



THE ARMY

SUSTAINABILITY REPORT 2009



SUSTAIN THE MISSION
SECURE THE FUTURE

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The United States Army is currently in the midst of its eighth year of protracted conflict. Having deployed over one million men and women in support of this Nation's longest ever war fought with an All-Volunteer Force, the Army is stressed. With an eye toward rebalancing the Force, sustainability has proven an effective tool for meeting operational requirements, while sustaining facilities and ranges, improving quality of life and reducing the burden on the natural and manmade systems on which we depend.

Army leadership has also come to understand the potential for sustainability to strengthen national security. What had previously yielded benefits through environmental initiatives is emerging as an important tool for countering the destabilizing effects of emerging challenges from competition over limited and diminishing resources, as well as population movements, pandemics and other climate change-related events.

The Army's long and proud history of excellence stems from a culture that honors the past accomplishments while striving for continuous improvement. Our commitment to sustainability is no different. The Army's last report demonstrated government-wide leadership as the first within the federal government to use the widely accepted Global Reporting Initiative (GRI) guidelines. The report presented a benchmark of the Army's accomplishments toward the goal of greening the force. This second report builds off of the last by documenting progress further down the path toward Army Sustainability, with comparisons drawn to past data in order to highlight successes and future challenges.

While we have many accomplishments to be proud of, the potential remains for significant innovation and forward progress. From the enlisted Soldier through the highest Army leadership, efforts are underway to further inculcate sustainability as an organizing principle throughout the entire Army enterprise. These efforts will continue to evolve and take shape as the Army broadens the benefits of a more sustainable enterprise. Army Green is Army Strong!

Peter W. Chiarelli
General, United States Army
Vice Chief of Staff

Joseph W. Westphal
Under Secretary of the Army

INTRODUCTION

Training, equipping, and supporting the Army's operations requires significant land, resources, and people. The weapons and tactics used to prepare Soldiers for their mission, such as incendiary munitions, explosives, and heavy armored vehicles, appear to stand in stark contrast to visions of sustainability. However, pursuing sustainable practices for its environment and community improves the Army's ability to organize, equip, train, and deploy Soldiers by meeting their future needs, and the needs of their Families and Army Civilians.

Writing a report does not make the Army sustainable, but it helps to identify where the Army may need to refocus. This report marks the second annual Army Sustainability Report (ASR), highlighting Army programs and progress in implementing sustainable practices in 2008. The publication of the first report on the Army's 2007 practices in September 2008 served as a model for other major federal entities, such as the Air Force, General Services Administration, Department of State, and United States Postal Service, that have published reports using the Global Reporting Initiative (GRI) sustainability reporting framework.

In the 2008 Army Earth Day message the senior Army leadership challenged all Army personnel to commit to minimizing the Army's *footprint*. This report provides broad highlights and describes programs from throughout the Army's operations and institutions as well as explicit performance trends on mission, environment, and community. It is published in accordance with the GRI *Sustainability Reporting Guidelines* (G3) in conjunction with the GRI's *Sector Supplement for Public Agencies*. GRI is a network-based organization that developed the guidelines through a consensus-seeking process with business, civil society, labor, and professional participants. In 2008, over 1,000 entities reported

to the GRI that they used the GRI guidelines, 100 of which were from the United States.¹

Sustainability reporting is not a short-term or one-time effort; this annual synopsis informs the Army's primary stakeholders, the American people, and other interested parties on its progress in embodying the principles of sustainability in operations, installations, systems, and community engagements. The Army's continuing contingency operations make some trend reporting difficult, as deployments consume huge amounts of resources. The figure below presents several trends and highlights from 2008, all of which are detailed in the Performance Highlights sections.

This report discusses both the Army's progress—such as reducing Toxic Release Inventory (TRI)

Army Sustainability Highlights

21 Army installations have undergone an Integrated Strategic and Sustainability planning process as of December 2008.

100% of Fiscal Year 2008 (FY08) Army new military construction projects required to be designed at 30% more energy efficient than the ANSI/ASHRAE/IESNA 90.1-2004 standards.

In 2008 all new Army construction was required to be designed to achieve a LEED®² Silver rating.

Environmental Performance Trends

- 1.4% increase in facility water use since FY07, 30.6% reduction since FY04.
- 2.3% decrease in facility energy use intensity³ since FY07, 10.4% decrease since FY03.
- 70% increase in hazardous waste disposal and a 48% increase in pounds of hazardous waste disposed per \$1,000 net Army cost of operations over Calendar Years (CY) 06–07.
- 8% decrease in absolute toxic release inventory (TRI) releases, and a 14.3% decrease in pounds TRI released per \$1,000 net Army cost of operations over CY06–07.

Soldier and Community Well-Being Performance Trends

- 5.7% decrease in Army retention and 2.4% decrease in Army recruitment since FY07, still well above goals.
- 21.6% decrease in military accident fatalities since FY07.
- 5.7% decrease in the rate of Army Civilian time lost due to injuries and fatalities since FY07.

releases and Soldier accidental fatalities—and areas where operational demands called for increased Army sustainability efforts, such as the trend in hazardous waste disposal. Seven years of overseas engagements and the demands of repeated deployments have stretched and stressed the Army's institution, support structures, equipment, Soldiers, Families, and Civilians. Although much work remains, the Army continues to pursue strategies to increase sustainability—to support the mission by reducing impact on the environment and improving community relations and Soldier, Family, and Civilian well-being.

The Army is a vast and complex enterprise that includes operational (training and warfighting) and institutional functions. In accordance with GRI, the report contains a complete index to all the recommended GRI sustainability performance metrics (Tables 3-6 in the Annex). These tables have links to the publicly available Army reports that contain information

related to each of the GRI recommended economic, environmental, and social responsibility performance metrics.

The GRI has developed 87 sustainability performance indicators for use by organizations world-wide. The indicators are consensus-based and widely accepted by the public as standards for sustainability reporting. The Army fully reports data on 25 and partially reports on 22, which is in accordance with GRI Application Level B (Figure 1). The 2009 report improves upon the Army's reporting process by providing more detail on each indicator, as suggested by feedback from the report published in 2008.

The Army invites readers to submit comments directly to the Office of the Assistant Secretary of the Army for Installations and Environment. See the back cover for the contact information and mailing address.



Report Application Level		C	C+	B	B+	A	A+
Standard Disclosures	G3 Profile Disclosure OUTPUT	Report on: 1.1 2.1–2.10 3.1–3.8, 3.10–3.12 4.1–4.4, 4.14–4.15	Report Externally Assured	Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5–4.13, 4.16–4.17	Report Externally Assured	Same requirement for Level B	Report Externally Assured
	G3 Management approach Disclosures OUTPUT	Not required		Management approach disclosures for each indicator category		Management approach disclosures for each indicator category	
	G3 performance indicators and sector supplement performance indicators OUTPUT	Report on a minimum of 10 performance indicators, including at least one from each of: economic, social and environmental		Report on a minimum of 20 performance indicators, including at least one from each of: economic, environmental, human rights, labor, society, product responsibility		Report on each core G3 and sector supplement* indicator with due regard to the Materiality Principle by either: a) reporting on the indicator or b) explaining the reason for its omission	

*Sector supplement in final version

Figure 1. Army Report Standard Disclosure Summary for GRI Application Level

ARMY OPERATIONS OVERVIEW

It is our obligation to ensure that our Soldiers today—and the Soldiers of the future—have the land, water, and air resources they need to train; a healthy environment in which to live; and the support of local communities, government officials, and the American people. To sustain the future Army, we must implement effective policies and practices that safeguard the environment and our quality of life in a manner that our nation expects of us. In light of the risks and costs that we already face as we reposition our global footprint and realign all of our bases, depots, and arsenals, we cannot afford to do otherwise.

—2008 Army Posture Statement, Army Sustainability

8

The Army—Soldiers, Families, and Civilians—is stretched to meet the demands of the current conflicts. As of September 30, 2008, more than 130,000 soldiers were deployed in Iraq and Afghanistan, many on their third or fourth tours. Army Civilians support infrastructure reconstruction missions in Iraq and Afghanistan, including but not limited to providing electricity, oil and natural gas, water, roads, security, and facilities for health and education. This time overseas puts significant pressure on the Army Family. Yet, the Army's Soldiers, Families, and Civilians continue to answer the call of duty and to display courage with distinction.

The Army is a resilient, committed, professional force, but it is out of balance. In 2007, the Army Chief of Staff, General George W. Casey, introduced four imperatives to restore balance. The Army pursued these imperatives in 2008:

- *Sustain* our forces by implementing new programs and resources to support our Wounded Warriors and Families, especially Spouses and Families who have lost their loved ones during this era of persistent conflict.
- *Prepare* our forces to succeed in the current conflict.
- *Reset* and repair units and equipment.
- *Transform* and grow the Army to make it ready for current operations and future contingencies.

The Army has made progress on the four imperatives, but restoring the balance as rapidly as possible will be no easy task, and it will require the full support of Congress and the American people.

Mission

The Army's mission is to support the National Military Strategy by providing well-trained, well-led, and well-equipped forces to the combatant commanders. This mission encompasses the intent of Congress, as defined in Title 10 *United States Code*, for the military to

- preserve the peace and security of, and provide the defense for, the United States; its territories, commonwealths, and possessions; and any areas it occupies;
- support national policies;
- implement national objectives; and
- overcome any nations responsible for aggressive acts that imperil the peace and security of the United States.

New adversaries, technologies, persistent conflict, and the growth in asymmetric warfare have compelled the Army to transform how it trains and equips its Soldiers, how it is organized, and how it fights or engages in operations.



Soldiers from Company A, 101st Airborne Division Special Troops Battalion, air assault into a village inside Jowizak Valley in Parwan province, Afghanistan.

Vision

The Army is committed to remaining the world's preeminent land power, relevant and ready at all times to serve the Nation and to support its allies. The Army will continue to supply U.S. Combatant Commanders with the forces necessary to defeat any adversary, in any situation, at any time. The Army, therefore, must fully train and appropriately organize its forces, develop innovative and adaptive leaders, and design support structures appropriate for the new global security environment.

Leadership

This past year saw sustained leadership at the highest level, with former Secretary Pete Geren replaced in September 2009 by Secretary John M. McHugh serving as Secretary of the Army and General George Casey continuing his duties as the Army Chief of Staff. To learn more about the Army leadership structure, visit the Army website at <http://www.army.mil/leaders/>.

Organization

The Army is one of the three military departments (Army, Navy, and Air Force) reporting to the Department of Defense (DoD). To fulfill the requirements of today's defense missions, including defending the homeland and supporting civil authority, the Army has more than 710,000 Soldiers on active duty from all components in nearly 80 countries worldwide. These warfighters are backed by more than 258,000 Army Civilians, who perform critical missions in support of the institution at every level. More than 4,100 Army Civilians and more than 33,000 U.S. contractor employees are forward-deployed, performing vital missions abroad.

The Army is large and complex, organized with the primary objective of supporting and sustaining the mobilization, training, and deployment of its Soldiers anywhere in the world. Headquarters, Department of the Army (HQDA), under the direction of the Secretary of the Army and the Chief of Staff, leads and manages the entire Army (Figure 2).

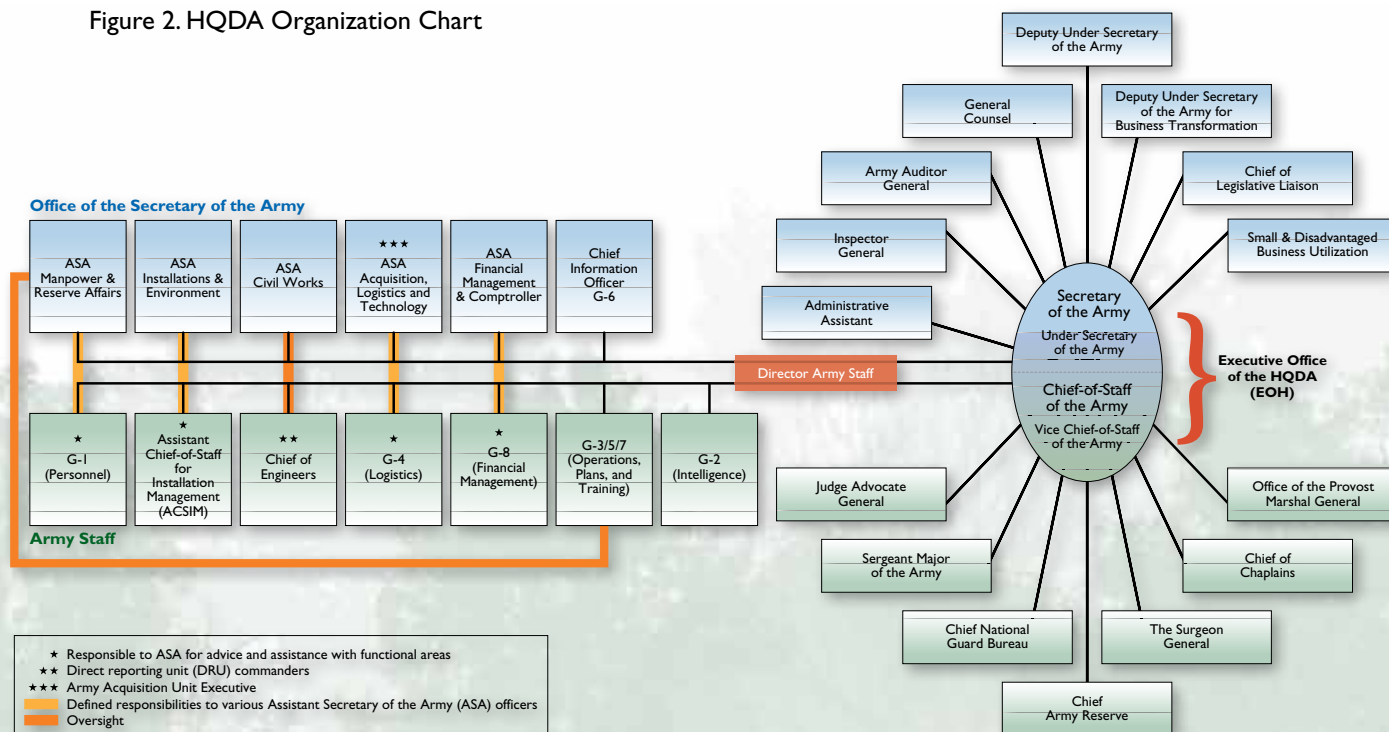
The Army's organizational structure consists of two interdependent pieces:

1. The warfighting, or operational, Army.
2. The institutional Army.

The operational Army consists of numbered armies, corps, divisions, brigades, and battalions that advance the mission around the world. These are organized by region. The institutional Army supports the operational forces by providing the training, facilities, and equipment to prepare and sustain Soldiers. Within the institutional Army, the U.S. Forces Command trains, mobilizes, and

deploys Soldiers to the operational Army. Within the institutional training domain of the institutional Army, the U.S. Training and Doctrine Command (TRADOC) develops leadership among Soldiers and Civilian leaders, recruits Soldiers, designs the future combat force, and maximizes institutional learning. The U.S. Army Materiel Command (AMC) provides acquisition and logistics support to the Army, including managing industrial bases and processes. Other Direct Reporting Units (DRU) to HQDA mentioned in this report include the U.S. Army Medical Command (MEDCOM), U.S. Army Corps of Engineers (USACE), and the Reserve Command.

Figure 2. HQDA Organization Chart



Source: Derived from FY08 Army Annual Financial Report and added Office of the Provost Marshal General for accuracy.

The Army's active and reserve components have both operational and institutional functions. The active component consists of full-time Soldiers assigned to the operational and institutional organizations that perform day-to-day Army missions. Congress annually reviews and mandates the number of Soldiers that the Army may maintain. The Reserve component consists of the Army National Guard (ARNG) and the U.S. Army Reserve (USAR).

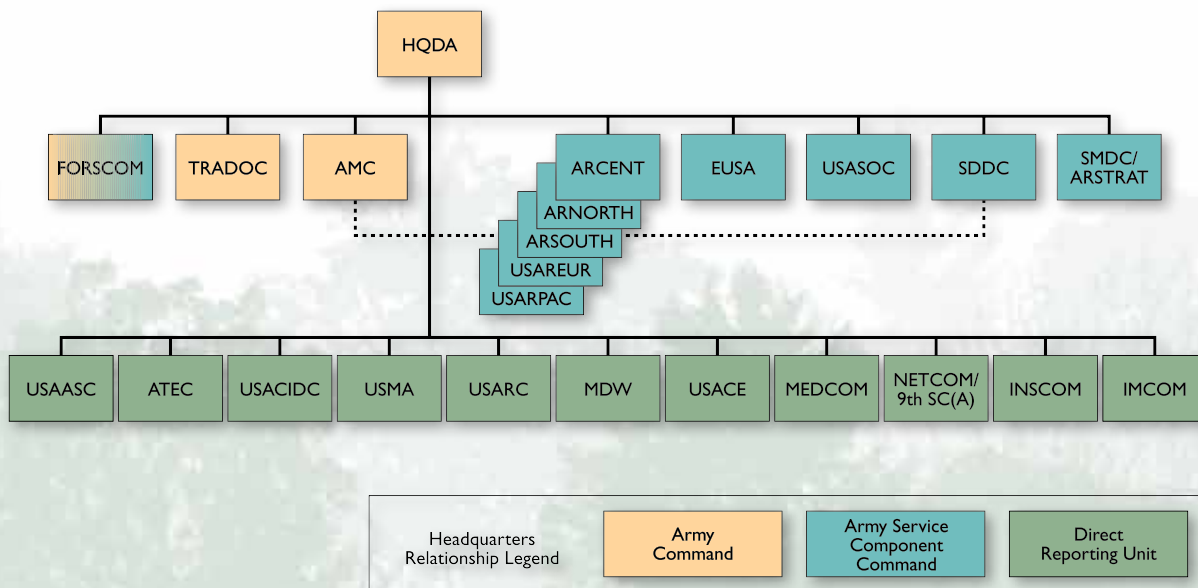
The ARNG has two missions: federal and state. Its federal mission is to provide trained and ready forces for wartime, national emergencies, and other requirements. Its state mission is to train for, and respond to, domestic emergencies and other missions as required by state law. Unless

federally mobilized, ARNG units are commanded by their state executive, usually the governor.

The USAR is the primary reserve force of the Army. It provides specialized units and resources to support the deployment and sustainment of Army forces around the globe. In addition, the USAR is the main source of individual Soldiers to augment headquarters staff and fill vacancies in the active component.

Each organization in the Army has unique challenges in incorporating sustainability. These challenges will be discussed in the following sections. Visit the Army website, <http://www.army.mil/info/organization/>, to learn more about how the Army is organized.

Figure 3. Army Command Structure*



* See Acronyms Annex for definitions.

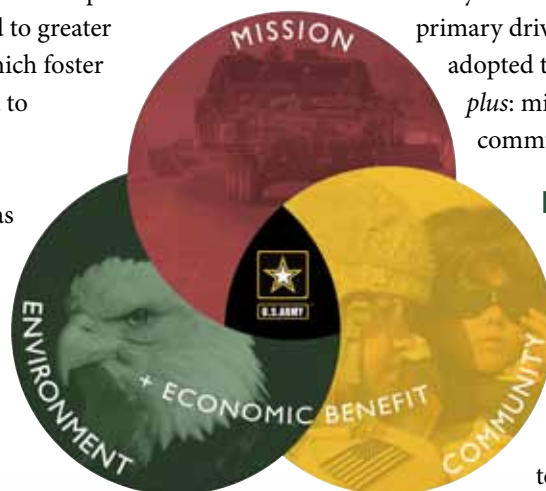
THE ARMY'S TRIPLE BOTTOM LINE—PLUS

The Army is facing several global challenges to sustainability that create a volatile security environment with an increased potential for conflict:

- *Globalization's* increased interdependence and connectivity has led to greater disparities in wealth, which foster conditions that can lead to conflict.
- *Technology*, though it has many benefits, is also exploited by extremists to manipulate perceptions, export terror, and recruit disenfranchised or threatened people.
- *Population growth and poverty*; the poor in fast-growing urban areas are especially vulnerable to antigovernment and radical ideologies.
- *Increasing demand for resources*, such as energy, water, and food, especially in developing economies, will increase competition and the likelihood of conflict.
- *Climate change and natural disasters* strain already limited resources, increasing the potential for humanitarian crises and population migrations.

The Army has an opportunity to set a sustainable example for other complex government and private organizations. To face the security challenges ahead, the Army will continue to transform into a land force that is versatile, expeditionary, agile, lethal, interoperable, and sustainable.

For this purpose, the Army adapted a concept familiar to the private sector, the *triple bottom line*, where common ground is found between financial interests and what is right for the environment and society. To illustrate the concept of sustainability in an Army context, where mission is the primary driver instead of profit, it adopted the *triple bottom line—plus*: mission, environment, and community, plus economic benefit.



Mission

Army sustainability addresses both present and future mission needs while strengthening community partnerships that improve its ability to organize, equip, train, and deploy Soldiers. *Sustain the Mission, Secure the Future*, the theme of the Army's sustainability program, is inspired by the global challenges to the Nation's security and stability, which stress the interconnected human, economic, and natural systems.

The Army's primary mission is to defend the United States—its people, its land, and its heritage. In this rapidly changing environment, meeting mission requirements worldwide will increasingly require both safeguarding the natural systems upon which quality of life depends, and more effectively partnering at the global, federal, state, and local levels.

Environment

Sustainability connects the Army's activities today to those of tomorrow with sound business and environmental practices. Environmental compliance with federal, state, and local laws ensures that the Army manages its activities and

the natural resources for which it is responsible in the manner that the American people expect. However, to sustain the mission, the Army has to do more than comply with environmental regulations.

Community

The *triple bottom line*—plus values not only natural resources, but also the health and safety of Soldiers, the Army Family, Civilians, and local communities—inside and outside the fence line. The Army must implement effective policies and practices that safeguard quality of life, health care, education, and other community needs as the Nation expects.

Sustainability cannot be achieved alone or on a single Army installation. Sustaining the future requires a

deep and personal commitment from every member of the Army team—leaders, Soldiers, Families, and Civilians. Sustainability requires the involvement of local communities as well as the cooperation, collaboration, and commitment of the administration, Congress, DoD, industry, and the general public.

Plus

The Army recognizes that sustainable practices reduce the true cost of doing business. The Army's current business transformation initiative acts together with sustainability to drive and accelerate Army innovation, measured in reduced total ownership costs, as well as reduced environmental and community impact. As a federal entity the Army is responsible to the American public to use resources wisely.



Members of the Texas ARNG help a woman stranded by a flood in July 2008.

STRATEGIC SUSTAINABILITY GOALS

As the Army works to restore and meet operational challenges, it is obligated to ensure that Soldiers today—and those of the future—have the land, water, and air resources they need to train; a healthy environment in which to live; and the support of local communities and the American people. In the *Army Strategy for the Environment* (ASE), the Army established far-reaching sustainability goals, through which it looks to institutionalize sustainable practices as follows:

- Foster an ethic within the Army that takes us beyond environmental compliance to sustainability.
- Strengthen Army operational capability by reducing our environmental footprint through more sustainable practices.
- Meet current and future training, testing, and other mission requirements by sustaining land, air, and water resources.
- Minimize impacts and total ownership costs of Army systems, materiel, facilities, and operations by integrating the principles and practices of sustainability.
- Enhance the well-being of our Soldiers, Civilians, Families, neighbors, and communities through leadership in sustainability.
- Use innovative technology and the principles of sustainability to meet user needs and anticipate future Army challenges.

In the following sections, the report highlights Army programs that affirm these goals and the Army's 2008 successes.

GOAL: Foster A Sustainability Ethic

Through education, outreach, and setting the example, we inspire each other to take proactive measures and achieve excellence.

It is no coincidence that the ASE's first goal is to foster a sustainability ethic. Sustainability requires integrating programs from throughout the base and involving those that may not identify themselves as having environmental or social missions. Integrated Strategic and Sustainability Planning (ISSP), awards for sustainability and energy and environment successes are two ways the Army is fostering a sustainability ethic.

Integrated Strategic and Sustainability Planning

An ISSP allows installations to bring together stakeholders from throughout the installation to think proactively about future challenges to sustainability. The result of the planning process is a strategic plan that addresses not only the physical and environmental components of Army installations, such as buildings and natural resources, but also management practices and community involvement. An ISSP is unique in that it looks at a 25-year period and reviews life-cycle cost-effective investments to meet future missions and community aspirations.

As of 2008, 21 Army installations have undergone an ISSP process. This same year Fort Bragg, North Carolina, the first Army installation to develop and implement an ISSP, was recognized with a 2008 Secretary of the Army Sustainability Award.

One of Fort Bragg's 25-year goals is sustainable transportation: to "build a sustainable world-class mass transportation network providing seamless transition between multiple modes of travel while reducing harmful emissions by 2030." In response, it developed and designed a shuttle system with 12 stops servicing over 400 buildings.

In 2008, the system provided a transportation alternative to over 35,000 passengers, including free transportation for Soldiers, Families, Civilians, wounded warriors, and government contractors. Fort Bragg is planning to add more buses compliant with the American Disability Act and expand service to more areas on and off the installation.

On the Army-wide level, the U.S. Army Environmental Command promotes sustainability to Army stakeholders through Monthly Sustainability Information Exchange (MOSIX) virtual meetings. MOSIX meetings are opportunities to discuss and learn about ISSPs, potential technologies, and projects being executed today.

Army Awards

In addition to Fort Bragg's award, many Army projects were recognized in 2008, including the following:

- 2008 White House Closing the Circle Award⁴

- » Sustainable Design/Green Buildings: Fort Bragg, North Carolina

- 2008 Secretary of Defense Environmental Awards⁵

- » Cultural Resources Management: Redstone Arsenal, Alabama
- » Environmental Excellence in Weapon System Acquisition: M115A2-M116A1 Simulator, Perchlorate Replacement Team, Aberdeen Proving Ground, Maryland
- » Pollution Prevention: Aviation Classification Repair Activity Depot, Army National Guard, Connecticut

- » Environmental Quality: U.S. Army Garrison, Daegu, Korea
- » Natural Resources Conservation: Camp San Luis Obispo, California Army National Guard

- 2008 Secretary of the Army Environmental Awards⁶

- » Natural Resources Conservation: Camp Ripley Maneuver and Training Center, Minnesota Army National Guard
- » Cultural Resources Management: Camp Navajo, Arizona Army National Guard, and Fort Drum, New York
- » Environmental Quality: U.S. Army Garrison Bamberg, Germany
- » Pollution Prevention: Combined Support Maintenance Shop, Michigan Army National Guard, and Field Maintenance Shop #2, North Carolina Army National Guard
- » Environmental Restoration, Fort Bragg, North Carolina



Fort Bragg's Sustainable Design Team being awarded the White House Closing the Circle Award, 2008.

- 2008 Secretary of the Army Energy and Water Management Awards⁷
 - » Renewable/Alternatives: Fort Carson, Colorado
 - » Energy Efficiency/Energy Management: U.S. Army Garrisons Vicenza, Italy; Bamberg, Germany; and Camp Zama, Japan; Fort Campbell, Kentucky; Radford Army Ammunition Plant, Virginia, and an individual award for Mr. Glenn Stubblefield from Fort Gordon, Georgia
 - » Innovative/New Technology: Chief Joseph Dam, Washington State and Fort Hood, Texas
 - » Water Conservation: Fort Knox, Kentucky
- 2008 Federal Electronics Reuse and Recycling Campaign Awards, the Office of the Federal Environmental Executive
 - » Fort Bragg, North Carolina.

GOAL: Strengthen Army Operations

Strengthen Army operational capability by reducing our environmental footprint through more sustainable practices in both operations and garrisons.

The Army is committed to being the best possible steward of its natural resources while fulfilling its operational mission. In 2008, the Army made strides to strengthen operational capability by reducing its energy, water, and waste footprint.

Army Energy Security

While engaging in practices to enhance environmental stewardship, the Army also

is improving its energy security posture and assuring access to critical power for the full spectrum of Army missions. Army energy security has five key components:

- *Surety*: preventing loss of access to required power and fuel sources
- *Survivability*: ensuring resilience in energy systems to overcome loss of access
- *Supply*: accessing alternative and renewable energy sources
- *Sufficiency*: providing adequate power for critical missions when, where, and in the quantities needed
- *Sustainability*: promoting support for the Army's mission, its community, and the environment.

In 2008, the Army established the Deputy Assistant Secretary of the Army for Energy and Partnerships within the Assistant Secretary of the Army for Installations and Environment (ASA I&E) to focus on energy security. To solidify senior leadership on this topic, the Secretary of the Army and Army Chief of Staff chartered the Senior Energy Council (SEC). The SEC provides guidance for the development of Army power and energy priorities and implementation plans, as well as synchronization of energy program resource requirements and budgeting.

In 2008, the Army's 44 renewable electricity-generation programs provided more than 19,000 megawatt-hours (MWH) of non-fossil fuel energy to its installations. To increase energy

security, the Army announced several pilot projects and initiatives in 2008, including:

- Up to 500 MW of renewable projects, including mostly solar thermal electric generation, at Fort Irwin, California
- A 30 MW geothermal electric power generation project at Hawthorne Army Depot, Nevada⁸
- Upgrading heating/cooling, solar lighting, and using alternative energy at Fort Bliss, Texas.

The Army is also investigating multiple strategies to reduce energy use, including, smart micro-grid technology to manage electric demand at forward operating bases and insulation of tents in theater.

Energy and Water: Army Environmental Policy Institute—Sustain the Mission Project⁹

In 2008, the Defense Science Board (DSB) Task Force on DoD Energy Strategy identified two primary energy challenges for the Army:

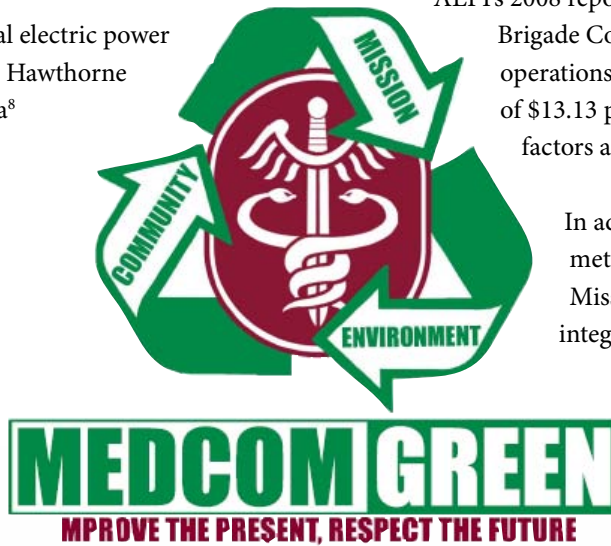
- Unnecessarily high and growing contingency operations fuel demand, exposing Soldiers and Civilians to greater risk and increasing costs
- Installations completely dependent on vulnerable commercial power grids.¹⁰

In contingency operations, nearly 50 percent of the load carried by supply is fuel. Clean drinking water

makes up another 20 percent. In response to the recommendations of the DSB Task Force, the Army Environmental Policy Institute's (AEPI's) Sustain the Mission Project developed a sustainability cost methodology for calculating the fully-burdened cost of fuel and water both in operations and at the garrison.

AEPI's 2008 report found that a Stryker Brigade Combat Team in contingency operations has a fully burdened cost of \$13.13 per gallon of fuel when all factors are taken into account.

In addition to creating this methodology, AEPI's Sustain the Mission project also coordinated integration among Army offices in support of the *Army Strategy for the Environment* and conducted a workshop on sustainability analysis tools. The SMP identifies how reducing the *footprint* of the Army supports the mission.



Waste: Medical Command Sustainability Strategy

MEDCOM provides medical leadership for field units and manages fixed medical units. Its sustainability strategy helps ensure MEDCOM's mission to:

- Ensure military forces are deployed in a state of optimal health.
- Ensure deploying units are capable of supporting the medical requirements of deployed forces.
- Manage the health care of the Soldier, the Soldier's Family, and the military alumni.

In 2008, MEDCOM implemented innovative technologies to reduce waste. It piloted the use of

a system that collects and reduces the amount of regulated medical waste generated during surgeries by as much as 50 percent. Additionally, MEDCOM tested equipment that will both decrease the amount of hazardous waste generated by laboratory sampling and aid in complying with the patient privacy rule under the Health Insurance Portability and Accountability Act. Both technologies have proven successful and will be incorporated throughout MEDCOM where practicable. MEDCOM also reduced select hazardous waste streams; as a result, Army hospitals are now virtually mercury free.

GOAL: Meet Test, Training, and Mission Requirements

Meet current and future training, testing, and other mission requirements by sustaining land, air, and water resources.

Restricted training and equipment testing increases delays and is a serious threat to safety and the mission. The Army meets test, training, and mission requirements by creating permanent buffer lands for its installations and protecting endangered species, air, and water.

The Army Sustainable Range Program

The Sustainable Range Program maximizes the Army's ability to meet test, training, and mission requirements by conserving ranges and training lands. The Army meets this goal by obtaining essential data on its natural resources, managing these natural resources for multiple uses, and educating the public on the Army's training needs.

One of the core elements of the Sustainable Range Program is the Integrated Training Area Management (ITAM) program. ITAM funds land rehabilitation and erosion control projects. For

example, as of 2008, Fort Hood, Texas, installed 4,500 maneuver access structures or "plugs" that stabilize gullies for vehicles. This project reduced erosion from 33 tons per acre per year to 4 tons per acre in 2008—preserving natural resources and maintaining the land for training.

Army Compatible Use Buffer Program

However, training can also be limited by activity outside of the fence line. One of the major threats to training requirements is encroachment—the incompatible use of land, air, water, and other resources caused by incompatible land use, such as residential communities, and habitat fragmentation. Encroachment is also a problem for the communities outside the fence line, who could be exposed to reduced air quality and noise.

The Army Compatible Use Buffer (ACUB) program facilitates partnerships between the Army, conservation organizations, state, and local governments, and landowners to limit incompatible land use around Army installations. This reduces restrictions to daily military activities. The ACUB program supports local and regional planning and sustainability efforts by working toward common goals and objectives.

Since the program began, the military buffer program has been working with its partners to preserve 95,962 acres of high-value habitat—a win-win solution to encroachment. In FY08, the Army added 14,375 acres.

Protecting Rare Species: U.S. Army Garrison Hawaii

U.S. Army Garrison, Hawaii (located on the islands Oahu and Hawaii) is a leader in the collection and propagation of rare plant species on the Hawaiian Islands. U.S. Army Garrison Hawaii's Natural Resource Program manages more than 100 federally listed species and their habitats. It also manages four

greenhouses with a total of more than 12,000 square feet of growing space, three on Oahu and one in Pohakuloa on Hawaii. The program grows an average of 2,000 common native and endangered plants in the greenhouses and coordinates more than 2,000 volunteer hours to transplant them back into the wild.

By propagating and transplanting rare species, the Army ensures that no single training event or environmental catastrophe would destroy an entire plant species. As fire is the main threat from military training, without the plant propagation work of the Natural Resource Program, the Army would have had to limit the use of incendiary munitions, detracting from the realistic nature of training events.

GOAL: Minimize Impacts and Total Ownership Costs

Reduce environmental impacts and the true cost of doing business by integrating sustainable practices into Army systems, materiel, facilities, and operations.

Sustainability requires planning for the long-term—reviewing the true cost of doing business on the mission, environment, and community. The Army is minimizing impacts and total ownership costs through green building strategies, acquisition, and procurement.

Green Building Strategies

Beginning in 2008, Army policy required all Army vertical construction with climate control to be designed to achieve the minimum of a LEED® Silver rating¹¹. LEED® is a third-party certification program and the nationally accepted benchmark for the design, construction, and operation of high performance green buildings promoted by the U.S. Green Building Council. Its green requirements include sustainable

siting, energy, water, indoor environmental quality, and material and waste management. In January 2008, the USACE created a LEED® Implementation Guide to assist Army installations with this policy.

In December 2008, the Army formed a Sustainable Design and Development (SDD) Validation committee to develop a plan to validate Army self-certification of construction. The Army continues to pursue information on actual building performance into 2009.



Workers finish the roof of a “green” building under construction at Fort Hood, Texas. The building is designed to meet the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED®) silver-level criteria.

The Army recognizes that the new construction policy does not address the Army’s significant existing building portfolio. In addition to this policy, the Army is organizing to adhere to the green building requirements in Executive Order (EO) 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. This EO requires the Army to ensure that 15 percent of its existing inventory meets the *High Performance and Sustainable Buildings* Guiding Principles by 2015. These guiding principles are intended to:

- reduce the total ownership cost of facilities;
- improve energy efficiency and water conservation;

- provide safe, healthy, and productive built environments; and
- promote sustainable environmental stewardship.

In 2008, the Interagency Sustainability Working Group released new guidance on the EO 13423 existing building requirements.¹² The first year of reporting is 2009. Meeting this and future requirements will be a major initiative in coming years.

Green Acquisition

As part of the 2008 energy security strategy, the Army initiated many programs to acquire green vehicle technology. The Army planned to increase the number of leased neighborhood electric vehicles in the next few years. These vehicles are versatile and cost-effective in an installation setting, where short trips are common. The first leases begin in 2009. The Army also continued to develop and demonstrate hybrid-electric vehicles in 2008 as part of its modernization program, Future Combat Systems. The U.S. Army Tank Automotive Research, Development, and Engineering Center (TARDEC) showcased its XM1124 Hybrid-Electric Humvee at the 2008 Society of Automotive Engineers World Congress, highlighting an all-electric drive train. However, green acquisition is more than vehicles, as highlighted by the Tactical Garbage and Energy Refinery (TGER).

The Tactical Garbage to Energy Refinery

In 2008, the Army began operational testing of the TGER at Camp Liberty, Iraq. To minimize impacts of energy and waste management supply, the TGER converts 1,300 to 2,500 pounds of liquid and food waste per day into an ethanol gas. This gas is used to power a 60kW generator for 600 or more

Soldiers. The total system is small enough to fit in a CONEX container and is easily transportable. The TGER cuts costs by conserving fuel, producing thermal energy for showers and laundry, and reducing waste disposal costs. It also shortens the logistical tail of operations in Iraq, requiring fewer trucks that could become targets for improvised explosive devices. It advances the mission, protects the Soldier, and reduces environmental impact.



The Tactical Garbage to Energy Refinery being installed in Iraq.

The TGER was a product developed in 2007 by the Rapid Equipping Force (REF), which assesses Army business practices and acquisition techniques to equip Soldiers with solutions, including future force technology solutions. The U.S. Army Research, Development and Engineering Command stated that this technology could also be useful in post-disaster areas where waste is plentiful.¹³

Green Procurement

For the Army, green procurement is not only an issue of compliance—it also minimizes environmental impacts while reducing costs. The Resource Conservation and Recovery Act (RCRA) directs agencies to develop procurement programs for recycled material. The Farm Security and Rural

Investment Act of 2002 requires programs for bio-based materials, and the Energy Policy Act of 2005 requires programs for energy efficient equipment and vehicles. In 2006, the Army advanced this initiative by establishing the Army Green Procurement Program.¹⁴

Green procurement is an element of pollution prevention. The Sustainable Painting Operations for the Total Army program supports solutions that reduce or eliminate hazardous air pollutants from painting operations. This not only improves air quality, but also avoids costs of future regulatory requirements. One example of its application in day-to-day operations is by the Connecticut Army National Guard.

In 2008, the Connecticut Army National Guard's Aviation Classification Repair Activity Depot received a Secretary of Defense Environmental Award for a new paint. Their new system uses chromium 3 primer instead of chromium 6, a known carcinogen. Beyond avoiding potential health risks, the new paint performs better, being more resistant to fading and reduces the need and cost to repaint. The Connecticut Army National Guard is saving money while protecting their community from air pollutants.

GOAL: Enhance Well-Being

Enhance the well-being of our Soldiers, Civilians, Families, neighbors, and communities through leadership in sustainability.

Community is an integral part of sustainability. As part of the *triple bottom line*—plus, the Army strives to enhance the well-being of its Soldiers, Civilians, Families, neighbors, and communities today and in the future. This includes social programs for those inside and outside the fence line, emergency response and natural resource management in the United States, and infrastructure development support overseas.

Shoulder to Shoulder, No Soldier Stands Alone: Army Suicide Prevention Program

The Family and Morale, Welfare and Recreation Command serves the needs, interests, and responsibilities of each individual in the Army community through many programs. The Army Suicide Prevention Program is one such program, an Army-wide commitment to provide resources for suicide awareness, intervention skills, prevention, and follow-up in an effort to reduce the occurrence of suicidal behavior across the Army. In FY08, a General Officer Steering Committee was initiated by Army G-1, Chief of Chaplains, and the Surgeon General. It identified the need to reduce the stigma of seeking mental health care, improve access to behavioral health providers, raise awareness of junior leaders, provide actionable intelligence to field commanders, and increase life skills.

Army Family Covenant

In direct response to Army Family concerns and to enhance the quality of support to Soldiers and their Families in order to preserve the All-Volunteer Force, The Secretary and Chief of Staff of the Army established the Army Family Covenant in October 2007. This Covenant is a commitment to:

- Standardize and fund existing Family programs and services
- Increase accessibility and quality of health care
- Improve Soldier and Family Housing
- Ensure excellence in schools, youth services and child care
- Expand education and employment opportunities for Family members.

As part of the Army Family Covenant in 2008, the Army increased the number of Military Family Life

Consultants, added Family Readiness Support Assistant positions, established Soldier and Family Assistance Centers for Warriors in Transition, accelerated Child Development and Youth Center construction, expanded the Residential Communities Initiative Program, refocused Survivor Outreach Services mission, supported the Post-9/11 GI Educational Benefit Bill, expanded the Army Spouse Employment Program. The Army continues to fulfill the Covenant commitment.

Army Community Covenant

From the Army Family Covenant came the Community Covenant in 2008. The program is designed to foster and sustain effective state and community partnerships with the Army to improve the quality of life for Soldiers and their Families, both at their current duty stations and as they transfer to other states. These partnerships support the strength, resilience and readiness of Soldiers and their Families as well as recognize the support of the communities in which they live and work. The covenant includes community-based programs and services to support deployed units, Wounded Warriors, Families, and surviving spouses, which are available on the website: <http://www.army.mil/community>. The first official Community Covenant signing took place in Columbus, Georgia on April 17, 2008. In 2008, there were 85 signing ceremonies across the country.

USACE: Civil Works

The USACE contributes to national sustainability by serving the public well beyond the borders of Army installations. Its Civil Works program provides critical management of the Nation's water resources; protection, restoration, and management of the environment; disaster response and recovery; and engineering and technical services. As a few examples, since FY05, USACE has restored, created, improved, or protected 46,446 acres of habitat and constructed storm damage reduction projects throughout the Nation's shoreline. USACE also provides recreational services for the community. In FY08, 137 million

people visited Army Corps of Engineer recreational areas, an increase of 3.8 percent since FY07.

USACE is also evaluating potential future threats to the Nation's water security. In 2008, it initiated research into how climate change will affect water resources management.

USACE: Military Program

USACE has essential programs for the military and communities in overseas locations. In the Gulf Region, USACE supports contingency operations through reconstruction, restoring Iraqi oil and electricity, supporting base operation facilities, building infrastructure for the Afghan National Army and Police, constructing counter narcotics and law enforcement facilities, and supporting the U.S. Agency for International Development in construction of roads, bridges, dams, schools, medical clinics, and irrigation systems.

As of September 2, 2008, the Gulf Region Division completed 4,247 projects in the Persian Gulf:¹⁵

- Added and restored 4,439 MW of electricity
- Protected 0.9 million cubic meters of water treatment capacity per day affecting 4.7 million people
- Completed 235 village road, 112 railroad, 23 aviation, and 8 port projects
- Turned over 125 Primary Healthcare Centers to the Iraqi Ministry of Health
- Renovated 41 hospitals
- Completed 1,089 school renovations
- Completed construction on 155 border posts, 97 fire stations, 48 courthouses, and 6 correctional facilities

GOAL: Drive Innovation

Use innovative technology and the principles of sustainability to meet user needs and anticipate future Army challenges.

TARDEC Fuel Efficient Ground Vehicle Demonstrator (FED)

In 2008, the Office of the Secretary of Defense (OSD) initiated the FED program, due to the energy conservation needs highlighted in the Defense Science Board: Energy Security Task Force. The intent of this program is to demonstrate a tactical vehicle that with new technologies can perform with greater fuel economy than conventionally available. This vehicle will reduce the need for fuel in contingency operations. TARDEC, part of the U.S. Army Research Development and Engineering Command, convened six subject matter experts to review technologies, including government and industry personnel. Currently TARDEC is in the technical assessment and concept development phase.

Renewable Energy in Contingency Operations

Solar power is growing for contingency operations in Iraq and Afghanistan. It presents a secure, flexible, and abundant energy source. By the end of 2008, USACE has installed over 800 solar streetlights in Fallujah and the Iraq Ministry of Electricity installed 5,000 in

Mostly desert and a lot of sun, it makes sense there's a place for solar power in Iraq.

—Army.mil News Dec. 2008



As many as 800 solar-powered street lights have been put up in Fallujah by the Army Corps of Engineers, and the Corps expects to place as many as 600-700 more.

Baghdad.¹⁶ These lamps provide a secure source of lighting at night that require no maintenance.

The Army has also been supporting the installation of solar energy for critical services—medical clinics. In 2008, Soldiers with the 2nd Brigade Combat Team, 1st Infantry Division, Multi-National Division-

Baghdad oversaw an Iraqi-led and Iraqi-run project to install 32 panels on the roof of the Ameriyah clinic in Baghdad, powering the labs, birthing section, and refrigeration units protecting vaccines and medical supplies. This area receives 10 hours of sunlight daily, enough to generate 72 hours of power—

allowing the staff to provide non-stop service.

The Army's REF continues to evaluate wind and hydro systems for forward operating bases, highlighted in the ASR published in 2008.

Renewable Energy on Army Installations

When including thermal sources, the Army's total renewable energy use in 2008 was 3.1 percent of total energy use. However, the Army obtained 1.1 percent of total electric use from Energy Policy Act 2005-defined renewable sources in FY08, well short of the act's 3% requirement. Though the Army reported this percentage in FY07 as 2.1 percent, this drop is due to errors in overstated FY07 data and FY08 weather-

related low head hydropower output at Rock Island Arsenal, Illinois. Purchased renewable energy totaled

102 thousand megawatt hours (MWh), mostly from a 2.0 MW Photovoltaic (PV) array at Fort Carson, Colorado.

Currently the Army operates 70 renewable energy projects on site. Three new projects were implemented in FY08.

Location	Project Description	Capacity
Fort Riley, Kansas	PV Powered Training Range Targets	3.3 kW
Fort Knox, Kentucky	Wind Turbine	1.8 kW
Detroit Arsenal, Michigan	PV Powered Public Address System	2.0 kW

Table I. New Army On-site Renewable Energy Projects for FY08

To learn more about the Army and DoD's energy initiatives, view the FY08 Defense Energy Management Report: http://www.acq.osd.mil/ie/energy/energymgmt_report/main.shtml.

Fort Carson, Colorado: PV Array Project

Fort Carson, Colorado, supports 130,000 people and provides stewardship of 373,000 acres to train, mobilize, deploy, and sustain combat-ready forces.

As part of its ISSP, Fort Carson constructed a \$13 million contractor-owned/contractor-operated, 2 MW, ground-mounted, PV array. The Fort Carson solar array is the largest of its kind in the Army, 6th largest in the United States and 70th largest in the world.

With external pressure from encroachment and internal pressure due to growth from the Base Realignment and Closure (BRAC), Transformation, and Grow the Army initiatives, constructing the array on top of Landfill 9, a highly visible closed landfill, offered a unique reuse opportunity for Fort Carson. In addition, the project has helped increase security for the installation by stabilizing a portion of the electricity requirements and costs. This innovative business model allowed the private sector to finance the PV equipment, construct the PV array, and provide operations and maintenance for the 20-year term of the contract.



Covering nearly 12 acres, the solar photovoltaic array at Fort Carson is the largest solar array at a U.S. Army facility and one of the largest in Colorado.

ARMY FY08 PERFORMANCE HIGHLIGHTS

For the past 30 years, environmental management in the Army has been primarily compliance based, with an ultimate goal of reducing the release of pollutants and avoiding costly violations. The Army is dedicated to going beyond compliance, to ensure that Army mission obligations can be met. Many of the sustainable practices the Army seeks to institutionalize are modeled from practices adopted by a growing number of corporations that achieve a competitive advantage by taking a thorough look at how its processes impact, not only the Army's financial status, but also environmental and social well-being—the *triple bottom line*—plus.

The Army, like other federal agencies, realized that it could do more than just promote sustainable practices: the Army leads by example in implementing them in its mission activities. The following sections contain annual performance data for key Army mission, environmental, and community performance metrics in FY04–08. These metrics

There is much still to learn as we continue our journey toward a sustainable Army.

—Army Sustainability Report 2007

are based on a subset of the economic, environmental, and social responsibility performance metrics recommended by the GRI's *Sustainability Reporting Guidelines* (G3) and the GRI's *Sector Supplement for Public Agencies*.

In addition, this report provides a complete index to all the recommended GRI sustainability performance metrics (Tables 3-6 in the Annex). These tables

provide links to the publicly available Army reports that contain information related to each of the GRI recommended economic, environmental, and social responsibility performance metrics.

Table 2 details FY04–08 data for key mission, environment, and community metrics. This collection of metrics indicates the Army's baseline performance in implementing the ASE. The Army continues to improve its data collection efforts and recognizes that these metrics are often insufficient for a true understanding of the Army's overall sustainability. The sections after Table 2 give narratives describing each trend.

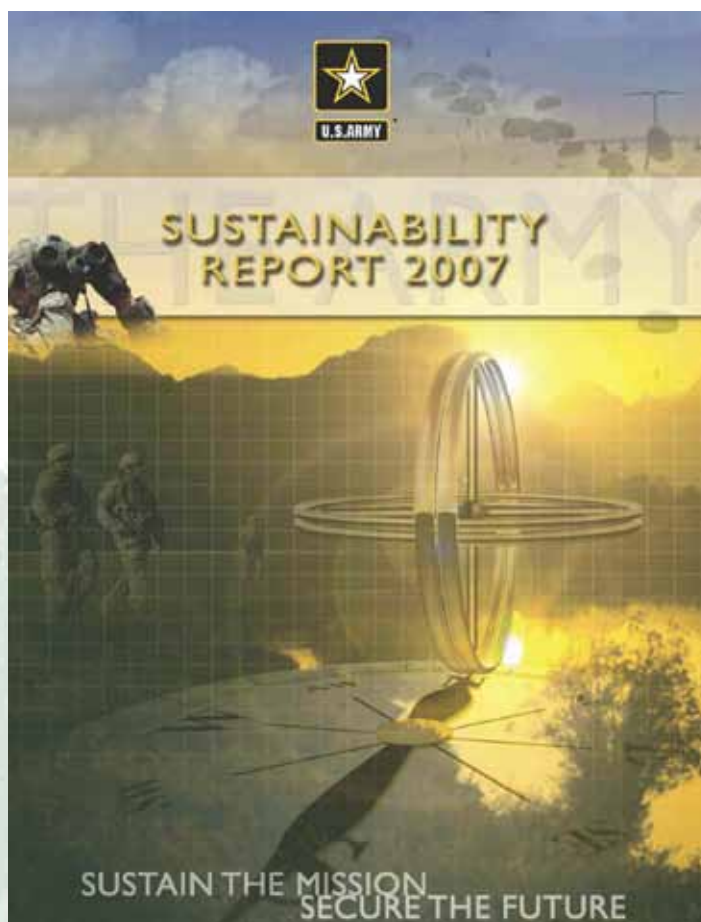


Table 2: Army Sustainability Trends FY04 to FY08¹

Metric definition (units)	FY04	FY05	FY06	FY07	FY08	FY08 Goal ²	FY07–FY08 Change
Net cost of Army operations (\$B) ³	135.78	146.43	164.61	168.92	190.5		12.8%
Total Army end strength (000s) ³	1040.59	1014.91	1041.66	1064.61	1101.01	1085.49	3.4%
Active Army end strength (000s) ³	493.54	492.73	505.4	522.02	543.64	529.19	4.1%
Reserve and National Guard end strength (000s) ³	547.05	522.18	536.26	542.59	557.37	556.3	2.7%
Total acres permanently protected ACUB Partnerships ¹²	22,431	28,419	63,370	81,587	95,962		17.6%
Environmental funding (\$ millions) ⁴	1456	1467	1454	1493	1520		1.8%
Cleanup (Formerly Used Defense Sites, Environmental Remediation) (\$M) ⁴	\$678.30	\$667.00	\$658.10	\$665.60	\$724.10		8.8%
Compliance, pollution prevention, conservation (\$M) ⁴	\$777.90	\$799.60	\$795.80	\$827.00	\$795.90		-3.8%
Percentage facilities with EMS fully implemented ⁴	Note 5	Note 5	Note 5	Note 5	14%		Note 5
Installation Integrated Strategic and Sustainability Planning	7	12	13	16	21		31.3%
Army New Environmental Enforcement Actions ⁴	89	91	101	94	130		38.3%
Solid waste (SW) and construction and demolition (C&D) debris generated (million tons) ^{4,5}	2.76	2.14	2.33	2.83	2.25		-20.5%
Overall SW and C&D recycled rate ^{4,5}	57%	45%	59%	65%	58%		-7.0%
HW disposal (million pounds by CY) ^{4,7}	33.39	45.71	63.7	45	76.5		70.0%
HW disposal indexed to net cost of Army operations (pound HW per \$1000)	0.25	0.31	0.39	0.27	0.4		48.2%
TRI releases (million pounds by CY) ^{4,7}	21.48	18.87	18.76	23.87	21.96		-8.0%
TRI releases indexed to net cost of Army operations (pound TRI per \$1,000)	0.16	0.13	0.11	0.14	0.12		-14.3%
% new MILCON 30% more energy efficient than ASHRAE Standards ⁸	Note 9	Note 9	Note 9	Note 9	Note 9	100%	Note 9
Installations with up-to-date INRMPs ⁴	98%	99%	98%	98%	98%	100%	0%
Army facility water use (Billion gallons) ⁸	66.15	45.93	43.44	45.25	45.9		1.4%
Facility energy use intensity (Btu/GSF) ⁸	Note 10	Note 10	Note 10	91,873	89,802		-2.3%
Military accident fatalities rate (per 1000 service members) ¹²	0.37	0.44	0.37	0.37	0.29		-21.6%
Army Civilian lost time claims (per 1000 Civilians) ¹¹	19.9	6.79	7.75	7.66	7.22		-5.7%
Retention (000s) (Active, Reserve, National Guard) ³	123.35	119.8	126.61	127.26	120.05	111.83	-5.7%
Recruiting (000s) (Active, Reserve, National Guard) ³	148.09	142.99	175.06	174.06	169.86	167.11	-2.4%
Number of community covenants signed	Note 13	Note 13	Note 13	Note 13	85		Note 13
Visits to Corps recreational areas (millions) ^{3,14}	122	122	131	132	137	132	3.8%

1) The count of federal, state, and local inspections reported in FY07 was not published in FY08 per time of report. This report also does not include several USACE Civil Works metrics reported in 2007, which were outside the scope of this document. 2) Not all metrics have an established goal. 3) Army FY04–08 Annual Financial Statements. 4) DoD Annual Environmental Reports to Congress FY04 to FY08. 5) In FY07, OFEE established new standards for “fully implemented” EMSs, including a requirement for external EMS audits. The previous metric measured those with EMS in place, which measured 100% in FY07. 6) For FY08, ASR includes CONUS and Overseas. 7) Figures reported on a calendar year basis, but shown in the following fiscal year. 8) DoD FY04–08 Annual Energy Management Reports clarified with facility energy intensity totals from personal communication with energy engineer Randy Smidt, Program Manager for Energy Sustainability Program, Headquarters Department of the Army. 9) FY07 Report counted new construction attaining LEED® standards, in FY08 Army required buildings to be designed 30% more energy efficient than ASHRAE Standard 90.1 2004. The Army is currently validating these designs. 10) Metric not included in public FY04–06 DoD Annual Energy Management Reports, percentage is calculated from a FY03 baseline. 11) U.S. Army Accident Information, Army Historical Statistical Report, FY98–08: https://rmis.army.mil/stats/prc_Army_stats_history. 12) Data reported annually on reports located at <http://aec.army.mil/usaec/acub/index.html>. 13) This program began in 2008. 14) Personal communication on changes to Annual Financial Statement data.

MISSION PERFORMANCE HIGHLIGHTS

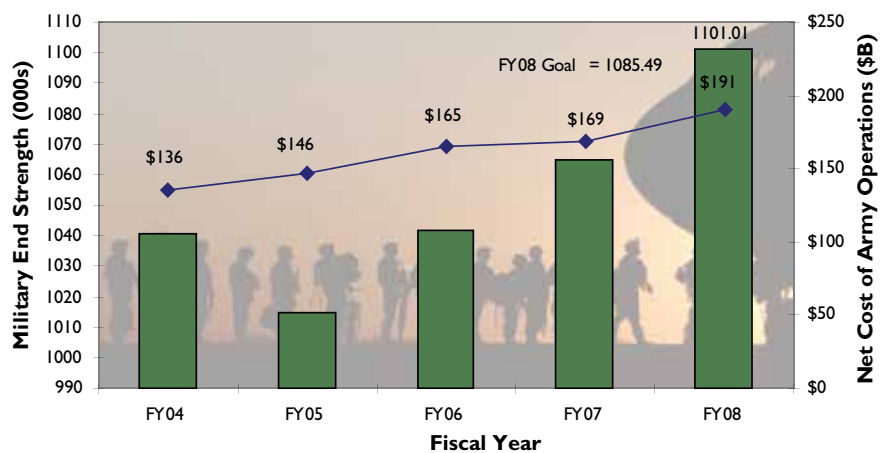
The Army's mission performance includes metrics on cost of operations, end strength, and acres of land permanently preserved. A metric on how well the Army is meeting its mission is not within the scope of the 2009 ASR. However, understanding increasing costs of operations and manpower is important in reviewing how the environmental and community performance metrics are enhancing and supporting, but also endangering, the Army's mission.

Net Cost of Operations and End Strength

As shown in Table 1 and Figure 4, net cost of operations increased between FY07 and FY08 by 12.8 percent. The trend upwards is likely due to the challenges of the ongoing counterinsurgency operations in Iraq and Afghanistan. Deployment in harsh desert and mountain environments has caused equipment to be used at unprecedented rates. In



Soldiers training at Fort Hood.



Source: Army FY08 Financial Report, pgs 6 & 29, <http://www.defenselink.mil/comptroller/cfs/fy2008.html>.

Figure 4. Army Military End Strength (Active, Reserve, and National Guard) and Net Operating Costs (FY04–08)

addition, the Army has continued to replace old, inefficient systems with new, high performance and cost-effective systems.

Army end strength increased between FY07 and FY08 by 4.1 percent for the Active Army and 2.7 percent for Reserve and National Guard to meet the challenges of asymmetric warfare. This increase was likely due to both higher rates of new enlistments and improved retention of highly skilled Soldiers—discussed under the Community Performance Highlights.

ACUB Program: Acres Preserved

In FY08, the ACUB program permanently preserved 14,375 acres, bringing the total since the program began to 95,962 acres. This is an increase of 17.6 percent since FY07. See a discussion on this program under the Meet Test, Training, and Mission Requirements Goal.

ENVIRONMENTAL PERFORMANCE HIGHLIGHTS

Every year since 1994, the Army has published its environmental performance as part of the *Fiscal Year Defense Environmental Programs Annual Report to Congress*. This report fulfills congressional reporting requirements under Title 10 *United States Code* § 2706, the Comprehensive Environmental Response, Compensation, and Liability Act; the RCRA; and various other laws and regulations. This report summarizes DoD's environmental activities during each fiscal year and includes discussions of past budget appropriations and anticipated funding requests. The complete reports for FY94–08 are available at <https://www.denix.osd.mil/portal/page/portal/ARC>.

In addition to an environmental report, DoD publishes an *Annual Energy Management Report*, which includes Army-specific information. Federal agencies are required to submit an energy management report annually in a format provided by the Department of Energy's (DOE's) Federal Energy Management Program. The format and content have changed several times since 2004 due to the Energy Policy Act of 2005 and EO 13423, and again for FY08 due to the Energy Independence and Security Act of 2007. The DoD annual energy reports for FY99–08 are available at http://www.acq.osd.mil/ie/energy/energymgmt_report/main.shtml. In addition to providing the report to DOE, which compiles a report for the federal government, DoD also furnishes the report by law directly to the congressional defense committees. To compare data from one year to another, the guidelines used to compile the report should also be compared. Data listed under similar titles may not be consistently reported due to legislative changes year to year.

The narratives below discuss the environmental metrics from Table 2. They cover varying aspects of environmental planning, compliance, and pollution prevention, particularly for Army installations.



Robert Shinn, Chief of the State Department of Environmental Protection, picks up a scoop of lead that was removed earlier from the dune of Range 24 at Fort Dix.

Environmental Funding

The Army's total environmental program funding (measured in millions of dollars) increased 1.8 percent since FY07. In Table 2, this report tracks two types of funding, cleanup of past operations and funding for current operations (compliance, pollution prevention, and conservation). Cleanup funding increased 8.8 percent and includes Formerly Used Defense Sites (FUDS), BRAC, and Environmental Remediation.¹⁷ Compliance, pollution prevention, and conservation funding decreased by 3.8 percent.

Compliance funding supports routine sampling of air, water, soil, and waste; hazardous waste disposal; management of environmental permits; and other activities. Conservation funding provides for endangered species and natural

resources management. The pollution prevention programs establish forward-thinking solutions that allow the Army to progress beyond compliance to avoiding future costs. See the FY08 Defense Environmental Program's Annual Report to Congress Appendices A, G, R, and V: <https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008>.

Facilities with a Fully Implemented Environmental Management System (EMS)

Sustainability is not approached from a singular water, energy, or waste perspective. An EMS is a formal framework for integrating the consideration of environmental issues into the overall management structure that, when properly implemented, identifies the environmental aspects of the mission, prioritizes significant environmental aspects, implements programs to improve those aspects, promotes pollution prevention, and tracks progress toward environmental goals. The Army is using EMSs to improve performance and compliance.

In FY07, the Office of the Federal Environmental Executive established new standards for “fully implemented” EMSs. EO 13423 requires that “fully implemented” EMSs: (1) have been the subject of a formal audit by a qualified party outside the control or scope of the EMS, (2) have audit findings recognized by the appropriate level of the agency implementing the EMS, and (3) are declared in conformance by a senior manager. Twenty-one Army appropriate facilities met the new federal EMS requirements as of FY08. This represents 14 percent of all appropriate facilities.¹⁸ In pursuit of meeting the new standard, the Army has conducted external EMS audits at 61 percent of its appropriate facilities and is projected to meet the new EMS requirements by December 31, 2009 with 93 percent of facilities audited. The new standard raises the bar on EMS integration.

The Army has increased requirements for this metric from the last report, which only reported on

those installations with EMSs in place (100%). See Appendix B of the FY08 Defense Environmental Program's Annual Report to Congress: <https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008>.

Integrated Strategic and Sustainability Planning

ISSPs are part of an installation's strategic planning process. See the discussion under the Foster a Sustainability Ethic goal. As of December 2008, 21 installations have undergone the ISSP process. This is an increase of 5 installations since FY07.

Environmental Enforcement Actions

The Army is committed to spending funds to protect human health and the environment so that mission is not impacted. In FY08, the Army invested approximately \$475.4 million in compliance activities; however, violations and the resulting related fines and penalties continue to take place. Enforcement actions (ENFs) issued to Army installations increased to a total of 130 during FY08, a 38.3 percent increase from 94 in FY07. The 130 ENFs in FY08 reverse a 6 percent average annual decrease in ENFs since FY99.

Analysis of the FY08 Enforcement Actions shows the ENFs primarily occurred in three statutes: Clean Water Act (35%), Safe Drinking Water Act (25%), and Hazardous Waste (18%). Nearly one-third of the FY08 ENFs were related to drinking water, waste water, or storm water monitoring deficiencies. The Army Headquarters' environmental staff are developing guidance to strengthen its water-related monitoring procedures and prevent reoccurrence of similar monitoring deficiencies. Despite the higher number of ENFs in FY08, the total fines assessed against the Army have decreased from \$903K in FY04 to \$453K in FY08. See Appendix U of the FY08 Defense Environmental Program's Annual Report to Congress: <https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008>.

Solid Waste (SW) and Construction and Demolition (C&D) Debris and Recycling Rates

The Army generated 20.5 percent less SW and C&D debris in FY08 than in FY07, for a total of 2.25 million tons. The overall Army SW and C&D recycling rate decreased to approximately 58 percent from 65 percent. In FY08, 71 percent of C&D debris was put into productive reuse and 42 percent of other non-hazardous solid waste was diverted from the waste stream. Diverting waste from landfills and incinerators resulted in an avoidance of \$96 million in disposal costs. The Army's Qualified Recycling Program posted gross revenues of \$43 million, with funds supporting the operation and improvement of the program. The Army continues to integrate SW management practices into its operations to enhance and sustain mission readiness, comply with requirements, and reduce resource consumption. See Appendix W of the FY08 Defense Environmental Program's Annual Report to Congress: <https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008>.

Hazardous Waste (HW)

The DoD has sustained a strong dedication to reducing HW and has achieved, as an agency, a 37 percent reduction in total HW disposed since CY96. However, due to increased maintenance, rebuild, and production activity at Army industrial installations in support of Operations Iraqi Freedom and Enduring Freedom, the Army has seen increases in the last couple of years. In CY07, the Army disposed of 76.5 million pounds of HW, a 70 percent increase from CY06. When indexed to the net cost of Army operations, the Army's HW disposal increased 48.2 percent from CY07. It is important to note that the net cost during this time has also increased. The Army continues to pursue technologies and strategies to reduce HW during the increased operational needs. See Appendix W of the FY08 Defense Environmental Program's

Annual Report to Congress: <https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008>.

TRI Amounts

TRI provides information about toxic chemicals (measured in million pounds by CY) that enter into the environment at a facility or are transferred off site for further waste management. Annual TRI reports are filed by facilities and sent to the U.S. Environmental Protection Agency where the data is collected and maintained in a publicly accessible toxic chemical database, known as the TRI Explorer available at <http://www.epa.gov/triexplorer>.

In CY07, the Army reported releases of 21.96 million pounds to the TRI. This inventory includes, among other pollutants, nitrate compounds, copper, lead, ethylene glycol, dichloromethane, zinc, acid aerosols, trichloroethylene, and phosphorus. Since CY06, the Army's TRI releases decreased 8 percent. When indexed to the net cost of Army operations, the Army in CY07 released 14.3 percent fewer pounds of TRI chemicals per each \$1,000 as in CY06. These reductions likely represent increased efficiency and substitution. See Appendix Y of the FY08 Defense Environmental Program's Annual Report to Congress: <https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008>.

New Military Construction Projects Designed 30 Percent more Energy Efficient than American National Standards Institute (ANSI), American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc (ASHRAE) and Illuminating Engineering Society of North America (IESNA) 90.1-2004 Standard

In FY08 the Army required that 100 percent of new construction be designed at 30 percent more energy efficient than the ANSI/ASHRAE/IESNA 90.1 2004 standards (<http://army-energy.hqda.pentagon.mil/reporting/progress.asp>).¹⁹ This is in

line with the High Performance Sustainable Building Standards required under EO 13423: *Strengthening Federal Environmental, Energy, and Transportation Management* described under the ASE goals. The Army is pursuing validation of this performance.

Installations with Up-to-Date Integrated Natural Resources Management Plans (INRMPs)

As amended in 1997, the Sikes Act of 1960 requires DoD to prepare and implement an INRMP for each installation with significant natural resources.²⁰ This comprehensive plan describes how natural resources will be managed to ensure the sustained use of a natural landscape for military mission needs in compliance with applicable laws and regulations.

There was no change in the percentage of Army installations with up-to-date INRMPs in the past 5 years. Ninety-eight percent of installations required to have an INRMP maintain this document. In FY08, the costs for the Army to implement INRMPs increased by 26 percent due to Army transformation and realignment, as well as changes in reporting criteria. See Appendix D of the FY08 Defense Environmental Program's

Annual Report to Congress: <https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008>.

Army Facility Water and Energy Use²¹

The Army's facilities used 45.9 billion gallons of water in FY08, an increase of 1.4 percent since FY07, though the Army has reduced water use by 31 percent since FY04. The long-term reduction is partly due to water conserving toilets and urinals, low flow

faucets, and showerheads. Some installations have aggressively surveyed for leaks.

The Army's facilities used 89,802 Btu/sf² in FY08, a decrease of 2.3 percent from FY07. At this same time the total Army end strength has increased 3.4 percent. Since FY04 the Army reduced its facility energy use by 10.4 percent. This exceeds the facility energy intensity reduction goal of 9 percent since 2008 set by the Energy Policy Act 2005, EO 13423, and Energy Independence and Security Act 2007. The majority of this decrease is due to increased efficiency at installations from lighting improvements, energy

management control system installation, heating and air conditioning upgrades, window and door replacement projects, system and temperature reset, water conservation measures, and use of renewable technologies.



Soldiers complete a 12.5 mile ruck march as the final phase of the 8th Squadron, 1st Cavalry Regiment Spur Ride.

COMMUNITY PERFORMANCE HIGHLIGHTS

The Army's community consists of Soldiers, Families, Civilians, the local communities surrounding installations, and the public. Many of the support systems, including health care, education, and family programs, were designed for the 20th Century Army, and are straining under the accumulated pressure of 7 years of overseas engagements.

The Army has taken a hard look at how it takes care of its most valuable resource— people—to determine the changes needed in terms of support and services. The objective is to ensure Soldiers, the Civilian workforce, and Army Families have meaningful programs available to them and that the Army community affords them the quality of life they deserve for the service they render the Nation today and into the future.

The narratives below discuss the community metrics included in Table 2, including Accidental Fatalities, Lost Time Claims, Army Retention and Recruiting, the Army Community Covenant, and visits to USACE Recreational Areas. The scope of this report includes programs and metrics related to the Soldier, their Families, communities around installations, the U.S. general public, and communities overseas.

Soldier Accidental Fatalities Rate and Army Civilian Employee Lost Time Claims Due to Injuries and Fatalities

In FY06, the Army released the Army Safety and Occupational Health Strategic Plan in response to the Secretary of Defense's goal to reduce accident rates 75 percent by FY08 from FY02.²² This plan outlines the Army's commitment to increase operational and workplace safety and health while reducing accidents. The plan also

offers a single integrated framework for strategic planning for Army safety and occupation health programs as well as a basis for action plans to provide safe work environments.

The military accident fatalities rate decreased 21.6 percent from FY07 to FY08 to 0.29 per 1,000 service members. The Army Civilian lost time claims decreased 5.7 percent from FY07 to FY08 to 7.22 per 1,000 Civilians. These metrics show progress on this goal. Soldier and Army Civilian health remains a top priority.



1st Infantry Division Soldiers sort waste at the U.S. Army Garrison Schweinfurt recycling sort center

Army Soldier Retention and Recruiting

Retention measures the number of Soldiers reenlisted during a given fiscal year. In FY08, Army retention decreased 5.7 percent to 120,050; still well above the goal of 111,830. Recruiting decreased 2.4 percent to 169,860, above the goal of 167,110 recruits. To learn

more about the Army's initiatives to sustain its Soldiers, Families and Civilians in FY08, visit the FY08 Army Posture Statement website at <http://www.army.mil/aps/08/index.html>.

Army Community Covenant

As described under the Enhance Well Being Goal, the first official Community Covenant took place in Columbus, Georgia on April 17, 2008. In 2008, there were 85 total signings across the country.

Visitors to Corps Recreational Areas

In FY08, 137 million people visited the USACE recreational areas, an increase of 3.8 percent from FY07. The Corps administers 2,603 recreation sites at 423 projects on 12 million acres of land. See the Enhance Well Being goal for more details on the USACE programs.

CLOSING THOUGHTS

The March Toward Sustainability Continues

The second annual *Army Sustainability Report* highlights the Army's progress toward making sustainability a way of life throughout the Army enterprise. Army sustainability is a critical organizing principle that forms the basis of our future. It enables us to bring into closer focus the notion of the triple bottom line, of mission, environment and community as a paradigm in the fight to gain and maintain national and global security.

Environmental Management Systems are in-place at every Army installation and the number of installations with sustainability plans has increased by 30 percent during the past year. While this progress is made on the installation level, the Army is working hard to apply the benefits and cost savings imparted by sustainability across the entire enterprise. Over the past year, senior uniformed Army leadership set forth the challenge to operationalize sustainability: to integrate sustainability into the very DNA of the Army. As an organizing principle, operational sustainability not only mandates the expansion of sustainability on a broader scale throughout the Army, but it also establishes enabling capabilities that directly correlate with the Army's four major imperatives:

1. **Sustain:** Ensure ongoing availability of high quality installations, facilities and services for Soldiers and their Families through sustainable facility and infrastructure construction and operations.
2. **Prepare:** Deliver a force that is trained and ready for full spectrum operations by enabling realistic, dynamic training landscapes representative of current and future operating environments.
3. **Reset:** Enable readiness through recovery and reset of forces using sustainable procurement practices.
4. **Transform:** Ensure the ability to operate in the 21st Century and beyond in support of combatant commands; address the need to engage in humanitarian, stability, and combat operations in environments destabilized by climate change and increased competition over decreased access to resources (land, energy, water, etc.); and ensure future systems include sustainability performance metrics.

Mission accomplishment is the true determinant of success or failure within the military. Sustainable ranges and training areas ensure combat readiness through increased training days, while sustainable buildings, facilities and neighborhoods enhance the quality of life for Soldiers and their Families. The Army is building green, buying green and going green to reduce our total life-cycle costs, logistics tail and energy bills. By working together, we can continue to improve by making sustainability a way of life throughout the Army.

Tad Davis, *ARMY STRONG!*
Deputy Assistant Secretary of the Army
Environment, Safety and Occupational Health

ANNEX

Table 3 contains the index for GRI recommended content for an organization sustainability report and Tables 4, 5, and 6 contain the recommended GRI performance metrics for economic, environmental and social responsibility performance, respectively. For each GRI recommended report content element, the table provides a reference (page number or website) to the source of the Army data.

- A few performance metrics were reported differently in 2008 than in previous years, due to changes in the source material. All material reported in the 2009 ASR is reported publicly in other Army reports. Performance is tracked for data compiled on FY08, CY08, and occasionally CY07 when reporting constrains.

- In this second annual ASR, the Army aimed to provide more data on the GRI Indicators to assist the reader to obtaining desired information.
- In FY08, the Army awarded 77 building construction projects²³ and had 26 training range projects, closed one active installation (Fort Monmouth, New Jersey) and nine U.S. Army Reserve Centers, added 14,000 acres of U.S. land²⁴ and disposed of 1,133 excess acres. The Army added 2,000 acres of foreign land, and lost 4,000 acres.²⁵



A U.S. Army Ranger instructor explains the technical instructions of rappelling from the 50-foot rock to his left in Dahlonga, GA.

Table 3. GRI Content Index to Army FY08 Information

GRI Indicator	Description of GRI Recommended Report Content	Reference to Army FY08 Information
1	Vision and Strategy	
1.1	Statement from the most senior decision maker of the organization	Front of this report, "Message from the Secretary of the Army and the Army Chief of Staff"
1.2	Description of key impacts, risks, and opportunities	Pages 24-32, FY08 Performance Highlights, describe a selection of key impacts on Army mission, environment, and community including successes, trends, and challenges. Page 12-13, Trends in Global Sustainability, describes some of the risks to global sustainability that will affect the Army's mission success. Pages 1-3, 12-13, and the 2008 Army Posture Statement Sustainability Information Paper (http://www.army.mil/aps/08/information_papers/reset/Army_Sustainability.html) include information on the Army's approaches and opportunities for sustainable activities. Table 2 shows trends in Army Sustainability and accompanying text explains metrics.
2	Organization Profile	
2.1	Name of reporting organization.	United States Army
2.2	Organization mission, functions, and responsibilities	Pages 8-11
2.3	Operational structure of the organization	Pages 8-11
2.4	Location of organization's headquarters	Arlington, VA (http://pentagon.afis.osd.mil/)
2.5	Number of countries where the organization operates	Page 9, more than 80 countries worldwide, see the FY08 Posture Statement Army Global Commitments for specific countries of significance for sustainability (http://www.Army.mil/aps/08/strategic_context/strategic_context.html).
2.6	Nature of ownership and legal form	Pages 8-11, the Army executes Title 10 and Title 32 United States Code directive, to include organizing, equipping, and training forces for the conduct of prompt and sustained combat operations on lands. It accomplishes missions assigned by the President, Secretary of Defense, and combatant commanders.
2.7	Markets served	Pages 8-11, Army website: http://www.Army.mil/institution/organization/ .
2.8	Scale of the reporting organization, including number of employees, net revenues, and quantity of products or services provided	Page 27 include, net costs and end strength. Assets are available, pg 28: FY08 Army Annual Financial Report (http://www.defenselink.mil/comptroller/cfs/fy2008.html). Information on the quantity of services provided is located throughout the 2009 ASR, as well as here: 2008 Army Posture Statement, Strategic Context (http://www.Army.mil/aps/08/strategic_context/strategic_context.html).
2.9	Significant changes during the reporting period regarding size, structure, or ownership including: The location of, or changes in, operations including facility openings, closings, and expansions	Annex, Page 1, and also FY08 Army Annual Financial report, pg 19 (http://www.defenselink.mil/comptroller/cfs/fy2008.html). Fort Monmouth, NJ, closure report (http://www.hqda.Army.mil/acsim/brac/Report-Closure-FortMonmouth.pdf). Reporting changes in capital is not applicable to the Army because the Army, as a department within the Executive Branch of U.S. Federal Government, does not have authority to change capital structure. The Army does not publicly report in one source the location of the changes described in the beginning of this Annex.
2.10	Awards received in the previous reporting period	Page 15, sustainability and environmental awards are also described here: http://aec.Army.mil/usaec/newsroom/awards00.html , including the White House Closing the Circle Awards (http://www.fedcenter.gov/opportunities/awards/ctcawards/), Secretary of the Army Energy and Water Awards (http://Army-energy.hqda.pentagon.mil/awards/sec_Army2008.asp), Secretary of the Army Environmental Awards (http://aec.Army.mil/usaec/newsroom/awards08/bestprac08.pdf), and a Federal Energy Management Program Award for Fort Hood (http://Army-energy.hqda.pentagon.mil/docs/fortHood_femp2008summary.pdf).

GRI Indicator	Description of GRI Recommended Report Content	Reference to Army FY08 Information
3	Report Profile	
3.1	Reporting period for information provided	2008
3.2	Date of most recent previous report (if any)	September 2008
3.3	Reporting cycle (annual, biennial, etc.)	Annual
3.4	Contact point for report	Back cover of report
	Report Scope and Boundary	
3.5	Process for defining report content	Pages 6-7, this report includes publicly available data on appropriate Army programs and performance.
3.6	Boundary of the report	Pages 6-7, this report includes Army operational and institutional programs, though performance metrics are limited as described in their source documentation.
3.7	State any specific limitations on the scope or boundary of the report.	Pages 6-7 I, this report uses only publicly available information about Army sustainability activities, limiting the scope of the document. The Army is using the GRI Indicators to form a common baseline with other sustainability reports and through this reporting, identifies areas where information is not reported and can pursue when appropriate. Some performance information is only available for some sections of the Army, such as facility energy intensity as opposed to total energy use.
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	As the 2009 ASR only reports on publicly available data, the basis of reporting for each metric is described within their text. This may affect reporting when methods for collecting information or data guidelines change year to year: FY08 Army Annual Financial Report, pgs 38–39, 105–106 describes leased equipment; leases (I.Q) and contracts, pg 45 addresses ownership and contracts, pg 75 includes accounting for state and locally owned land used for federal purposes (Required Supplementary Stewardship Information) (http://www.defenselink.mil/comptroller/cfs/fy2008.html). FY08 DoD Energy Management Report, energy and water reporting includes leased facilities, pg 34 (no exceptions), and purchased versus produced renewable energy are clearly differentiated (pgs 37, 41) (http://www.acq.osd.mil/ie/energy/energymgmt_report/main.shtml). FY08 Defense Environmental Program Annual Report to Congress reporting is mainly impacted by mission and size changes, instead of joint ventures, however areas such as TRI reporting, it can cause changes, as described in Appendix Y, pg 7 (https://www.denix.osd.mil/portal/page/portal/denix/environment/ARC).
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report	Pages 6-7, all data comes from publicly available reports, all performance metrics in this report are from source documents, which are the location for any measurement techniques.
3.10	Explanation of the effect of any re-statements of information provided in earlier reports	Annex, Page I
3.11	Significant changes from previous reporting periods	Annex, Page I, Table 2 includes footnotes on performance definition changes.
3.12	Table identifying the location of the Standard Disclosures in the report	Annex, Tables 3–6
3.13	Policy and current practice with regard to seeking external assurance for the report	The Army did not seek external assurance for this report.

GRI Indicator	Description of GRI Recommended Report Content	Reference to Army FY08 Information
4	Governance Commitments and Engagement	
4.1	Governance structure of the organization	The Army governance structure is described on pages 8–11 of this report, and in the United States Code Title 10—Armed Forces, Chapters 303–307 (http://uscode.house.gov/download/title_10.shtml).
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	The Civilian and military leadership roles are prescribed in the United States Code Title 10—Armed Forces, Chapter 303—Department of the Army (http://uscode.house.gov/download/pls/10C303.txt).
4.3	The number of members of the highest governance body that are independent and/or non-executive members	Not applicable to the Army, GRI's Sector Supplement for Public Agencies does not have any direction for how to apply this Indicator to organizations without boards.
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	The Army has a chain a command and open door policy through which employees operate. This is outlined in Army Regulation 600-20, "Army Command Policy" in Sections 2-1 and 2-2 (http://www.army.mil/usapa/epubs/pdf/r600_20.pdf). Mailing address provided at http://www.Army.mil/contact/ .
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives and the organization's performance	The linkage between compensation and performance for Senior Executive Service members discussed in memo: Office of Personnel Management (OPM) policy on New Performance-Based Pay System for the Senior Executive Service (http://www.opm.gov/ocal/compmemo/2003/2003-19.asp). Military personnel pay is based on rank.
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided	Procurement conflicts of interest, at 10 United States Code Title 10—Armed Forces, Chapter 137 Procurement Generally (http://uscode.house.gov/download/pls/10C137.txt). Research conflicts of interest, at 10 United States Code Title 10—Armed Forces, Chapter 139 Research and Development (http://uscode.house.gov/download/pls/10C139.txt).
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics	Chapter 305- The Army Staff, Title 10 describes how members of the staff are selected. The Chief of Staff and Vice Chief of Staff are appointed by the President and confirmed by Congress, according to Title 10, Chapter 305, § 3033-3034. The Secretary of the Army, Undersecretary, Assistant Secretaries, and General Counsel are appointed by the President with Congressional confirmation, according to Title 10, Chapter 303, § 3015-3020 (http://uscode.house.gov/download/title_10.shtml).
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation	Pages 12-13 and Table 2 describe the Triple Bottom Line and performance metrics relevant to their application. Army Strategy for the Environment, pgs 5–6 (http://www.sustainability.Army.mil/overview/overview.cfm).
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance	The Army established goals in the Army Strategy for the Environment, pgs 6 and 11 (http://www.sustainability.Army.mil/overview/overview.cfm). It oversees these goals through the annual ASR, reporting for the Defense Environmental Program's Annual Report to Congress (https://www.denix.osd.mil/portal/page/portal/ARC), financial reporting (http://www.defenselink.mil/comptroller/cfs/fy2008.html), and the Army Common Levels of Support, which tracks performance on all services involved in installation management (http://www.Army.mil/aps/09/information/papers/common_level_of_support.html).
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	Pages 6-9, Annual Sustainability Report using the GRI Guidelines. The highest governance body is also evaluated by its accordance to laws and EOs, described in PA3

GRI Indicator	Description of GRI Recommended Report Content	Reference to Army FY08 Information
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	Pages 14-24, Strategic Sustainability Goals, and as stated in the ASE, pgs 8-11, "Through education and setting the example, we inspire each other to take proactive measures and achieve excellence."
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	Pages 12-13, the triple bottom line. Page 6, Global Reporting Initiative. All EOs, including EO 13423, and DoD instructions (http://www.archives.gov/federal-register/executive-orders/), (http://www.dtic.mil/whs/directives/corres/ins1.html). The Army also subscribes to the USGBC's LEED® standards for new construction (http://www.usgbc.org).
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization has positions in governance bodies, participates in projects or committees, provides substantive funding beyond routine membership dues, or views membership as strategic	Not reported in one Army location. The Army is involved in many interagency working groups, including the Interagency Sustainability Working Group (http://www1.eere.energy.gov/femp/program/sustainable_workinggroup.html).
4.14	List of stakeholder groups engaged by the organization	A general list of stakeholders, at Army Leader's Guide to Environmental Public Involvement, pgs 12-13 (http://www.asaie.Army.mil/Public/IE/Toolbox/documents/final_leaders_guide_to_public_involvement.pdf).
4.15	Basis for identification and selection of stakeholders with whom to engage	Army Leader's Guide to Environmental Public Involvement, pgs 12-13 (http://www.asaie.Army.mil/Public/IE/Toolbox/documents/final_leaders_guide_to_public_involvement.pdf).
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	Army Leader's Guide to Environmental Public Involvement, pgs 13-16 discusses ways to involve stakeholders (http://www.asaie.Army.mil/Public/IE/Toolbox/documents/final_leaders_guide_to_public_involvement.pdf). Army Community Covenant website provides links to national and state/local information on strengthening community relationships with Soldiers and their Families (http://www.army.mil/community/).
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	The Army reports continuously to the U.S. Congress on its activities. The 2008 ASR was a proactive publication for the general public to answer key concerns from its stakeholders. The program examples under each ASE goal showcases how the Army has responded in 2008.
	Public Policies and Performance Integration Measures	
PAI	Describe the relationship to other governments or public authorities and the position of the agency within its immediate governmental structures	Pages 10-11. The DoD organization chart describes the position of the Army within its immediate governmental structures (http://www.defenselink.mil/odam/omp/pubs/GuideBook/Pdf/DoD.PDF). The DoD's position within the federal government is seen in the U.S. Government Manual Chart (http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2008_government_manual&docid=214669tx_xxx-3.pdf).

GRI Indicator	Description of GRI Recommended Report Content	Reference to Army FY08 Information
PA2	Define sustainable development used by the public agency and identify any statements or principles adopted to guide sustainable development policies	See Indicator 4.8
PA3	Identify the aspects for which the organization has established sustainable development policies	Green Building: The Army's Sustainable Design and Development Policy for building is outlined in the following memo: http://www.acsim.Army.mil/operations/docs/facilitiespolicy/Sustaina.pdf. EO 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" (http://www.fedcenter.gov/programs/eo13423/). PA11, Green Procurement. Pages 32-33 on Community Involvement and support for Soldiers, as well as some examples: Army Family Action Plan (http://www.Army.mil/aps/09/information_papers/Army_family_action_plan.html) Army Suicide Prevention Program (http://www.Army.mil/aps/09/information_papers/Army_suicide_prevention_program.html) Army Community Covenant (http://www.army.mil/community/).
PA4	Identify the specific goals of the organization for each aspect listed in PA3	Where specific goals exist (EO 13423, Army's SDD Policy), they are identified in the source linked. The other aspects do not have specific goals.
PA5	Describe the process by which the aspects and goals in PA3 and PA4 were set	The goals in EO 13423 were signed by President George W. Bush in 2007. The goals in the Army's SDD Policy were signed by the Acting Deputy Assistant Secretary of the Army (Installations and Housing). The other aspects above are plans and programs established by the Army leadership due to identified needs.
PA6	For each goal, provide the following: implementation measures; results of relevant assessments of the effectiveness of measures before they are implemented; targets and key indicators used to monitor progress, with a focus on outcomes; description of progress relative to goals and targets in the reporting periods, including results of key indicators; actions to ensure continuous improvement toward reaching the public agency's goals and targets; post-implementation assessment and targets for the next time period; and public policies and implementation measures	The Army reports its progress on EO 13423 implementation to OSD, for roll-up OSD submissions on the various Office of Management and Budget scorecards (see EO 13423 Scorecards section: http://www.fedcenter.gov/programs/eo13423/). Some of this information is available in the DoD Energy Management Report (http://www.acq.osd.mil/ie/energy/energymgmt_report/main.shtml) on energy, water, and building performance. This is also reported on the Army's Energy Program website (http://Army-energy.hqda.pentagon.mil/reporting/progress.asp). Green Procurement progress is not reported and some progress information on the community programs are available in the FY08 Army Posture Statement links provided in PA3. The Army published a timeline document on its sustainability activities from 2001 to 2008 (http://www.aepi.Army.mil/).
PA7	Describe the role of, and engagement with, stakeholders relative to the items disclosed in PA6	The Army's vision for community involvement are described in the ASE, pgs 8-11 (http://www.asaie.Army.mil/Public/ESOH/doc/ArmyEnvStrategy.pdf). Stakeholders are generally not involved in the goals described in PA3-PA6.

ARMY FY08 PERFORMANCE—GRI ECONOMIC



A member of the Multi-National Division-Baghdad, discusses solar power with local Iraqis at the Ameriyah Clinic, Iraq, where solar panels power critical services.

As a federal entity, the overall Army is not interested in profit or selling goods like many private organizations using the GRI framework. However, economic performance is important as a steward to the American public. Another reason to report on economic indicators is the indirect economic impacts the Army can have on stakeholders and communities. The Army reports its financial statements in accordance with the generally accepted accounting principles established by the Federal Accounting Standards Advisory Board.

In 2008, the Army continued to enact Business Transformation, which became a Deputy Under Secretary of the Army office in 2006. Business Transformation is a continuous process to increase productivity, safety, and quality, while reducing costs. The Army also realizes sustainability in procurement and acquisition policies designed for long-term success. There were no major changes to these indicators since the last report.

Table 4. FY08 Army Sustainability Report Economic Indicators

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	F	The FY08 Army Annual Financial Report presents financial records broken out into Army General Fund, Army Working Fund, and the Civil Works program. Each division includes a consolidated balance sheet, a consolidated statement of changes in net position, and other summaries (http://www.defenselink.mil/comptroller/cfs/fy2008.html). The FY09 Defense Budget Report includes tables on the Army's total obligational authority, budget authority, and outlay (http://www.defenselink.mil/comptroller/defbudget/fy2009/fy2009_summary_tables_whole.pdf). The Army FY09 Budget documentation includes FY08 funds enacted on Operation and Maintenance, Procurement, Research, Construction, Personnel, and other obligations (http://asafm.army.mil/offices/BU/BudgetMat.aspx?OfficeCode=1200).
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	NR	Not reported. AEPI conducts research on the risks of climate change to the Army's operations (http://www.aepi.army.mil/publications/foresight/). Further, the 2008 Earth Day message from Army Sec. Pete Geren highlighted the challenges imposed by climate change (http://www.asaie.Army.mil/Public/IE/earthday08message.pdf). However, neither of these references quantify financial implications.
EC3	Coverage of the organization's defined benefit plan obligations	F	The Army's benefit plan obligations are described in the following resources: MyArmyBenefits website provides fact sheet information and state-specific benefits (http://myarmybenefits.us.army.mil/Home.html). The Defense Finance and Accounting Service reports on pay and benefits for Army and Civilian personnel (http://www.dfas.mil/). The Army Benefits Tool provides information and tools for calculating benefits and retirement (http://myarmybenefits.us.army.mil/Home/Planning_Toolkits.html). The annual Army contribution to these benefits is provided in the Army Annual Financial Report: Military Retirement and Other Military Benefits (Note 17, pg 64) (http://www.defenselink.mil/comptroller/cfs/fy2008.html).
EC4	Significant financial assistance received from government	F	The FY08 Army Annual Financial Report includes tables on budgetary financing sources broken out into the Army General Fund, Army Working Fund, and the Civil Works program (http://www.defenselink.mil/comptroller/cfs/fy2008.html).
EC5	Range of ratios of standard entry-level wage compared to local minimum wage at significant locations of operation	P	No information is presented on the ratio of standard entry-level wage compared to local minimum wage for the entire Army. MyArmyBenefits has information on state wage differences for National Guard (http://myarmybenefits.us.army.mil/Home/Benefit_Facts/Federal_Benefits_Page/Basic_Pay.html?serv=150). OPM has information on pay for Civilian employees (http://www.opm.gov/oca/09tables/indexGS.asp).
EC6	Policy, practices, and proportion of spending on locally based suppliers at significant locations of operation	NR	Not reported
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation	NR	Not reported
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	P	The USACE maintains a vibrant Civil Works program in addition to its military and contingency missions. This program includes supporting navigation infrastructure, flood risk management, ecosystem restoration, recreation, hydropower, and other infrastructure needs. The Army Civil Works FY08 Financial Statement goes into detail on the size and scope of Civil Work's efforts in this area (http://www.defenselink.mil/comptroller/cfs/fy2008.html). The Army's installations are active in community infrastructure around the bases. The Army Public Involvement Toolbox is one example of the resources available for involving the community, mostly for environmental issues (http://www.asaie.Army.mil/Public/IE/Toolbox/default.html). The Army also has resources for community relations with the military, with regional contacts (http://www.Army.mil/comrel/index.html). Further, the Army conducts assessments of its impacts on the community infrastructure due to closure and growth as described under indicator EC9.

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	P	DoD Directive 5410.12 "Economic Adjustment Assistance to Defense-Impacted Communities," (July 5, 2006) directs military personnel to assist local communities impacted by military activities, realignment, or closure (http://www.dtic.mil/whs/directives/corres/pdf/541012p.pdf). The Army conducts a variety of studies to understand and describe the indirect economic impacts as part of its BRAC initiatives. The public can view the Army's recommendations, community concerns, and commission findings for each BRAC location using the map at: http://www.hqda.Army.mil/ACSIM/brac/braco.htm . For frequently asked questions: http://www.hqda.Army.mil/ACSIM/brac/faq.htm .
PA8	Gross expenditures broken down by type of payment	F	See data for EC1
PA9	Gross expenditures broken down by financial classification	F	See data for EC1
PA10	Capital expenditures broken down by financial classification	F	See data for EC1
PA11	Procurement policy of the public agency related to sustainable development	F	The Army follows the policy prescribed in EO13423 and the DoD Green Procurement Strategy. EO 13423 (http://www.fedcenter.gov/programs/eo13423/). DoD Green Procurement Strategy, including: https://www.denix.osd.mil/portal/page/portal/GPP . Army Green Procurement Memorandum (https://www.alt.Army.mil/portal/page/portal/oasalt/documents/Army_Green_Proc_Prog_Joint_Memo.pdf) - Recycled content products - Environmentally preferable products and services - Biobased products, energy and water efficient products - Alternate fuel vehicles and alternative fuels - Products using renewable energy - Alternatives to hazardous or toxic chemicals.
PA12	Describe economic, environmental, and social criteria that apply to expenditures and financial commitments	P	The guidance listed in PA11 directs: "purchases of green products and services consistent with the demands of mission, efficiency, and cost-effectiveness, with continual improvement toward federally established procurement goals."
PA13	Describe linkages between the public agency's procurement practices and its public policy priorities.	F	Pages 19-20.
PA14	Percentage of the total value of goods purchased that were registered with voluntary environmental or social labels and/or certification programs, broken down by type	NR	Not reported
PA15	Administrative efficiency: describe the results of assessments of the efficiency and effectiveness of services provided by the public agency, including the actions taken to achieve improvements in service delivery	F	The Army's FY08 Annual Financial Report, pgs 1-21 reports on the Army's operations and use of funds for the prior year. This report informs the taxpayer on how and where funds are used (http://www.defenselink.mil/comptroller/cfs/fy2008.html).

ARMY FY08 PERFORMANCE—GRI ENVIRONMENTAL



Army Civilian conducts water monitoring at Fort Gordon.

The Army is required by Congress to report on many of the GRI Environmental Indicators below, not all of which are public on the Internet. The Army reports on its programs and performance with energy, water, biodiversity, emissions, waste, and compliance with environmental law in the FY08 Defense Environmental Programs Annual Report to Congress. The Army is in 80 countries worldwide and is a very large organization. As such, minimal information is available on total sums of products and materials in aggregate, though under the goals section of this report many such relevant programs are highlighted.

The Army's environmental goals are driven by regulations, such as the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007, as well as Executive Orders, such as EO 13423. See the Environmental Performance Highlights Section. It is also driven by internal policy, as noted in these indicators. The most senior person at the Army for the environment is the ASA-IE. See the *Army Strategy for the Environment* goals section for more details on awareness and programs and the Performance Highlights section for performance approaches.

Table 5. FY08 Army Sustainability Report Environmental Indicators

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
EN1	Materials used by weight or volume	NR	Not reported
EN2	Percentage of materials used that are recycled input materials	NR	Not reported
EN3	Direct energy consumption by primary energy source	P	Partially reported in aggregate in the DoD Energy Management Report, as well as in terms of total energy consumption per square foot (89,802 Btu/GSF) (http://www.acq.osd.millie/energy/library/DoDenergygmtrpt08.pdf).
EN4	Indirect energy consumption by primary source	NR	Not reported
EN5	Energy saved due to conservation and efficiency improvements	P	The DoD Energy Management Report states the reduction in energy use per unit of gross square feet [10.4% reduction since 2003 (89,802 Btu/GSF)], which it attributes to increased efficiency on installations through lighting improvements, energy management control systems, upgrades, window and door replacements, system and temperature resets, and renewable technologies. It does not provide a total amount of energy saved (http://www.acq.osd.millie/energy/library/DoDenergygmtrpt08.pdf).
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	P	The Army reports on its energy efficiency and renewable energy initiatives and programs in the DoD Energy Management Report, however it does not report total energy saved from these initiatives. Some initiatives include retrofits and capital improvement through the Army Energy Strategy for Installations, the use of performance contracts, new construction that is required to be designed at 30% more energy efficient than ASHRAE Standard 90.1-2004 and new on-site renewable energy (http://www.acq.osd.millie/energy/library/DoDenergygmtrpt08.pdf).
EN7	Initiatives to reduce indirect energy consumption and reductions achieved	NR	Not reported
EN8	Total water withdrawal by source	P	The Army reports on total potable water use in gallons (45.9B) in the DoD Energy Management Report, as well as its decrease in consumption since FY07 (6.2%). It does not list water withdrawals by source (http://www.acq.osd.millie/energy/library/DoDenergygmtrpt08.pdf).
EN9	Water sources significantly affected by withdrawal of water	NR	Not reported
EN10	Percentage and total volume of water recycled and reused	NR	Not reported. Water recycling is reported by installations in the Army Energy and Water Reporting System but is not tracked by DoD or publicly reported in the Annual Energy Report.
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high bio-diversity value outside protected areas	P	The FY07 Threatened and Endangered Species (TES) Report (published in FY09) includes information about the location of designated critical habitat and threatened and endangered species both on the base or off site. Critical habitat is designated as essential to the conservation of the species. It does not include the size of the land (http://aec.army.mil/usaec/endangered/index.html).
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	F	The Army reports on its impacts on and programs for endangered species and their habitat in the annual TES Report (http://aec.army.mil/usaec/endangered/index.html). Further, the DoD Biodiversity website (http://dodbiodiversity.org/index.html) discusses how the DoD affects biodiversity and its programs to mitigate these issues. The Army reports on the progress of its habitat and land resource protection programs, including the Sustainable Range program (https://www.denix.osd.mil/portal/page/portal/denix/range) and the ACUB program (http://aec.Army.mil/usaec/acub/index.html).
EN13	Habitats protected or restored	P	The Army does not report on the gross amount of habitat protected. The TES Report cites which installations have protected habitat for endangered species. The Army does report on conservation partnerships, especially the ACUB program, where enduring conservation purchases are created with local landowners and other partners (http://aec.Army.mil/usaec/acub/index.html). The FY09 Army Posture Statement states that more than 83,000 acres of land were protected through the ACUB program at 26 installations across the United State (http://www.Army.mil/aps/09/information_papers/Army_environmental_programs.html).

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	F	The DoD biodiversity website (http://dodbiodiversity.org/index.html) discusses how the DoD affects biodiversity and its programs to mitigate these issues. This includes current actions and strategies. The Army reports on the progress of its habitat and land resource protection programs, including the Sustainable Ranges program (https://www.denix.osd.mil/portal/page/portal/SustainableRangeInitiative) and the ACUB program (http://aec.Army.mil/usaec/acub/index.html).
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	P	The annual TES report includes all species and designated critical habitat on and contiguous to Army installations in the United States that are listed by the Endangered Species Act. The report may be used to interpret habitats that may be affected by military operations and vice versa. Many of these species are also listed by the International Union for Conservation of Nature (IUCN), however, the TES Report does not designate which species are IUCN-listed species. The Overseas Environmental Baseline Guidance Document lists species that are on the red list that could impact military operations at DoD facilities overseas (http://www.dtic.mil/whs/directives/corres/pdf/471505g.pdf).
EN16	Total direct and indirect greenhouse gas emissions by weight	NR	Not reported
EN17	Other relevant indirect greenhouse gas emissions by weight	NR	Not reported
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	NR	Not reported
EN19	Emissions of ozone-depleting substances (ODS) by weight	NR	Not reported. The Army does report in the FY08 Defense Environmental Program's Annual Report to Congress Appendix Z that since 1992 it has eliminated 98% of Class I ODS use in facilities. In FY08 the Army initiated a program to reduce operational halon use by another 20% overall (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008).
EN20	NO _x , SO _x , and other significant air emissions by type and weight	F	The Army reports significant air emissions by type and weight in the FY08 Defense Environmental Program's Annual report to Congress, Appendix S (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008). This document lists data for HAPs, VOCs, NO ₂ , PM ₁₀ , PM _{2.5} , SO ₂ , CO, and Lead.
EN21	Total water discharge by quality and destination	NR	Not reported. The Army does not provide a consolidated annual report of this information. However, every Army installation in the United States reports water quantity and quality for all point source discharges via the National Pollutant Discharge Elimination System. The Army also publishes compliance with the Clean Water Act, Safe Drinking Water Act, and Final Governing Standards in foreign nations in the FY08 Defense Environmental Program's Annual Report to Congress, Appendix T (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008).
EN22	Total weight of waste by type and disposal method	P	The Army reports the total solid waste generated and diverted, including C&D debris, and total hazardous waste disposal in the FY08 Defense Environmental Program's Annual Report to Congress, Appendix W (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008). It does not list the specific disposal method.
EN23	Total number and volume of significant spills	P	The Army reports all oil, chemical, radiological, biological, and etiological discharges in the United States and its territories to the National Response Center, NRC (http://www.nrc.uscg.mil/download.html). The NRC provides reports by CY, but no aggregated information for the Army as an institution.
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	NR	Not reported

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	NR	Not reported
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	P	The Army has green procurement policies and is responsible under the Federal Acquisition Requirements 52.223 for bio-based, recycled, and energy-efficient products and alternatives to ozone-depleting substances (https://www.acquisition.gov/far/html/52_223_226.html). The FY08 Defense Environmental Program's Annual Report to Congress, Appendix X cites the status of Defense-wide policy (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008).
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	NR	Not reported
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	F	The Army reports on fines and enforcement actions in the FY08 Defense Environmental Program's Annual Report to Congress, Appendix U (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008). The Army was assessed a total of \$453.2 thousand and received 130 new enforcement actions in FY08.
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	NR	Not reported
EN30	Total environmental protection expenditures and investments by type	P	The Army reports its total environmental protection expenditures and investments (\$1,612.9M) in the FY08 Defense Environmental Program's Annual Report to Congress, Appendix A (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008). This provides the Army's expenditures by appropriation and program area.



A North Dakota Air National Guard CH-47 Chinook helicopter drops several one-ton sandbags onto the spillway of the Clausen Springs Dam as part of a flood control effort.

ARMY FY08 PERFORMANCE—GRI SOCIAL

The 2008 ASR does not report many of the GRI Social Indicators. As the Army continues to enact the triple bottom line—plus, these Indicators will be consolidated and more clearly reported. It is not within the scope of the report to line item every policy and program in this section.

The Social Indicators include labor, human rights, society, and product responsibility. The activities of the Army in relation to these criteria are largely regulated by law and EOs, particularly in relation to corruption and labor. The Army has significant regulations and memorandums on safety and occupational health (<http://www.asaie.Army.mil/Public/ESOH/Safety/Policy/memos.html>), (<http://www.asaie.Army.mil/Public/ESOH/Safety/Policy/policy.html>). The DoD has specific regulations on labor management (<http://www.cpms.osd.mil/ASSETS/562D774A47D74D2C9B031E6808B98510/m1400711.pdf>). The Indicators reported below link to the programs and policies related to these areas.



A Soldier helps a local Cub Scout plant a tree in Daegu, South Korea.

The relevant positions are: ASA-IE (Safety/Health), Army Deputy Chief of Staff Equal Opportunity Office (labor/human rights), AMC (industrial facilities/product responsibility), and TRADOC (education, development). Further, these responsibilities are upheld at each Army installation in managing social requirements.

Table 6. FY08 Army Sustainability Report Social Indicators

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
LA1	Total workforce by employment type, employment contract, and region	F	The Army reports through a variety of publicly available websites to include the OSD's Statistical Information Analysis Division's online database of military and Civilian workforce attributes by year, grade, rank, employment type, and country. DoD online database of military and Civilian workforce by country, by grade, by rank, by employment type (http://siadapp.dmdc.osd.mil/personnel/MMIDHOME.HTM) Active Duty Military Strength Report for 2008-2009 (http://siadapp.dmdc.osd.mil/personnel/MILITARY/msl.pdf). Online Database for Army Federal Civilian Employment (http://siadapp.dmdc.osd.mil/personnel/CIVILIAN/CIVTOP.HTM).
LA2	Total number and rate of employee turnover by age group, gender, and region	F	The Army summarizes this information in end strength reports as part of its Annual Financial Reports: Retention numbers (http://www.defenselink.mil/comptroller/cfs/fy2008.html) Strength/deployed forces by region (http://www.Army.mil/aps/08/APS2008.pdf) FY08 Army Demographics Profile (http://www.Army.mil/hr/docs/demographics/FY08%20Army%20Profile.pdf) Additionally, the 2008 Defense Advisory Committee on Women in the Services (DACOWITS) report discusses retention by gender and grade (http://www.defenselink.mil/dacowits/tablereports2008_subpage.html) The Army's equal employment opportunity reporting in Management Directive 715 describes difficulties and plans for improving retention among different populations. It published FY08 data in late FY09 (http://eeoa.Army.pentagon.mil/web/prog_comp/reports/reports.htm) More detail is available in the FY07 Annual Report on the Federal Workforce (http://www.eeoc.gov/federal/reports/fsp2008/fsp2008.pdf).
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations	F	The Army reports these for both military and Civilian personnel. Army Pay and Benefits Summary Description (http://www.Army.mil/WellBeing/pay.html). Civilian pay and benefits (http://www.opm.gov/oca/09tables/index.asp).
LA4	Percentage of employees covered by collective bargaining agreements.	P	The following sources contain information about collective bargaining on the Army Civilian side. Army Labor-Management Relations Program (http://www.cpol.Army.mil/cgi-bin/permis/tree.cgi?MainSection=LMRP) Collective bargaining (http://www.cpol.Army.mil/library/permis/4131.html) Personnel Management Information and Support System (http://cpol.Army.mil/library/permis/). This indicator is listed as partial because the sources contain information about collective bargaining on the Army Civilian side, but no data on percentage of employees covered.
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	F	These are described in the following documents: DoD Displaced Employee Guide, Benefit and Entitlement Information (Oct 07) (http://www.cpms.osd.mil/ASSETS/9E43C08C52474716BF5A04AAEA84F910/deguide.pdf) DoD Civilian Assistance and Re-Employment (CARE) Division (http://www.cpms.osd.mil/CARE/care_index.aspx) DoD I400.25 Civilian Personnel Management System Manual, Chapter on Workforce Shaping (http://www.cpol.army.mil/library/general/nsps/archived-regs/1960WorkforceShaping.pdf) U.S. Code on retention, Title 5, Part III, Subpart B, Chapter 35, Sections 3501-3503 (http://uscode.house.gov/download/pls/05C35.txt) Info on reductions in force (http://www.cpms.osd.mil/ASSETS/DDBB7692588945AFAED0B78C10147CD4/rif.pdf).

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	NR	Not reported
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region	F	Reported through the Army Online Accident, Injury, and Illness Statistics website (https://safety.army.mil/statisticsdata/ARMYSTATISTICS/tabid/373/Default.aspx) DoD Online Personnel and Military Casualty Statistics (http://siadapp.dmdc.osd.mil/personnel/MMIDHOME.HTM) U.S. Army Accident Information FY07-09 (https://rmis.Army.mil/stats/prc_fy_Army_stats)
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	F	The following programs and services are available: Army Community Covenant (http://www.army.mil/community/) U.S. Army Wounded Warrior Program (http://www.aw2.army.mil) U.S. Army Public Health Command (http://phc.amedd.army.mil/home/) Army Wellbeing Services (http://www.armywell-being.org/skins/WBLO/home.aspx)
LA9	Health and safety topics covered in formal agreements with trade unions	NR	Not reported
LA10	Average hours of training per year per employee by employee category	P	FY08 Army Financial Report (Tables 6, 7, 9, 10) (http://www.defenselink.mil/comptroller/cfs/fy2008.html). This indicator is listed as partial because this source shows employee training by kind of course, which to varying degrees may or may not correspond to employee category.
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	F	The following sources report programs in this area: Army Posture Statement (http://www.Army.mil/aps/08/information_papers/information_papers.html) FY08 Army Financial Report (pages 9–12) (http://www.defenselink.mil/comptroller/cfs/fy2008.html) DoD Displaced Employee Guide, Benefit and Entitlement Information (Oct 07) (http://www.cpms.osd.mil/ASSETS/9E43C08C52474716BF5A04AAEA84F910/deguide.pdf) DoD Civilian Assistance and Re-Employment (CARE) Division (http://www.cpms.osd.mil/CARE/care_index.aspx) Army Regulation 350-1, Army Training and Leader Development (http://www.Army.mil/usapa/epubs/pdf/r350_1.pdf).
LA12	Percentage of employees receiving regular performance and career development reviews	F	All employees to receive regular performance reviews, in accordance with Army policies. Army Regulation 623–3, Personnel Evaluation, Evaluation Reporting System (http://www.Army.mil/usapa/epubs/pdf/r623_3.pdf) Civilian Personnel online: National Security Personnel System (NSPS)—Performance management policies (http://www.cpol.Army.mil/library/general/nsps/pm.html)
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	P	These are described in the Army demographic profile (http://www.Armyg1.Army.mil/hr/demographics.asp). The Changing Profile of the Army (Dec 08) (http://www.Armyg1.Army.mil/hr/docs/demographics/Changing%20Profile%20report%20December%202008.pdf). The FY08 Annual Report on the Federal Workforce, published late FY09, details the minority group membership and gender breakdown of Army employees as well as broad labor categories (http://www.eeoc.gov/federal/reports/fsp2008/fsp2008.pdf). This indicator is listed as partial because this source does not show the number of employees by age group.

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
LA14	Ratio of basic salary of men to women by employee category	P	It is more representative of the military to discuss levels of retention and promotion by gender, as salaries are tied directly to rank and grade. The 2008 DACOWITS report discusses retention by gender and grade (http://www.defenselink.mil/dacowits/tablereports2008_subpage.html). More detail is available in the FY08 Annual Report on the Federal Workforce (http://www.eeoc.gov/federal/reports/fsp2008/fsp2008.pdf). Information on military pay rates (http://www.dfas.mil/militarypay/militarypaytables.html). Information on Army Civilian pay (http://www.opm.gov/oca/08tables/).
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	NR	Not reported
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	NR	Not reported
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	NR	Not reported
HR4	Total number of incidents of discrimination and actions taken	F	The Army Equal Opportunity Reporting System database collects, records, and maintains racial, ethnic group and gender data and statistics needed to support the Army Equal Opportunity Program, to include Affirmative Action Plan reporting requirements. The Army report on the FY08 progress for the Equal Employment Opportunity Report Management Directive 715 (http://eeoa.Army.pentagon.mil/web/prog_comp/reports/reports.htm). More detail is available in the FY08 Annual Report on the Federal Workforce (http://www.eeoc.gov/federal/reports/fsp2008/fsp2008.pdf).
HR5	Operations identified in which the right to exercise freedom of association or collective bargaining may be at significant risk, and actions taken to support these rights	NR	Not reported
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	NR	Not reported
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of forced or compulsory labor	NR	Not reported. The Army has a Combating Trafficking in Persons policy and program that applies worldwide with a zero tolerance stance towards any and all activities associated with human trafficking, including mandatory training (http://www.combat-trafficking.Army.mil/policy.htm).
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	NR	Not reported

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	NR	Not reported
SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting	P	The following resources and services are focused on these impacts: Office of Economic Adjustment (http://www.oea.gov/OEAWeb.nsf/Home?OpenForm) Handbook For Growth Communities (http://www.hqda.Army.mil/acsim/brac/HandbookForGrowthCommunities.pdf) BRAC 2005 Army (http://www.defenselink.mil/brac), (http://www.hqda.Army.mil/acsim/brac/index.htm). This indicator is listed as partial because these sources do not specify the operations that are included or the effectiveness of programs.
SO2	Percentage and total number of business units analyzed for risks related to corruption	NR	Not reported
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures	P	Army Regulation 350-I, Army Training and Leader Development, contains training requirements (http://www.Army.mil/usapa/epubs/pdf/r350_1.pdf). This indicator is listed as partial because the source has policy stating that all personnel must be trained in ethics, but does not report data.
SO4	Actions taken in response to incidents of corruption	NR	Not reported
SO5	Public policy positions and participation in public policy development and lobbying	F	These actions are covered under the following regulations: Army Regulation 1-20 Legislative Liaison (http://www.Army.mil/usapa/epubs/pdf/r1_20.pdf) Army Regulation 360-I Army Public Affairs Regulation (http://www.Army.mil/usapa/epubs/pdf/r360_1.pdf).
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	NA	Not applicable to Army, as a federal entity the Army does not provide financial or in-kind contributions to political parties or politicians.
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	NR	Not reported
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	P	The Army reports the amount of its fines and enforcement actions related to environmental compliance in the FY08 Defense Environmental Programs Annual Report to Congress, Appendix U (https://www.denix.osd.mil/portal/page/portal/ARC/ARCFY2008). It does not report on other fines and sanctions.
PR1	Life-cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	F	The Army's Acquisition Policy AR70-I (Section I-4(n-o)) identifies the health, safety and pollution prevention requirements. PAM 70-3 Section VI also describes the Environmental, Safety and Occupational Health aspects of system acquisition. Army Acquisition Policy AR70-I (http://www.Army.mil/usapa/epubs/pdf/r70_1.pdf). PAM 70-3 Army Acquisition Procedure (Section VI) (http://www.Army.mil/usapa/epubs/pdf/p70_3.pdf).
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	NR	Not reported

Ind.	Description of GRI Recommended Metric	FY08 Status	Link to FY08 Army Source Data
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	NR	Not reported
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	NR	Not reported
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	F	The Army maintains an Interactive Customer Evaluation system that tracks comments on programs at each installation of each military branch (https://lice.disa.mil/). The Army also participates in the Federal Human Capital Survey, a tool that measures employees' perceptions of whether, and to what extent, conditions characterizing successful organizations are present in their agencies (http://www.fhcs.opm.gov/2008/Published/).
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	NR	Not reported
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	NR	Not reported
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	NR	Not reported
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	NR	Not reported

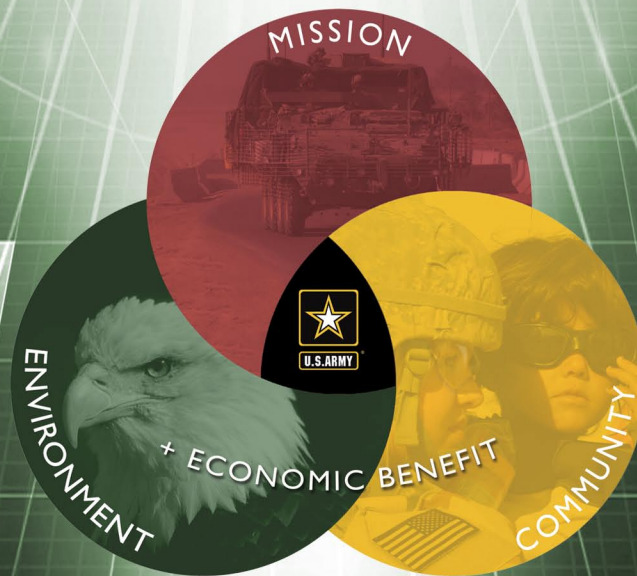
END NOTES

- ¹ GRI Reports, <http://www.globalreporting.org/GRIReports/GRIReportsList/>.
- ² The Leadership in Energy and Environmental Design (LEED®) Green Building Rating System was created by the U.S. Green Building Council (USGBC), a 501(c)(3) non-profit community of leaders. Effective with the FY08 Military Construction Program, the Army is required to attain LEED® Silver standards for new construction, instead of using the Sustainable Project Rating Tool (SPiRiT), see: <http://www.acsim.army.mil/operations/docs/facilitiespolicy/Sustaina.pdf>.
- ³ Energy use intensity is amount of energy used per unit area of gross square feet. This metric does not include the U.S. Army Corps of Engineers (USACE) Civil Works Program's energy use.
- ⁴ 2008 Closing the Circle Awards: <http://www.fedcenter.gov/kd/Items/actions.cfm?action=ShowItem&id=13947&destination=ShowItem>.
- ⁵ 2008 (FY07) Secretary of Defense Environmental Awards: <https://www.denix.osd.mil/portal/page/portal/Awards/FY07SECDEF>.
- ⁶ For more information on these awards: <http://aec.army.mil/usaec/newsroom/awards01.html>.
- ⁷ For more information on the Army Energy and Water Management Awards visit the Army Energy Program website: http://army-energy.hqda.pentagon.mil/awards/sec_army.asp.
- ⁸ Army Launches New Energy Initiatives, Test Projects at Posts (Oct 6, 2008): <http://www.army.mil/-newsreleases/2008/10/06/13073-army-launches-new-energy-initiatives-test-projects-at-posts/>.
- ⁹ Sustain the Mission Project: Energy and Water Costing Methodology and Decision Support Tool Final Technical Report. Army Environmental Policy Institute, 2008: http://www.aepi.army.mil/docs/whatsnew/SMP2_Final_Technical_Report.pdf.
- ¹⁰ Report of the DSB Task Force on DoD Energy Strategy "More Fight—Less Fuel" Feb 2008: <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA477619&Location=U2&doc=GetTRDoc.pdf>.
- ¹¹ LEED® Silver is the second of four progressive levels in the USGBC's Rating System. A building must achieve credits from five categories, including, Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, and Indoor Environmental Quality. For more information, see Army Memorandum, *Sustainable Design and Development Policy Update—Life Cycle Costs*, April 27, 2007: <http://www.acsim.army.mil/operations/docs/facilitiespolicy/Sustaina.pdf>.
- ¹² Interagency Sustainability Working Group, High Performance and Sustainable Buildings Guidance. December 1, 2008: <http://www.fedcenter.gov/kd/Items/actions.cfm?action=ShowItem&id=11130&destination=ShowItem>.
- ¹³ Army Turning Trash into Energy in Iraq, Army News, June 19, 2008: <http://www.army.mil/-news/2008/06/19/10194-army-turning-trash-into-energy-in-iraq/>.
- ¹⁴ Army Memorandum, *Establishment of the Army Green Procurement Program*, November 22, 2006: https://www.alt.army.mil/portal/page/portal/oasaalt/documents/Army_Green_Proc_Prog_Joint_Memo.pdf.
- ¹⁵ USACE Gulf Region Division Reconstruction Fact Sheets, October 2008: http://www.grd.usace.army.mil/news/factsheets/docs/October_2008.pdf.
- ¹⁶ Solar power helping light streets in Iraq, Army.mil News, December 16, 2008, <http://www.army.mil/-news/2008/12/16/15214-solar-power-helping-light-streets-of-iraq/>.
- ¹⁷ For this report we are including FUDS under Army cleanup funds as reported in the FY08 Defense Environmental Program's Annual Report to Congress, however, though the Army is the executive agent, OSD budgets for cleanup at FUDS.
- ¹⁸ A DoD EMS appropriate facility is typically a host command and its tenants within an installation fence line, as well as satellite properties under direct control of the installation commanding officer. DoDI 4715.17, April 15, 2009.
- ¹⁹ See the Whole Building Design Guide for more information on High Performance Sustainable Building energy requirements: http://www.wbdg.org/references/mou_ee.php.
- ²⁰ Per Army Regulation 200-1 (December 13, 2007), Significant natural resources exist when (1) federally listed, proposed, or candidate species are onsite, or critical habitat has been designated or proposed on the installation; (2) conservation reimbursable forestry or agricultural outleasing consist of 100 acres or more; (3) hunting and/or fishing takes place; (4) the installation conducts intensive, on-the-ground military missions that require conservation measures to minimize impacts (soil erosion control, prescribed fire); (5) unique biological resources, wetlands, species at risk, or ecological issues require a level of planned management; and/or (6) Assistant Chief of Staff for Installation Management determines significant natural resources are present.
- ²¹ The USACE Civil Works program does not report energy use or renewable energy production to the Army, as it is not funded through DoD.
- ²² The Army Safety and Occupational Health Strategic Plan is available online at <http://www.asaie.army.mil/Public/ESOH/Safety/Direction/ArmySafetyStrategy.pdf>.
- ²³ FY08 Army Financial Statement, p. 10.
- ²⁴ Ibid., p. 82.
- ²⁵ Ibid., p. 82.

ACRONYMS

ACOM	Army Command	INRMP	Integrated Natural Resources Management Plan
ACUB	Army Compatible Use Buffer	INSCOM	U.S. Army Intelligence and Security Command
AEPI	Army Environmental Policy Institute	ISSP	Integrated Strategies and Sustainability Planning
AMC	Army Materiel Command	ITAM	Integrated Training Area Management
ANSI	American National Standards Institute	IUCN	International Union for Conservation of Nature
ARCENT	U.S. Army Central	LEED®	Leadership in Energy and Environmental Design
ARNORTH	U.S. Army North	MEDCOM	U.S. Army Medical Command
ARSOUTH	U.S. Army South	MDW	U.S. Army Military District of Washington
ARNG	Army National Guard	MILCON	Military Construction Program
ASA-IE	Assistant Secretary of the Army (Installations and Environment)	NETCOM/ 9 th SC(A)	U.S. Army Network Enterprise Technology Command/ 9 th Signal Command (Army)
ASCC	Army Service Component Command	NRC	National Response Center
ASE	Army Strategy for the Environment	NSPS	National Security Personnel System
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers	ODS	ozone-depleting substances
ASR	Army Sustainability Report	OPM	Office of Personnel Management
ATEC	U.S. Army Test and Evaluation Command	PV	photovoltaic
BRAC	base realignment and closure	RCRA	Resource Conservation and Recovery Act
C&D	construction and demolition	REF	Rapid Equipping Force
CY	calendar year	SDD	Sustainable Design and Development
DACOWITS	Defense Advisory Committee on Women in the Services	SDDC	Military Surface Deployment and Distribution Command
DoD	Department of Defense	SEC	Senior Energy Council
DOE	Department of Energy	SMDC/ ARSTRAT	U.S. Army Space and Missile Defense Command/ Army Strategic Command
DRU	Direct Reporting Units	SPiRiT	Sustainable Project Rating Tool
DSB	Defense Science Board	SW	solid waste
EMS	Environmental Management System	TARDEC	U.S. Army Automotive Research, Development and Engineering Center
ENF	enforcement actions	TES	threatened and endangered species
EO	executive order	TGER	Tactical Garbage to Energy Refinery
EUSA	Eighth Army	TRADOC	U.S. Army Training and Doctrine Command
FED	Fuel Efficient Ground Vehicle Demonstrator	TRI	Toxic Release Inventory
FORSCOM	U.S. Army Forces Command	USAASC	U.S. Army Acquisition Support Center
FUDS	Formerly Used Defense Sites	USACE	U.S. Army Corps of Engineers
FY	fiscal year	USACIDC	U.S. Army Criminal Investigation Command
G3	Third Sustainability Reporting Guidelines of the Global Reporting Initiative	USAR/ USARC	U.S. Army Reserve/ U.S. Army Reserve Command
GRI	Global Reporting Initiative	USAREUR	U.S. Army Europe
HQDA	Headquarters, Department of the Army	USARPAC	U.S. Army Pacific
HW	Hazardous Waste	USASOC	U.S. Army Special Operations Command
IESNA	Illuminating Engineering Society of North America	USGBC	U.S. Green Building Council
IMCOM	U.S. Army Installation Management Command	USMA	United States Military Academy

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OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
FOR INSTALLATIONS AND ENVIRONMENT
110 Army Pentagon, Room 3E464
Washington, DC 20310-0110

703-692-9800 (phone)
703-692-9808 (fax)
<http://www.asaie.army.mil>