more than \$630,000,000 short of the full program need. The Committee believes the program will be an exemplar for rapid acquisition of space programs, whether the program succeeds or fails. Failure will have implications for Congress's willingness to fund future programs using the National Defense Authorization Act section 804 rapid prototyping and fielding authorities for similarly large, or even middle tier programs, for years to come. Alternatively, if the program is to have any chance of success, the Department cannot continue to rely on reprogramming requests for its funding. Therefore the Committee recommends \$1,930,778,000 for Next-Gen OPIR, an increase of \$535,500,000. The Committee expects the Department to fully fund the program in fiscal year 2021. The Committee continues to designate Next-Gen OPIR as a congressional special interest item and continues to direct the Secretary of the Air Force to provide quarterly briefings to the congressional defense committees detailing progress against cost and schedule milestones.

Electro Optical/Infrared Weather Strategy.—The Committee is concerned about the Air Force's electro optical/infrared [EO/IR] weather acquisition strategy. After several years of fits and starts, the fiscal year 2019 budget request seemed to have a viable path forward for interim and long-term solutions to meet EO/IR weather gaps. Due to contract challenges with the interim solution, however, the Air Force abandoned the strategy as laid out in the fiscal year 2019 and 2020 budget submissions and recently submitted, informally, its latest plan, a distributed low earth orbit solution. While the Committee appreciates some aspects of this new acquisition plan, in particular, leveraging commercial investment via weather data as a service, the Committee is concerned about the Department's shift to what may be an overreliance on notional small satellite constellations for a variety of challenging acquisitions. No small satellite constellations currently exist and potential challenges with communications and ground systems have yet to be

tested. Moreover the Committee has not been afforded the opportunity for a briefing on the new proposal and has many questions about the plans, timeline, and cost assumptions. Therefore, the Committee recommends a rescission of \$74,400,000 from fiscal year 2019 and a reduction of \$24,742,000 from fiscal year 2020 from Research, Test, Development, and Evaluation, Air Force, Space Rapid Capabilities Office for the terminated ORS-8 program, which was to be the interim EO/IR weather solution. In addition, the Committee recommends a transfer of \$101,222,000 from Research, Test, Development, and Evaluation, Air Force, EO/IR Weather, to Space Procurement, Air Force, EO/IR Weather, for the procurement of an EO/IR weather sensor. The Committee welcomes additional discussion with the Air Force about its new acquisition strategy prior to conference discussion with the House Appropriations Committee.

Tactically Responsive Space Launch.—The Committee believes that demonstrating tactically responsive launch operations that leverage new and innovative commercial capabilities will enable Department of Defense space domain mission assurance and strategic deterrence objectives. A coherent tactically responsive launch concept of operations is needed to address tactics, techniques, and procedures and support operationally relevant satellite reconstitution demonstrations and pilot programs. Therefore, the Committee recommends establishment of a dedicated funding line for tactically responsive space launch to improve visibility and oversight of small launch funding and ensure the Department is focused on a program for responsive, cost-effective small launch acquisition for evolving missions and future national security space objectives. Additionally, the Committee recommends an increase of \$22,000,000 in Research, Development, Test and Evaluation, Air Force, Tactically Responsive Space Launch.

Inland Launch.—The Committee directs the Secretary of Defense to report, not later than 180 days after enactment of this act, on the feasibility, potential benefits and risks, and cost estimates of the establishment of an inland testing and space corridor for hypersonic testing and space launch. The report should give consideration to existing military test ranges and spaceports and shall identify known regulatory, statutory, or other impediments to using such facilities for launch or hypersonic testing.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

Appropriations, 2019	\$23,691,836,000
Budget estimate, 2020	24,346,953,000
Committee recommendation	26,371,649,000

The Committee recommends an appropriation of \$26,371,649,000. This is \$2,024,696,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RESEARCH, DEVELOPMENT, TEST & EVAL, DEFENSE-WIDE			
	BASIC RESEARCH			
1	DTRA UNIVERSITY STRATEGIC PARTNERSHIP BASIC RESEARCH ..	26,000	26,000	.....
2	DEFENSE RESEARCH SCIENCES	432,284	408,634	- 23,650
3	BASIC RESEARCH INITIATIVES	48,874	118,874	+ 70,000
4	BASIC OPERATIONAL MEDICAL RESEARCH SCIENCE	54,122	45,092	- 9,030
5	NATIONAL DEFENSE EDUCATION PROGRAM	92,074	100,074	+ 8,000
6	HISTORICALLY BLACK COLLEGES & UNIV [HBCU]	30,708	32,708	+ 2,000
7	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	45,238	57,238	+ 12,000
	TOTAL, BASIC RESEARCH	729,300	788,620	+ 59,320
	APPLIED RESEARCH			
8	JOINT MUNITIONS TECHNOLOGY	19,306	19,306	.....
9	BIOMEDICAL TECHNOLOGY	97,771	92,771	- 5,000
11	LINCOLN LABORATORY RESEARCH PROGRAM	52,317	52,317	.....
12	APPLIED RESEARCH FOR ADVANCEMENT S&T PRIORITIES	62,200	74,200	+ 12,000
13	INFORMATION AND COMMUNICATIONS TECHNOLOGY	442,556	414,390	- 28,166
14	BIOLOGICAL WARFARE DEFENSE	34,588	34,588	.....
15	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	202,587	204,687	+ 2,100
16	CYBER SECURITY RESEARCH	15,118	15,118	.....
17	TACTICAL TECHNOLOGY	337,602	313,002	- 24,600
18	MATERIALS AND BIOLOGICAL TECHNOLOGY	223,976	214,976	- 9,000
19	ELECTRONICS TECHNOLOGY	332,192	317,192	- 15,000
20	WEAPONS OF MASS DESTRUCTION DEFEAT TECHNOLOGIES	179,096	174,096	- 5,000
21	SOFTWARE ENGINEERING INSTITUTE	9,580	9,580	.....
22	SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT	40,569	40,569	.....
	TOTAL, APPLIED RESEARCH	2,049,458	1,976,792	- 72,666
	ADVANCED TECHNOLOGY DEVELOPMENT			
23	JOINT MUNITIONS ADVANCED TECH INSENSITIVE MUNITIONS AD	25,779	25,779	.....
24	SO/LIC ADVANCED DEVELOPMENT	5,000	5,000	.....
25	COMBATING TERRORISM TECHNOLOGY SUPPORT	70,517	86,517	+ 16,000
26	FOREIGN COMPARATIVE TESTING	24,970	24,970	.....
28	COUNTERPROLIFERATION INITIATIVES—PROLIF PREV & DEFEAT	340,065	320,065	- 20,000
29	ADVANCED CONCEPTS AND PERFORMANCE ASSESSMENT	14,208	41,201	+ 26,993
30	WEAPONS TECHNOLOGY	10,000	.....	- 10,000
31	ADVANCED RESEARCH	20,674	20,674	.....
32	JOINT DOD-DOE MUNITIONS TECHNOLOGY DEVELOPMENT	18,773	18,773	.....
33	ADVANCED AEROSPACE SYSTEMS	279,741	279,741	.....
34	SPACE PROGRAMS AND TECHNOLOGY	202,606	172,606	- 30,000
35	ANALYTIC ASSESSMENTS	19,429	19,429	.....
36	ADVANCED INNOVATIVE ANALYSIS AND CONCEPTS	37,645	37,645	.....
37	ADVANCED INNOVATIVE ANALYSIS AND CONCEPTS—MHA	14,668	14,668	.....
38	COMMON KILL VEHICLE TECHNOLOGY	13,600	13,600	.....
40	DEFENSE INNOVATION UNIT	29,398	29,398	.....
41	TECHNOLOGY INNOVATION	60,000	30,000	- 30,000
42	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM—ADVANCED			
	DEV	172,486	172,486	.....
43	RETRACT LARCH	159,688	159,688	.....
44	JOINT ELECTRONIC ADVANCED TECHNOLOGY	12,063	12,063	.....
45	JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS	107,359	89,859	- 17,500
46	NETWORKED COMMUNICATIONS CAPABILITIES	2,858	2,858	.....
47	DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY			
	PROG	96,397	223,397	+ 127,000
48	MANUFACTURING TECHNOLOGY PROGRAM	42,834	52,834	+ 10,000
49	EMERGING CAPABILITIES TECHNOLOGY DEVELOPMENT	80,911	116,911	+ 36,000
50	GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS	10,817	12,217	+ 1,400
51	STRATEGIC ENVIRONMENTAL RESEARCH PROGRAM	66,157	66,157	.....
52	MICROELECTRONIC TECHNOLOGY DEVELOPMENT AND SUPPORT	171,771	206,771	+ 35,000
53	JOINT WARFIGHTING PROGRAM	4,846	4,846	.....
54	ADVANCED ELECTRONICS TECHNOLOGIES	128,616	111,616	- 17,000
55	COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS	232,134	231,134	- 1,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
56	NETWORK-CENTRIC WARFARE TECHNOLOGY	512,424	486,824	-25,600
57	SENSOR TECHNOLOGY	163,903	158,903	-5,000
58	DISTRIBUTED LEARNING ADVANCED TECHNOLOGY DEVELOPMENT	13,723	13,723	.....
59	SOFTWARE ENGINEERING INSTITUTE	15,111	15,111	.....
60	QUICK REACTION SPECIAL PROJECTS	47,147	24,147	-23,000
61	ENGINEERING SCIENCE AND TECHNOLOGY	19,376	19,376	.....
62	HIGH ENERGY LASER ADVANCED TECHNOLOGY PROGRAM	85,223	85,223	.....
63	TEST & EVALUATION SCIENCE & TECHNOLOGY	175,574	191,574	+16,000
64	NATIONAL SECURITY INNOVATION NETWORK	25,000	25,000	.....
65	OPERATIONAL ENERGY CAPABILITY IMPROVEMENT	70,536	44,536	-26,000
66	CWMD SYSTEMS	28,907	.....	-28,907
68	SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT ..	89,154	103,154	+14,000
69	SPACE SCIENCE AND TECHNOLOGY RESEARCH AND DEVELOPMENT	20,000	20,000	.....
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	3,742,088	3,790,474	+48,386
	DEMONSTRATION & VALIDATION			
	NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT	42,695	42,695	.....
70	WALKOFF	92,791	92,791	.....
71	ACQUISITION ENTERPRISE DATA AND INFORMATION SERVICES ...	5,659	5,659	.....
72	ENVIRONMENTAL SECURITY TECHNICAL CERTIFICATION PROGRAM	66,572	68,572	+2,000
73	BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT	302,761	306,761	+4,000
74	BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE SEGMENT ...	1,156,506	1,360,616	+204,110
75	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	83,662	80,162	-3,500
76	BALLISTIC MISSILE DEFENSE SENSORS	283,487	283,288	-199
77	BALLISTIC MISSILE DEFENSE ENABLING PROGRAMS	571,507	634,449	+62,942
78	SPECIAL PROGRAMS—MDA	377,098	512,098	+135,000
79	AEGIS BMD	727,479	723,639	-3,840
80	BALLISTIC MISSILE DEFENSE COMMAND AND CONTROL, BATTLE MANAGEMENT	564,206	549,756	-14,450
81	BALLISTIC MISSILE DEFENSE JOINT WARFIGHTER SUPPORT	51,532	51,532	.....
82	BALLISTIC MISSILE DEFENSE INTERGRATION AND OPERATIONS CENTER (MDIOC)	56,161	56,161	.....
83	REGARDING TRENCH	22,424	22,424	.....
84	SEA BASED X-BAND RADAR (SBX)	128,156	128,156	.....
85	ISRAELI COOPERATIVE PROGRAMS	300,000	300,000	.....
86	BALLISTIC MISSILE DEFENSE TEST	395,924	399,738	+3,814
87	BALLISTIC MISSILE DEFENSE TARGETS	554,171	611,939	+57,768
88	HUMANITARIAN DEMINING	10,820	10,820	.....
89	COALITION WARFARE	11,316	11,316	.....
90	DEPARTMENT OF DEFENSE CORROSION PROGRAM	3,365	11,165	+7,800
91	TECHNOLOGY MATURATION INITIATIVES	303,458	298,520	-4,938
92	MISSILE DEFEAT PROJECT	17,816	17,816	.....
93	HYPERSONIC DEFENSE	157,425	395,268	+237,843
94	ADVANCED INNOVATIVE TECHNOLOGIES	1,312,735	1,477,735	+165,000
95	TRUSTED AND ASSURED MICROELECTRONICS	542,421	542,421	.....
96	RAPID PROTOTYPING PROGRAM	100,957	50,957	-50,000
97	DEFENSE INNOVATION UNIT [DIU] PROTOTYPING	92,000	92,000	.....
98	DOD UNMANNED AIRCRAFT SYSTEM [UAS] COMMON DEVELOPMENT	3,021	7,021	+4,000
99	HOMELAND DEFENSE RADAR-HAWAII	274,714	173,548	-101,166
100	PACIFIC DISCRIMINATING RADAR	6,711	6,711	.....
101	WARGAMING AND SUPPORT FOR STRATEGIC ANALYSIS [SSA]	3,751	3,751	.....
102	DEFENSE RAPID INNOVATION PROGRAM	14,021	14,021	.....
103	JOINT C5 CAPABILITY DEVELOPMENT, INTEGRATION AND INTEROPERABILITY	20,062	20,062	.....
104	LONG RANGE DISCRIMINATION RADAR	136,423	136,423	.....
105	IMPROVED HOMELAND DEFENSE INTERCEPTORS	412,363	494,363	+82,000
106	BMD TERMINAL DEFENSE SEGMENT TEST	25,137	25,137	.....
107	AEGIS BMD TEST	169,822	169,822	.....
108	BALLISTIC MISSILE DEFENSE SENSOR TEST	105,530	105,530	.....
109	LAND-BASED SM-3 [LBSM3]	38,352	38,352	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
115	BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE SEGMENT			
	TEST	98,139	98,139	.....
117	ENTERPRISE INFORMATION TECHNOLOGY SYSTEMS	1,600	1,600	.....
118	JOINT ELECTROMAGNETIC TECHNOLOGY (JET) PROGRAM	3,191	3,191	.....
119	CYBER SECURITY INITIATIVE	1,138	11,138	+ 10,000
120	SPACE TECHNOLOGY DEVELOPMENT AND PROTOTYPING	85,000	85,000	.....
121	SPACE TRACKING AND SURVEILLANCE SYSTEM	35,849	36,349	+ 500
122	BALLISTIC MISSILE DEFENSE SYSTEM SPACE PROGRAMS	27,565	140,565	+ 113,000
	TOTAL, DEMONSTRATION & VALIDATION	9,797,493	10,709,177	+ 911,684
	ENGINEERING & MANUFACTURING DEVELOPMENT			
123	NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT	11,276	11,276	.....
124	PROMPT GLOBAL STRIKE CAPABILITY DEVELOPMENT	107,000	107,000	.....
125	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	384,047	373,814	- 10,233
126	JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS) ...	40,102	52,602	+ 12,500
127	WEAPONS OF MASS DESTRUCTION DEFEAT CAPABILITIES	13,100	13,100	.....
128	INFORMATION TECHNOLOGY DEVELOPMENT	3,070	3,070	.....
129	HOMELAND PERSONNEL SECURITY INITIATIVE	7,295	7,295	.....
130	DEFENSE EXPORTABILITY PROGRAM	17,615	17,615	.....
131	OUS(D) IT DEVELOPMENT INITIATIVES	15,653	5,653	- 10,000
132	DOD ENTERPRISE SYSTEMS DEVELOPMENT AND DEMONSTRATION	2,378	1,628	- 750
133	DCMO POLICY AND INTEGRATION	1,618	1,618	.....
134	DEFENSE AGENCY INITIATIVES FINANCIAL SYSTEM	27,944	23,944	- 4,000
135	DEFENSE RETIRED AND ANNUITANT PAY SYSTEM (DRAS)	6,609	6,609	.....
136	DEFENSE-WIDE ELECTRONIC PROCUREMENT CAPABILITIES	9,619	9,619	.....
137	TRUSTED & ASSURED MICROELECTRONICS	175,032	175,032	.....
138	INFORMATION SYSTEMS SECURITY PROGRAM	425	425	.....
139	GLOBAL COMBAT SUPPORT SYSTEM	1,578	1,578	.....
140	DOD ENTERPRISE ENERGY INFORMATION MANAGEMENT (EEIM)	4,373	4,373	.....
141	CWMD SYSTEMS: SYSTEM DEVELOPMENT AND DEMONSTRATION	12,854	12,854	.....
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	841,588	829,105	- 12,483
	RDT&E MANAGEMENT SUPPORT			
142	JOINT CAPABILITY EXPERIMENTATION	13,000	13,000	.....
143	DEFENSE READINESS REPORTING SYSTEM (DRRS)	9,724	9,724	.....
144	JOINT SYSTEMS ARCHITECTURE DEVELOPMENT	9,593	9,593	.....
145	CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT ...	260,267	512,817	+ 252,550
146	ASSESSMENTS AND EVALUATIONS	30,834	30,834	.....
147	MISSION SUPPORT	68,498	68,498	.....
148	JOINT MISSION ENVIRONMENT TEST CAPABILITY (JMETC)	83,091	89,091	+ 6,000
149	TECHNICAL STUDIES, SUPPORT AND ANALYSIS	18,079	18,079	.....
150	JOINT INTEGRATED AIR AND MISSILE DEFENSE ORGANIZATION ...	70,038	70,038	.....
152	SYSTEMS ENGINEERING	37,140	37,140	.....
153	STUDIES AND ANALYSIS SUPPORT	4,759	4,759	.....
154	NUCLEAR MATTERS—PHYSICAL SECURITY	8,307	8,307	.....
155	SUPPORT TO NETWORKS AND INFORMATION INTEGRATION	9,441	9,441	.....
156	GENERAL SUPPORT TO USD (INTELLIGENCE)	1,700	5,700	+ 4,000
157	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	110,363	110,363	.....
166	SMALL BUSINESS INNOVATION RESEARCH/TECHNOLOGY TRANSFER	3,568	3,568	.....
167	MAINTAINING TECHNOLOGY ADVANTAGE	19,936	19,936	.....
168	DEFENSE TECHNOLOGY ANALYSIS	16,875	15,875	- 1,000
169	DEFENSE TECHNICAL INFORMATION CENTER (DTIC)	57,716	57,716	.....
170	R&D IN SUPPORT OF DOD ENLISTMENT, TESTING & EVALUATION	34,448	29,448	- 5,000
171	DEVELOPMENT TEST AND EVALUATION	22,203	22,203	.....
172	MANAGEMENT HEADQUARTERS (RESEARCH & DEVELOPMENT) ...	13,208	13,208	.....
173	MANAGEMENT HEADQUARTERS DEFENSE TECHNICAL INFORMATION CENTER (DTIC)	3,027	3,027	.....
174	BUDGET AND PROGRAM ASSESSMENTS	8,017	8,017	.....
175	ODNA TECHNOLOGY AND RESOURCE ANALYSIS	3,194	3,194	.....
176	DEFENSE DIGITAL SERVICE (DDS) DEVELOPMENT SUPPORT	1,000	1,000	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
179	DEFENSE OPERATIONS SECURITY (OPSEC)	3,037	8,037	+ 5,000
180	JOINT STAFF ANALYTICAL SUPPORT	9,216	9,216	.....
183	SUPPORT TO INFORMATION OPERATIONS (IO) CAPABILITIES	553	553	.....
184	DEFENSE MILITARY DECEPTION PROGRAM OFFICE	1,014	1,014	.....
185	COMBINED ADVANCED APPLICATIONS	58,667	48,667	- 10,000
187	INTELLIGENCE CAPABILITIES AND INNOVATION INVESTMENTS	21,081	21,081	.....
189	ALGORITHMIC WARFARE CROSS FUNCTIONAL TEAMS	221,235	221,235	.....
191	COCOM EXERCISE ENGAGEMENT AND TRAINING TRANSFORMATION	40,073	40,073	.....
192	DEFENSE EQUAL OPPORTUNITY MANAGEMENT INSTITUTE [DEOMI]	100	100	.....
193	MANAGEMENT HEADQUARTERS—MDA	27,065	27,065	.....
194	JOINT SERVICE PROVIDER [JSP]	3,090	3,090	.....
9999	CLASSIFIED PROGRAMS	51,471	51,471	.....
	TOTAL, RDT&E MANAGEMENT SUPPORT	1,354,628	1,606,178	+ 251,550
	OPERATIONAL SYSTEMS DEVELOPMENT			
195	ENTERPRISE SECURITY SYSTEM (ESS)	7,945	7,945	.....
196	JOINT ARTIFICIAL INTELLIGENCE	208,834	208,834	.....
197	REGIONAL INTERNATIONAL OUTREACH & PARTNERSHIP FOR PEAC	1,947	1,947	.....
198	OVERSEAS HUMANITARIAN ASSISTANCE SHARED INFORMATION SY	310	310	.....
199	INDUSTRIAL BASE ANALYSIS AND SUSTAINMENT SUPPORT	10,051	116,051	+ 106,000
200	OPERATIONAL SYSTEMS DEVELOPMENT	12,734	12,734	.....
201	GLOBAL THEATER SECURITY COOPERATION MANAGEMENT	14,800	10,000	- 4,800
202	CHEMICAL AND BIOLOGICAL DEFENSE (OPERATIONAL SYSTEMS D	54,023	51,834	- 2,189
203	PLANNING AND DECISION AID SYSTEM	4,537	4,537	.....
204	C4I INTEROPERABILITY	64,122	64,122	.....
210	DEFENSE INFO INFRASTRUCTURE ENGINEERING & INTEGRATION	15,798	10,798	- 5,000
211	LONG HAUL COMMUNICATIONS (DCS)	11,166	11,166	.....
212	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK	17,383	17,383	.....
214	KEY MANAGEMENT INFRASTRUCTURE (KMI)	54,516	54,516	.....
215	INFORMATION SYSTEMS SECURITY PROGRAM	67,631	31,631	- 36,000
216	INFORMATION SYSTEMS SECURITY PROGRAM	289,080	344,198	+ 55,118
217	INFORMATION SYSTEMS SECURITY PROGRAM	42,796	44,678	+ 1,882
218	GLOBAL COMMAND AND CONTROL SYSTEM	25,218	17,218	- 8,000
219	JOINT SPECTRUM CENTER (DEFENSE SPECTRUM ORGANIZATION)	21,698	21,698	.....
220	JOINT INFORMATION ENVIRONMENT (JIE)	18,077	18,077	.....
222	FEDERAL INVESTIGATIVE SERVICES INFORMATION TECHNOLOGY	44,001	44,001	.....
228	SECURITY AND INVESTIGATIVE ACTIVITIES	2,400	2,400	.....
232	POLICY R&D PROGRAMS	6,301	6,301	.....
233	NET CENTRICITY	21,384	21,384	.....
235	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	6,359	6,359	.....
238	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	2,981	2,981	.....
241	INSIDER THREAT	1,964	1,964	.....
242	HOMELAND DEFENSE TECHNOLOGY TRANSFER PROGRAM	2,221	2,221	.....
250	LOGISTICS SUPPORT ACTIVITIES	1,361	1,361	.....
251	PACIFIC DISASTER CENTERS	1,770	1,770	.....
252	DEFENSE PROPERTY ACCOUNTABILITY SYSTEM	3,679	3,679	.....
254	MQ-9 UAV	20,697	20,697	.....
256	SPECIAL OPERATIONS AVIATION SYSTEMS ADVANCED DEV	245,795	250,395	+ 4,600
257	SPECIAL OPERATIONS INTELLIGENCE SYSTEMS DEVELOPMENT	15,484	15,484	.....
258	SOF OPERATIONAL ENHANCEMENTS	166,922	150,154	- 16,768
259	WARRIOR SYSTEMS	62,332	68,470	+ 6,138
260	SPECIAL PROGRAMS	21,805	21,005	- 800
261	UNMANNED ISR	37,377	37,377	.....
262	SOF TACTICAL VEHICLES	11,150	11,150	.....
263	SOF MARITIME SYSTEMS	72,626	69,126	- 3,500
264	SOF GLOBAL VIDEO SURVEILLANCE ACTIVITIES	5,363	5,363	.....
265	SOF OPERATIONAL ENHANCEMENTS INTELLIGENCE	12,962	12,962	.....
266	SOF TELEPORT PROGRAM	6,158	6,158	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
300	NEXT GENERATION INFORMATION COMMUNICATIONS TECHNOLOGY		436,000	+ 436,000
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	1,715,758	2,248,439	+ 532,681
999	CLASSIFIED PROGRAMS	4,116,640	4,422,864	+ 306,224
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, DEF-WIDE	24,346,953	26,371,649	+ 2,024,696

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Defense Research Sciences	432,284	408,634	- 23,650
	Improving funds management: Program delays			- 23,650
3	Basic Research Initiatives	48,874	118,874	+ 70,000
	Program increase: DEPCOR			+ 12,000
	Program increase: Cyber research			+ 8,000
	Program increase: Basic research			+ 50,000
4	Basic Operational Medical Research Science	54,122	45,092	- 9,030
	Improving funds management: Program delays			- 9,030
5	National Defense Education Program	92,074	100,074	+ 8,000
	Program increase: Submarine workforce development			+ 8,000
6	Historically Black Colleges and Universities/Minority Institutions	30,708	32,708	+ 2,000
	Program increase: Aerospace education, research and innovation center			+ 2,000
7	Chemical and Biological Defense Program	45,238	57,238	+ 12,000
	Program increase: Smallpox antiviral post-exposure prophylaxis			+ 12,000
9	Biomedical Technology	97,771	92,771	- 5,000
	Improving funds management: Program delays			- 5,000
12	Applied Research for the Advancement of S&T Priorities	62,200	74,200	+ 12,000
	Program increase: PFAS modeling			+ 7,000
	Program increase: Test center for quantum communications and sensors			+ 5,000
13	Information & Communications Technology	442,556	414,390	- 28,166
	Improving funds management: Program delays			- 13,166
	Improving funds management: Unjustified increase			- 15,000
15	Chemical and Biological Defense Program	202,587	204,687	+ 2,100
	Program increase: Coatings technologies			+ 2,100
17	Tactical Technology	337,602	313,002	- 24,600
	Improving funds management: Program delays			- 14,600
	Improving funds management: Prior year carryover			- 10,000
18	Materials and Biological Technology	223,976	214,976	- 9,000
	Improving funds management: Program delays			- 9,000
19	Electronics Technology	332,192	317,192	- 15,000
	Improving funds management: Program delays			- 15,000
20	Counter Weapons of Mass Destruction Applied Research	179,096	174,096	- 5,000
	Improving funds management: Unjustified growth			- 5,000
25	Combating Terrorism Technology Support	70,517	86,517	+ 16,000
	Program increase: Bomb squad robot retrofitting			+ 3,000
	Program increase: Cooperative C-UAS development			+ 13,000
28	Counter Weapons of Mass Destruction Advanced Technology Development	340,065	320,065	- 20,000
	Maintain program affordability: Unjustified growth			- 20,000
29	Advanced Concepts and Performance Assessment	14,208	41,201	+ 26,993
	Program increase: Cybersecurity of MDA DV left and right of launch			+ 22,500

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Program increase: Cybersecurity			+ 4,493
30	Weapons Technology	10,000		- 10,000
	Restoring acquisition accountability: MD72 program termination			- 10,000
34	Space Programs and Technology	202,606	172,606	- 30,000
	Improving funds management: RSGS program delays			- 30,000
41	Technology Innovation	60,000	30,000	- 30,000
	Improving funds management: Prior year carryover			- 30,000
45	Joint Capability Technology Demonstrations	107,359	89,859	- 17,500
	Improving funds management: Unjustified growth			- 17,500
47	Defense-Wide Manufacturing Science and Technology Program	96,397	223,397	+ 127,000
	Program increase: Accelerated rapid prototyping			+ 17,000
	Program increase: Manufacturing cybersecurity			+ 14,000
	Program increase: HPC-enabled advanced manufacturing			+ 17,000
	Program increase: Advanced structural manufacturing			+ 9,000
	Program increase: Silicon based lasers			+ 25,000
	Program increase: Manufacturing engineering education program			+ 45,000
48	Manufacturing Technology Program	42,834	52,834	+ 10,000
	Program increase: Steel Performance Initiative			+ 10,000
49	Emerging Capabilities Technology Development	80,911	116,911	+ 36,000
	Program increase: Open source intelligence			+ 3,000
	Program increase: Remote advise and assist technology development			+ 8,000
	Program increase: Disruptive air and missile defense			+ 5,000
	Program increase: Artificial intelligence enabled sensor network			+ 10,000
	Program increase: High-altitude optical reconnaissance unit and sensors			+ 10,000
50	Generic Logistics R&D Technology Demonstrations	10,817	12,217	+ 1,400
	Improving funds management: Prior year carryover			- 3,600
	Program increase: Liquid hydrocarbon fuels			+ 5,000
52	Microelectronics Technology Development and Support	171,771	206,771	+ 35,000
	Program increase: Cyber accelerator			+ 30,000
	Program increase: GaN-on-Si based RF Front-end			+ 5,000
54	Advanced Electronics Technologies	128,616	111,616	- 17,000
	Improving funds management: Program delays			- 17,000
55	Command, Control and Communications Systems	232,134	231,134	- 1,000
	Improving funds management: Program delays			- 10,000
	Program increase: Commercial satellite antenna technology			+ 9,000
56	Network-Centric Warfare Technology	512,424	486,824	- 25,600
	Improving funds management: Program delays			- 25,600
57	Sensor Technology	163,903	158,903	- 5,000
	Improving funds management: Program delays			- 5,000
60	Quick Reaction Special Projects	47,147	24,147	- 23,000
	Improving funds management: Prior year carryover			- 23,000
63	Test & Evaluation Science & Technology	175,574	191,574	+ 16,000
	Program increase: Test resource management center			+ 16,000
65	Operational Energy Capability Improvement	70,536	44,536	- 26,000
	Reduce duplication: Space solar power project			- 30,000
	Program increase			+ 4,000
66	CWMD Systems	28,907		- 28,907
	Reduce duplication			- 28,907
68	SOF Advanced Technology Development	89,154	103,154	+ 14,000
	Program increase: Identity management			+ 14,000
73	Environmental Security Technical Certification Program	66,572	68,572	+ 2,000
	Program increase: Technology demonstration program			+ 2,000
74	Ballistic Missile Defense Terminal Defense Segment	302,761	306,761	+ 4,000
	Program increase: Cybersecurity			+ 4,000
75	Ballistic Missile Defense Midcourse Defense Segment	1,156,506	1,360,616	+ 204,110
	RKV program termination: Transfer from line 109 to GBI CE-I reliability SLEP only			+ 180,000
	Program increase: Cybersecurity			+ 24,110

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
76	Chemical and Biological Defense Program—Dem/Val	83,662	80,162	– 3,500
	Improving funds management: Program delays (VAC VEE)			– 2,000
	Improving funds management: Program delays (MPD)			– 1,500
77	Ballistic Missile Defense Sensors	283,487	283,288	– 199
	Restoring acquisition accountability: MD11 Modeling and simulation development unjustified growth			– 21,993
	Program increase: Cybersecurity			+ 20,294
	Program increase: Models and simulation unfunded requirement			+ 1,500
78	BMD Enabling Programs	571,507	634,449	+ 62,942
	Program increase: Cybersecurity			+ 62,942
79	Special Programs—MDA	377,098	512,098	+ 135,000
	Program increase: Classified			+ 135,000
80	AEGIS BMD	727,479	723,639	– 3,840
	Restoring acquisition accountability: BMD 5.1 baseline unjustified growth			– 29,630
	Improving funds management: AEGIS underlay funds early to need			– 2,000
	RKV program termination funding transfer: AEGIS upgrades			+ 19,000
	Program increase: Cybersecurity			+ 8,790
81	Ballistic Missile Defense Command and Control, Battle Management and Communications	564,206	549,756	– 14,450
	Restoring acquisition accountability: Increment 7 growth early to need			– 33,300
	Program increase: Cybersecurity			+ 18,850
87	Ballistic Missile Defense Test	395,924	399,738	+ 3,814
	Program increase: Cybersecurity			+ 3,814
88	Ballistic Missile Defense Targets	554,171	611,939	+ 57,768
	Improving funds management: MRBM target contract award delays			– 11,232
	Program increase: HEMP hardening			+ 69,000
91	Department of Defense Corrosion Program	3,365	11,165	+ 7,800
	Program increase: Coatings technologies			+ 5,000
	Program increase: Military painter training and applied research			+ 2,800
92	Technology Maturation Initiatives	303,458	298,520	– 4,938
	Unclear budget justification: Flight test			– 4,938
95	Hypersonic Defense	157,425	395,268	+ 237,843
	Program increase: Glide Phase Defeat Weapon System			+ 25,000
	Program increase: Engineering enablers			+ 57,858
	Program increase: Leverage and upgrade existing systems			+ 43,942
	Program increase: Fiscal year 2020 partnered flight test participation			+ 111,043
96	Advanced Innovative Technologies	1,312,735	1,477,735	+ 165,000
	Maintain program affordability: unjustified program growth			– 80,000
	Program increase: Hypervelocity Gun Weapon system			+ 80,000
	Program increase: Micro Nuclear Reactor Program			+ 140,000
	Program increase: Machine learning			+ 10,000
	Program increase: Advanced technologies to support operational agility, fleet sustainability, and offset advantage			+ 15,000
98	Rapid Prototyping Program	100,957	50,957	– 50,000
	Reduce duplication			– 50,000
100	Department of Defense (DoD) Unmanned System Common Development	3,021	7,021	+ 4,000
	Program increase: Unmanned traffic management			+ 4,000
102	Homeland Defense Radar—Hawaii (HDR—H)	274,714	173,548	– 101,166
	Improving funds management: Radar foundation and thermal control system			– 41,166
	Improving funds management: Funding acceleration early to need			– 60,000
109	Improved Homeland Defense Interceptors	412,363	494,363	+ 82,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	RKV program termination: Transfer excess RKV funds to line 75 for GBI CE-I reliability/SLEP only			- 140,000
	RKV program termination: Transfer RKV funds to Next Generation Interceptor program			- 222,363
	RKV program termination: Transfer to Next Generation Interceptor program from RKV program funds			+ 222,363
	RKV program termination: Next Generation Interceptor Competitive Development			+ 222,000
119	Cyber Security Initiative	1,138	11,138	+ 10,000
	Program increase: Cheyenne Mountain cyber resilience efforts			+ 10,000
121	Space Tracking & Surveillance System	35,849	36,349	+ 500
	Program increase: Cybersecurity			+ 500
122	Ballistic Missile Defense System Space Programs	27,565	140,565	+ 113,000
	Program increase: Hypersonic and ballistic tracking space sensor development			+ 108,000
	Program increase: Cybersecurity			+ 5,000
125	Chemical and Biological Defense Program—EMD	384,047	373,814	- 10,233
	Improving funds management: Program delays (ROCS)			- 4,500
	Improving funds management: Program delays (MMPRDS)			- 2,533
	Improving funds management: Program delays (CALS)			- 2,500
	Improving funds management: Program delays (SSA)			- 700
126	Joint Tactical Information Distribution System [JTIDS]	40,102	52,602	+ 12,500
	Program increase: Integrated Kinetic and Non-Kinetic Nodal Analysis Capability Enhancement			+ 12,500
131	OUSD(C) IT Development Initiatives	15,653	5,653	- 10,000
	Improving funds management: Prior year carryover			- 10,000
132	DOD Enterprise Systems Development and Demonstration	2,378	1,628	- 750
	Improving funds management: Prior year carryover			- 750
134	Defense Agency Initiatives [DAI]-Financial Systems			- 4,000
	Improving funds management: Prior year carryover			- 4,000
145	Central Test and Evaluation Investment Development [CTEIP]	260,267	512,817	+ 252,550
	Program increase: Hypersonics—ground testing in support of National Defense Strategy			+ 91,250
	Program increase: Hypersonics—flight test infrastructure in support of National Defense Strategy			+ 14,000
	Program increase: Space test infrastructure in support of National Defense Strategy			+ 50,000
	Program increase: Directed energy infrastructure in support of National Defense Strategy			+ 40,000
	Program increase: Cyber infrastructure in support of National Defense Strategy			+ 40,000
	Program increase: Defense Threat Center of Excellence			+ 17,300
148	Joint Mission Environment Test Capability [JMETC]	83,091	89,091	+ 6,000
	Program increase			+ 6,000
156	General Support to USD (Intelligence)	1,700	5,700	+ 4,000
	Program increase			+ 4,000
168	Defense Technology Analysis	16,875	15,875	- 1,000
	Improving funds management: Prior year carryover			- 4,000
	Program increase: Technology transition			+ 3,000
170	R&D in Support of DoD Enlistment, Testing and Evaluation	34,448	29,448	- 5,000
	Maintain program affordability: unjustified growth			- 5,000
179	Defense Operations Security Initiative [DOSI]	3,037	8,037	+ 5,000
	Program increase: Cyber kinetic combat environment			+ 5,000
185	Combined Advanced Applications	58,667	48,667	- 10,000
	Classified adjustment			- 10,000
199	Industrial Base Analysis and Sustainment Support	10,051	116,051	+ 106,000
	Program increase: Machine and advanced manufacturing			+ 20,000
	Program increase: Automated textile manufacturing			+ 10,000
	Program increase: Precision optics			+ 6,000
	Program increase: Interdisciplinary center for advanced manufacturing systems			+ 15,000
	Program increase: Rare earth elements from coal ash			+ 5,000
	Program increase: Defense manufacturing communities			+ 50,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
201	Global Theater Security Cooperation Management Information Systems [G-TSCMIS]	14,800	10,000	-4,800
	Maintain program affordability: unjustified growth			-4,800
202	Chemical and Biological Defense (Operational Systems Development)	54,023	51,834	-2,189
	Improving funds management: Program delays (SSA)			-700
	Improving funds management: Program delays (ALS MOD)			-500
	Improving funds management: Program delays (MODPROT)			-500
	Improving funds management: Program delays (JBAIDS) ..			-489
210	Defense Info Infrastructure Engineering and Integration	15,798	10,798	-5,000
	Improving funds management: Prior year carryover			-5,000
215	Information Systems Security Program	67,631	31,631	-36,000
	Maintain program affordability: Unjustified growth			-36,000
216	Information Systems Security Program	289,080	344,198	+55,118
	DOD requested transfer to Line 217: Sharkseer			-1,882
	Program increase: Centers for Academic Excellence			+12,000
	Program increase: Workforce transformation cyber security initiative pilot			+25,000
	Program increase: Cyber scholarships for senior military colleges			+10,000
	Program increase: Cyber security pathfinders			+10,000
217	Information Systems Security Program	42,796	44,678	+1,882
	DOD requested transfer from Line 216: Sharkseer			+1,882
218	Global Command and Control System	25,218	17,218	-8,000
	Improving Funds Management: Prior year carryover			-8,000
256	Aviation Systems	245,795	250,395	+4,600
	SOCOM requested transfer from PDW, Line 61: RFCM			+8,400
	Program increase: Aviation Systems, Future Vertical Lift ..			+8,800
	Improving funds management: HEL ground test early to need			-7,000
	Improving funds management: Unjustified growth (ITMS)			-5,600
258	Operational Enhancements	166,922	150,154	-16,768
	Classified Adjustment			-16,768
259	Warrior Systems	62,332	68,470	+6,138
	Improving Funds Management: Prior year carryover			-5,000
	Improving funds management: Unjustified growth (C-UAS)			-3,000
	Improving funds management: NGLS excess to need			-862
	Program increase: SGM collaborative strike enhancement			+15,000
260	Special Programs	21,805	21,005	-800
	Classified Adjustment			-4,000
	Program increase: Enhanced visual augmentation system			+3,200
263	Maritime Systems	72,626	69,126	-3,500
	Insufficient budget justification: Poor justification materials (DCS)			-6,500
	Program increase: Driver propulsion device			+3,000
300	NEXT GENERATION INFORMATION COMMUNICATIONS TECHNOLOGY (5G)		436,000	+436,000
	Program increase			+436,000
999	Classified Programs	4,116,640	4,422,864	+306,224
	Classified adjustment			+303,224
	Program increase: Transport access control			+3,000

Strategic Capabilities Office.—Since its inception, the Committee has been supportive of the Strategic Capabilities Office [SCO], which uses existing weapons systems in new ways to counter near peer adversaries. The Committee believes that such focus on near term solutions to counter threats and responsiveness to the needs of the Combatant Commands is vital, however, the Committee shares concerns from within the Department of Defense that SCO's ability to successfully transition programs to service partners and

ensure that programs meet requirements needs improvement. The Committee understands that the Department is conducting a review of SCO's prior year budgets and the fiscal year 2020 budget submission, including all current SCO projects and 2020 new starts. The Committee always welcomes a reevaluation of budget priorities and oversight of programs within the Department, but notes that revisiting program decisions a month prior to the start of the fiscal year challenges effective congressional budget oversight. Therefore, the Committee directs the Secretary of Defense to provide the congressional defense committees with the findings of the program review, including metrics on transition success, and a funding realignment plan, by November 1, 2019. In addition, the Committee directs the Secretary to provide to the congressional defense committees, quarterly obligation and expenditure reports for SCO by project. Finally, the Secretary shall report to the congressional defense committees with recommendations for enhancing SCO's ability to transition programs and ensure that programs within the SCO portfolio are optimized to meet Department of Defense requirements. Recommendations shall include changes that can be made within the current SCO organizational structure, but may include options for a broader reorganization. The report shall include the views of each Combatant Command on the recommendations.

User Activity Monitoring.—The Committee remains concerned about insider threats to Department of Defense information systems and appreciates the Department's effort to establish a task force to develop an approach to user activity monitoring [UAM] across the Department and identify challenges and necessary resources to implement the approach. The Committee urges the Department to expedite these UAM efforts and establish a program that provides UAM coverage of all employees with access to classified networks. The Committee also directs that the Chief Information Officer report to the Committee not later than 90 days after the enactment of this act, the findings of the task force to date, including the timeline to initiate a program for comprehensive UAM coverage across the Department beginning in fiscal year 2020; a recommended governance structure for managing execution of such a program; any obstacles identified to establishing such a program to include legal, financial, contractual, or cultural issues; identification of the resources required to implement the program in fiscal year 2020; and an explanation of how the program complies with all relevant provisions of Executive Order 13587 and CNSS Directive 504.

Cyber Education.—The Committee supports efforts by the Department of Defense and National Security Agency to reduce the vulnerability of our national information infrastructure by promoting higher education and research in cyber defense and producing professionals with cyber defense expertise. Therefore, the Committee recommends an increase in Research, Development, Test and Evaluation, Defense-Wide of \$12,000,000 for the National Centers for Academic Excellence Cyber Defense program. The Committee recommends an additional increase of \$25,000,000 for the establishment of a workforce development pilot program that would offer certificate-based courses through the Centers for Academic

Excellence in cybersecurity and artificial intelligence. Finally, the Committee recommends \$10,000,000 to fund an initiative authorized in the John S. McCain National Defense Authorization Act for Fiscal Year 2019, for the Secretary of Defense to designate Department of Defense Cyber Institutes at institutions of higher education, with consideration to the Senior Military Colleges, to award scholarships, student and research support, and a K–12 cyber education program.

Cyber Professionals From Minority Communities.—The Committee is aware of the significant need for attracting well qualified individuals with cyber training to aid the nation against adversarial cyber threats. The Committee encourages the Department of Defense and the intelligence community to review opportunities to grow its workforce by focusing future recruitment in underrepresented populations and minority communities and to work with qualified historically black colleges and universities to identify and recruit the next generation of cyber professionals.

Manufacturing Innovation Institutes.—The Committee continues to support the Manufacturing Innovation Institutes, but notes that the Department of Defense lacks a comprehensive approach to integrating the institutes into each service's future year's research agenda. Therefore, the Committee directs the Secretary of Defense to provide a briefing not later than 90 days after the enactment of this act, describing a plan for sustained investment in the Manufacturing Innovation Institutes, including integration with the military services to facilitate transition of advanced manufacturing capabilities into fielded systems and programs of record.

Manufacturing Engineering Programs.—The Committee recognizes that the United States must maintain a technically trained workforce to meet the defense industrial base requirements of the Department of Defense. Therefore, the Committee recommends an additional \$45,000,000 above the fiscal year 2020 President's budget request for manufacturing engineering grants and encourages the Secretary of Defense to prioritize funding under this program to support community colleges and technical schools.

Micro Nuclear Reactors.—The Strategic Capabilities Office [SCO] of the Department of Defense has initiated studies and analysis to determine the feasibility and safety of developing a transportable nuclear reactor to better satisfy the logistics and other power needs of Department of Defense expeditionary basing, humanitarian assistance, and disaster relief operations. The Committee supports SCO's initial efforts to develop preliminary engineering plans, address key technical and manufacturing weaknesses, and build initial safety and licensing documentation. The Committee recommends an additional \$140,000,000 in Research, Development, Test, and Evaluation; Defense-Wide to expedite efforts toward a final engineering design.

Precision Optics.—The Committee is aware that there are challenges within the precision optical systems supply chain to include increased competition from overseas suppliers, a shortage of later-stage research and development investments, and a shrinking skilled workforce. The Committee recognizes that stable later-stage development of innovative optical materials and optical manufacturing technologies is required. Additional efforts should be made

to stabilize the industry and provide for optics technician training programs in key geographical regions to insure a future technical workforce for the industry.

Cheyenne Mountain Cyber Resiliency Efforts.—The Committee notes the criticality of the Cheyenne Mountain Complex to U.S. national security, including ballistic missile defense operations, as well as the increasing cyber threat. Therefore, the Committee recommends \$10,000,000 for industrial control systems cyber security solutions for key Department of Defense installations critical to homeland defense and overseas operations, with special emphasis on the Cheyenne Mountain Complex.

Commercial Artificial Intelligence Solutions.—The Committee is encouraged by the ongoing rapid fielding of commercially-available technologies, and the contributions made by small businesses, that utilize artificial intelligence for the Department of Defense. Recent advances in commercially available technology have made it possible to develop, manufacture, and deploy technologies that can process information more effectively and efficiently, and at much lower cost than legacy systems. The Joint Artificial Intelligence Center has already identified disaster response and predictive maintenance as two National Mission Initiatives. Accordingly, the Committee recommends that the Defense Innovation Unit identify commercial artificial intelligence solutions in support of those National Mission Initiatives. The Committee also recommends that the Secretary of Defense take steps to enhance the ability of small businesses, which demonstrate the ability to advance artificial intelligence-related capabilities, to compete for Joint Artificial Intelligence Center projects and include a description of such small business efforts in the fiscal year 2021 budget justification materials.

Multi-Mission Payload-Medium.—The Committee is concerned by the recent decision of the United States Special Operations Command [USSOCOM] to transfer funds away from the Multi-Mission Payload-Medium [MMP-M] prior to developmental and operational testing needed to field this capability. The MMP-M system was recently outfitted on a modified aircraft and was set to begin operational testing in the fourth quarter of fiscal year 2019 at the request of the Army Special Operations Command in order to expand its capabilities on the physical and digital battlefield. Given the funding and time spent on modifying the MMP-M system and aircraft, it would be fiscally and operationally prudent to follow through with the required testing. The Committee directs the USSOCOM to finish operational testing on the MMP-M system using previously appropriated funds for this effort and provide a report to the congressional defense committees on the results of the testing.

Advanced Electric Vertical Take Off and Landing Unmanned Aerial System for Distributed Logistics and Test Range.—As other nations increase their Arctic presence, it is imperative that the U.S. military do the same. Therefore, the Committee urges the Air Force to develop an advanced Electric Vertical Take Off and Landing Unmanned Aerial System, including a five-sensor detect and avoid system, for distributed logistics and a test range to provide

for demonstration of the system, including operation in a GPS denied environment and to help meet Arctic defense strategies.

OPERATIONAL TEST AND EVALUATION, DEFENSE

Appropriations, 2019	\$381,009,000
Budget estimate, 2020	221,200,000
Committee recommendation	232,700,000

The Committee recommends an appropriation of \$232,700,000. This is \$11,500,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the adjustments recommended by the Committee:

(In thousands of dollars)

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Operational Test and Evaluation	93,291	93,291	.....
2	Live Fire Test and Evaluation	69,172	69,172	.....
3	Operational Test Activities and Analyses	58,737	70,237	+11,500
	Program increase: Advanced satellite navigation receiver .....	.....	.....	+10,000
	Program increase: Cyber talent recruitment initiative .....	.....	.....	+1,500
	Total, Operational Test and Evaluation, Defense	221,200	232,700	+11,500

Testing for Rapid Prototyping and Rapid Fielding Programs.—The Director, Operational Test and Evaluation, in coordination with the Under Secretary of Defense (Acquisition and Sustainment) and the Under Secretary of Defense (Research and Engineering), and with the cooperation of the respective service test organizations, is directed to provide to the congressional defense committees, concurrently with the fiscal year 2021 President’s budget request, an assessment of test strategies for all current and proposed acquisition programs using section 804 acquisition authorities. This assessment shall include a review of test sufficiency, scope, realism, data to be collected, as well as resources required to conduct this testing.

Cyber Talent Recruitment Initiative.—The Committee notes continued weaknesses in the Department of Defense’s cyber posture, to include challenges in the recruitment and retention of qualified cyber talent. Therefore, the Committee recommends the Department of Defense consider implementing a pilot program to provide scholarships through qualified institutions of higher education, including community colleges, to students who are enrolled in programs that lead to degrees or specialized program certifications in the cybersecurity field that support Department of Defense requirements. The Committee believes that the Department could benefit from such a program and partnership with universities to create a cyber talent pipeline that develops a cyber workforce. The Committee recommends \$1,500,000 to develop a program that identifies university partners and a structure to award scholarships to build a certified cyber defense workforce.

TITLE V
 REVOLVING AND MANAGEMENT FUNDS
 DEFENSE WORKING CAPITAL FUNDS

Appropriations, 2019 \$1,641,115,000
 Budget estimate, 2020 1,226,211,000
 Committee recommendation 1,580,211,000

The Committee recommends an appropriation of \$1,580,211,000. This is \$354,000,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Item	2020 budget estimate	Committee recommendation	Change from budget estimate
Arsenals Initiative	57,467	202,467	+ 145,000
Program increase: Arsenals initiative			+ 145,000
Supply Management	32,130	32,130	
Program increase: Pilot program for partnership with digital manufacturing institute efforts		9,000	+ 9,000
Total, Defense Working Capital Fund, Army	89,597	243,597	+ 154,000
Supplies and Materials	92,499	92,499	
Total, Defense Working Capital Fund, Air Force	92,499	92,499	
Defense Logistics Agency	49,085	49,085	
Total, Defense Working Capital Fund, Defense-wide	49,085	49,085	
Commissary Operations	995,030	995,030	
Total, Defense Working Capital Fund, Defense-wide, DECA ..	995,030	995,030	
Defense Counterintelligence and Security Agency		200,000	+ 200,000
Transfer: DCSA funding from request as a separate working capital fund			+ 200,000
Total, Defense Working Capital Fund, Defense Counterintelligence and Security Agency		200,000	+ 200,000
Grand Total, Defense Working Capital Funds	1,226,211	1,580,211	+ 354,000

Meals Ready-to-Eat.—The Committee recommends full funding for the Defense Logistics Agency’s request of 2.5 million cases of Meals Ready to Eat and reaffirms its support for the War Reserve stock objective of 5.0 million cases and the minimum sustainment rate for the industrial base.

DEFENSE COUNTERINTELLIGENCE AND SECURITY AGENCY

Appropriations, 2019 .....	.....
Budget estimate, 2020	\$200,000,000
Committee recommendation .....	.....

The Committee recommends full funding of the Defense Counterintelligence and Security Agency under the Defense Working Capital Funds heading.

TITLE VI
OTHER DEPARTMENT OF DEFENSE PROGRAMS
DEFENSE HEALTH PROGRAM

Appropriations, 2019 \$34,007,519,000
 Budget estimate, 2020 32,998,687,000
 Committee recommendation 33,495,289,000

The Committee recommends an appropriation of \$33,495,289,000.
 This is \$496,602,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

(In thousands of dollars)

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	DEFENSE HEALTH PROGRAM			
	OPERATION AND MAINTENANCE			
10	IN-HOUSE CARE	9,570,615	9,322,915	- 247,700
20	PRIVATE SECTOR CARE	15,041,006	14,983,506	- 57,500
30	CONSOLIDATED HEALTH SUPPORT	1,975,536	1,938,036	- 37,500
40	INFORMATION MANAGEMENT	2,004,588	1,902,788	- 101,800
50	MANAGEMENT ACTIVITIES	333,246	333,246	.....
60	EDUCATION AND TRAINING	793,810	778,210	- 15,600
70	BASE OPERATIONS/COMMUNICATIONS	2,093,289	2,093,289	.....
	SUBTOTAL, OPERATION AND MAINTENANCE	31,812,090	31,351,990	- 460,100
	PROCUREMENT			
150	INITIAL OUTFITTING	26,135	7,651	- 18,484
160	REPLACEMENT AND MODERNIZATION	225,774	225,774	.....
170	JOINT OPERATIONAL MEDICINE INFORMATION SYSTEM	314	.....	- 314
180	MILITARY HEALTH SYSTEM—DESKTOP TO DATACENTER	73,010	73,010	.....
190	DOD HEALTH MANAGEMENT SYSTEM MODERNIZATION	129,091	129,091	.....
	SUBTOTAL, PROCUREMENT	454,324	435,526	- 18,798
	RESEARCH DEVELOPMENT TEST AND EVALUATION			
80	RESEARCH	12,621	12,621	.....
90	EXPLORATORY DEVELOPMENT	84,266	84,266	.....
100	ADVANCED DEVELOPMENT	279,766	279,766	.....
110	DEMONSTRATION/VALIDATION	128,055	128,055	.....
120	ENGINEERING DEVELOPMENT	143,527	98,427	- 45,100
130	MANAGEMENT AND SUPPORT	67,219	67,219	.....
140	CAPABILITIES ENHANCEMENT	16,819	16,819	.....
150	UNDISTRIBUTED MEDICAL RESEARCH .....	.....	1,020,600	+ 1,020,600
	SUBTOTAL, RESEARCH DEVELOPMENT TEST AND EVALUATION	732,273	1,707,773	+ 975,500
	TOTAL, DEFENSE HEALTH PROGRAM	32,998,687	33,495,289	+ 496,602

COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Item	2020 budget estimate	Committee recommendation	Change from budget estimate
Operation and Maintenance	31,812,090	31,351,990	- 460,100
In-House Care	9,570,615	9,322,915	- 247,700
Transfer Preservation of the Force and Family-Behavioral Health: SOCOM requested from O&M Defense-Wide line 1PLR			+ 5,000
Improving funds management: Excess funding to replace military medical end strength			- 212,500
Improving funds management: Printing and reproduction excess growth			- 5,200
Improving funds management: Equipment purchases excess growth			- 35,000
Private Sector Care	15,041,006	14,983,506	- 57,500
Improving funds management: Pharmaceutical drugs excess growth			- 19,000
Improving funds management: Historical underexecution			- 38,500
Consolidated Health Support	1,975,536	1,938,036	- 37,500
Improving funds management: Historical underexecution			- 37,500
Information Management/IT	2,004,588	1,902,788	- 101,800
Restoring acquisition accountability: DHMSM excess growth			- 80,600
Improving funds management: TMIP-J excess growth			- 17,800
Improving funds management: JOMIS excess growth			- 3,400
Management Activities	333,246	333,246	
Education and Training	793,810	778,210	- 15,600
Improving funds management: Supplies and materials excess growth			- 8,700
Improving funds management: Equipment purchases excess growth			- 6,900
Base Operations and Communications	2,093,289	2,093,289	
Procurement	454,324	435,526	- 18,798
Restoring acquisition accountability: New facility outfitting excess due to military construction delays			- 18,484
Restoring acquisition accountability: JOMIS ahead of need			- 314
Research and Development	732,273	1,707,773	+ 975,500
Restoring acquisition accountability: DHMSM prior year carry-over			- 27,100
Restoring acquisition accountability: JOMIS excess growth			- 18,000
Restore core funding reduction			+ 212,100
Peer-reviewed ALS research			+ 20,000
Peer-reviewed breast cancer research			+ 120,000
Peer-reviewed cancer research			+ 90,000
Peer-reviewed epilepsy research			+ 12,000
Peer-reviewed medical research			+ 350,000
Peer-reviewed melanoma research			+ 20,000
Peer-reviewed ovarian cancer research			+ 10,000
Peer-reviewed prostate cancer research			+ 64,000
Peer-reviewed rare cancers research			+ 7,500
Peer-reviewed traumatic brain injury and psychological health research			+ 60,000
Chronic pain management			+ 15,000
Joint warfighter medical research			+ 25,000
Orthotics and prosthetics outcomes research			+ 15,000
Total	32,998,687	33,495,289	+ 496,602

Defense Health Program Reprogramming Procedures.—The Committee remains concerned regarding the transfer of funds from the

In-House Care budget sub-activity to pay for contractor-provided medical care. To limit such transfers and improve oversight within the Defense Health Program operation and maintenance account, the Committee includes a provision which caps the funds available for Private Sector Care under the TRICARE program subject to prior approval reprogramming procedures. The provision and accompanying report language should not be interpreted by the Department as limiting the amount of funds that may be transferred to the Direct Care System from other budget activities within the Defense Health Program. In addition, funding for the In-House Care and Private Sector Care budget sub-activities are designated as congressional special interest items. Any transfer of funds in excess of \$15,000,000 into or out of these sub-activities requires the Secretary of Defense to follow prior approval reprogramming procedures.

The Committee directs the Secretary of Defense to provide written notification to the congressional defense committees of cumulative transfers in excess of \$10,000,000 out of the Private Sector Care budget sub-activity not later than fifteen days after such a transfer. The Committee further directs the Assistant Secretary of Defense (Health Affairs) to provide quarterly briefings to the congressional defense committees on budget execution data for all of the Defense Health Program budget activities not later than 30 days after the end of each fiscal quarter and to adequately reflect changes to the budget activities requested by the Services in future budget submissions.

Carryover.—For fiscal year 2020, the Committee recommends 1 percent carryover authority for the operation and maintenance account of the Defense Health Program. The Committee directs the Assistant Secretary of Defense (Health Affairs) to submit a detailed spend plan for any fiscal year 2019 designated carryover funds to the congressional defense committees not less than 30 days prior to executing the carryover funds.

Operation and Maintenance Reductions.—The Committee notes that the budget justification materials for the Defense Health Program do not delineate operation and maintenance funding between the Defense Health Agency, Army, Navy, Air Force, Uniformed Services University of Health Sciences, and National Capital Region Medical Directorate. Given this lack of granular visibility, the Department is expected to implement operation and maintenance reductions among the various components in accordance with their historical underexecution.

Electronic Health Record.—The Committee remains supportive of the goal of the Departments of Defense and Veterans Affairs to develop and deploy fully interoperable electronic health records that can exchange data in a meaningful way and be used in a dynamic environment to improve patient care and facilitate smoother transitions for servicemembers from military service to veteran status. After a nearly 2 year pause in the deployment of Military Health System [MHS] GENESIS, the Department of Defense is preparing its next waves of deployments beginning in September 2019. The Committee expects that many of the incidents identified in the Initial Operational Test and Evaluation [IOT&E] have been corrected in order to ensure a smoother deployment at upcoming sites and

looks forward to reviewing the results of the Full Operational Test and Evaluation [FOT&E] report in June 2020. The Defense Healthcare Management System Modernization [DHMSM] program currently has a full deployment decision authority to proceed milestone scheduled for the third quarter of fiscal year 2020. The Committee believes that this decision should be informed by and contingent upon the success of the fixes to the problems identified in IOT&E and directs the Under Secretary of Defense for Acquisition and Sustainment to brief the congressional defense committees not later than 30 days after the full deployment decision on the results of FOT&E.

The Committee understands that a total of 508 incidents were identified among the four initial operating capability sites, with 57 identified as high priority. Since IOT&E concluded, approximately 122 of these incidents have been resolved, while another 386 incidents remain open. Nearly two-thirds of these open incidents have approved fixes and are ready for re-test during the FOT&E period in early 2020. The Committee directs the Program Executive Officer, Defense Healthcare Management Systems [PEO DHMS] to provide monthly reports not later than 15 days after the end of each month to the congressional defense committees on the status of all open incident reports as well as the 57 high priority incident reports in order for the Committee to better track the progress of the Department in resolving the multitude of issues identified in the initial deployment of MHS GENESIS.

The PEO DHMS, in conjunction with the Director of the Inter-agency Program Office [IPO], is directed to provide quarterly reports not later than 30 days after the end of each fiscal quarter to the congressional defense committees and the Government Accountability Office on the cost and schedule of the program, to include milestones, knowledge points, and acquisition timelines, as well as quarterly obligation reports. These reports should also include the following: (1) any changes to the deployment timeline, including benchmarks, for full operating capability; (2) any refinements to the cost estimate for full operating capability and the total life cycle cost of the project; and (3) the progress toward developing, implementing, and fielding the interoperable electronic health record throughout the two Departments' medical facilities. The Committee further directs the PEO DHMS to continue briefing the House and Senate Defense Appropriations Subcommittees on a quarterly basis, coinciding with the report submission. The Committee notes that these reporting requirements have been in place since fiscal year 2016 and is disappointed that the PEO DHMS failed to provide the updated program life cycle cost estimate established in December 2018 or the updated deployment schedule established in January 2019 as required in these quarterly reports.

Additionally, the Committee directs the Comptroller General to continue quarterly performance reviews of the deployment of MHS GENESIS with a focus on whether the program is meeting expected cost, schedule, scope, quality, and risk mitigation expectations. The Committee expects PEO DHMS to facilitate these quarterly performance reviews by providing the Comptroller General with regular and in-depth access to the program.

Finally, the Committee directs the IPO to continue to provide quarterly reports to the House and Senate Subcommittees on Appropriations for Defense and Military Construction, Veterans Affairs, and Related Agencies on the progress of interoperability between the two Departments.

Military Treatment Facility Transition.—The Committee is dismayed with the lack of detail and timeliness of information it has received regarding the transition of Military Treatment Facilities [MTF] from the Services to the Defense Health Agency [DHA]. The first eight MTFs transitioned under the control of DHA in October 2018, and the Committee was briefed in January 2019 that east coast MTFs would transition in October 2019, west coast MTFs in October 2020, and MTFs outside the continental U.S. in October 2021. In July 2019, the Committee learned secondhand about a new plan for all MTFs to transition under DHA in October 2019, a plan that has since been reported through Department media outlets yet still not confirmed to the Committee, less than 1 month before the accelerated transition is set to begin. Additional details regarding the transition, such as a list of the functional capabilities and conditions upon which the transfers would be based, have been requested and not yet received. These are metrics that the Department has set for itself and should be able to openly and expediently share with congressional oversight committees. The Committee finds these delays unacceptable.

The Committee directs the Comptroller General to submit a report to the congressional defense committees not later than 90 days after the enactment of this act on the transition of MTFs to the DHA. The report should include a review of functions at facilities that have already transitioned, including DHA's role, management, or administration support that the Services are currently still providing and a timeline for that support to cease; cost implications of the transition; the current and planned DHA staffing model; and how the DHA will ensure that the Services' medical requirements are accounted for.

Traumatic Brain Injury/Psychological Health.—The Committee recommends \$60,000,000 above the fiscal year 2020 budget request for continued research into treatment, prevention, and detection of Traumatic Brain Injury [TBI] and improved psychological health. The Committee directs the Assistant Secretary of Defense (Health Affairs) to submit a report to the congressional defense committees not later than 18 months after the enactment of this act on expenditure and obligation data of additional funding added by Congress for psychological health and TBI. This report should include information on agreements made with other government agencies.

Additionally, the Committee is aware of recent medical advances in drug development for neurodegenerative diseases and encourages the Department to further its research into developing drugs that reverse, halt, or slow the neurodegenerative process associated with TBI including opportunities through public-private partnerships, such as the Medical Technology Consortium. The Committee is also aware of recent scientific evidence that suggests rotational acceleration resulting from blunt impact is a contributing factor to mild TBI [mTBI] and concussion and encourages the Department to continue to work with and support research at non-Department

of Defense entities that have developed and proposed rotational impact test methodologies to provide enhanced protection solutions.

The Committee also notes that more work needs to be done to diagnose TBI in all its forms, including mTBI and concussion. The Committee encourages the Department to continue research into and deployment of mTBI/concussion multi-modal diagnostic devices that have been cleared by the Food and Drug Administration. Finally, the Committee understands that chronic migraine is often associated with post-traumatic headaches of patients who suffer from TBI. Given the lack of data in this area, the Committee encourages the Department to support research to develop biomarkers useful in diagnosing and monitoring TBI patients with chronic migraine or post-traumatic headache.

Peer-Reviewed Medical Research Program.—The Committee recommends \$350,000,000 for the Peer-Reviewed Medical Research Program. The Committee directs the Secretary of Defense, in conjunction with the Service Surgeons General, to select medical research projects of clear scientific merit and direct relevance to military health. Research areas considered under this funding are restricted to: arthritis, autism, burn pit exposure, chronic migraine and post-traumatic headache, congenital heart disease, constrictive bronchiolitis, diabetes, Duchenne muscular dystrophy, dystonia, eating disorders, emerging viral diseases, endometriosis, epidermolysis bullosa, familial hypercholesterolemia, fibrous dysplasia, focal segmental glomerulosclerosis, food allergies, Fragile X, frontotemporal degeneration, Guillain-Barre Syndrome, gulf war illness, hearing regeneration, hemorrhage control, hepatitis B, hydrocephalus, immunomonitoring of intestinal transplants, inflammatory bowel diseases, interstitial cystitis, lupus, metals toxicology, mitochondrial disease, multiple sclerosis, musculoskeletal health, myalgic encephalomyelitis/chronic fatigue syndrome, myotonic dystrophy, neurofibromatosis, nutrition optimization, pancreatitis, Parkinson's, pathogen-inactivated blood products, plant-based vaccines, polycystic kidney disease, pressure ulcers, pulmonary fibrosis, reconstructive transplantation, resilience training, respiratory health, rheumatoid arthritis, sleep disorders and restriction, spinal cord injury, spinal muscular atrophy, sustained release drug delivery, trauma, tuberous sclerosis complex, vascular malformations, vision, and women's heart disease. The Committee emphasizes that the additional funding provided under the Peer-Reviewed Medical Research Program shall be devoted only to the purposes listed above.

Joint Warfighter Medical Research Program.—The Committee recommends \$25,000,000 for the Joint Warfighter Medical Research Program. Funds shall be used to augment and accelerate high priority Department of Defense and Service medical requirements and to continue both core and congressionally-directed prior year initiatives that are close to achieving their objectives and yielding a benefit to military medicine. These funds shall not be used for new projects or basic research, and they shall be awarded at the discretion of the Secretary of Defense following a review of medical research and development gaps, as well as unfinanced medical requirements of the Services. Further, the Committee directs the Assistant Secretary of Defense (Health Affairs) to provide a report not later than 18 months after the enactment of this act

to the congressional defense committees, which lists the projects that receive funding. The report should include the funding amount awarded to each project, a thorough description of each project's research, and the benefit the research will provide to the Department of Defense.

Peer-Reviewed Cancer Research Programs.—The Committee recommends \$120,000,000 for the peer-reviewed breast cancer research program, \$64,000,000 for the peer-reviewed prostate cancer research program, \$20,000,000 for a peer-reviewed melanoma research program, \$10,000,000 for the peer-reviewed ovarian cancer research program, \$7,500,000 for a peer-reviewed rare cancers research program, and \$90,000,000 for the peer-reviewed cancer research program that would research cancers not addressed in the aforementioned programs currently executed by the Department of Defense.

The funds provided in the peer-reviewed cancer research program are directed to be used to conduct research in the following areas: bladder cancer; blood cancers; brain cancer; colorectal cancer; esophageal cancer; head and neck cancer; immunotherapy; kidney cancer; liver cancer; lung cancer; mesothelioma; neuroblastoma; pancreatic cancer; pediatric brain tumors; pediatric, adolescent, and young adult cancers; and stomach cancer.

The funds provided under the peer-reviewed cancer research program shall be used only for the purposes listed above. The Committee directs the Assistant Secretary of Defense (Health Affairs) to provide a report not later than 18 months after the enactment of this act to the congressional defense committees on the status of the peer-reviewed cancer research program. For each research area, the report should include the funding amount awarded, the progress of the research, and the relevance of the research to servicemembers.

Orthotics and Prosthetics Outcomes Research.—The Committee recommends \$15,000,000 in support of orthotics and prosthetics outcomes research. The focus of this research should be on outcomes-based best practices through analysis of the merits of clinical options currently available, not on the development or improvement of new and existing technology. The Committee directs the Assistant Secretary of Defense (Health Affairs) to provide a report not later than 18 months after the enactment of this act to the congressional defense committees on the peer-reviewed projects that receive funding. The report should include the funding amount awarded to each project and the anticipated effect on patient care.

Chronic Pain Management Research.—The Committee recommends \$15,000,000 for a chronic pain management research program to research opioid-alternative or non-addictive methods to treat and manage chronic pain. Chronic pain is defined as a pain that occurs on at least half the days for 6 months or more, and which can be caused by issues including, but not limited to: combat- and training-related physical or mental stress and trauma, migraines and chronic headaches, traumatic brain injury, arthritis, muscular-skeletal conditions, neurological disease, tick and vector-borne disease, other insect-transmitted or tropical disease, and cancer. The funds provided in the chronic pain management research program shall be used to conduct research on the effects of using

prescription opioids to manage chronic pain and for researching alternatives, namely non-opioid or non-addictive methods to treat and manage chronic pain, with a focus on issues related to military populations. The Committee encourages the Department to collaborate with non-military research institutions, such as the institutions of the National Institutes of Health Pain Consortium, and the institutions represented in the Interagency Pain Research Coordinating Committee, to address the efforts outlined in the 2016 National Pain Strategy.

Warfighter Respiratory Health.—The Committee remains concerned about respiratory ailments among deployed and returning servicemembers and their deleterious effects on combat and personnel readiness. It is estimated that respiratory diseases affect more than 100,000 servicemembers each year and result in almost 27,000 lost workdays per year. The Committee has included respiratory health as part of the Peer-Reviewed Medical Research Program and believes that further development of a comprehensive, broad-based warfighter respiratory research program is necessary to support overall readiness. The Assistant Secretary of Defense (Health Affairs) is directed to provide a report to the congressional defense committees not later than 120 days after the enactment of this act detailing the scope and impact of respiratory illness on military personnel—particularly on deployed troops—dating from the first Gulf War to the present.

Epilepsy Research.—The Committee is concerned about the large number of service men and women returning from combat zones who have sustained traumatic brain injuries [TBI] and the long term consequences of TBI. These wounded warriors are at high risk for developing post-traumatic epilepsy, depression, cognitive difficulties, and post-traumatic stress disorder, which may be interconnected. As current TBI longitudinal studies have not included epilepsy, the Committee encourages the Department to place greater priority and invest more funding in longitudinal epidemiological research, including epilepsy surveillance, to better understand the magnitude of the problem and improve patient care and outcomes. To assist in these efforts, the Committee recommends \$12,000,000 in support of epilepsy research. Additionally, the Committee urges the Department to expand research into the mechanisms by which brain injury produces epilepsy and research directed at the prevention of epilepsy and concomitant comorbidities in those known to be at high risk.

Melanoma Research.—The Committee understands that melanoma diagnoses are increasing among active duty servicemembers and that melanoma is the fifth most common cancer among veterans. Recent research suggests that exposure to high levels of solar radiation in young adulthood is associated with a higher risk of melanoma mortality. Given the extreme and harsh conditions servicemembers face in theater and the rise of this aggressive and frequently deadly form of cancer, the Committee encourages the Department to continue its investments in melanoma research and recommends \$20,000,000 for a peer-reviewed melanoma research program.

Inclusion of Women and Minorities in the Congressionally-Directed Medical Research Program.—The Committee recognizes that

the Congressionally-Directed Medical Research Program supports essential research to respond to the healthcare needs of servicemembers, their dependents, and retirees. In a series of laws, including the 21st Century Cures Act, Congress directed the National Institutes of Health to update relevant policies and implement accountability mechanisms to ensure that research supported by the agency included and conducted the appropriate analysis to identify the differential impact of research interventions on populations that are often underrepresented in clinical research, including women, and racial and ethnic minorities.

To continue improving the inclusion of women and minorities in federally funded research, the Committee directs the Department of Defense to develop a plan to ensure the appropriate representation of women and minorities in its extramural research. Specifically, this plan shall include mechanisms to measure, enforce, assess the adequacy of, and improve the: (1) representation of women and minorities in each clinical trial, as well as the data on the specific challenges researchers face in seeking to include women and minorities in their studies; (2) examination of biological variables, including the appropriate analysis of differential outcomes by sex, in clinical research; (3) practice of making clinical findings, subgroup analyses, and data publicly available, as appropriate and applicable; and (4) requirements (including, but not limited to, programmatic controls) and updated guidelines to ensure the appropriate representation of women in clinical research. Outcomes should also be analyzed for potential sex differences. This plan should be developed in coordination with the National Institutes of Health and submitted to the congressional defense committees not later than 180 days after the enactment of this act.

Medical Defense Against Infectious Disease.—The Committee recognizes the importance of medical countermeasures to naturally occurring infectious diseases, such as malaria, Dengue, and Chikungunya viruses. These pose a significant threat to the strategic access and operational effectiveness of forces deployed outside the United States. The Committee remains concerned with the Department's decisions over recent years to precipitously decrease funding for malaria research, particularly due to the emergence of increased malaria resistance in Asia, as malaria remains the number one infectious disease threat to U.S. servicemembers abroad. The Committee commends the research on malaria and malaria vaccines performed by the Walter Reed Army Institute of Research and encourages the Department to continue investing in research for chemoprophylaxis, surveillance, vaccine development, and other countermeasures for malaria. The Committee further encourages the Department to partner with colleges and universities that have strong research programs in infectious diseases, as well as other Federal agencies, foreign governments, international agencies, and non-profit organizations.

Armed Forces Institute of Regenerative Medicine.—The Committee is aware of the many emerging breakthrough treatments for severely wounded servicemembers that have resulted from the Army's leadership in pioneering and proving the value of a peer-reviewed consortium approach in the field of regenerative medicine. The Committee was disappointed to learn that the Department

plans to continue its efforts in this area with a Regenerative Medicine Focused Research Award rather than renew the Armed Forces Institute of Regenerative Medicine [AFIRM] consortium model for a third period of performance, as strongly suggested in the report accompanying the Senate version of the Department of Defense Appropriations Act, 2019 (Senate Report 115–290). The Committee encourages the Department to continue to work with the universities and institutions involved in the success of AFIRM I and II and establish a dedicated funding line for regenerative medicine research in the fiscal year 2021 budget request.

Substance Abuse Pilot Program.—The Committee understands that wounded, ill, and injured servicemembers and their families face complicated and complex challenges, which at times can lead to attempts at self-medication and other substance use disorders. The Committee recognizes the need to provide opioid safety and substance use educational resources to at-risk servicemembers and their families in order to better prepare them for their warrior care and transition. As such, the Committee supports programs that utilize harm reduction techniques and offer confidential educational information that can reduce substance use, relapse, hospital visits, and suicide. The Committee encourages the Department to establish a health support and education pilot program at Army bases with transition units to provide servicemembers and their families with a comprehensive, Internet-based educational program and tools related to substance use in order to assist and safeguard their warrior care and transition.

National Intrepid Center of Excellence Satellite Strategic Basing.—The Committee recognizes the value of the National Intrepid Center of Excellence [NICoE] at Walter Reed National Military Medical Center as a global leader in traumatic brain injury [TBI] care, research, and education. In recent years, the NICoE has broadened its reach to servicemembers and families by establishing a successful model of satellite centers, known as Intrepid Spirit Centers, which are located in highly populated military and defense communities. The Committee believes the Department of Defense and Department of Veterans Affairs can benefit from a similar model and joint project to serve both the active duty and veteran populations in support of complementary and comprehensive recovery from the effects of TBI. The Committee directs the Department of Defense, in coordination with the Department of Veterans Affairs, to provide a report not later than 180 days after enactment of this act to the congressional defense committees on the value and merit of establishing a joint NICoE Intrepid Spirit Center that serves both active duty and veteran populations for their mutual benefit and growth in treatment and care. The report should include inputs from NICoE personnel and analysis regarding localities in geographically rural areas that are distant from existing or planned NICoE satellite locations and that may have existing Department of Defense medical facilities that partner with the Department of Veterans Affairs, existing warrior transition units, or academic institutions specializing in neurology.

Behavioral and Mental Health Care for National Guard and Reserve.—The Committee recognizes that the men and women of the National Guard and Reserve components need greater access to

care if they are to maintain a high state of medical readiness to support regularly occurring deployments. It also recognizes that the suicide rate in the reserve components is consistently higher than the suicide rate for both the active duty military and the civilian population. Therefore, the Committee encourages the Department to better ensure that periodic health assessments are followed by medical treatment to address any behavioral or mental health conditions that could impact a servicemember’s ability to deploy, even if such care falls outside of the pre-deployment window. This practice would allow for a more medically ready, deployable force and would expand access to behavioral and mental healthcare for reserve component servicemembers.

Nurse Training in American Samoa.—The Committee recognizes that the Uniformed Services University of the Health Sciences [USUHS] is utilizing American Samoa as a training site for its graduate nursing students. The territory is noted for having the highest rate of military enlistment of any U.S. state or territory, and the clinical experience in a remote, resource-challenging environment assists in preparation for the future demands placed on military nurses. Therefore, the Committee encourages the USUHS to continue and expand its training program for nursing students in American Samoa.

CHEMICAL AGENTS AND MUNITIONS DESTRUCTION, DEFENSE

Appropriations, 2019	\$993,816,000
Budget estimate, 2020	985,499,000
Committee recommendation	985,499,000

The Committee recommends an appropriation of \$985,499,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[Dollars in thousands]

Line	Item	Qty.	2020 budget estimate	Qty.	Committee recommendation	Change from	
						Qty.	Budget estimate
	CHEMICAL AGENTS AND MUNITIONS DESTRUCTION, DEFENSE						
1	CHEM DEMILITARIZATION—OPERATION AND MAINTENANCE		107,351		107,351		
3	CHEM DEMILITARIZATION—PROCUREMENT		2,218		2,218		
2	CHEM DEMILITARIZATION—RESEARCH, DEVELOPMENT, TEST AND EVALUATION		875,930		875,930		
	TOTAL, CHEMICAL AGENTS AND MUNITIONS DESTRUCTION, DEFENSE		985,499		985,499		

Assembled Chemical Weapons Alternatives Program.—The Program Executive Office [PEO] Assembled Chemical Weapons Alternatives [ACWA] is responsible for the safe and environmentally compliant destruction of the remaining U.S. chemical weapons stockpile stored at the U.S. Army Pueblo Chemical Depot in Colorado and the Blue Grass Army Depot in Kentucky. The Committee notes that Congress has appropriated approximately \$8,750,000,000 for the ACWA program through fiscal year 2019, including an additional \$127,000,000 in an out-of-cycle March 2017 request for additional appropriations. The fiscal year 2020 budget requests \$870,000,000 for the program, and the estimated total cost to complete the program now exceeds \$13,000,000,000.

In June 2017, the Department notified Congress that the program experienced a significant Nunn-McCurdy unit cost breach due to increases in required funding as a result of schedule extensions, cost growth in explosive destruction technology, and technical issues that led to systemization and operations delays. A 2017 program office estimate showed program cost growth of 21.6 percent over the approved acquisition program baseline. A February 2018 Department of Defense Inspector General Report found that schedule delays and cost increases were due to a lack of contract oversight and that the program was in jeopardy of not being able to meet the destruction deadline of December 31, 2023.

The Committee was dismayed to learn in April 2019 that the ACWA program had \$251,000,000 in excess funding and to see this funding repurposed for other Department priorities in a May 2019 reprogramming action. Additionally, the Committee has serious concerns about the schedule and funding disconnect in the current budget request that shows significant funding requirements even past the December 2023 destruction deadline. PEO ACWA is currently working on an updated program office estimate, and the Office of Cost Assessment and Program Evaluation [CAPE] is doing an independent cost estimate expected to be complete in November 2019. The Committee directs the PEO ACWA and the Director of CAPE to provide these estimates to the congressional defense committees not later than 15 days after their completion.

DRUG INTERDICTION AND COUNTER-DRUG ACTIVITIES, DEFENSE

Appropriations, 2019	\$881,525,000
Budget estimate, 2020	799,402,000
Committee recommendation	884,402,000

The Committee recommends an appropriation of \$884,402,000. This is \$85,000,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
010	Counter-Narcotics Support	581,739	517,514	−64,225

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Transfer: To line 030 for National Guard Counter-drug support			- 64,225
020	Drug Demand Reduction Program	120,922	120,922	.....
030	National Guard Counter-Drug Program	91,370	220,595	+ 129,225
	Program increase			+ 65,000
	Transfer: From line 010 for National Guard Counter-drug support			+ 64,225
040	National Guard Counter-Drug Schools	5,371	25,371	+ 20,000
	Program increase			+ 20,000
	Total, Drug Interdiction and Counter-Drug Activities	799,402	884,402	+ 85,000

OFFICE OF THE INSPECTOR GENERAL

Appropriations, 2019	\$329,273,000
Budget estimate, 2020	363,499,000
Committee recommendation	363,499,000

The Committee recommends an appropriation of \$363,499,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Item	2020 budget estimate	Committee recommendation	Change from budget estimate
Office of the Inspector General, Operation and Maintenance	360,201	360,201	.....
Office of the Inspector General, Research and Development	2,965	2,965	.....
Office of the Inspector General, Procurement	333	333	.....
TOTAL, OFFICE OF THE INSPECTOR GENERAL	363,499	363,499	.....

Quarterly End Strength and Execution Reports.—The Department of Defense Inspector General is directed to provide quarterly reports to the congressional defense committees on civilian personnel end strength, full-time equivalents, and budget execution not later than 15 days after the end of each fiscal quarter. The reports should contain quarterly civilian personnel end strength and full-time equivalents as well as an estimate of fiscal year end strength and fiscal year full-time equivalents. The reports should also include quarterly budget execution data along with revised fiscal year estimated execution data. The Inspector General is directed to provide realistic end of fiscal year estimates based on personnel trends to date.

TITLE VII
RELATED AGENCIES

CENTRAL INTELLIGENCE AGENCY RETIREMENT AND DISABILITY
SYSTEM FUND

Appropriations, 2019	\$514,000,000
Budget estimate, 2020	514,000,000
Committee recommendation	514,000,000

The Committee recommends an appropriation of \$514,000,000.
This is equal to the budget estimate.

INTELLIGENCE COMMUNITY MANAGEMENT ACCOUNT

Appropriations, 2019	\$522,424,000
Budget estimate, 2020	558,000,000
Committee recommendation	539,400,000

The Committee recommends an appropriation of \$539,400,000.
This is \$18,600,000 below the budget estimate.

TITLE VIII

GENERAL PROVISIONS

The following lists general provisions proposed by the Committee. The Committee recommends inclusion of several proposals which have been incorporated in previous appropriations acts, provisions requested for inclusion by the Defense Department, and new provisions. The Committee recommendations are as follows:

SEC. 8001. *Publicity/Propaganda Limitation*.—Retains a provision carried in previous years.

SEC. 8002. *Compensation/Employment of Foreign Nationals*.—Retains a provision carried in previous years.

SEC. 8003. *Obligation Rate of Appropriations*.—Retains a provision carried in previous years.

SEC. 8004. *Obligations in Last 2 Months of Fiscal Year*.—Retains and modifies a provision carried in previous years.

SEC. 8005. *General Transfer Authority*.—Retains a provision carried in previous years.

SEC. 8006. *Project Level Adjustments*.—Retains and modifies a provision carried in previous years.

SEC. 8007. *Establishment of Reprogramming Baseline*.—Retains and modifies a provision carried in previous years.

SEC. 8008. *Working Capital Funds Cash Disbursements*.—Retains a provision carried in previous years.

SEC. 8009. *Special Access Programs Notification*.—Retains a provision carried in previous years.

SEC. 8010. *Multiyear Procurement Authority*.—Retains and modifies a provision carried in previous years.

SEC. 8011. *Humanitarian and Civic Assistance*.—Retains a provision carried in previous years.

SEC. 8012. *Restriction on Civilian Personnel End-Strength*.—Retains and modifies a provision carried in previous years.

SEC. 8013. *Lobbying*.—Retains a provision carried in previous years.

SEC. 8014. *Educational Benefits and Bonuses*.—Retains a provision carried in previous years.

SEC. 8015. *Mentor-Protégé Program*.—Retains a provision carried in previous years.

SEC. 8016. *Strategic Delivery Vehicles*.—Retains a provision carried in previous years.

SEC. 8017. *Alcoholic Beverages*.—Retains a provision carried in previous years.

SEC. 8018. *Demilitarization of Surplus Firearms*.—Retains a provision carried in previous years.

SEC. 8019. *Relocations into the National Capital Region*.—Retains a provision carried in previous years.

SEC. 8020. *Indian Financing Act*.—Retains and modifies a provision carried in previous years.

SEC. 8021. *Defense Media Activity*.—Retains a provision carried in previous years.

SEC. 8022. *Burden Sharing With Kuwait*.—Retains a provision carried in previous years.

SEC. 8023. *Civil Air Patrol*.—Retains and modifies a provision carried in previous years.

SEC. 8024. *federally Funded Research and Development Centers*.—Retains and modifies a provision carried in previous years.

SEC. 8025. *Carbon, Alloy, or Armor Steel Plate*.—Retains a provision carried in previous years.

SEC. 8026. *Congressional Defense Committee Definition*.—Retains a provision carried in previous years.

SEC. 8027. *Depot Maintenance Competition*.—Retains a provision carried in previous years.

SEC. 8028. *Reciprocal Trade Agreements*.—Retains and modifies a provision carried in previous years.

SEC. 8029. *Overseas Military Facility Investment*.—Retains a provision carried in previous years.

SEC. 8030. *Walking Shield*.—Retains and modifies a provision carried in previous years.

SEC. 8031. *Investment Item Unit Cost*.—Retains a provision carried in previous years.

SEC. 8032. *POW/MIA Accounting Agency*.—Inserts a new provision allowing for expenses related to the acquisition of vehicles for use by the POW/MIA accounting agency.

SEC. 8033. *Asia-Pacific Regional Initiative*.—Retains and modifies a provision carried in previous years.

SEC. 8034. *Tobacco Use in the Military*.—Retains a provision carried in previous years.

SEC. 8035. *Working Capital Fund Investment Item Restrictions*.—Retains and modifies a provision carried in previous years.

SEC. 8036. *CIA Availability of Funds*.—Retains and modifies a provision carried in previous years.

SEC. 8037. *Tribal Lands Environmental Impact*.—Retains and modifies a provision carried in previous years.

SEC. 8038. *Buy American Act Compliance*.—Retains a provision carried in previous years.

SEC. 8039. *Field Operating Agencies*.—Retains a provision carried in previous years.

SEC. 8040. *Contractor Conversion and Performance*.—Retains a provision carried in previous years.

SEC. 8041. *Rescissions*.—The Committee recommends a general provision rescinding funds from prior years as displayed below:

	Amount
2012 Appropriations	
Shipbuilding and Conversion, Navy: DDG-51	\$44,500,000

	Amount
2018 Appropriations	
Aircraft Procurement, Army: Utility F/W Aircraft	44,000,000
Missile Procurement, Army: Indirect Fire Protection Capability	5,182,000
Weapons and Tracked Combat Vehicles, Army: Paladin Integrated Management	115,078,000
Other Procurement, Army: Tractor Yard	5,685,000
Aircraft Procurement, Navy: C-40	68,781,000
Other Procurement, Navy: AN/SLQ-32—Block 3 installation funding	4,548,000
Procurement, Marine Corps: AAV7A1 PIP	9,046,000
Aircraft Procurement, Air Force: F-35	238,000,000
KC-46	76,000,000
HC-130J	6,522,000
MQ-9	37,900,000
A-10	5,900,000
KC-46 modifications	1,213,000
C-130J modifications	30,953,000
HC/MC-130 Modifications (MC AbMN)	14,700,000
Initial Spares/Repair Parts (MQ-9 spares)	24,400,000
RQ-4 Post Production Charges (Interim contractor support)	20,000,000
Missile Procurement, Air Force: Missile Replacement Eq-Ballistic	39,173,000
Small Diameter Bomb	36,800,000
Other Procurement, Air Force: AFNET (ARAD)	26,000,000
2019 Appropriations	
Missile Procurement, Army: Indirect Fire Protection Capability	24,498,000
Javelin (Aaws-M) System Summary	20,000,000
MLRS Mods	23,300,000
Weapons and Tracked Combat Vehicles, Army: Armored Multi Purpose Vehicle	37,106,000
Bradley Program (MOD)	178,840,000
Other Procurement, Army: Joint Light Tactical Vehicle-TADSS	17,258,000
Joint Effects Training System	60,900,000
Army Command Post Integrated Infrastructure	2,284,000
Global Combat Support System-Army	6,841,000
Contract Writing System	5,927,000
Area Mine Detection System	4,100,000
Tractor Yard	4,956,000
Aircraft Procurement, Navy: F-18 Series	71,300,000
V-22 (Tilt/Rotor Acft) Osprey	19,000,000
Joint Strike Fighter CV	47,600,000
JSF STOVL	52,800,000
Procurement of Ammunition, Navy and Marine Corps: Direct support munitions—5/54" ammunition	22,000,000
Shipbuilding and Conversion, Navy: DDG-51 (AP)	102,000,000
Shipbuilding and Conversion, Navy: LPD-17 (AP)	102,900,000
Other Procurement, Navy: AN/SLQ-32—Block 3 installation funding	13,470,000
Unmanned carrier aviation mission control station	11,300,000
Procurement, Marine Corps: AAV7A1 PIP	74,756,000
Aircraft Procurement, Air Force: F-35	207,200,000

	Amount
KC-46	32,055,000
C-130J	1,008,000
MC-130J	38,951,000
Combat Rescue Helicopter	26,400,000
KC-46 modifications	8,547,000
C-17	52,000,000
F-15 *COM001*(APG82(V)1)	19,300,000
F-16 modifications (AIFF mode 5)	36,381,000
F-22A modifications (Mode 5 IFF)	13,500,000
A-10 (ARC-210)	9,520,000
E-3 modifications	14,553,000
E-8 modifications	19,807,000
HC/MC-130 modifications (Block 8.1)	17,370,000
Other Production Charges (F-22 depot activation)	30,000,000
Other aircraft (BACN)	15,088,000
Aerial targets	61,860,000
Initial Spares/Repair Parts (F-15 EPAWSS)	4,034,000
Initial Spares/Repair Parts (KC-46A)	61,400,000
Missile Procurement, Air Force:	
Missile Replacement Eq-Ballistic	13,927,000
MMIII modifications	26,052,000
Hellfire	25,752,000
Space Procurement, Air Force:	
Integrated Broadcast Service	5,000,000
Rocket Systems Launch Program	5,000,000
Evolved Expendable Launch Vehicle (SPACE)	85,100,000
Evolved Expendable Launch Capability	75,200,000
Other Procurement, Air Force:	
Classified	20,000,000
Procurement, Defense-Wide:	
GMD (FF)	197,000,000
GMD (AP)	115,000,000
SKR B-kits	10,000,000
STC/NGTC	25,000,000
Research, Development, Test and Evaluation, Army:	
Assured PNT	23,000,000
Infantry Support Weapons—S62 Counter-Defilade Target Engagement	1,998,000
Night Vision Systems—Eng Dev—Joint Effects Targeting Systems	1,150,000
Weapons and Munitions—Eng Dev—EU6 XM1113	5,100,000
Army Tactical Command & Control Hardware & Software—ER9 Unified Network Operations	8,004,000
Firefinder—Hypervelocity Armament System	17,595,000
Soldier Systems—Warrior Dem/Val	3,000,000
Suite of Survivability Enhancement Systems—EMD	5,914,000
Emerging Technology Initiatives	7,100,000
AMF Joint Tactical Radio System	15,964,000
Assessments and Evaluations Cyber Vulnerabilities	22,000,000
Apache Product Improvement Program	4,700,000
Improved Turbine Engine Program	3,000,000
Unmanned Aircraft System Universal Products	9,595,000
Combat Vehicle Improvement Programs—M113 Improvements	7,915,000
Combat Vehicle Improvement Programs—Bradley	25,000,000
Other Missile Product Improvement Programs	4,450,000
Information Systems Security Program	20,745,000
Research, Development, Test and Evaluation, Navy:	
Classified program	105,000,000
Research, Development, Test and Evaluation, Air Force:	
KC-135	2,600,000
ICBM Dem/Val	20,000,000
Hard and Deeply Buried Target Defeat System (HDBTDS) Program	4,800,000
B-1B Squadrons	15,000,000
Airborne Warning and Control System [AWACS]	11,600,000
Airborne Reconnaissance Systems	26,000,000
RQ-4 UAV	9,650,000
C-130J Program	2,700,000
Classified programs	70,600,000
Space Rapid Capabilities Office	74,400,000

	Amount
Research, Development, Test and Evaluation, Defense-Wide:	
Improved Homeland Defense Interceptors	267,000,000
Classified programs	20,000,000
Defense Health Program—Research, Development, Test and Evaluation:	
RDTE JOMIS carryover	26,200,000

SEC. 8042. *Civilian Technician Reductions*.—Retains a provision carried in previous years.

SEC. 8043. *North Korea*.—Retains and modifies a provision carried in previous years.

SEC. 8044. *Reserve Component Intelligence Reimbursement*.—Retains a provision carried in previous years.

SEC. 8045. *Counter-Drug Activities Transfer*.—Retains a provision carried in previous years.

SEC. 8046. *Funding to Maintain Competitive Rates at Arsenals*.—Retains and modifies a provision carried in previous years.

SEC. 8047. *United Service Organizations Grant*.—Retains and modifies a provision carried in previous years.

SEC. 8048. *Buy American Computers*.—Retains a provision carried in previous years.

SEC. 8049. *Small Business Set-Asides*.—Retains a provision carried in previous years.

SEC. 8050. *Contractor Bonuses*.—Retains a provision carried in previous years.

SEC. 8051. *Reserve Peacetime Support*.—Retains a provision carried in previous years.

SEC. 8052. *Unexpended Balances*.—Retains and modifies a provision carried in previous years.

SEC. 8053. *National Guard Distance Learning*.—Retains a provision carried in previous years.

SEC. 8054. *Sexual Assault Prevention Programs*.—Retains and modifies a provision carried in previous years.

SEC. 8055. *End-Item Procurement*.—Retains and modifies a provision carried in previous years.

SEC. 8056. *Buy American Waivers*.—Retains a provision carried in previous years.

SEC. 8057. *Military Family Housing*.—Retains a provision carried in previous years.

SEC. 8058. *Joint Capability Demonstration Project*.—Retains a provision carried in previous years.

SEC. 8059. *Secretary of Defense Reporting Requirement*.—Retains a provision carried in previous years.

SEC. 8060. *Missile Defense Authorization*.—Retains a provision carried in previous years.

SEC. 8061. *Armor-Piercing Ammo*.—Retains a provision carried in previous years.

SEC. 8062. *Personal Property Lease Payments*.—Retains a provision carried in previous years.

SEC. 8063. *O&M, Army Transfer*.—Retains and modifies a provision carried in previous years.

SEC. 8064. *National Intelligence Program Separation*.—Retains and modifies a provision carried in previous years.

SEC. 8065. *O&M, Navy Transfer to Stennis Center.*—Retains a provision carried in previous years.

SEC. 8066. *Assignment of Forces.*—Retains and modifies a provision carried in previous years.

SEC. 8067. *Rapid Acquisition Authority Reporting Requirement.*—Retains a provision carried in previous years.

SEC. 8068. *Israeli Cooperative Programs.*—Retains and modifies a provision carried in previous years.

SEC. 8069. *Prior Year Shipbuilding.*—Retains and modifies a provision carried in previous years.

SEC. 8070. *Intelligence Authorization.*—Retains and modifies a provision carried in previous years.

SEC. 8071. *New Start Authority.*—Retains a provision carried in previous years.

SEC. 8072. *Contingency Operations Budget Justification.*—Retains and modifies a provision carried in previous years.

SEC. 8073. *Nuclear Armed Interceptors.*—Retains a provision carried in previous years.

SEC. 8074. *Rapid Acquisition Authority.*—Retains a provision carried in previous years.

SEC. 8075. *53rd Weather Reconnaissance Squadron.*—Retains a provision carried in previous years.

SEC. 8076. *Integration of Foreign Intelligence.*—Retains a provision carried in previous years.

SEC. 8077. *Army Tactical UAVs.*—Retains a provision carried in previous years.

SEC. 8078. *DNI R&D Waiver.*—Retains and modifies a provision carried in previous years.

SEC. 8079. *Shipbuilding Obligations.*—Retains a provision carried in previous years.

SEC. 8080. *DNI Reprogramming Baseline.*—Retains and modifies a provision carried in previous years.

SEC. 8081. *Support to Friendly Foreign Countries.*—Retains a provision carried in previous years.

SEC. 8082. *Defense Acquisition Workforce Development Fund.*—Retains and modifies a provision carried in previous years.

SEC. 8083. *Child Soldiers.*—Retains a provision carried in previous years.

SEC. 8084. *NIP Reprogramming.*—Retains a provision carried in previous years.

SEC. 8085. *National Security Space Launch.*—Inserts a new provisions ensuring competitive launch by qualified participants.

SEC. 8086. *Congressional Intelligence Committee Definition.*—Retains a provision carried in previous years.

SEC. 8087. *Fisher House Authorization.*—Retains a provision carried in previous years.

SEC. 8088. *Defense Acquisition Workforce Development Fund.*—Retains a provision carried in previous years.

SEC. 8089. *Public Disclosure of Agency Reports.*—Retains a provision carried in previous years.

SEC. 8090. *Contractor Compliance With the Civil Rights Act of 1964.*—Retains a provision carried in previous years.

SEC. 8091. *DOD-VA Medical Facility Demonstration.*—Retains and modifies a provision carried in previous years.

SEC. 8092. *Exchanging Ballistic Missile Defense Information.*—Retains a provision carried in previous years.

SEC. 8093. *Armored Vehicles.*—Retains a provision carried in previous years.

SEC. 8094. *NIP Reprogramming.*—Retains and modifies a provision carried in previous years.

SEC. 8095. *Transfer of Detainees to or Within the United States.*—Retains a provision carried in previous years.

SEC. 8096. *Detainee Transfer to a Foreign Country or Entity.*—Retains and modifies a provision carried in previous years.

SEC. 8097. *War Powers Resolution.*—Retains a provision carried in previous years.

SEC. 8098. *Rosoboronexport.*—Retains a provision carried in previous years.

SEC. 8099. *Detainee Facilities.*—Retains a provision carried in previous years.

SEC. 8100. *Ex Gratia Payments.*—Retains and modifies a provision carried in previous years.

SEC. 8101. *Public Disclosure of Grant Agreement.*—Retains a provision carried in previous years.

SEC. 8102. *Rapid Prototyping Fund reprogrammings and account reductions.*—Retains a provision carried in previous years.

SEC. 8103. *Restrictions on NSA.*—Retains a provision carried in previous years.

SEC. 8104. *Transfers to Another Federal Agency.*—Retains a provision carried in previous years.

SEC. 8105. *Authority to Transfer O&M, Navy Funds to Ready Reserve Force, Maritime Administration Account.*—Retains and modifies a provision carried in previous years.

SEC. 8106. *Support to Foreign Countries.*—Retains a provision carried in previous years.

SEC. 8107. *Crime Databases Reporting Requirement.*—Retains and modifies a provision carried in previous years.

SEC. 8108. *T-AO(X) Oiler Program.*—Retains a provision carried in previous years.

SEC. 8109. *Rapid Prototyping with DAWDF.*—Retains a provision carried in previous years.

SEC. 8110. *Project Designated by the Secretary of Defense.*—Retains a provision carried in previous years.

SEC. 8111. *Prohibition on the Transfer of F-35 Aircraft to Turkey.*—Retains a provision carried in previous years.

SEC. 8112. *Authority to Use Funds for OPM Background Investigations.*—Retains and modifies a provision carried in previous years.

SEC. 8113. *Blocking Pornography on Computers.*—Retains a provision carried in previous years.

SEC. 8114. *Global Engagement Center Reprogrammings.*—Retains and modifies a provision carried in previous years.

SEC. 8115. *Closure of GTMO.*—Retains a provision carried in previous years.

SEC. 8116. *Prohibition on Use of Equipment for Ceremonial Honors.*—Retains a provision carried in previous years.

SEC. 8117. *Integrity in Federal Contracting.*—Retains a provision carried in previous years.

SEC. 8118. *Advance Billing for Background Investigations.*—Inserts a new provision regarding the advance billing of background investigation services.

TITLE IX
OVERSEAS CONTINGENCY OPERATIONS

DEPARTMENT OF DEFENSE—MILITARY

The Committee recommends an appropriation of \$70,665,000,000 for operations related to Overseas Contingency Operations. In fiscal year 2019 Congress appropriated \$67,914,000,000 for activities funded in this title in Public Law 115–245.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the Committee recommendation:

[In thousands of dollars]

	Fiscal year 2019 enacted	Fiscal year 2020 estimate	Committee recommendation
Military Personnel	4,660,661	4,485,808	4,485,808
Operation and Maintenance	49,478,483	134,149,216	53,340,943
Procurement	12,627,028	23,143,022	11,183,170
Research, development, test and evaluation	1,193,394	1,646,732	833,762
Revolving and management funds	15,190	20,100	20,100
Other Department of Defense Programs	529,860	535,596	535,596
General Provisions (net)	– 590,616	.....	265,621
Total, Overseas Contingency Operations	67,914,000	163,980,474	70,665,000

OVERVIEW

COMMITTEE RECOMMENDATION

The Committee recommends \$70,665,000,000 of additional appropriations for Overseas Contingency Operations in fiscal year 2020. This funding will ensure that resources, equipment, and supplies are available for our servicemembers without interruption, and will enable the Department to avoid absorbing operational costs from within baseline programs that are critical to future readiness and home-station activities.

REPORTING REQUIREMENTS

The Secretary of Defense is directed to submit reports, on a quarterly basis, to the congressional defense committees not later than 30 days after the last day of each quarter of the fiscal year that detail commitment, obligation, and expenditure data by sub-activity group for the Afghanistan Security Forces Fund, the Counter-the Islamic State of Iraq and Syria Fund and Operation and Maintenance, Defense-Wide, Defense Security Cooperation Agency.

MILITARY PERSONNEL

The Committee recommends a total of \$4,485,808,000 for pay, allowances, and other personnel costs for Active, Reserve, and Guard troops activated for duty in Afghanistan and other contingency operations. This recommendation includes funding for subsistence, permanent change of station travel, and special pays including imminent danger pay, family separation allowance, and hardship duty pay.

MILITARY PERSONNEL, ARMY

Appropriations, 2019	\$2,929,154,000
Budget estimate, 2020	2,743,132,000
Committee recommendation	2,743,132,000

The Committee recommends an appropriation of \$2,743,132,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Pay and Allowances of Officers			
005	Basic Pay	400,180	400,180	.....
010	Retired Pay Accrual	97,644	97,644	.....
025	Basic Allowance for Housing	121,906	121,906	.....
030	Basic Allowance for Subsistence	14,524	14,524	.....
035	Incentive Pays	3,305	3,305	.....
040	Special Pays	24,905	24,905	.....
045	Allowances	27,510	27,510	.....
050	Separation Pay	3,551	3,551	.....
055	Social Security Tax	30,600	30,600	.....
	Total	724,125	724,125	.....
	BA 2: Pay and Allowances of Enlisted			
060	Basic Pay	833,570	833,570	.....
065	Retired Pay Accrual	203,392	203,392	.....
080	Basic Allowance for Housing	331,542	331,542	.....
085	Incentive Pays	2,024	2,024	.....
090	Special Pays	76,026	76,026	.....
095	Allowances	61,647	61,647	.....
100	Separation Pay	1,009	1,009	.....
105	Social Security Tax	63,769	63,769	.....
	Total	1,572,979	1,572,979	.....
	BA 4: Subsistence of Enlisted Personnel			
115	Basic Allowance for Subsistence	94,192	94,192	.....
120	Subsistence-In-Kind	308,078	308,078	.....
	Total	402,270	402,270	.....
	BA 5: Permanent Change of Station Travel			
135	Operational Travel	4,256	4,256	.....
140	Rotational Travel	1,028	1,028	.....
160	Temporary Lodging Expense	119	119	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Total	5,403	5,403	.....
	BA 6: Other Military Personnel Costs			
175	Interest on Uniformed Services Savings	4,054	4,054	.....
180	Death Gratuities	2,800	2,800	.....
185	Unemployment Benefits	21,703	21,703	.....
216	SGLI Extra Hazard Payments	9,798	9,798	.....
	Total	38,355	38,355	.....
	Total, Military Personnel, Army	2,743,132	2,743,132	.....

MILITARY PERSONNEL, NAVY

Appropriations, 2019	\$385,461,000
Budget estimate, 2020	356,392,000
Committee recommendation	356,392,000

The Committee recommends an appropriation of \$356,392,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Pay and Allowances of Officers			
005	Basic Pay	68,443	68,443	.....
010	Retired Pay Accrual	16,700	16,700	.....
025	Basic Allowance for Housing	23,102	23,102	.....
030	Basic Allowance for Subsistence	2,256	2,256	.....
035	Incentive Pays	464	464	.....
040	Special Pays	3,998	3,998	.....
045	Allowances	6,868	6,868	.....
055	Social Security Tax	5,245	5,245	.....
	Total	127,076	127,076	.....
	BA 2: Pay and Allowances of Enlisted			
060	Basic Pay	83,786	83,786	.....
065	Retired Pay Accrual	20,443	20,443	.....
080	Basic Allowance for Housing	45,506	45,506	.....
085	Incentive Pays	161	161	.....
090	Special Pays	9,288	9,288	.....
095	Allowances	15,668	15,668	.....
105	Social Security Tax	6,410	6,410	.....
	Total	181,262	181,262	.....
	BA 4: Subsistence of Enlisted Personnel			
115	Basic Allowance for Subsistence	9,057	9,057	.....
120	Subsistence-In-Kind	23,095	23,095	.....
	Total	32,152	32,152	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 5: Permanent Change of Station Travel			
125	Accession Travel	3,151	3,151	.....
135	Operational Travel	698	698	.....
140	Rotational Travel	223	223	.....
145	Separation Travel	4,516	4,516	.....
	Total	8,588	8,588	.....
	BA 6: Other Military Personnel Costs			
185	Unemployment Benefits	3,654	3,654	.....
216	SGLI Extra Hazard Payments	3,660	3,660	.....
	Total	7,314	7,314	.....
	Total, Military Personnel, Navy	356,392	356,392	.....

MILITARY PERSONNEL, MARINE CORPS

Appropriations, 2019	\$109,232,000
Budget estimate, 2020	104,213,000
Committee recommendation	104,213,000

The Committee recommends an appropriation of \$104,213,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Pay and Allowances of Officers			
005	Basic Pay	22,993	22,993	.....
010	Retired Pay Accrual	5,610	5,610	.....
025	Basic Allowance for Housing	8,142	8,142	.....
030	Basic Allowance for Subsistence	764	764	.....
035	Incentive Pays	238	238	.....
040	Special Pays	2,382	2,382	.....
045	Allowances	2,859	2,859	.....
050	Separation Pay	878	878	.....
055	Social Security Tax	1,759	1,759	.....
	Total	45,625	45,625	.....
	BA 2: Pay and Allowances of Enlisted			
060	Basic Pay	22,994	22,994	.....
065	Retired Pay Accrual	5,611	5,611	.....
080	Basic Allowance for Housing	12,502	12,502	.....
085	Incentive Pays	5	5	.....
090	Special Pays	5,284	5,284	.....
095	Allowances	6,268	6,268	.....
100	Separation Pay	877	877	.....
105	Social Security Tax	1,759	1,759	.....
	Total	55,300	55,300	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 4: Subsistence of Enlisted Personnel			
115	Basic Allowance for Subsistence	2,635	2,635	.....
	Total	2,635	2,635	.....
	BA 6: Other Military Personnel Costs			
175	Interest on Uniformed Services Savings	238	238	.....
216	SGLI Extra Hazard Payments	415	415	.....
	Total	653	653	.....
	Total, Military Personnel, Marine Corps	104,213	104,213	.....

MILITARY PERSONNEL, AIR FORCE

Appropriations, 2019	\$964,508,000
Budget estimate, 2020	1,007,594,000
Committee recommendation	1,007,594,000

The Committee recommends an appropriation of \$1,007,594,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Pay and Allowances of Officers			
005	Basic Pay	127,838	127,838	.....
010	Retired Pay Accrual	31,197	31,197	.....
025	Basic Allowance for Housing	35,863	35,863	.....
030	Basic Allowance for Subsistence	3,919	3,919	.....
040	Special Pays	8,364	8,364	.....
045	Allowances	4,788	4,788	.....
055	Social Security Tax	9,780	9,780	.....
	Total	221,749	221,749	.....
	BA 2: Pay and Allowances of Enlisted			
060	Basic Pay	326,053	326,053	.....
065	Retired Pay Accrual	79,557	79,557	.....
080	Basic Allowance for Housing	137,589	137,589	.....
090	Special Pays	28,895	28,895	.....
095	Allowances	18,225	18,225	.....
105	Social Security Tax	24,943	24,943	.....
	Total	615,262	615,262	.....
	BA 4: Subsistence of Enlisted Personnel			
115	Basic Allowance for Subsistence	33,640	33,640	.....
120	Subsistence-In-Kind	117,601	117,601	.....
	Total	151,241	151,241	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 6: Other Military Personnel Costs			
180	Death Gratuities	700	700	.....
185	Unemployment Benefits	11,653	11,653	.....
216	SGLI Extra Hazard Payments	6,989	6,989	.....
	Total	19,342	19,342	.....
	Total, Military Personnel, Air Force	1,007,594	1,007,594	.....

RESERVE PERSONNEL, ARMY

Appropriations, 2019	\$37,007,000
Budget estimate, 2020	34,812,000
Committee recommendation	34,812,000

The Committee recommends an appropriation of \$34,812,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Reserve Component Training and Support			
080	Special Training	34,812	34,812	.....
	Total	34,812	34,812	.....
	Total, Reserve Personnel, Army	34,812	34,812	.....

RESERVE PERSONNEL, NAVY

Appropriations, 2019	\$11,100,000
Budget estimate, 2020	11,370,000
Committee recommendation	11,370,000

The Committee recommends an appropriation of \$11,370,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Reserve Component Training and Support			
080	Special Training	11,370	11,370	.....
	Total	11,370	11,370	.....
	Total, Reserve Personnel, Navy	11,370	11,370	.....

RESERVE PERSONNEL, MARINE CORPS

Appropriations, 2019	\$2,380,000
Budget estimate, 2020	3,599,000
Committee recommendation	3,599,000

The Committee recommends an appropriation of \$3,599,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Reserve Component Training and Support			
080	Special Training	3,552	3,552	.....
090	Administration and Support	47	47	.....
	Total	3,599	3,599	.....
	Total, Reserve Personnel, Marine Corps	3,599	3,599	.....

RESERVE PERSONNEL, AIR FORCE

Appropriations, 2019	\$21,076,000
Budget estimate, 2020	16,428,000
Committee recommendation	16,428,000

The Committee recommends an appropriation of \$16,428,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Reserve Component Training and Support			
080	Special Training	16,428	16,428	.....
	Total	16,428	16,428	.....
	Total, Reserve Personnel, Air Force	16,428	16,428	.....

NATIONAL GUARD PERSONNEL, ARMY

Appropriations, 2019	\$195,283,000
Budget estimate, 2020	202,644,000
Committee recommendation	202,644,000

The Committee recommends an appropriation of \$202,644,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Reserve Component Training and Support			
010	Pay Group A Training (15 Days & Drills 24/48)	65,231	65,231	.....
070	School Training	3,324	3,324	.....
080	Special Training	115,437	115,437	.....
090	Administration and Support	18,652	18,652	.....
	Total	202,644	202,644	.....
	Total, National Guard Personnel, Army	202,644	202,644	.....

NATIONAL GUARD PERSONNEL, AIR FORCE

Appropriations, 2019	\$5,460,000
Budget estimate, 2020	5,624,000
Committee recommendation	5,624,000

The Committee recommends an appropriation of \$5,624,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	BA 1: Reserve Component Training and Support			
080	Special Training	5,624	5,624	.....
	Total	5,624	5,624	.....
	Total, National Guard Personnel, Air Force	5,624	5,624	.....

OPERATION AND MAINTENANCE

The Committee recommends \$53,340,943,000 for the operation and maintenance accounts. These funds are available to fund overseas deployments and other activities by the services and Special Operations Forces to include financing flying hours, ship steaming days, ground operations, special airlift missions, increased ship and aircraft maintenance, logistics support, fuel purchases, base support, civilian personnel, personnel support costs, overseas transportation, communications support, facility management, and other operation and maintenance requirements.

OPERATION AND MAINTENANCE, ARMY

Appropriations, 2019	\$18,548,500,000
Budget estimate, 2020	37,987,549,000
Committee recommendation	19,892,938,000

The Committee recommends an appropriation of \$19,892,938,000. This is \$18,094,611,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
111	Maneuver Units	3,146,796	1,410,874	- 1,735,922
	Transfer: From Title IX to Title II for base requirements			- 1,735,922
112	Modular Support Brigades	127,815		- 127,815
	Transfer: From Title IX to Title II for base requirements			- 127,815
113	Echelons Above Brigade	742,858	26,502	- 716,356
	Transfer: From Title IX to Title II for base requirements			- 716,356
114	Theater Level Assets	3,165,381	2,224,490	- 940,891
	Transfer: From Title IX to Title II for base requirements			- 890,891
	Maintain program affordability: Unjustified growth			- 30,000
	Improving funds management: Program decrease unaccounted for			- 20,000
115	Land Forces Operations Support	1,368,765	136,288	- 1,232,477
	Transfer: From Title IX to Title II for base requirements			- 1,232,477
116	Aviation Assets	1,655,846	300,240	- 1,355,606
	Transfer: From Title IX to Title II for base requirements			- 1,355,606
121	Force Readiness Operations Support	6,889,293	3,985,009	- 2,904,284
	Transfer: From Title IX to Title II for base requirements			- 2,824,284
	Maintain program affordability: Unjustified growth			- 80,000
122	Land Forces Systems Readiness	29,985	29,985	
123	Land Forces Depot Maintenance	1,720,258	736,931	- 983,327
	Transfer: From Title IX to Title II for base requirements			- 983,327
131	Base Operations Support	8,163,639	115,706	- 8,047,933
	Transfer: From Title IX to Title II for base requirements			- 8,047,933
132	Facilities Sustainment, Restoration, and Modernization	72,657	72,657	
135	Additional Activities	6,397,586	6,385,586	- 12,000
	Improving funds management: Program decrease unaccounted for			- 12,000
136	Commanders' Emergency Response Program	5,000	5,000	
137	Reset	1,048,896	1,048,896	
141	US Africa Command	203,174	220,174	+ 17,000
	Transfer from Title II: Personnel Recovery and Casualty Evacuation Support			+ 17,000
142	US European Command	173,676	173,676	
151	Cyberspace Activities--Cyberspace Operations	188,529	188,529	
153	Cyberspace Activities--Cybersecurity	5,682	5,682	
212	Army Prepositioned Stocks	131,954	131,954	
411	Security Programs	1,568,564	1,568,564	
421	Servicewide Transportation	721,014	721,014	
422	Central Supply Activities	66,845	66,845	
423	Logistics Support Activities	9,309	9,309	
424	Ammunition Management	23,653	23,653	
434	Other Personnel Support	109,019	109,019	
437	Real Estate Management	251,355	251,355	
UNDIST	Improving funds management: Program decrease unaccounted for		- 55,000	- 55,000
	Total, Operation and Maintenance, Army	37,987,549	19,892,938	- 18,094,611

OPERATION AND MAINTENANCE, NAVY

Appropriations, 2019	\$5,172,155,000
Budget estimate, 2020	31,734,683,000
Committee recommendation	8,413,650,000

The Committee recommends an appropriation of \$8,413,650,000. This is \$23,321,033,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Mission And Other Flight Operations	5,682,156	1,023,047	- 4,659,109
	Transfer: From Title IX to Title II for base requirements			- 4,659,109
1A3A	Aviation Technical Data & Engineering Services	60,115	816	- 59,299
	Transfer: From Title IX to Title II for base requirements			- 59,299
1A4A	Air Operations And Safety Support	9,582	9,582	
1A4N	Air Systems Support	197,262	197,262	
1A5A	Aircraft Depot Maintenance	1,322,427	168,246	- 1,154,181
	Transfer: From Title IX to Title II for base requirements			- 1,154,181
1A6A	Aviation Depot Operations Support	3,594	3,594	
1A9A	Aviation Logistics	10,618	10,618	
1B1B	Mission And Other Ship Operations	5,582,370	2,135,108	- 3,447,262
	Transfer: From Title IX to Title II for base requirements			- 3,447,262
1B2B	Ship Operations Support & Training	20,334	20,334	
1B4B	Ship Depot Maintenance	10,426,913	3,146,615	- 7,280,298
	Transfer: From Title IX to Title II for base requirements			- 8,061,298
	Program increase: Ship Depot Maintenance			+ 781,000
1B5B	Ship Depot Operations Support	2,073,641		- 2,073,641
	Transfer: From Title IX to Title II for base requirements			- 2,073,641
1C1C	Combat Communications and Electronic Warfare	58,092	58,092	
1C3C	Space Systems and Surveillance	18,000	18,000	
1C4C	Warfare Tactics	16,984	16,984	
1C5C	Operational Meteorology And Oceanography	29,382	29,382	
1C6C	Combat Support Forces	608,870	608,870	
1C7C	Equipment Maintenance and Depot Operations Support	7,799	7,799	
1CCM	Combatant Commanders Direct Mission Support	24,800	24,800	
1CCY	Cyberspace Activities	363	363	
1D4D	Weapons Maintenance	486,188	473,188	- 13,000
	Improving funds management: Program transfer to base budget unaccounted for			- 13,000
1D7D	Other Weapons Systems Support	12,189	12,189	
BSM1	Facilities Sustainment, Restoration And Modernization	68,667	68,667	
BSS1	Base Operating Support	4,634,042	219,099	- 4,414,943
	Transfer: From Title IX to Title II for base requirements			- 4,414,943
2C1H	Expeditionary Health Service Systems	17,580	17,580	
2C3H	Coast Guard Support	190,000		- 190,000
	Coast Guard funded in Department of Homeland Security bill			- 190,000
3B1K	Specialized Skill Training	52,161	52,161	
4A1M	Administration	8,475	8,475	
4A4M	Military Manpower And Personnel Management	7,653	7,653	
4B1N	Servicewide Transportation	70,683	70,683	
4B3N	Acquisition, Logistics and Oversight	11,130	11,130	
4C1P	Investigative and Security Services	1,559	1,559	
999	Classified Programs	21,054	17,754	- 3,300
	Classified adjustment			- 3,300
UNDIST	Improving funds management: Remove one-time FY 2019 increase		- 26,000	- 26,000
	Total, Operation and Maintenance, Navy	31,734,683	8,413,650	- 23,321,033

OPERATION AND MAINTENANCE, MARINE CORPS

Appropriations, 2019	\$1,292,995,000
Budget estimate, 2020	5,123,470,000
Committee recommendation	1,362,917,000

The Committee recommends an appropriation of \$1,362,917,000. This is \$3,760,553,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Operational Forces	1,682,877	899,653	- 783,224
	Transfer: From Title IX to Title II for base requirements			- 768,224
	Improving funds management: Program decrease unaccounted for			- 15,000
1A2A	Field Logistics	232,508	232,508	
1A3A	Depot Maintenance	287,092	54,101	- 232,991
	Transfer: From Title IX to Title II for base requirements			- 232,991
1B1B	Maritime Prepositioning	100,396		- 100,396
	Transfer: From Title IX to Title II for base requirements			- 100,396
1CCY	Cyberspace Activities	2,000	2,000	
BSM1	Sustainment, Restoration and Modernization	443,292		- 443,292
	Transfer: From Title IX to Title II for base requirements			- 443,292
BSS1	Base Operating Support	2,278,346	77,696	- 2,200,650
	Transfer: From Title IX to Title II for base requirements			- 2,200,650
3B4D	Training Support	30,459	30,459	
4A3G	Servicewide Transportation	61,400	61,400	
999	Classified Programs	5,100	5,100	
	Total, Operation and Maintenance, Marine Corps	5,123,470	1,362,917	- 3,760,553

OPERATION AND MAINTENANCE, AIR FORCE

Appropriations, 2019	\$9,828,674,000
Budget estimate, 2020	33,028,712,000
Committee recommendation	10,632,379,000

The Committee recommends an appropriation of \$10,632,379,000. This is \$22,396,333,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
011A	Primary Combat Forces	163,632	163,632	
011C	Combat Enhancement Forces	1,049,170	1,014,170	- 35,000
	Improving funds management: Program decrease unaccounted for			- 35,000
011D	Air Operations Training	111,808	111,808	
011M	Depot Purchase Equipment Maintenance	3,743,491	1,058,699	- 2,684,792
	Transfer: From Title IX to Title II for base requirements			- 2,684,792
011R	Facilities Sustainment, Restoration & Modernization	613,875	147,264	- 466,611
	Transfer: From Title IX to Title II for base requirements			- 466,611
011V	Cyberspace Sustainment	238,872	10,061	- 228,811
	Transfer: From Title IX to Title II for base requirements			- 228,811
011W	Contractor Logistics Support and System Support	9,282,958	1,024,594	- 8,258,364
	Transfer: From Title IX to Title II for base requirements			- 8,329,364
	Improving funds management: Program decrease unaccounted for			- 20,000
	Program increase: Readiness recovery			+ 91,000
011Y	Flying Hour Program	6,544,039	3,045,266	- 3,498,773
	Transfer: From Title IX to Title II for base requirements			- 3,398,773
	Maintain program affordability: Unjustified growth for KC-46A			- 100,000

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
011Z	Base Operating Support	8,762,102	1,538,120	- 7,223,982
	Transfer: From Title IX to Title II for base requirements			- 7,223,982
012A	Global C3I And Early Warning	13,863	13,863	
012C	Other Combat Ops Spt Programs	272,020	272,020	
012D	Cyberspace Activities	17,657	17,657	
012F	Tactical Intelligence and Special Activities	36,098	36,098	
013A	Launch Facilities	391	391	
013C	Space Control Systems	39,990	39,990	
015C	US NORTHCOM/NORAD	725	725	
015D	US STRATCOM	926	926	
015E	US CYBERCOM	35,189	35,189	
015F	US CENTCOM	163,015	163,015	
015G	US SOCOM	19,000	19,000	
021A	Airlift Operations	1,271,439	1,271,439	
021D	Mobilization Preparedness	109,682	109,682	
031A	Officer Acquisition	200	200	
031B	Recruit Training	352	352	
032A	Specialized Skill Training	26,802	26,802	
032B	Flight Training	844	844	
032C	Professional Development Education	1,199	1,199	
032D	Training Support	1,320	1,320	
041A	Logistics Operations	164,701	164,701	
041B	Technical Support Activities	11,608	11,608	
042A	Administration	4,814	4,814	
042B	Service-wide Communications	145,204	145,204	
042G	Other Service-wide Activities	98,841	98,841	
043A	Security Programs	52,995	52,995	
044A	International Support	29,890	29,890	
	Total, Operation and Maintenance, Air Force	33,028,712	10,632,379	- 22,396,333

OPERATION AND MAINTENANCE, DEFENSE-WIDE

Appropriations, 2019	\$8,105,991,000
Budget estimate, 2020	8,448,612,000
Committee recommendation	8,198,105,000

The Committee recommends an appropriation of \$8,198,105,000. This is \$250,507,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1PL1	Joint Chiefs of Staff	21,866	21,866	
8PL1	Joint Chiefs of Staff-CE2T2	6,634	6,634	
1PL6	Special Operations Command Combat Development Activities	1,121,580	1,100,282	- 21,298
	Classified adjustment			- 21,298
1PLU	Special Operations Command Intelligence	1,328,201	1,296,677	- 31,524
	Improving funds management: Program transition unaccounted for			- 30,000
	Maintain program affordability: Unjustified growth			- 1,524
1PL7	Special Operations Command Maintenance	399,845	399,845	
1PLV	Special Operations Command Operational Support	138,458	138,458	
1PLR	Special Operations Command Theater Forces	808,729	807,793	- 936
	Maintain program affordability: Unjustified growth			- 936
4GT6	Defense Contract Audit Agency	1,810	1,810	
4GT0	Defense Contract Management Agency	21,723	21,723	

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
4GT9	Defense Information Systems Agency	81,133	81,133	.....
4GU9	Defense Information Systems Agency—Cyber	3,455	3,455	.....
4GTA	Defense Legal Services Agency	196,124	196,124	.....
ES18	Defense Media Activity	14,377	14,377	.....
4GTD	Defense Security Cooperation Agency	1,927,217	1,810,968	– 116,249
	Maintain program affordability: Security Cooperation unjustified growth .....	.....	.....	– 86,000
	Insufficient budget justification: Coalition Support Funds .....	.....	.....	– 430,000
	Transfer: From Title IX to Title II for George C. Marshall Center .....	.....	.....	– 249
	Program increase: Baltics regional air defense radar system .....	.....	.....	+ 400,000
4GTI	Defense Threat Reduction Agency	317,558	317,558	.....
4GTJ	Department of Defense Education Activity	31,620	31,620	.....
4GTN	Office of the Secretary of Defense	16,666	16,666	.....
4GTQ	Washington Headquarters Services	6,331	6,331	.....
9999	Classified Programs	2,005,285	1,924,785	– 80,500
	Classified adjustment .....	.....	.....	– 80,500
	Total, Operation and Maintenance, Defense-Wide	8,448,612	8,198,105	– 250,507

Coalition Support Funds.—After several years of failing to meet requirements in the National Defense Authorization Act that Pakistan make significant progress against the Haqqani Network in order to receive hundreds of millions of dollars in Coalition Support Funds [CSF], the John S. McCain National Defense Authorization Act for Fiscal Year 2019 terminated Pakistan's eligibility for CSF. The Act left Pakistan eligible for only \$150,000,000 in border security assistance. The Department's request, therefore, of \$430,000,000 for CSF in fiscal year 2020 has no justification. Accordingly, the Committee recommends a reduction in Operation and Maintenance, Defense-Wide of \$430,000,000. The Committee notes that \$20,000,000 for the Coalition Readiness Support Program and \$250,000,000 in support for the border security activities of certain partner nations remain in the recommendation elsewhere in this appropriation.

Civilian Casualties Resulting from U.S. Military Operations.—The Committee appreciates the appointment of the Principal Deputy Under Secretary for Policy as the senior Department of Defense official responsible for overseeing policies relating to civilian casualties resulting from U.S. military operations. The Committee urges the Administration to move quickly to fill this vacant position. Additionally, the Committee directs the Secretary of Defense and the Chairman of the Joint Chiefs of Staff to consult with the Committee not later than 90 days after the enactment of this act regarding coordination across the Department and among the Global Combatant Commands on the development and application of policies related to civilian casualties, including to ensure that the necessary personnel and resources are available on the Joint Staff to advise the Chairman on strategy and planning regarding compliance with such policies.

Ex Gratia Payments.—Not later than March 1, 2020, and annually thereafter, the Secretary of Defense shall submit a report to the congressional defense committees detailing the total number of

claims submitted to the United States Government for ex gratia payments for damage, personal injury, or death that is incident to combat operations of the Armed Forces in a foreign country during the preceding 12 months. The report shall also include the number of such payments offered, including the respective amounts; whether a payment was made in each case; and the authority and source of funds used to make such payment. The report shall cover all ex gratia payments, including, but not limited to, condolence, battle damage, and Hero payments, made using any authority in this act, prior appropriations acts, the National Defense Authorization Act, or under Title 10, United States Code, including under the Commanders Emergency Response Program or Title 10, United States Code, Section 127. The Secretary of Defense shall designate an office in the Department of Defense to be responsible for maintaining such data and identify the office in the report.

OPERATION AND MAINTENANCE, ARMY RESERVE

Appropriations, 2019	\$41,887,000
Budget estimate, 2020	1,986,599,000
Committee recommendation	37,592,000

The Committee recommends an appropriation of \$37,592,000. This is \$1,949,007,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
112	Modular Support Brigades	11,927	.....	- 11,927
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 11,927
113	Echelons Above Brigade	553,455	20,440	- 533,015
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 533,015
114	Theater Level Assets	119,517	.....	- 119,517
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 119,517
115	Land Forces Operations Support	550,468	.....	- 550,468
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 550,468
116	Aviation Assets	86,670	.....	- 86,670
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 86,670
121	Force Readiness Operations Support	689	689	.....
123	Land Forces Depot Maintenance	48,503	.....	- 48,503
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 48,503
131	Base Operations Support	615,370	16,463	- 598,907
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 598,907
	Total, Operation and Maintenance, Army Reserve	1,986,599	37,592	- 1,949,007

OPERATION AND MAINTENANCE, NAVY RESERVE

Appropriations, 2019	\$25,637,000
Budget estimate, 2020	886,868,000
Committee recommendation	23,036,000

The Committee recommends an appropriation of \$23,036,000. This is \$863,832,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Mission and Other Flight Operations	654,220	.....	- 654,220
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 654,220
1A3A	Intermediate Maintenance	510	510	.....
1A5A	Aircraft Depot Maintenance	119,864	11,628	- 108,236
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 108,236
1C6C	Combat Support Forces	10,898	10,898	.....
BSSR	Base Operating Support	101,376	.....	- 101,376
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 101,376
	Total, Operation and Maintenance, Navy Reserve	886,868	23,036	- 863,832

OPERATION AND MAINTENANCE, MARINE CORPS RESERVE

Appropriations, 2019	\$3,345,000
Budget estimate, 2020	239,693,000
Committee recommendation	8,707,000

The Committee recommends an appropriation of \$8,707,000. This is \$230,986,000 below to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1A1A	Operational Forces	114,111	7,627	- 106,484
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 106,484
1A3A	Depot Maintenance	18,429	.....	- 18,429
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 18,429
BSS1	Base Operating Support	107,153	1,080	- 106,073
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 106,073
	Total, Operation and Maintenance, Marine Corps Reserve	239,693	8,707	- 230,986

OPERATION AND MAINTENANCE, AIR FORCE RESERVE

Appropriations, 2019	\$60,500,000
Budget estimate, 2020	1,195,131,000
Committee recommendation	29,758,000

The Committee recommends an appropriation of \$29,758,000. This is \$1,165,373,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
011M	Depot Purchase Equipment Maintenance	518,423	24,188	- 494,235
	Transfer: From Title IX to Title II for base requirements			- 494,235
011W	Contractor Logistics Support and System Support	256,512		- 256,512
	Transfer: From Title IX to Title II for base requirements			- 256,512
011Z	Base Operating Support	420,196	5,570	- 414,626
	Transfer: From Title IX to Title II for base requirements			- 414,626
	Total, Operation and Maintenance, Air Force Reserve	1,195,131	29,758	- 1,165,373

OPERATION AND MAINTENANCE, ARMY NATIONAL GUARD

Appropriations, 2019	\$110,729,000
Budget estimate, 2020	4,376,939,000
Committee recommendation	83,291,000

The Committee recommends an appropriation of \$83,291,000. This is \$4,293,648,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
111	Maneuver Units	851,567	45,896	- 805,671
	Transfer: From Title IX to Title II for base requirements			- 805,671
112	Modular Support Brigades	195,514	180	- 195,334
	Transfer: From Title IX to Title II for base requirements			- 195,334
113	Echelons Above Brigade	774,030	2,982	- 771,048
	Transfer: From Title IX to Title II for base requirements			- 771,048
114	Theater Level Assets	95,274	548	- 94,726
	Transfer: From Title IX to Title II for base requirements			- 94,726
115	Land Forces Operations Support	33,696		- 33,696
	Transfer: From Title IX to Title II for base requirements			- 33,696
116	Aviation Assets	991,048	9,229	- 981,819
	Transfer: From Title IX to Title II for base requirements			- 981,819
121	Force Readiness Operations Support	1,584	1,584	
123	Land Forces Depot Maintenance	258,278		- 258,278
	Transfer: From Title IX to Title II for base requirements			- 258,278
131	Base Operations Support	1,175,139	22,063	- 1,153,076
	Transfer: From Title IX to Title II for base requirements			- 1,153,076
133	Management and Operational Headquarters	606	606	
432	Service-wide Communications	203	203	
	Total, Operation and Maintenance, Army National Guard	4,376,939	83,291	- 4,293,648

OPERATION AND MAINTENANCE, AIR NATIONAL GUARD

Appropriations, 2019	\$15,870,000
Budget estimate, 2020	3,291,982,000
Committee recommendation	176,909,000

The Committee recommends an appropriation of \$176,909,000. This is \$3,115,073,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
011G	Mission Support	3,666	3,666	.....
011M	Depot Purchased Equipment Maintenance	946,411	66,944	- 879,467
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 879,467
011V	Cyberspace Sustainment	24,742	.....	- 24,742
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 24,742
011W	Contractor Logistics Support and System Support	1,392,709	93,620	- 1,299,089
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 1,299,089
011Z	Base Support	924,454	12,679	- 911,775
	Transfer: From Title IX to Title II for base requirements .....	.....	.....	- 911,775
	Total, Operation and Maintenance, Air National Guard	3,291,982	176,909	- 3,115,073

AFGHANISTAN SECURITY FORCES FUND

Appropriations, 2019	\$4,920,000,000
Budget estimate, 2020	4,803,978,000
Committee recommendation	3,736,661,000

The Committee recommends an appropriation of \$3,736,661,000. This is \$1,067,317,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Sustainment	1,313,047	1,313,047	.....
	Infrastructure	37,152	37,152	.....
	Equipment and Transportation	120,868	120,868	.....
	Training and Operations	118,591	118,591	.....
	Undistributed reduction for contract management savings and forward financing .....	.....	- 279,000	- 279,000
	Subtotal: Afghan National Army	1,589,658	1,310,658	- 279,000
	Sustainment	422,806	422,806	.....
	Infrastructure	2,358	2,358	.....
	Equipment and Transportation	127,081	127,081	.....
	Training and Operations	108,112	108,112	.....
	Undistributed reduction for contract management savings and forward financing .....	.....	- 117,200	- 117,200
	Subtotal: Afghan National Police	660,357	543,157	- 117,200
	Sustainment	893,829	893,829	.....
	Infrastructure	8,611	8,611	.....
	Equipment and Transportation	566,967	103,650	- 463,317
	Ahead of need: UH-60 procurement .....	.....	.....	- 463,317
	Training and Operations	356,108	356,108	.....
	Undistributed reduction for contract management savings and forward financing .....	.....	- 71,900	- 71,900
	Subtotal: Afghan Air Force	1,825,515	1,290,298	- 535,217
	Sustainment	437,909	437,909	.....
	Infrastructure	21,131	21,131	.....
	Equipment and Transportation	153,806	153,806	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Training and Operations	115,602	115,602	.....
	Undistributed reduction for contract management savings and forward financing		- 135,900	- 135,900
	Subtotal: Afghan Special Security Forces	728,448	592,548	- 135,900
	Total, Afghanistan Security Forces Fund	4,803,978	3,736,661	- 1,067,317

Afghanistan Security Forces Fund Budget Submission Requirements.—The Committee appreciates the efforts of the Department of Defense to comply with prior year direction to provide detailed execution information concurrent with the budget request and Financial Activity Plan [FAP] submissions for the Afghanistan Security Forces Fund [ASFF] appropriation. This has enhanced the Committee’s ability to conduct budget analysis and make appropriate funding level recommendations.

The Committee remains concerned, however, that the budget flexibility allowed within the ASFF appropriation has led to a lack of budget discipline that challenges effective congressional and executive branch oversight and risks wasteful spending. For example, reductions recommended by the Committee for the ASFF program in fiscal year 2019 were appealed by the Department as too burdensome and likely to degrade the Afghan security environment. Yet, after much of the recommended reductions were withdrawn, the Department transferred \$604,000,000 out of the program, citing available balances due to forward financing and contract savings. The Committee believes this shows that the Department still does not have the necessary fidelity of its annual ASFF budget needs.

Therefore, the Committee continues direction that the Secretary shall provide budget justification materials that include, the budget request amount, the appropriated amount, and the actual obligation amount by line item, for the prior 2 fiscal years. In addition, concurrent with the submission of each FAP, the Secretary of Defense shall provide the congressional defense committees with line item detail of planned funding movements within each ASFF subactivity group using line item titles from the appropriate year’s budget justification submission. Any line item that did not appear in the budget justification submission shall be delineated as a new line item in the line item detail accompanying the FAP. In addition, the Committee recommends a \$604,000,000 reductions to the ASFF appropriation for contract savings and forward financing.

Afghanistan Security Forces Fund Aviation.—In January 2019, the Special Inspector General for Afghanistan Reconstruction [SIGAR] submitted an audit report to Congress outlining concerns that the UH–60 program was successfully meeting fielding dates, but the program was at risk of not having sufficient numbers of trained pilots or maintainers. The SIGAR found that “based on the current UH–60 schedule, it is unlikely that there will be enough pilots trained before all 159 UH–60s are delivered.” The SIGAR noted that rather than scale back or slow UH–60 deliveries, the Combined Security Transition Command-Afghanistan [CSTC–A] had lowered targets for trained pilots from 477 to 320, and the

SIGAR found that even the reduced target was unlikely to be met. The report also described numerous problems with the plan to develop Afghan maintenance personnel. The SIGAR’s most troubling finding was that “DOD runs the risk that the aircraft it delivers will sit idle in Afghanistan without enough pilots to fly them.”

The Committee has had longstanding concerns about the ability of the Department of Defense to ensure that costly, maintenance intensive equipment is not provided to partner nations ahead of the utilization and maintenance capacity of those partners. The Committee expressed such concerns in 2016 when the Department submitted a budget amendment requesting fiscal year 2017 funding for the Afghan Aviation Initiative. The Department noted at that time, and has continued to note since, that the Afghan UH–60 program was designed to allow flexibility to either accelerate or slow aircraft fielding in order to adjust the pace of pilot and maintainer generation. In light of the SIGAR report and indications that force reductions may intensify maintenance and training challenges, the Committee believes it is time to slow aircraft fielding. Therefore, the Committee recommends a reduction of \$463,317,000 for Afghanistan Security Forces Fund UH–60 procurement for fiscal year 2020 and directs the Secretary of Defense to suspend UH–60 procurements in fiscal year 2020. The Committee welcomes discussions with the Department about how it has addressed the SIGAR’s recommendations, in particular, how CSTC–A is accelerating and improving pilot and maintainer training timelines and how the program will link pilot production to UH–60 deliveries for future funding requests.

COUNTER-ISIS TRAIN AND EQUIP FUND

Appropriations, 2019	\$1,352,200,000
Budget estimate, 2020	1,045,000,000
Committee recommendation	745,000,000

The Committee recommends an appropriation of \$745,000,000. This is \$300,000,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Counter–ISIS Train and Equip Fund	1,045,000	745,000	– 300,000
	Improving funds management: Underexecution			– 300,000
	Total, Counter–ISIS Train and Equip Fund	1,045,000	745,000	– 300,000

Counter-ISIS Train and Equip Fund.—The Committee supports the Department of Defense’s efforts to train and equip both the Syrian Democratic Forces and Iraqi security forces through the Counter-ISIS train and equip program [CTEF]. The Committee notes, however, that the program has had long standing challenges with program execution. For example, as of the third quarter of fiscal year 2019, the program still had \$285,000,000 of unobligated fiscal year 2018/2019 funds and \$1,265,000,000 in unobligated fis-

cal year 2019/2020 funds. Moreover, the program request for fiscal year 2020 included over \$700,000,000 in weapons, equipment, and transportation and logistics for weapons and equipment, but the Department was unable to provide information to the Committee about the quantities of equipment/weapons ordered in prior years, equipment/weapons received by the Department from prior orders, equipment/weapons received by partner security forces, equipment/weapons that remains in transit, or battlefield equipment/weapons losses in prior years. The Committee sees no justification for continuing to fund large weapons purchases if the program is unable to account for weapons on hand or under contract. Finally, the Committee notes that the program requested CTEF border security funding in fiscal year 2019, which it intended to use on a non-reimbursable basis for partner nations. Such non-reimbursable payments are not permissible under current law for CTEF border security. Therefore, the Committee recommends rescissions of \$300,000,000 for unexecuted balances and \$171,837,000 in unexecutable border security funding from the fiscal year 2019 CTEF appropriation. In addition, the Committee recommends a reduction to the fiscal year 2020 CTEF appropriation of \$300,000,000 to bring the program more in line with historic execution trends. The Committee also directs the Secretary of Defense, prior to the obligation of fiscal year 2020 funds for weapons/equipment, to provide the congressional defense committees with an accounting of weapons/equipment requested in the fiscal year 2018 and 2019 budget submission, including what equipment/weapons were ordered, delivered to the Department, delivered to security forces in Iraq and Syria, or remains undelivered. Of the undelivered equipment/weapons, the Secretary shall include a timeline of expected deliveries.

Islamic State of Iraq and Syria Detainees.—The Committee is concerned about the burden on the Syrian Democratic Forces [SDF] of holding thousands of Islamic State of Iraq and Syria [ISIS] detainees. The makeshift detention facilities are overcrowded and vulnerable to the types of ISIS attacks that led to the rise of the organization in 2012. The Committee supports efforts of the Department of Defense and international partners to fortify and construct detention facilities to alleviate overcrowding, enhance humane detention, and ensure the security of dangerous detainees. The Committee directs the Department of Defense to notify the Committee 30 days prior to obligation of funds for detention facility construction and prohibits the use of Counter-ISIS Train and Equip Funds for any other construction activity. Moreover, the Committee directs the Department of Defense to engage with the SDF on ensuring that detainees are afforded all protections due under the Geneva Conventions.

PROCUREMENT

The Committee recommends \$11,183,170,000 for the procurement accounts. The Overseas Contingency Operations funding supports our forces engaged in Operation Enduring Freedom and other contingency operations. The Committee recommends funding to replace combat losses and equipment left behind in theater, augment and upgrade equipment for deploying units, sustain munitions and

other war consumables, and reset the units returning home to an equipment-ready status. Funding adjustments have been made in instances where the requirement was poorly defined, funding was requested ahead of need or program execution has been delayed.

AIRCRAFT PROCUREMENT, ARMY

Appropriations, 2019	\$346,963,000
Budget estimate, 2020	381,541,000
Committee recommendation	463,241,000

The Committee recommends an appropriation of \$463,241,000 below. This is \$81,700,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

(In thousands of dollars)

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
3	MQ-1 UAV	54,000	144,000	+ 90,000
	Program increase: Additional aircraft			+ 90,000
15	CH-47 Helicopter	25,000	25,000	
21	Multi Sensor ABN Recon (MIP)	80,260	80,260	
24	GRCS SEMA MODS	750	750	
26	EMARSS SEMA MODS	22,180	22,180	
27	Utility/Cargo Airplane MODS	8,362	8,362	
29	Network and Mission Plan	10	10	
31	Degraded Visual Environment	49,450	49,450	
37	CMWS	130,219	121,919	- 8,300
	Restoring acquisition accountability: U/c growth			- 8,300
38	Common Infrared Countermeasures (CIRCM)	9,310	9,310	
45	Launcher Guided Missile: Longbow Hellfire	2,000	2,000	
	Total, Aircraft Procurement, Army	381,541	463,241	+ 81,700

MISSILE PROCUREMENT, ARMY

Appropriations, 2019	\$1,729,904,000
Budget estimate, 2020	4,645,755,000
Committee recommendation	1,423,589,000

The Committee recommends an appropriation of \$1,423,589,000. This is \$3,222,166,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

(In thousands of dollars)

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	System Integration and Test Procurement	113,857		- 113,857
	Transfer: From Title IX to Title III for base requirements			- 113,857
2	M-SHORAD—Procurement	262,100	158,300	- 103,800
	Transfer: From Title IX to Title III for base requirements			- 103,800
3	MSE Missile	736,541	37,938	- 698,603
	Transfer: From Title IX to Title III for base requirements			- 698,603
4	INDIRECT FIRE PROTECTION CAPABILITY INC 2-1	9,337		- 9,337
	Transfer: From Title IX to Title III for base requirements			- 9,337
6	Hellfire Sys Summary	429,549	236,265	- 193,284

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Transfer: From Title IX to Title III for base requirements			-193,284
7	Joint Air-To-Ground MsIs [JAGM]	233,353		-233,353
	Transfer: From Title IX to Title III for base requirements			-233,353
8	Javelin (Aaws-M) System Summary	142,794	4,389	-138,405
	Transfer: From Title IX to Title III for base requirements			-138,405
9	Tow 2 System Summary	114,340		-114,340
	Transfer: From Title IX to Title III for base requirements			-114,340
10	Tow 2 System Summary (AP-CY)	10,500		-10,500
	Transfer: From Title IX to Title III for base requirements			-10,500
11	Guided MLRS Rocket [GMLRS]	1,228,809	431,596	-797,213
	Transfer: From Title IX to Title III for base requirements			-797,213
12	MLRS Reduced Range Practice Rockets [RRPR]	27,555		-27,555
	Transfer: From Title IX to Title III for base requirements			-27,555
14	Army Tactical Msl Sys [ATACMS]—Sys Sum	340,612	130,770	-209,842
	Transfer: From Title IX to Title III for base requirements			-209,842
15	LETHAL MINIATURE AERIAL MISSILE SYSTEM [LMAMS]	83,300	83,300	
16	Patriot Mods	279,464		-279,464
	Transfer: From Title IX to Title III for base requirements			-279,464
17	ATACMS MODS	85,320		-85,320
	Transfer: From Title IX to Title III for base requirements			-85,320
18	GMLRS MOD	5,094		-5,094
	Transfer: From Title IX to Title III for base requirements			-5,094
19	Stinger Mods	89,115	7,500	-81,615
	Transfer: From Title IX to Title III for base requirements			-81,615
20	Avenger Mods	14,107		-14,107
	Transfer: From Title IX to Title III for base requirements			-14,107
21	Itas/Tow Mods	3,469		-3,469
	Transfer: From Title IX to Title III for base requirements			-3,469
22	MLRS Mods	387,019	333,531	-53,488
	Restoring acquisition accountability: Unjustified spares growth			-14,469
	Transfer: From Title IX to Title III for base requirements			-39,019
23	Himars Modifications	12,483		-12,483
	Transfer: From Title IX to Title III for base requirements			-12,483
24	Spares and Repair Parts	26,444		-26,444
	Transfer: From Title IX to Title III for base requirements			-26,444
25	Air Defense Targets	10,593		-10,593
	Transfer: From Title IX to Title III for base requirements			-10,593
26	Production Base Support			
	Total, Missile Procurement, Army	4,645,755	1,423,589	-3,222,166

**PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES,
ARMY**

Appropriations, 2019	\$1,102,108,000
Budget estimate, 2020	353,454,000
Committee recommendation	346,306,000

The Committee recommends an appropriation of \$346,306,000. This is \$7,148,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
2	Armored Multi Purpose Vehicle [AMPV]	221,638	214,490	-7,148
	Restoring acquisition accountability: Revised vehicle pricing estimate			-7,148

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
3	Stryker (MOD)	4,100	4,100	.....
8	Improved Recovery Vehicle (M88A2 Hercules)	80,146	80,146	.....
13	M1 Abrams Tank (MOD)	13,100	13,100	.....
15	M240 Medium Machine Gun (7.62MM)	900	900	.....
16	MULTI-ROLE ANTI-ARMOR ANTI-PERSONNEL WEAPON	2,400	2,400	.....
19	Mortar Systems	18,941	18,941	.....
20	XM320 Grenade Launcher Module (GLM)	526	526	.....
23	Carbine	1,183	1,183	.....
25	Common Remotely Operated Weapons Station	4,182	4,182	.....
26	Handgun	248	248	.....
31	M2 50 Cal Machine Gun Mods	6,090	6,090	.....
	Total, Procurement of Weapons and Tracked Combat Vehicles, Army	353,454	346,306	- 7,148

PROCUREMENT OF AMMUNITION, ARMY

Appropriations, 2019	\$299,075,000
Budget estimate, 2020	2,843,230,000
Committee recommendation	148,682,000

The Committee recommends an appropriation of \$148,682,000. This is \$2,694,548,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Ctg, 5.56mm, All Types	69,516	567	- 68,949
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 68,949
2	CTG, 7.62mm, All Types	114,268	40	- 114,228
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 114,228
3	CTG, Handgun, All Types	17,824	17	- 17,807
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 17,807
4	CTG, .50 Cal, All Types	64,155	189	- 63,966
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 63,966
5	CTG, 20mm, All Types	35,920	.....	- 35,920
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 35,920
6	CTG, 25mm, All Types	8,990	.....	- 8,990
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 8,990
7	CTG, 30mm, All Types	93,713	24,900	- 68,813
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 68,813
8	CTG, 40mm, All Types	103,952	.....	- 103,952
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 103,952
9	60MM Mortar, All Types	50,580	.....	- 50,580
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 50,580
10	81MM Mortar, All Types	59,373	.....	- 59,373
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 59,373
11	120MM Mortar, All Types	125,452	.....	- 125,452
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 125,452
12	Cartridges, Tank, 105MM and 120MM, All Types	171,284	.....	- 171,284
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 171,284
13	Artillery Cartridges, 75MM & 105MM, All Types	44,675	.....	- 44,675
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 44,675
14	Artillery Projectile, 155MM, All Types	266,037	.....	- 266,037
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 266,037
15	Proj 155mm Extended Range M982	93,486	36,052	- 57,434
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 57,434

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
16	Artillery Propellants, Fuzes and Primers, All	278,873	7,271	- 271,602
	Transfer: From Title IX to Title III for base requirements			- 271,602
17	Mines & Clearing Charges, All Types	55,433		- 55,433
	Transfer: From Title IX to Title III for base requirements			- 55,433
18	Shoulder Launched Munitions, All Types	75,054	176	- 74,878
	Transfer: From Title IX to Title III for base requirements			- 74,878
19	Rocket, Hydra 70, All Types	255,453	79,459	- 175,994
	Transfer: From Title IX to Title III for base requirements			- 175,994
20	CAD/PAD, All Types	7,595		- 7,595
	Transfer: From Title IX to Title III for base requirements			- 7,595
21	Demolition Munitions, All Types	51,651		- 51,651
	Transfer: From Title IX to Title III for base requirements			- 51,651
22	Grenades, All Types	40,592		- 40,592
	Transfer: From Title IX to Title III for base requirements			- 40,592
23	Signals, All Types	18,609		- 18,609
	Transfer: From Title IX to Title III for base requirements			- 18,609
24	Simulators, All Types	16,054		- 16,054
	Transfer: From Title IX to Title III for base requirements			- 16,054
25	Ammo Components, All Types	5,261		- 5,261
	Transfer: From Title IX to Title III for base requirements			- 5,261
26	Non-Lethal Ammunition, All Types	715		- 715
	Transfer: From Title IX to Title III for base requirements			- 715
27	Items Less Than \$5 Million (AMMO)	9,224	11	- 9,213
	Transfer: From Title IX to Title III for base requirements			- 9,213
28	Ammunition Peculiar Equipment	10,044		- 10,044
	Transfer: From Title IX to Title III for base requirements			- 10,044
29	First Destination Transportation (AMMO)	18,492		- 18,492
	Transfer: From Title IX to Title III for base requirements			- 18,492
30	Closeout Liabilities	99		- 99
	Transfer: From Title IX to Title III for base requirements			- 99
31	Industrial Facilities	474,511		- 474,511
	Transfer: From Title IX to Title III for base requirements			- 474,511
32	Conventional Munitions Demilitarization	202,512		- 202,512
	Transfer: From Title IX to Title III for base requirements			- 202,512
33	Arms Initiative	3,833		- 3,833
	Transfer: From Title IX to Title III for base requirements			- 3,833
	Total, Procurement of Ammunition, Army	2,843,230	148,682	- 2,694,548

OTHER PROCUREMENT, ARMY

Appropriations, 2019	\$1,364,045,000
Budget estimate, 2020	1,139,650,000
Committee recommendation	1,120,504,000

The Committee recommends an appropriation of \$1,120,504,000. This is \$19,146,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
10	Family of Heavy Tactical Vehicles (FHTV)	26,917	26,917	.....
11	Pls Esp	16,941	16,941	.....
12	Hvy Expanded Mobile Tactical Truck Ext Serv	62,734	62,734	.....
14	Tactical Wheeled Vehicle Protection Kits	50,000	50,000	.....
15	Modification of In Svc Equip	28,000	26,515	- 1,485

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Improving funds management: Program management carryover			- 1,485
22	Tactical Network Technology Mod In Svc	40,000	40,000	
29	Transportable Tactical Command Communications	6,930	6,930	
31	Assured Positioning, Navigation and Timing	11,778	11,778	
32	Smart-T (SPACE)	825	825	
40	Radio Terminal Set, Mids Lvt(2)	350	350	
47	COTS Communications Equipment	20,400	20,400	
48	Family of Med Comm for Combat Casualty Care	1,231	1,231	
51	CI Automation Architecture (MIP)	6,200	6,200	
59	Base Support Communications	20,482	20,482	
60	Information Systems	55,800	55,800	
63	Installation Info Infrastructure Mod Program	75,820	75,820	
68	DCGS-A (MIP)	38,613	38,613	
70	Trojan (MIP)	1,337	1,337	
71	Mod of In-Svc Equip (Intel Spt) (MIP)	2,051	2,051	
75	Biometric Tactical Collection Devices (MIP)	1,800	1,800	
82	Family of Persistent Surveillance Cap. (MIP)	71,493	71,493	
83	Counterintelligence/Security Countermeasures	6,917	6,917	
85	Sentinel Mods	20,000	20,000	
86	Night Vision Devices	3,676	3,676	
94	Joint Battle Command—Platform [JBC-P]	25,568	25,568	
97	Computer Ballistics: LHMCB XM32	570	570	
98	Mortar Fire Control System	15,975	15,975	
103	AIR & MSL Defense Planning & Control Sys	14,331	14,331	
112	Army Training Modernization	6,014	6,014	
113	Automated Data Processing Equip	32,700	32,700	
124	Family of Non-Lethal Equipment [FNLE]	25,480	25,480	
125	Base Defense Systems [BDS]	47,110	39,984	- 7,126
	Maintain program affordability: Unjustified growth			- 7,126
126	CBRN Defense	18,711	17,461	- 1,250
	Insufficient budget justification: Unit cost discrepancies			- 1,250
128	Tactical Bridging	4,884	4,884	
133	Grnd Standoff Mine Detectn Sysm [GSTAMIDS]	4,500	3,655	- 845
	Insufficient budget justification: Unit cost discrepancies			- 845
135	Husky Mounted Detection System [HMDS]	34,253	28,071	- 6,182
	Insufficient budget justification: Unit cost discrepancies			- 6,182
136	Robotic Combat Support System [RCSS]	3,300	3,300	
140	Render Safe Sets kits Outfits	84,000	84,000	
143	Heaters and ECU'S	8	8	
145	Personnel Recovery Support System [PRSS]	5,101	5,101	
146	Ground Soldier System	1,760	1,760	
148	Force Provider	56,400	56,400	
150	Cargo Aerial Del & Personnel Parachute System	2,040	2,040	
154	Distribution Systems, Petroleum & Water	13,986	12,409	- 1,577
	Restoring acquisition accountability: HIPPO unit cost growth			- 1,577
155	Combat Support Medical	2,735	2,735	
159	Scrapers, Earthmoving	4,669	3,910	- 759
	Insufficient budget justification: Narrative discrepancies			- 759
160	Loaders	380	380	
162	Tractor, Full Tracked	8,225	8,225	
164	High Mobility Engineer Excavator [HMEE]	3,000	3,000	
166	Const Equip Esp	3,870	3,870	
167	Items Less Than \$5.0M (Const Equip)	350	350	
171	Generators and Associated Equip	2,436	2,436	
173	Family of Forklifts	5,152	5,152	
175	Training Devices, Nonsystem	2,106	2,106	
181	Integrated Family of Test Equipment [IFTE]	1,395	1,395	
184	Rapid Equipping Soldier Support Equipment	24,122	18,000	- 6,122
	Restoring acquisition accountability: Overestimation of requirements			- 6,122
185	Physical Security Systems (OPA3)	10,016	10,016	
187	Modification of In-Svc Equipment (OPA-3)	33,354	33,354	

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
189	Building, Pre-Fab, Relocatable	62,654	77,054	+ 14,400
	Transfer: Army requested transfer from Title III			+ 14,400
999	Classified Programs	8,200		- 8,200
	Classified adjustment			- 8,200
	Total, Other Procurement, Army	1,139,650	1,120,504	- 19,146

AIRCRAFT PROCUREMENT, NAVY

Appropriations, 2019	\$232,119,000
Budget estimate, 2020	119,045,000
Committee recommendation	42,045,000

The Committee recommends an appropriation of \$42,045,000. This is \$77,000,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
26	STUASLO UAV	7,921	7,921	.....
27	MQ-9A Reaper	77,000	.....	- 77,000
	Restoring acquisition accountability: Unclear acquisition strategy			- 77,000
36	EP-3 Series	5,488	5,488	.....
46	Special Project Aircraft	3,498	3,498	.....
51	Common ECM Equipment	3,406	3,406	.....
53	Common Defensive Weapon System	3,274	3,274	.....
62	QRC	18,458	18,458	.....
	Total, Aircraft Procurement, Navy	119,045	42,045	- 77,000

WEAPONS PROCUREMENT, NAVY

Appropriations, 2019	\$14,134,000
Budget estimate, 2020	4,332,710,000
Committee recommendation	97,466,000

The Committee recommends an appropriation of \$97,466,000. This is \$4,235,244,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Trident II Mods	1,177,251	.....	- 1,177,251
	Transfer: From Title IX to Title III for base requirements			- 1,177,251
2	Missile Industrial Facilities	7,142	.....	- 7,142
	Transfer: From Title IX to Title III for base requirements			- 7,142
3	Tomahawk	386,730	.....	- 386,730
	Transfer: From Title IX to Title III for base requirements			- 386,730
4	AMRAAM	224,502	.....	- 224,502

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Transfer: From Title IX to Title III for base requirements			- 224,502
5	Sidewinder	119,456		- 119,456
	Transfer: From Title IX to Title III for base requirements			- 119,456
7	Standard Missile	404,523		- 404,523
	Transfer: From Title IX to Title III for base requirements			- 404,523
8	Standard Missile (AP)	96,085		- 96,085
	Transfer: From Title IX to Title III for base requirements			- 96,085
9	Small Diameter Bomb II	118,466		- 118,466
	Transfer: From Title IX to Title III for base requirements			- 118,466
10	Ram	106,765		- 106,765
	Transfer: From Title IX to Title III for base requirements			- 106,765
11	Joint Air Ground Missile [JAGM]	90,966	90,966	
12	Hellfire	1,525		- 1,525
	Transfer: From Title IX to Title III for base requirements			- 1,525
15	Aerial Targets	152,380	6,500	- 145,880
	Transfer: From Title IX to Title III for base requirements			- 145,880
16	Drones And Decoys	20,000		- 20,000
	Transfer: From Title IX to Title III for base requirements			- 20,000
17	Other Missile Support	3,388		- 3,388
	Transfer: From Title IX to Title III for base requirements			- 3,388
18	LRASM	143,200		- 143,200
	Transfer: From Title IX to Title III for base requirements			- 143,200
19	LCS OTH Missile	38,137		- 38,137
	Transfer: From Title IX to Title III for base requirements			- 38,137
20	ESSM	128,059		- 128,059
	Transfer: From Title IX to Title III for base requirements			- 128,059
21	Harpoon Mods	25,447		- 25,447
	Transfer: From Title IX to Title III for base requirements			- 25,447
22	Harm Mods	183,740		- 183,740
	Transfer: From Title IX to Title III for base requirements			- 183,740
23	Standard Missiles Mods	22,500		- 22,500
	Transfer: From Title IX to Title III for base requirements			- 22,500
24	Weapons Industrial Facilities	1,958		- 1,958
	Transfer: From Title IX to Title III for base requirements			- 1,958
25	Fleet Satellite Comm Follow-On	67,380		- 67,380
	Transfer: From Title IX to Title III for base requirements			- 67,380
27	Ordnance Support Equipment	109,427		- 109,427
	Transfer: From Title IX to Title III for base requirements			- 109,427
28	SSTD	5,561		- 5,561
	Transfer: From Title IX to Title III for base requirements			- 5,561
29	MK-48 Torpedo	114,000		- 114,000
	Transfer: From Title IX to Title III for base requirements			- 114,000
30	ASW Targets	15,095		- 15,095
	Transfer: From Title IX to Title III for base requirements			- 15,095
31	MK-54 Torpedo Mods	119,453		- 119,453
	Transfer: From Title IX to Title III for base requirements			- 119,453
32	MK-48 Torpedo ADCAP Mods	39,508		- 39,508
	Transfer: From Title IX to Title III for base requirements			- 39,508
33	Quickstrike Mine	5,183		- 5,183
	Transfer: From Title IX to Title III for base requirements			- 5,183
34	Torpedo Support Equipment	79,028		- 79,028
	Transfer: From Title IX to Title III for base requirements			- 79,028
35	ASW Range Support	3,890		- 3,890
	Transfer: From Title IX to Title III for base requirements			- 3,890
36	First Destination Transportation	3,803		- 3,803
	Transfer: From Title IX to Title III for base requirements			- 3,803
37	Small Arms and Weapons	14,797		- 14,797
	Transfer: From Title IX to Title III for base requirements			- 14,797
38	CIWS Mods	44,126		- 44,126
	Transfer: From Title IX to Title III for base requirements			- 44,126
39	Coast Guard Weapons	44,980		- 44,980
	Transfer: From Title IX to Title III for base requirements			- 44,980
40	Gun Mount Mods	66,376		- 66,376
	Transfer: From Title IX to Title III for base requirements			- 66,376

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
41	LCS Module Weapons	14,585	.....	- 14,585
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 14,585
43	Airborne Mine Neutralization Systems	7,160	.....	- 7,160
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 7,160
45	Spares and Repair Parts	126,138	.....	- 126,138
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 126,138
	Total, Weapons Procurement, Navy	4,332,710	97,466	- 4,235,244

PROCUREMENT OF AMMUNITION, NAVY AND MARINE CORPS

Appropriations, 2019	\$229,783,000
Budget estimate, 2020	1,186,128,000
Committee recommendation	204,814,000

The Committee recommends an appropriation of \$204,814,000. This is \$981,314,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	General Purpose Bombs	63,006	26,978	- 36,028
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 36,028
2	JDAM	82,676	12,263	- 70,413
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 70,413
3	Airborne Rockets, All Types	76,776	45,020	- 31,756
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 31,756
4	Machine Gun Ammunition	38,370	33,577	- 4,793
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 4,793
5	Practice Bombs	46,611	11,903	- 34,708
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 34,708
6	Cartridges & Cart Actuated Devices	60,819	15,081	- 45,738
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 45,738
7	Air Expendable Countermeasures	94,212	16,911	- 77,301
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 77,301
8	JATOS	7,262	.....	- 7,262
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 7,262
9	5 Inch/54 Gun Ammunition	22,594	.....	- 22,594
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 22,594
10	Intermediate Caliber Gun Ammunition	37,193	.....	- 37,193
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 37,193
11	Other Ship Gun Ammunition	42,753	3,262	- 39,491
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 39,491
12	Small Arms & Landing Party Ammo	48,906	1,010	- 47,896
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 47,896
13	Pyrotechnic and Demolition	11,158	537	- 10,621
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 10,621
15	Ammunition Less Than \$5 Million	2,386	.....	- 2,386
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 2,386
16	Mortars	57,473	1,930	- 55,543
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 55,543
17	Direct Support Munitions	132,937	1,172	- 131,765
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 131,765
18	Infantry Weapons Ammunition	80,214	2,158	- 78,056
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 78,056
19	Combat Support Munitions	41,013	965	- 40,048
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 40,048

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
20	Ammo Modernization	14,325	.....	- 14,325
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 14,325
21	Artillery Munitions	220,923	32,047	- 188,876
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 188,876
22	Items Less Than \$5 Million	4,521	.....	- 4,521
	Transfer: From Title IX to Title III for base requirements .....	.....	.....	- 4,521
	Total, Procurement of Ammunition, Navy and Marine Corps	1,186,128	204,814	- 981,314

OTHER PROCUREMENT, NAVY

Appropriations, 2019	\$181,173,000
Budget estimate, 2020	357,600,000
Committee recommendation	357,550,000

The Committee recommends an appropriation of \$357,550,000. This is \$50,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
20	Underwater EOD Programs	5,800	5,800	.....
42	Fixed Surveillance System	310,503	310,503	.....
85	Sonobuoys - All Types	2,910	2,910	.....
88	Aircraft Support Equipment	13,420	13,420	.....
94	Aviation Support Equipment	500	500	.....
103	Explosive Ordnance Disposal Equip	15,307	15,307	.....
108	Passenger Carrying Vehicles	173	173	.....
109	General Purpose Trucks	408	408	.....
111	Fire Fighting Equipment	785	735	- 50
	Restoring acquisition accountability: Excess cost growth .....	.....	.....	- 50
117	Supply Equipment	100	100	.....
118	First Destination Transportation	510	510	.....
122	Command Support Equipment	2,800	2,800	.....
123	Medical Support Equipment	1,794	1,794	.....
126	Operating Forces Support Equipment	1,090	1,090	.....
128	Environmental Support Equipment	200	200	.....
129	Physical Security Equipment	1,300	1,300	.....
	Total, Other Procurement, Navy	357,600	357,550	- 50

PROCUREMENT, MARINE CORPS

Appropriations, 2019	\$58,023,000
Budget estimate, 2020	20,589,000
Committee recommendation	20,589,000

The Committee recommends an appropriation of \$20,589,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
12	Guided MLRS Rocket [GMLRS]	16,919	16,919	.....
45	EOD Systems	3,670	3,670	.....
	Total, Procurement, Marine Corps	20,589	20,589	.....

AIRCRAFT PROCUREMENT, AIR FORCE

Appropriations, 2019	\$955,248,000
Budget estimate, 2020	309,110,000
Committee recommendation	1,011,810,000

The Committee recommends an appropriation of \$1,011,810,000. This is \$702,700,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
6	C-130J .....	.....	676,000	+ 676,000
	Program increase: Eight aircraft for the Air National Guard .....	.....	.....	+ 676,000
17	MQ-9	172,240	198,940	+ 26,700
	Program increase: Four aircraft .....	.....	.....	+ 26,700
18	RQ-20B Puma	12,150	12,150	.....
22	Large Aircraft Infrared Countermeasures	53,335	53,335	.....
67	MQ-9 UAS Payloads	19,800	19,800	.....
69	Initial Spares/Repair Parts	44,560	44,560	.....
72	Aircraft Replacement Support Equip	7,025	7,025	.....
	Total, Aircraft Procurement, Air Force	309,110	1,011,810	+ 702,700

MISSILE PROCUREMENT, AIR FORCE

Appropriations, 2019	\$493,526,000
Budget estimate, 2020	201,671,000
Committee recommendation	201,671,000

The Committee recommends an appropriation of \$201,671,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
4	Joint Air-Surface Standoff Missile	20,900	20,900	.....
8	Predator Hellfire Missile	180,771	180,771	.....
	Total, Missile Procurement, Air Force	201,671	201,671	.....

PROCUREMENT OF AMMUNITION, AIR FORCE

Appropriations, 2019 \$1,371,516,000
 Budget estimate, 2020 2,607,394,000
 Committee recommendation 934,758,000

The Committee recommends an appropriation of \$934,758,000.
 This is \$1,672,636,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Rockets	218,228	84,960	-133,268
	Transfer: From Title IX to Title III for base requirements			-133,268
2	Cartridges	193,091	52,642	-140,449
	Transfer: From Title IX to Title III for base requirements			-140,449
3	Practice Bombs	29,313		-29,313
	Transfer: From Title IX to Title III for base requirements			-29,313
4	General Purpose Bombs	631,194	545,309	-85,885
	Transfer: From Title IX to Title III for base requirements			-85,885
6	Joint Direct Attack Munition	1,066,224		-1,066,224
	Transfer: From Title IX to Title III for base requirements			-1,066,224
7	B61	80,773		-80,773
	Transfer: From Title IX to Title III for base requirements			-80,773
9	Cad/Pad	47,069		-47,069
	Transfer: From Title IX to Title III for base requirements			-47,069
10	Explosive Ordnance Disposal [EOD]	6,133		-6,133
	Transfer: From Title IX to Title III for base requirements			-6,133
11	Spares And Repair Parts	533		-533
	Transfer: From Title IX to Title III for base requirements			-533
12	Modifications	1,291		-1,291
	Transfer: From Title IX to Title III for base requirements			-1,291
13	Items Less Than \$5,000,000	1,677		-1,677
	Transfer: From Title IX to Title III for base requirements			-1,677
15	Flares	129,388	93,272	-36,116
	Transfer: From Title IX to Title III for base requirements			-36,116
16	Fuzes	158,889	152,480	-6,409
	Transfer: From Title IX to Title III for base requirements			-1,734
	Restoring acquisition accountability: FMU-152 cost growth			-4,675
17	Small Arms	43,591	6,095	-37,496
	Transfer: From Title IX to Title III for base requirements			-37,496
	Total, Procurement of Ammunition, Air Force	2,607,394	934,758	-1,672,636

OTHER PROCUREMENT, AIR FORCE

Appropriations, 2019 \$3,677,276,000
 Budget estimate, 2020 4,193,098,000
 Committee recommendation 3,513,098,000

The Committee recommends an appropriation of \$3,513,098,000.
 This is \$680,000,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
1	Passenger Carrying Vehicles	1,276	1,276	.....
4	Cargo and Utility Vehicles	9,702	9,702	.....
5	Joint Light Tactical Vehicle	40,999	40,999	.....
7	Special Purpose Vehicles	52,502	52,502	.....
8	Fire Fighting/Crash Rescue Vehicles	16,652	16,652	.....
9	Materials Handling Vehicles	2,944	2,944	.....
10	Runway Snow Remov And Cleaning Equ	3,753	3,753	.....
11	Base Maintenance Support Vehicles	11,837	11,837	.....
27	General Information Technology	5,000	5,000	.....
31	Air Force Physical Security System	106,919	106,919	.....
48	Tactical C-E Equipment	306	306	.....
52	Base Comm Infrastructure	4,300	4,300	.....
54	Personal Safety and Rescue Equipment	22,200	22,200	.....
59	Mobility Equipment	26,535	26,535	.....
60	Fuels Support Equipment [FSE]	4,040	4,040	.....
61	Base Maintenance and Support Equipment	20,067	20,067	.....
999	Classified Programs	3,864,066	3,184,066	- 680,000
	Classified adjustment .....	.....	.....	- 680,000
	Total, Other Procurement, Air Force	4,193,098	3,513,098	- 680,000

PROCUREMENT, DEFENSE-WIDE

Appropriations, 2019	\$572,135,000
Budget estimate, 2020	452,047,000
Committee recommendation	447,047,000

The Committee recommends an appropriation of \$447,047,000. This is \$5,000,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
9	Teleport Program	3,800	3,800	.....
12	Defense Information System Network	12,000	12,000	.....
27	Counter IED & Improvised Threat Technologies	4,590	4,590	.....
999	Classified Programs	56,380	51,380	- 5,000
	Classified adjustment .....	.....	.....	- 5,000
50	Manned ISR	5,000	5,000	.....
51	MC-12	5,000	5,000	.....
52	MH-60 Blackhawk	28,100	28,100	.....
54	Unmanned ISR	8,207	8,207	.....
56	U-28	31,500	31,500	.....
57	MH-47 Chinook	37,500	37,500	.....
59	MQ-9 Unmanned Aerial Vehicle	1,900	1,900	.....
64	Ordnance Items <\$5M	138,252	138,252	.....
65	Intelligence Systems	16,500	16,500	.....
67	Other Items <\$5M	28	28	.....
70	Tactical Vehicles	2,990	2,990	.....
71	Warrior Systems <\$5M	37,512	37,512	.....
72	Combat Mission Requirements	10,000	10,000	.....
74	Operational Enhancements Intelligence	7,594	7,594	.....
75	Operational Enhancements	45,194	45,194	.....
	Total, Procurement, Defense-Wide	452,047	447,047	- 5,000

NATIONAL GUARD AND RESERVE EQUIPMENT

Appropriations, 2019	\$1,300,000,000
Budget estimate, 2020	
Committee recommendation	850,000,000

The Committee recommends an appropriation of \$850,000,000. This is \$850,000,000 above the budget estimate.

The appropriation includes direction for the component commanders of the Army Reserve, Marine Forces Reserve, Air Force Reserve, Army National Guard and Air National Guard to submit to the congressional defense committees a detailed assessment of their component's modernization priorities, not later than 30 days after enactment of this act.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Item	2020 budget estimate	Committee recommendation	Change from budget estimate
NATIONAL GUARD AND RESERVE EQUIPMENT			
RESERVE EQUIPMENT:			
ARMY RESERVE:			
Program increase: Miscellaneous equipment		127,500	+ 127,500
NAVY RESERVE:			
Program increase: Miscellaneous equipment		42,500	+ 42,500
MARINE CORPS RESERVE:			
Program increase: Miscellaneous equipment		8,500	+ 8,500
AIR FORCE RESERVE:			
Program increase: Miscellaneous equipment		127,500	+ 127,500
TOTAL, RESERVE EQUIPMENT		306,000	+ 306,000
NATIONAL GUARD EQUIPMENT:			
ARMY NATIONAL GUARD:			
Program increase: Miscellaneous equipment		272,000	+ 272,000
AIR NATIONAL GUARD:			
Program increase: Miscellaneous equipment		272,000	+ 272,000
TOTAL, NATIONAL GUARD EQUIPMENT		544,000	+ 544,000
TOTAL, NATIONAL GUARD AND RESERVE EQUIPMENT		850,000	+ 850,000

High-Priority Items.—The Committee directs that the National Guard and Reserve Equipment account shall be executed by the Chiefs of the National Guard and reserve components with priority consideration given to the following items: Acoustic Hailing Devices; Cold Weather and Mountaineering Gear and Equipment, including Small Unit Support Vehicles; Counter-UAS Systems; Crashworthy, Ballistically Tolerant Auxiliary Fuel Systems; Detect and Avoid Systems for MQ-9 Aircraft; HMMWV Modernization; MQ-9 Deployable Launch & Recovery Element Mission Support Kits; and Solar Mobile Power Systems.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

The Committee recommends \$833,762,000 for research, development, test and evaluation.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

Appropriations, 2019	\$300,604,000
Budget estimate, 2020	204,124,000
Committee recommendation	174,354,000

The Committee recommends an appropriation of \$174,354,000. This is \$29,770,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
74	Air and Missile Defense Systems Engineering	500	500	.....
79	Soldier Support and Survivability	3,000	3,000	.....
85	Logistics and Engineer Equipment—Adv Dev	1,085	1,085	.....
95	Maneuver—Short Range Air Defense [M—SHORAD]	6,000	.....	— 6,000
	Transfer to title IV .....	.....	.....	— 6,000
97	Army Advanced Component Development & Prototyping	4,529	4,529	.....
105	Integrated Base Defense (Budget Activity 4)	2,000	2,000	.....
151	Common Infrared Countermeasures [CIRCM]	11,770	.....	— 11,770
	Insufficient budget justification: QRC Phase 3 development funding excess .....	.....	.....	— 11,770
159	Aircraft Survivability Development	77,420	77,420	.....
163	Army System Development & Demonstration	19,527	19,527	.....
174	Electronic Warfare Development	3,200	3,200	.....
200	Counterintel and Human Intel Modernization	1,875	1,875	.....
238	Security and Intelligence Activities	22,904	22,904	.....
246	Tactical Unmanned Aerial Vehicles	34,100	34,100	.....
247	Airborne Reconnaissance Systems	14,000	2,000	— 12,000
	Improving funds management: Prior year carryover .....	.....	.....	— 12,000
252	Biometrics Enabled Intelligence	2,214	2,214	.....
	Total, Research, Development, Test and Evaluation, Army	204,124	174,354	— 29,770

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY

Appropriations, 2019	\$167,812,000
Budget estimate, 2020	164,410,000
Committee recommendation	164,410,000

The Committee recommends an appropriation of \$164,410,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
28	Air/Ocean Tactical Applications	2,400	2,400	.....
38	RETRACT LARCH	22,000	22,000	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
57	Joint Service Explosive Ordnance Development	14,178	14,178	.....
69	Land Attack Technology	1,428	1,428	.....
143	Ship Self Defense (Detect & Control)	1,122	1,122	.....
228	Marine Corps Communications Systems	15,000	15,000	.....
999	Classified Programs	108,282	108,282	.....
	Total, Research, Development, Test and Evaluation, Navy	164,410	164,410	.....

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE

Appropriations, 2019	\$321,934,000
Budget estimate, 2020	450,248,000
Committee recommendation	128,248,000

The Committee recommends an appropriation of \$128,248,000. This is \$322,000,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
48	Tech Transition Program	26,450	26,450	.....
72	Space Rapid Capabilities Office	17,885	17,885	.....
177	Joint Counter RCIED Electronic Warfare	4,000	4,000	.....
217	Intel Data Applications	1,200	1,200	.....
999	Classified Programs	400,713	78,713	- 322,000
	Classified adjustment .....	.....	.....	- 322,000
	Total, Research Development, Test and Evaluation, Air Force	450,248	128,248	- 322,000

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

Appropriations, 2019	\$403,044,000
Budget estimate, 2020	827,950,000
Committee recommendation	366,750,000

The Committee recommends an appropriation of \$366,750,000. This is \$461,200,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
10	Counter Improvised-Threat Advanced Studies	1,677	1,677	.....
25	Combating Terrorism Technology Support	25,230	25,230	.....
27	Counter Improvised-Threat Simulation	49,528	37,028	- 12,500
	Improving funds management: Prior year carryover .....	.....	.....	- 12,500
94	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	113,590	90,890	- 22,700
	Improving funds management: Prior year carryover .....	.....	.....	- 22,700

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
258	Operational Enhancements	726	726	.....
259	Warrior Systems	6,000	6,000	.....
261	Unmanned ISR	5,000	5,000	.....
999	Classified Programs	626,199	200,199	- 426,000
	Classified adjustment .....	.....	.....	- 426,000
	Total, Research, Development, Test & Evaluation, Defense-Wide	827,950	366,750	- 461,200

REVOLVING AND MANAGEMENT FUNDS

DEFENSE WORKING CAPITAL FUNDS

Appropriations, 2019	\$15,190,000
Budget estimate, 2020	20,100,000
Committee recommendation	20,100,000

The Committee recommends an appropriation of \$20,100,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the programs recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Supply Management	20,100	20,100	.....
	Total, Defense Working Capital Fund, Army	20,100	20,100	.....
	Grand Total, Defense Working Capital Funds	20,100	20,100	.....

OTHER DEPARTMENT OF DEFENSE PROGRAMS

DEFENSE HEALTH PROGRAM

Appropriations, 2019	\$352,068,000
Budget estimate, 2020	347,746,000
Committee recommendation	347,746,000

The Committee recommends an appropriation of \$347,746,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table details the program recommended by the Committee:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Operation and Maintenance .....	.....	.....	.....
	In-House Care	57,459	57,459	.....
	Private Sector Care	287,487	287,487	.....
	Consolidated Health Care	2,800	2,800	.....

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
	Total, Defense Health Program	347,746	347,746	.....

DRUG INTERDICTION AND COUNTER-DRUG ACTIVITIES, DEFENSE

Appropriations, 2019	\$153,100,000
Budget estimate, 2020	163,596,000
Committee recommendation	163,596,000

The Committee recommends an appropriation of \$163,596,000. This is equal to the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

Line	Item	2020 budget estimate	Committee recommendation	Change from budget estimate
10	Counter-Narcotics Support	163,596	163,596	.....

OFFICE OF THE INSPECTOR GENERAL

Appropriations, 2019	\$24,692,000
Budget estimate, 2020	24,254,000
Committee recommendation	24,254,000

The Committee recommends an appropriation of \$24,254,000. This is equal to the budget estimate.

GENERAL PROVISIONS—THIS TITLE

The following lists general provisions proposed by the Committee. The Committee recommends inclusion of several proposals which have been incorporated in previous appropriations acts, provisions requested for inclusion by the Defense Department, and new provisions. The Committee recommendations are as follows:

SEC. 9001. *Funds in Addition to Base*.—Retains and modifies a provision carried in previous years.

SEC. 9002. *Special Transfer Authority*.—Retains and modifies a provision carried in previous years.

SEC. 9003. *Supervision and Administration Costs*.—Retains a provision carried in previous years.

SEC. 9004. *Vehicle Procurement*.—Retains a provision carried in previous years.

SEC. 9005. *Commanders' Emergency Response Program*.—Retains a provision carried in previous years.

SEC. 9006. *Coalition Lift and Sustainment*.—Retains a provision carried in previous years.

SEC. 9007. *Permanent Military Installations*.—Retains a provision carried in previous years.

SEC. 9008. *U.N. Convention Against Torture*.—Retains a provision carried in previous years.

SEC. 9009. *Afghanistan Resource Oversight Council*.—Retains a provision carried in previous years.

SEC. 9010. *Investment Unit Cost*.—Retains a provision carried in previous years.

SEC. 9011. *O&M Readiness Funds and Transfer Authority*.—Inserts a new provision which provides for O&M readiness funds and transfer authority.

SEC. 9012. *Ukraine Security Assistance Initiative*.—Retains and modifies a provision carried in previous years.

SEC. 9013. *Ukraine Replacement of Funds*.—Retains a provision carried in previous years.

SEC. 9014. *Counterterrorism Partnerships Fund Excess Equipment*.—Retains a provision carried in previous years.

SEC. 9015. *C-130 Cargo Aircraft Transfers*.—Retains a provision carried in previous years.

SEC. 9016. *Afghanistan Security Forces Fund Certification*.—Retains provision carried in previous years.

SEC. 9017. *Rescissions*.—The Committee recommends a general provision rescinding funds from prior years as displayed below:

	Amount
2018 Appropriations	
Weapons and Tracked Combat Vehicles, Army: Bradley Program (MOD)	\$30,000,000
2019 Appropriations	
Operation and Maintenance: DSCA Security Cooperation	133,442,000
Operation and Maintenance: Coalition Support Funds	30,000,000
Counter-ISIS Train and Equip Fund	471,837,000
Missile Procurement, Army: Hellfire	13,176,000

	Amount
Weapons and Tracked Combat Vehicles, Army:	
Bradley Program (MOD)	50,000,000
Common Remotely Operated Weapons Station	2,477,000
Other Procurement, Army:	
Information Systems	8,750,000
Aircraft Procurement, Air Force:	
MQ-9	69,984,000
Large Aircraft Infrared Countermeasures	24,713,000

SEC. 9018. *Saudi Coalition Support Prohibition*.—Inserts a new provision regarding a funds limitation for the Saudi-led coalition in Yemen.

SEC. 9019. *Emergency Designation*.—Retains a provision carried in previous years.

TITLE X
 ADDITIONAL APPROPRIATIONS FOR DISASTER RELIEF
 (EMERGENCY)
 DEPARTMENT OF DEFENSE—MILITARY

The Committee recommends an appropriation of \$1,710,245,000 for necessary expenses related to the consequences of Hurricanes Michael and Florence and flooding and earthquakes occurring in fiscal year 2019.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the Committee recommendation:

[In thousands of dollars]

	Fiscal year 2019 enacted	Fiscal year 2020 estimate	Committee recommendation
Operation and Maintenance	951,500
Procurement	408,745
Research, Development, Test and Evaluation	113,000
Defense Working Capital Funds	237,000
Total, Additional Appropriations for Disaster Relief	1,710,245

GENERAL PROVISION—THIS TITLE

SEC. 10001. *Emergency Designation.*—Requires the President to designate funding as an emergency.

COMPLIANCE WITH PARAGRAPH 7, RULE XVI OF THE
STANDING RULES OF THE SENATE

Paragraph 7 of rule XVI requires that Committee reports on general appropriations bills identify each Committee amendment to the House bill “which proposes an item of appropriation which is not made to carry out the provisions of an existing law, a treaty stipulation, or an act or resolution previously passed by the Senate during that session.”

The Committee recommends funding for the following accounts which currently lack authorization for fiscal year 2020:

Military Personnel, Army
Military Personnel, Navy
Military Personnel, Marine Corps
Military Personnel, Air Force
Reserve Personnel, Air Force
Reserve Personnel, Army
Reserve Personnel, Navy
Reserve Personnel, Marine Corps
Reserve Personnel, Air Force
National Guard Personnel, Army
National Guard Personnel, Air Force
Operation and Maintenance, Army
Operation and Maintenance, Navy
Operation and Maintenance, Marine Corps
Operation and Maintenance, Air Force
Operation and Maintenance, Space Force
Operation and Maintenance, Defense-Wide
Operation and Maintenance, Army Reserve
Operation and Maintenance, Navy Reserve
Operation and Maintenance, Marine Corps Reserve
Operation and Maintenance, Air Force Reserve
Operation and Maintenance, Army National Guard
Operation and Maintenance, Air National Guard
United States Court of Appeals for the Armed Forces
Environmental Restoration, Army
Environmental Restoration, Navy
Environmental Restoration, Air Force
Environmental Restoration, Defense-Wide
Environmental Restoration, Formerly Used Defense Sites
Overseas Humanitarian, Disaster, and Civic Aid
Cooperative Threat Reduction Account
Afghanistan Security Forces Fund
Counter-ISIS Train and Equip Fund
Aircraft Procurement, Army
Missile Procurement, Army
Procurement of Weapons and Tracked Combat Vehicles, Army
Procurement of Ammunition, Army

Other Procurement, Army
 Aircraft Procurement, Navy
 Weapons Procurement, Navy
 Procurement of Ammunition, Navy and Marine Corps
 Shipbuilding and Conversion, Navy
 Ohio Replacement Submarine [AP]
 Carrier Replacement Program [CVN 80]
 Carrier Replacement Program [CVN 81]
 Virginia Class Submarine
 Virginia Class Submarine [AP]
 CVN Refueling Overhauls
 CVN Refueling Overhauls [AP]
 DDG-1000
 DDG-51
 DDG-51 [AP]
 FGG-Frigate
 LPD Flight II
 LHA Replacement Expeditionary Fast Transport
 TAO Fleet Oiler
 TAO Fleet Oiler [AP]
 Towing, Salvage, and Rescue Ship
 LCU 1700
 Outfitting, Post Delivery, Conversions and First Destination
 Transportation
 Service Craft
 Completion of Prior Year Shipbuilding Programs
 Unmanned Surface Vessels
 Other Procurement, Navy
 Procurement, Marine Corps
 Aircraft Procurement, Air Force
 Missile Procurement, Air Force
 Space Procurement, Air Force
 Procurement of Ammunition, Air Force
 Other Procurement, Air Force
 Procurement, Defense-Wide
 National Guard and Reserve Equipment
 Research, Development, Test, and Evaluation, Army
 Research, Development, Test, and Evaluation, Navy
 Research, Development, Test, and Evaluation, Air Force
 Research, Development, Test, and Evaluation, Defense-Wide
 Operational Test and Evaluation, Defense
 Defense Working Capital Funds
 Defense Health Program
 Chemical Agents and Munitions Destruction
 Drug Interdiction and Counter-Drug Activities
 Office of the Inspector General
 Intelligence Community Management Account (ICMA)

COMPLIANCE WITH PARAGRAPH 7(c), RULE XXVI OF THE
STANDING RULES OF THE SENATE

Pursuant to paragraph 7(c) of rule XXVI, on September 12, 2019, the Committee ordered favorably reported an original bill (S. 2474) making appropriations for the Department of Defense for the fiscal year ending September 30, 2020, and for other purposes, provided that the bill be subject to amendment and that the bill be consistent with its budget allocation, and provided that the Chairman of the Committee or his designee be authorized to offer the substance of the original bill as a Committee amendment in the nature of a substitute to the House companion measure, by a recorded vote of 16–15, a quorum being present. The vote was as follows:

Yeas	Nays
Chairman Shelby	Mr. Leahy
Mr. McConnell	Mrs. Murray
Mr. Alexander	Mrs. Feinstein
Ms. Collins	Mr. Durbin
Ms. Murkowski	Mr. Reed
Mr. Graham	Mr. Tester
Mr. Blunt	Mr. Udall
Mr. Moran	Mrs. Shaheen
Mr. Hoeven	Mr. Merkley
Mr. Boozman	Mr. Coons
Mrs. Capito	Mr. Schatz
Mr. Kennedy	Ms. Baldwin
Mrs. Hyde-Smith	Mr. Murphy
Mr. Daines	Mr. Manchin
Mr. Rubio	Mr. Van Hollen
Mr. Lankford	

COMPLIANCE WITH PARAGRAPH 12, RULE XXVI OF THE
STANDING RULES OF THE SENATE

Paragraph 12 of rule XXVI requires that Committee reports on a bill or joint resolution repealing or amending any statute or part of any statute include “(a) the text of the statute or part thereof which is proposed to be repealed; and (b) a comparative print of that part of the bill or joint resolution making the amendment and of the statute or part thereof proposed to be amended, showing by stricken-through type and italics, parallel columns, or other appropriate typographical devices the omissions and insertions which would be made by the bill or joint resolution if enacted in the form recommended by the Committee.”

The Committee bill as recommended contains no such provisions.

BUDGETARY IMPACT OF BILL

PREPARED IN CONSULTATION WITH THE CONGRESSIONAL BUDGET OFFICE PURSUANT TO SEC. 308(a), PUBLIC LAW 93-344, AS AMENDED

[In millions of dollars]

	Budget authority		Outlays	
	Committee allocation	Amount in bill	Committee allocation	Amount in bill
Comparison of amounts in the bill with the subcommittee allocation for 2020: Subcommittee on Defense:				
Mandatory	514	514	514	¹ 514
Discretionary	622,516	694,891	623,896	¹ 665,265
Security	622,373	694,748	NA	NA
Nonsecurity	143	143	NA	NA
Projection of outlays associated with the recommendation:				
2020				² 406,533
2021				168,547
2022				57,637
2023				28,965
2024 and future years				23,020
Financial assistance to State and local governments for 2020	NA		NA	.....²

¹ Includes outlays from prior-year budget authority.

² Excludes outlays from prior-year budget authority.

NA: Not applicable.

NOTE.—Consistent with the funding recommended in the bill for emergency requirements and for overseas contingency operations and in accordance with subparagraphs (A)(i) and (A)(ii) of section 251(b)(2) of the BBEDCA of 1985, the Committee anticipates that the Budget Committee will provide a revised 302(a) allocation for the Committee on Appropriations reflecting an upward adjustment of \$72,375,000,000 in budget authority plus the associated outlays.

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR FISCAL YEAR 2020
 [In thousands of dollars]

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or -)	
				2019 appropriation	Budget estimate
TITLE I					
MILITARY PERSONNEL					
Military Personnel, Army	42,690,042	43,347,472	42,968,799	+ 278,757	- 378,673
Military Personnel, Navy	30,164,481	31,831,199	31,763,263	+ 1,598,782	- 67,936
Military Personnel, Marine Corps	13,779,038	14,175,211	14,088,775	+ 309,737	- 86,436
Military Personnel, Air Force	30,074,691	31,284,959	31,261,759	+ 1,187,068	- 23,200
Reserve Personnel, Army	4,836,947	4,964,671	4,920,866	+ 83,919	- 43,805
Reserve Personnel, Navy	2,049,021	2,123,947	2,121,507	+ 72,486	- 2,440
Reserve Personnel, Marine Corps	782,390	838,854	837,854	+ 55,464	- 1,000
Reserve Personnel, Air Force	1,860,406	2,038,040	2,022,340	+ 161,934	- 15,700
National Guard Personnel, Army	8,600,945	8,808,305	8,912,605	+ 311,660	+ 104,300
National Guard Personnel, Air Force	3,699,080	4,063,845	4,086,045	+ 386,965	+ 22,200
Total, title I, Military Personnel	138,537,041	143,476,503	142,983,813	+ 4,446,772	- 492,690
Total, Tricare Accrual payments (permanent, indefinite authority)					
Total, including Tricare	138,537,041	143,476,503	142,983,813	+ 4,446,772	- 492,690
TITLE II					
OPERATION AND MAINTENANCE					
Operation and Maintenance, Army	40,145,482	22,797,873	40,437,663	+ 292,181	+ 17,639,790
Operation and Maintenance, Navy	48,034,826	25,952,718	48,200,088	+ 165,262	+ 22,247,370
Operation and Maintenance, Marine Corps	6,540,049	3,928,045	7,608,598	+ 1,068,549	+ 3,680,553
Operation and Maintenance, Air Force	40,379,184	21,278,499	43,092,286	+ 2,713,102	+ 21,813,787
Operation and Maintenance, Space Force		72,436	72,436		
Operation and Maintenance, Defense-Wide	35,613,354	37,399,341	37,236,175	+ 72,436	- 163,166
Operation and Maintenance, Army Reserve	2,781,402	1,080,103	2,990,610	+ 1,622,821	+ 1,910,507
Operation and Maintenance, Navy Reserve	1,018,006	261,284	1,100,116	+ 209,208	+ 838,832

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL
FOR FISCAL YEAR 2020—Continued
(In thousands of dollars)

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or -)	
				2019 appropriation	Budget estimate
Operation and Maintenance, Marine Corps Reserve	271,570	61,090	292,076	+ 20,506	+ 230,986
Operation and Maintenance, Air Force Reserve	3,191,734	2,231,445	3,222,818	+ 31,084	+ 991,373
Operation and Maintenance, Army National Guard	7,118,831	3,335,755	7,588,903	+ 470,072	+ 4,253,148
Operation and Maintenance, Air National Guard	6,420,697	3,612,156	6,732,792	+ 312,095	+ 3,120,636
United States Court of Appeals for the Armed Forces	14,662	14,771	14,771	+ 109	.....
Environmental Restoration, Army	235,809	207,518	209,218	- 26,591	+ 1,700
Environmental Restoration, Navy	365,883	335,932	335,932	- 29,951	.....
Environmental Restoration, Air Force	365,808	302,744	402,744	+ 36,936	+ 100,000
Environmental Restoration, Defense-Wide	19,002	9,105	9,105	- 9,897	.....
Environmental Restoration, Formerly Used Defense Sites	248,673	216,499	216,499	- 32,174	.....
Overseas Humanitarian, Disaster, and Civic Aid	117,663	108,600	108,600	- 9,063	.....
Cooperative Threat Reduction Account	350,240	338,700	338,700	- 11,540	.....
Department of Defense Acquisition Workforce Development Fund	450,000	400,000	400,000	- 50,000	.....
Total, title II, Operation and Maintenance	193,682,875	123,944,614	200,610,130	+ 6,927,255	+ 76,665,516
TITLE III					
PROCUREMENT					
Aircraft Procurement, Army	4,299,566	3,696,429	3,766,529	- 533,037	+ 70,100
Missile Procurement, Army	3,145,256	.....	3,030,944	- 114,312	+ 3,030,944
Procurement of Weapons and Tracked Combat Vehicles, Army	4,486,402	4,715,566	4,463,582	- 22,820	- 251,984
Procurement of Ammunition, Army	2,276,330	.....	2,572,771	+ 296,441	+ 2,572,771
Other Procurement, Army	7,844,691	7,443,101	7,220,947	- 623,744	- 222,154
Aircraft Procurement, Navy	20,092,199	18,522,204	18,573,560	- 1,518,639	+ 51,356
Weapons Procurement, Navy	3,711,576	.....	3,963,067	+ 251,491	+ 3,963,067
Procurement of Ammunition, Navy and Marine Corps	952,682	.....	872,251	- 80,431	+ 872,251
Shipbuilding and Conversion, Navy	24,150,087	23,783,710	24,366,431	+ 216,344	+ 582,721
Other Procurement, Navy	9,097,138	9,652,956	10,568,201	+ 1,471,063	+ 915,245
Procurement, Marine Corps	2,719,870	3,090,449	3,045,749	+ 325,879	- 44,700

Aircraft Procurement, Air Force	17,112,337	16,784,279	17,308,918	+196,581	+524,639
Missile Procurement, Air Force	2,585,004	2,889,187	2,589,166	+4,162	-300,021
Space Procurement, Air Force	2,343,642	2,414,383	2,460,605	+116,963	+46,222
Procurement of Ammunition, Air Force	1,485,856	.....	1,625,661	+139,805	+1,625,661
Other Procurement, Air Force	20,884,225	20,687,857	21,083,464	+199,239	+395,607
Procurement, Defense-Wide	6,822,180	5,109,416	5,285,914	-1,536,266	+176,498
National Guard and Reserve Equipment	1,300,000	.....	.....	-1,300,000	.....
Defense Production Act Purchases	53,578	34,393	39,393	-14,185	+5,000
Joint Urgent Operational Needs Fund .....	.....	99,200	.....	.....	-99,200
Total, title III, Procurement	135,362,619	118,923,130	132,837,153	-2,525,466	+13,914,023
TITLE IV					
RESEARCH, DEVELOPMENT, TEST AND EVALUATION					
Research, Development, Test and Evaluation, Army	11,083,824	12,192,771	12,412,845	+1,329,021	+220,074
Research, Development, Test and Evaluation, Navy	18,510,564	20,270,499	19,818,218	+1,307,654	-452,281
Research, Development, Test and Evaluation, Air Force	41,229,475	45,616,122	45,446,727	+4,217,252	-169,395
Research, Development, Test and Evaluation, Defense-Wide	23,691,836	24,346,953	26,371,649	+2,679,813	+2,024,696
Operational Test and Evaluation, Defense	381,009	221,200	232,700	-148,309	+11,500
Total, title IV, Research, Development, Test and Evaluation	94,896,708	102,647,545	104,282,139	+9,385,431	+1,634,594
TITLE V					
REVOLVING AND MANAGEMENT FUNDS					
Defense Working Capital Funds	1,641,115	1,226,211	1,580,211	-60,904	+354,000
Defense Counterintelligence and Security Agency Working Capital Fund .....	.....	200,000	.....	.....	-200,000
Total, title V, Revolving and Management Funds	1,641,115	1,426,211	1,580,211	-60,904	+154,000
TITLE VI					
OTHER DEPARTMENT OF DEFENSE PROGRAMS					
Defense Health Program:					
Operation and maintenance	30,953,422	31,812,090	31,351,990	+398,568	-460,100
Procurement	873,160	494,324	435,526	-437,634	-18,798
Research, development, test and evaluation	2,180,937	732,273	1,707,773	-473,164	+975,500

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL
FOR FISCAL YEAR 2020—Continued
(In thousands of dollars)

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or -)	
				2019 appropriation	Budget estimate
Total, Defense Health Program ¹	34,007,519	32,998,687	33,495,289	-512,230	+496,602
Chemical Agents and Munitions Destruction, Defense:					
Operation and maintenance	105,997	107,351	107,351	+1,354	.....
Procurement	1,091	2,218	2,218	+1,127	.....
Research, development, test and evaluation	886,728	875,930	875,930	-10,798	.....
Total, Chemical Agents ²	993,816	985,499	985,499	-8,317	.....
Drug Interdiction and Counter-Drug Activities, Defense ¹	881,525	799,402	884,402	+2,877	+85,000
Office of the Inspector General ¹	329,273	363,499	363,499	+34,226	.....
Total, title VI, Other Department of Defense Programs	36,212,133	35,147,087	35,728,689	-483,444	+581,602
TITLE VII					
RELATED AGENCIES					
Central Intelligence Agency Retirement and Disability System Fund	514,000	514,000	514,000	.....	.....
Intelligence Community Management Account (ICMA)	522,424	558,000	539,400	+16,976	-18,600
Total, title VII, Related agencies	1,036,424	1,072,000	1,053,400	+16,976	-18,600
TITLE VIII					
GENERAL PROVISIONS					
Additional transfer authority (Sec.8005)	(4,000,000)	(5,000,000)	(4,000,000)	.....	(-1,000,000)
FFRDC (Sec.8024)	-179,000	.....	-53,000	+126,000	-53,000
Rescissions (Sec.8041)	-2,508,005	.....	-3,871,302	-1,363,297	-3,871,302
National grants (Sec.8047)	44,000	.....	20,000	-24,000	+20,000

Shipbuilding and conversion, Navy Judgment Fund	(30,000)	(30,000)	(30,000)				
O&M, Defense-wide transfer authority (Sec.8051)	(1,000)	(1,000)					(+ 1,000)
John C. Stennis Center for Public Service Development Trust Fund (O&M, Navy transfer authority) (Sec.8065)	10,000						
Fisher House Foundation	-250,000						-10,000
Revised economic assumptions	(11,000)						+250,000
Fisher House O&M Army Navy Air Force transfer authority (Sec.8087)	(113,000)	(11,000)	(11,000)				
Defense Health O&M transfer authority (Sec.8091)	270,000	(127,000)	(127,000)				(+ 14,000)
Public Schools on Military Installations	750,000						-270,000
Revised fuel costs	-50,000						-750,000
Working Capital Fund, Army excess cash balances	-50,000						+50,000
Working Capital Fund, Navy excess cash balances	-50,000						+50,000
Total, title VIII, General Provisions	-1,963,005		-3,904,302			-1,941,297	-3,904,302
TITLE IX							
OVERSEAS CONTINGENCY OPERATIONS/GLOBAL WAR ON TERRORISM (GWOT)							
Military Personnel							
Military Personnel, Army (GWOT)	2,929,154	2,743,132	2,743,132				
Military Personnel, Navy (GWOT)	385,461	356,392	356,392				-186,022
Military Personnel, Marine Corps (GWOT)	109,232	104,213	104,213				-29,069
Military Personnel, Air Force (GWOT)	964,508	1,007,594	1,007,594				-5,019
Reserve Personnel, Army (GWOT)	37,007	34,812	34,812				+43,086
Reserve Personnel, Navy (GWOT)	11,100	11,370	11,370				-2,195
Reserve Personnel, Marine Corps (GWOT)	2,380	3,599	3,599				+270
Reserve Personnel, Air Force (GWOT)	21,076	16,428	16,428				+1,219
National Guard Personnel, Army (GWOT)	195,283	202,644	202,644				-4,648
National Guard Personnel, Air Force (GWOT)	5,460	5,624	5,624				+7,361
Total, Military Personnel	4,660,661	4,485,808	4,485,808			-174,853	
Operation and Maintenance							
Operation & Maintenance, Army (GWOT)	18,548,500	37,987,549	19,892,938				+1,344,438
Operation & Maintenance, Navy (GWOT)	5,172,155	31,734,683	8,413,650				+3,241,495
(Coast Guard) (by transfer) (GWOT)		(190,000)					
Operation & Maintenance, Marine Corps (GWOT)	1,292,995	5,123,470	1,362,917				+69,922
Operation & Maintenance, Air Force (GWOT)	9,828,674	33,028,712	10,632,379				+803,705
Operation & Maintenance, Defense-Wide (GWOT)	8,105,991	8,448,612	8,198,105				+92,114
(Coalition support funds) (GWOT)	(900,000)	(450,000)	(20,000)				(-880,000)

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL
FOR FISCAL YEAR 2020—Continued
(In thousands of dollars)

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or -)	
				2019 appropriation	Budget estimate
Operation & Maintenance, Army Reserve (GWOT)	41,887	1,986,599	37,592	-4,295	-1,949,007
Operation & Maintenance, Navy Reserve (GWOT)	25,637	886,868	23,036	-2,601	-863,832
Operation & Maintenance, Marine Corps Reserve (GWOT)	3,345	239,693	8,707	+5,362	-230,986
Operation & Maintenance, Air Force Reserve (GWOT)	60,500	1,195,131	29,758	-30,742	-1,165,373
Operation & Maintenance, Army National Guard (GWOT)	110,729	4,376,939	83,291	-27,438	-4,293,648
Operation & Maintenance, Air National Guard (GWOT)	15,870	3,291,982	176,909	+161,039	-3,115,073
Subtotal	43,206,283	128,300,238	48,859,282	+5,652,999	-79,440,956
Alghanistan Security Forces Fund (GWOT)	4,920,000	4,803,978	3,736,661	-1,183,339	-1,067,317
Counter-SIS Train and Equip Fund (GWOT)	1,352,200	1,045,000	745,000	-607,200	-300,000
Total, Operation and Maintenance	49,478,483	134,149,216	53,340,943	+3,862,460	-80,808,273
Procurement					
Aircraft Procurement, Army (GWOT)	346,963	381,541	463,241	+116,278	+81,700
Missile Procurement, Army (GWOT)	1,729,904	4,645,755	1,423,589	-306,315	-3,222,166
Procurement of Weapons and Tracked Combat Vehicles, Army (GWOT)	1,102,108	353,454	346,306	-755,802	-7,148
Procurement of Ammunition, Army (GWOT)	299,075	2,843,230	148,682	-150,393	-2,694,548
Other Procurement, Army (GWOT)	1,364,045	1,139,650	1,120,504	-243,541	-19,146
Aircraft Procurement, Navy (GWOT)	232,119	119,045	42,045	-190,074	-77,000
Weapons Procurement, Navy (GWOT)	14,134	4,332,710	97,466	+83,332	-4,235,244
Procurement of Ammunition, Navy and Marine Corps (GWOT)	229,783	1,186,128	204,814	-24,969	-981,314
Other Procurement, Navy (GWOT)	181,173	357,600	357,550	+176,377	-50
Procurement, Marine Corps (GWOT)	58,023	20,589	20,589	-37,434	702,700
Aircraft Procurement, Air Force (GWOT)	955,248	309,110	1,011,810	+56,562	702,700
Missile Procurement, Air Force (GWOT)	493,526	201,671	201,671	-291,855	702,700
Procurement of Ammunition, Air Force (GWOT)	1,371,516	2,607,394	934,758	-436,758	-1,672,636
Other Procurement, Air Force (GWOT)	3,677,276	4,193,098	3,513,098	-164,178	-680,000
Procurement, Defense-Wide (GWOT)	572,135	452,047	447,047	-125,088	-5,000

National Guard and Reserve Equipment (GWOT)	850,000	+ 850,000	+ 850,000
Total, Procurement	11,183,170	- 1,443,858	- 11,959,852
Research, Development, Test and Evaluation			
Research, Development, Test & Evaluation, Army (GWOT)	174,354	- 126,250	- 29,770
Research, Development, Test & Evaluation, Navy (GWOT)	164,410	- 3,402	
Research, Development, Test & Evaluation, Air Force (GWOT)	128,248	- 193,686	- 322,000
Research, Development, Test and Evaluation, Defense-Wide (GWOT)	366,750	- 36,294	- 461,200
Total, Research, Development, Test and Evaluation	833,762	- 359,632	- 812,970
Revolving and Management Funds			
Defense Working Capital Funds (GWOT)	20,100	+ 4,910	
Other Department of Defense Programs			
Defense Health Program:			
Operation & Maintenance (GWOT)	347,746	- 4,322	
Drug Interdiction and Counter-Drug Activities, Defense (GWOT)	163,596	+ 10,496	
Office of the Inspector General (GWOT)	24,254	- 438	
Total, Other Department of Defense Programs	535,596	+ 5,736	
TITLE IX General Provisions			
Additional transfer authority (GWOT) (Sec.9002)	(2,000,000)		(- 2,500,000)
Ukraine Security Assistance Initiative (GWOT)	250,000	- 250,000	
Intelligence, Surveillance, and Reconnaissance (GWOT)	500,000	- 500,000	
Readiness (GWOT) (Sec.9011)	1,100,000	+ 1,100,000	+ 1,100,000
Rescissions (GWOT) (Sec.9017)	- 1,340,616	+ 506,237	- 834,379
Total, General Provisions	265,621	+ 856,237	+ 265,621
Total, title IX (OCO/GWOT)	163,980,474	+ 2,751,000	- 93,315,474

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL
FOR FISCAL YEAR 2020—Continued
[In thousands of dollars]

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or -)	
				2019 appropriation	Budget estimate
TITLE X					
ADDITIONAL APPROPRIATIONS FOR DISASTER RELIEF					
OPERATION AND MAINTENANCE					
Operation and Maintenance, Navy (emergency)			370,400	+ 370,400	+ 370,400
Operation and Maintenance, Marine Corps (emergency)			64,000	+ 64,000	+ 64,000
Operation and Maintenance, Air Force (emergency)			471,400	+ 471,400	+ 471,400
Operation and Maintenance, Army National Guard (emergency)			45,700	+ 45,700	+ 45,700
Total, Operation and Maintenance			951,500	+ 951,500	+ 951,500
PROCUREMENT					
Other Procurement, Navy (emergency)			53,000	+ 53,000	+ 53,000
Procurement, Marine Corps (emergency)			73,323	+ 73,323	+ 73,323
Aircraft Procurement, Air Force (emergency)			204,448	+ 204,448	+ 204,448
Other Procurement, Air Force (emergency)			77,974	+ 77,974	+ 77,974
Total, Procurement			408,745	+ 408,745	+ 408,745
RESEARCH, DEVELOPMENT, TEST AND EVALUATION					
Research, Development, Test and Evaluation, Navy (emergency)			113,000	+ 113,000	+ 113,000
REVOLVING AND MANAGEMENT FUNDS					
Defense Working Capital Funds (emergency)			237,000	+ 237,000	+ 237,000
Total, title X			1,710,245	+ 1,710,245	+ 1,710,245

OTHER APPROPRIATIONS							
ADDITIONAL SUPPLEMENTAL APPROPRIATIONS FOR DISASTER RELIEF ACT, 2019 (Public Law 116-20)							
Operation and Maintenance							
Operations and Maintenance, Marine Corps (emergency)	381,000						-381,000
Operations and Maintenance, Air Force (emergency)	670,000						-670,000
Total, Additional Supplemental Appropriations for Disaster Relief Act, 2019	1,051,000						-1,051,000
EMERGENCY SUPPLEMENTAL APPROPRIATIONS FOR HUMANITARIAN ASSISTANCE AND SECURITY AT THE SOUTHERN BORDER ACT, 2019 (Public Law 116-26)							
Operation and Maintenance							
Operations and Maintenance, Army (emergency)	92,800						-92,800
Operations and Maintenance, Marine Corps (emergency)	13,025						-13,025
Operations and Maintenance, Air Force (emergency)	18,000						-18,000
Operations and Maintenance, Army National Guard (emergency)	21,024						-21,024
Total, Emergency Supplemental Appropriations for Humanitarian Assistance and Security at the Southern Border Act, 2019 (Public Law 116-26)	144,849						-144,849
Grand total	668,515,759	690,617,564	687,546,478	690,617,564	687,546,478	+19,030,719	-3,071,086
Appropriations	(601,913,915)	(526,637,090)	(619,042,535)	(526,637,090)	(619,042,535)	(+17,128,620)	(+92,405,445)
Emergency appropriations	(1,195,849)		(1,710,245)		(1,710,245)	(+514,396)	(+1,710,245)
Global War on Terrorism (GWOT)	(69,254,616)	(163,980,474)	(71,499,379)		(71,499,379)	(+2,244,763)	(-92,481,095)
Rescissions	(-2,508,005)		(-3,871,302)		(-3,871,302)	(-1,363,297)	(-3,871,302)
Rescissions (GWOT)	(-1,340,616)		(-834,379)		(-834,379)	(+506,237)	(-834,379)
(Transfer Authority)	4,155,000	5,168,000	4,169,000		4,169,000	+14,000	-999,000
(Transfer Authority) (GWOT)	2,000,000	4,500,000	2,000,000		2,000,000		-2,500,000

¹ Excludes GWOT New and Advance appropriations. Includes Prior GWOT Outlays.

² Includes GWOT and emergency (except permanent appropriations).