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President requests \$533.7 billion for defense in base budget. President Barack Obama is requesting \$533.7 billion for the Defense Department for Fiscal Year 2010, a 4 percent increase over the last fiscal year. He is also requesting \$75 billion in emergency spending for military operations in Afghanistan and Iraq for this fiscal year and \$130 billion for FY 2010. The request anticipates continued American withdrawal of combat forces from Iraq in FY 2010.

Pay raises of 2.9 percent for military members and 2 percent for federal employees are included in the request. The budget outline, released Feb. 26, also calls for financing the Army to an end strength over 547,400 soldiers in the active force.

Speaking to reporters in the Pentagon Feb. 26, Defense Secretary Robert Gates said, "Over the past few months, different figures for the department's base budget top line have been the subject of speculation and debate, including a draft budget of more than \$580 billion. That last figure represented a notional effort I authorized to begin shifting war costs in a significant way from the supplementals to the base budget, additional procurement, and anticipated real costs in terms of health care benefits and pay. That proposal was not formally submitted anywhere outside this building.

"The number that matters is the one announced by the president today, and it represents an increase of more than \$20 billion over last year's Defense appropriation. In our country's current economic circumstances, I believe that represents a strong commitment to our security."

Without singling out any specific program, Gates added over the next few weeks, "hard choices" will have to be made on the defense budget. He also acknowledged that personnel costs, particularly health care, were rising.

The request also calls for expansion of concurrent receipt and Veterans Disability Compensation, part of the Association of the United States Army's legislative agenda.

On weapons systems, the budget outline said, "The administration will set realistic requirements and stick to them and incorporate 'best practices' by not allowing programs to proceed from one stage of the acquisition cycle to the next until they have achieved the maturity to clearly lower the risk of cost growth and schedule slippage."

Withdrawal plan for Iraq presented. Between 35,000 and 50,000 American service members will remain in Iraq in advisory and training roles after Aug. 31, 2010, President Barack Obama said in a speech at Camp Lejeune, N.C., Feb. 27.

"Let me say this as plainly as I can. By Aug. 31, our combat mission in Iraq will end." He said the remaining forces will leave by Dec. 31, 2011 in compliance with the status of forces agreement signed by the two nations.

Calling operations that began in March 2003 in Iraq "a long war," Obama said now was the time to "bring our troops home with the honor they have earned." He said American troops' mission had been to topple the regime of Saddam Hussein, "and you got the job done."

Obama praised the American military's efforts in controlling the insurgency and having dealt "al Qaeda a serious blow." He noted the improvements of the Iraqi security forces and the strides its government has made toward political accommodation, such as the recently concluded provincial elections. "Iraq is not yet secure and there will be difficult days ahead."

Obama said that he reached his decision by weighing events on the ground, the nature of the security agreements between the two nations and "with the critical recognition that the long-term solution in Iraq must be political."

There were about 140,000 American service members in Iraq in late February.

The president said Iraq's future in establishing a "sovereign, stable and self-reliant" nation was in its own people's hands. American forces "cannot police Iraq's streets indefinitely."

Turning to the Middle East and Afghanistan and Pakistan, he said, "This reflects a fundamental truth: we can no longer deal with regional challenges in isolation—we need a smarter, more sustainable and comprehensive approach. That is why we are renewing our diplomacy, while relieving the burden on our military. That is why we are refocusing on al Qaeda in Afghanistan and Pakistan; developing a strategy to use all elements of American power to prevent Iran from developing a nuclear weapon; and actively seeking a lasting peace between Israel and the Arab world."

Caldwell: 3 big ideas are changing the Army.

The commander of the Combined Armed Center said the release of three field manuals covering operations, stability operations and training in the past year were “three big ideas” that are changing the Army now.

Speaking Feb. 11 to 200 attendees at the Institute of Land Warfare breakfast in suburban Washington, Lt. Gen. William Caldwell said, “We elevated stability operations to be just as critical as offensive and defensive operations,” adopted a comprehensive approach to warfighting and allowed the Army “to re-tool training and education.”

He used chief of staff Gen. George W. Casey’s description of a middleweight fighter to describe the Army of the future ability to adjust to different weight classes and be successful. “Our Army must be equally versatile [and] lethal,” he said.

“Leaders must have the flexibility of mind to stay ahead of this changing environment,” Caldwell said. “We need officers to be competent, confident and creative communicators.”

The Command and General Staff College at the center on Fort Leavenworth, Kan., is changing as well especially in developing “creative and critical thinking.”

The college is also offering more spots at no cost to other agencies in the government and would send an officer to fill the student’s spot.

Although 20 slots were open, only seven students from other agencies attended the staff college. The reasons why so few, in Caldwell’s eyes, include supervisors not “wanting to give them up for a year” and other agencies “don’t have a culture of education” that is similar to the military’s.

Caldwell said that bringing more students from agencies outside the Defense Department to Leavenworth was increasingly important because of the nature of operations that involve civilian agencies and the military. “We are integrating our interagency partners at the training centers and pre-deployment exercises.”

The center also has established a directorate for complex operations. “We are looking at a major expansion of the School of Advanced Military Studies,” a second year of education at Leavenworth. Caldwell said the school would add a third more students and the focus of its work will be on Afghanistan.

Caldwell said the center is standing up the Army Physical Fitness Readiness Institute annex, in part, to address a growing challenge in the officer ranks at the 10- to 14-year mark. “It’s a lifestyle change” to control weight and improve physical fitness and a program that will also be used at the Sergeants Major Academy at Fort Bliss, Texas.

Army trauma management system has direct civilian care relationship.

What the Army has learned about trauma management has direct application to civilian medical care, the Army’s commander of its Medical Research and Materiel Command told attendees at the Association of the United States Army’s Winter Symposium and Exhibition in Fort Lauderdale, Fla.

Speaking during the science and technology day Feb. 25, Maj. Gen. George Weightman said it “applies directly to a gunshot victim in Baltimore, a traffic accident victim in Baltimore and Los Angeles.”

The Army’s trauma management system has evolved over time as the missions in Afghanistan and Iraq continue. “We have been improving our policies, tactics, techniques and procedures in how we treat trauma patients” and how the Army trains its medics and health care providers.

He said the improvements have raised survival rates from about 78 percent if wounded to 90 percent. “You need data” to improve what is being done, Weightman said.

In the Army, it started with the Joint Theater Trauma System and Joint Theater Trauma Registry. Other data was collected on how equipment held up in combat “and we shared that with the materiel guys, with the training guys, integrating what we learned.”

As an example of improved methods, Weightman said that in treating blood loss the ratio of plasma to red blood cells was changed from one to four to one to one. In looking at a patient with falling blood pressure because of traumatic injury, past practice had been to work to bring it back to normal levels. “But maybe the body has protective mechanisms and there was a good reason to let blood pressure drop.”

The development of a new generation of tourniquets also helped raise survival rates. “When do you need that tourniquet? You need it at the point of injury in the first five to 10 minutes.” Weightman said that there has not been one documented case in 862 amputations since the tourniquets went to the field of a soldier suffering long-term personal injury to a limb.

The use of space blankets to care for hypothermia victims who have suffered traumatic injury have also helped raise survival rates of severely wounded soldiers.

At about the same time, all soldiers have been taught combat lifesaving skills and the first aid kits that all soldiers carry have been greatly improved. In a year or so, Weightman expects to be fielding a finger-mounted ultrasound probe to field aid stations. For example in looking for injury inside the skull, the probe “could tell if there were bone fragments shrapnel inside the brain.” Portable ultrasound equipment is already at battalion aid stations.

DoD top researcher: Getting latest advances into service members' hand is critical.

One of the Department of Defense's top researchers called the recent growth in science and technology "an exciting time," but urged Army and defense leaders that it's important to get the latest technological advances into the hands of soldiers, sailors, airmen and marines as quickly as possible so they can have an edge over today's enemies.

As the opening presenter Feb. 25 at the Association of the United States Army's Winter Symposium and Exposition in Fort Lauderdale, Fla., Alan R. Shaffer said new technology is needed to keep service members up to date on a changing landscape. They are fighting today not just in the battlefield but in the dimensions of space and cyberspace as well.

Shafer, the principal deputy director for defense research and engineering, noted how the pace of technology today—in and outside of the military—has changed greatly so that more people throughout the world have access to the latest gadgets. He noted that the idea behind the F-22 Raptor originated in the mid-1980s but didn't reach active service until 20 years later, which is a timetable that can't happen today.

He also pointed out how many people didn't even carry cell phones 15 years ago, but that technology has advanced to where terrorists are using them to trigger explosives and bombs.

The ideal timetable for new technology is nine years, Shafer said, but in some cases, advances happen even faster. For example, within a year's time, the weight of vehicle armor was cut 33 percent without hurting protective capabilities.

He urged attendees to not just rely on the DoD for the latest innovations but to be open to ideas from commercial products. Of the "10 hot technologies" identified by the Massachusetts Institute of Technology for 2009, Shafer said, "I can draw a very rapid parallel for DoD and the Army."

One area that DoD researchers continue to explore include biometrics, something Shafer called "absolutely critical." Advances in this area have led to identifying more than 500 people working on forward operating bases as being tagged with biometrical markers.

Unmanned vehicles are also being utilized more and more in the field, Shafer said. They move faster and operate for longer periods in doing jobs that keep soldiers out of harm's way.

Speaking later on, Thomas H. Killion, deputy assistant secretary of the Army for research and technology, said unmanned ground vehicles were still in testing phases less than a decade ago. "Now there are thousands in the field performing important tasks."

Corps of Engineers adapts to changing demands in U.S., overseas.

As the enemy in Iraq adapted to what United States forces were doing, the director of research and development for the Army Corps of Engineers said American military changed how it was living and what it was doing.

James Houston, speaking Feb. 25 in Fort Lauderdale, Fla., said, "The trailer park and tent cities [Americans lived and worked in in Iraq] were vulnerable to mortars. Typical defense involved chain link fence on a Kevlar bed, [but] mortars go right through the chain links."

By improving those defenses, the number of deaths went down by a factor of 10 from 2004 to 2008.

During the surge, soldiers living in masonry buildings in Iraq's villages and cities were vulnerable to rocket-propelled grenade attacks that could level the structures. To counter that threat, the corps developed a modular protective system that four soldiers could assemble in 15 minutes. At the same time, interiors of these buildings were being strengthened with a retrofitted solution "that goes on like wallpaper."

For combat outposts in houses, schools, malls and the like, other materials were developed and installed to harden them against attack vehicle-borne improvised explosive devices. The corps is also working on ways to better protect embassies, subway systems, train systems and bridges through retrofitting. "If you name a famous bridge, we are working on it."

Houston said that there have been significant advances in detecting tunnels that in the American Southwest are used "to smuggle drugs in and take weapons out." This work is also being done in Iraq near its prisons and in Egypt along the border with the Gaza Strip.

Cyberspace Emerging as Next Major Battlefield.

Cyberspace will be the site of the next major battlefield, and it's already a major battleground with limitations that are quickly decreasing, according to members of a panel discussing information and electronic warfare at the Association of the United States Army's Winter Meeting and Exposition.

"Everything is changing before our eyes," said Lt. Gen. Keith B. Alexander, director of the National Security Agency (NSA).

Internet traffic doubles every 100 days, and the number of internet hosts is projected to exceed the human population by 2015, Alexander said Feb. 26 at the Fort Lauderdale, Fla., event. As analog and circuit technology is converted to digital, all communications become vulnerable to attack.

"Phase zero of the next war will be in cyberspace," he said.

Army is taking IED fight to enemy. Lt. Gen. Thomas Metz, director of the Joint Improvised Device Defeat Organization, told attendees at a science and technology day it is “my duty is to ensure that our warfighters receive all the counter-IED capabilities we can give them, and all the training necessary to defeat IEDs as a strategic weapon.”

Speaking Feb. 25 at the Association of the United States Army’s Winter Symposium and Exhibition, he added that IEDs were the enemies’ “weapons of choice” to raise fear and uncertainty. Their use has even toppled governments as happened in Spain following the attacks on the Madrid train system in 2004.

“Staying ahead of our enemies is our most daunting challenge.” Adding, “I would much rather take the fight to the enemy on his turf, than face them in our own backyard.”

The number of IED attacks rose from about 200 a month in 2003 to more than 2,500 in 2006, Metz said.

“Despite our many successes, we realize it’s not enough to just defeat devices. This defensive approach constantly puts troops in the line of fire—in harm’s way. We had to go on the offensive and take the fight to the enemy. We had to aggressively attack those networks that facilitate the use and employment of IEDs.”

He said, “Training is the key to success,” and it is available through the organization’s joint center of excellence. He called the changes at the Joint Readiness Training and National Training Centers “amazing” in replicating Afghan and Iraq villages with all their noise and clutter.

There are also mobile training teams bringing the lessons learned to home stations. Metz said that he is making sure he is working with the services in this training. “The Counter-IED Operations Integration Center . . . is [the] mechanism for bringing information to bear in the counter-IED fight.”

Metz said the center is working in a number of ways to not only mine data but exploit it. “It has maintained a sharp focus on those insurgent networks that facilitate the use and employment of IEDs. From financial support to supply chains, from bomb making techniques to arming and triggering devices, from recruiting to post-blast information operations, we strive to make it impossible for our enemy to hide from our analysts.

“We are working with other individuals who possess a deep knowledge of criminal behavior and the patterns of criminal activity to extract predictive evidence from the large body of data that is available. While we have achieved some success, we continue to explore techniques to reveal circumstantial behaviors, indicators, and warnings that predict a threat or the actions of an enemy.”

Army looks to partnerships to foster innovation. A few directors of subordinate organizations within Army Research, Development and Engineering Command (RDECOM) outlined partnerships—through both traditional and non-traditional channels—that have enabled researchers to foster innovations that benefit the Army.

In the Tank-Automotive Research, Development and Engineering Center (TARDEC), Grace M. Bochenek explained how they used the premise of the television show “Monster Garage” to garner ideas for the Humvee improvement program. Motivated by a demand from the vice chief of staff to find a way to give Humvees better protection and make them more fuel efficient, they brought in subject matter experts to evaluate the vehicle. Oh, and it had to be done in 120 days, not go over budget and be done outside TARDEC.

One-hundred different people with different backgrounds and technical perspectives were brought in to evaluate the Humvee. They were allowed “free brainstorming” to focus and channel ideas and how to integrate those ideas in the program, Bochenek said. They came up with 32 solutions, 29 of which were automatically implemented, she said.

TARDEC is also in the middle of a 12-month exchange program with 3M. One TARDEC engineer is working with 3M while a 3M engineer is embedded with TARDEC, Bochenek explained. This helps in two ways—the TARDEC employee will be able to bring back the experience of working in industry, and 3M will have a better understanding of how a government organization works.

Another area that is opening up the functions and processes of a government organization to non-traditional industry is the partnership with Automation Alley, a membership of technologically diverse, but typically smaller, businesses in southeast Michigan. TARDEC, which is located in Warren, Mich., “can put an issue in front of 1,000 other people” to find possibilities for solutions, Bochenek said.

In the armament research, development and engineering center (ARDEC), there are 130 active Cooperative Research and Development Agreements (CRADA) with industry partners, said Joseph A. Lannon, ARDEC’s director. This has led to developments in the XM360 lightweight 120mm gun with General Dynamics, the non-line-of-sight cannon and mortar with BAE, and software development for fire control systems with BAE York, to name a few.

ARDEC also has an intermediary partnership with InSitech, which has led to military and commercial applications of the Miniature Integration Nuclear Detection System, and an omni-directional imaging system that uses visual and thermal imaging to track potential threats. This dual use in the military and civilian community helps keep the overall costs down on both fronts.