SUSTAINABILITY 2001-2008

SUSTAIN THE MISSION
SECURE THE FUTURE
The men and women of the United States Army are the Strength of the Nation, striving daily to protect our Nation and to ensure its future, both at home and abroad. The Army is committed to maintaining its position as the world’s preeminent land power, a force trained and ready at all times to serve the Nation and support its allies. We recognize that a trained and ready force for tomorrow requires long-range vision today. This entails the application of transformational, systems thinking and sustainability principles across the Army in all functional areas. A sustainable Army accomplishes its mission while building healthy environments and stable communities. It ensures the needs of the force and the Nation—both now and into the future.

This brochure chronicles highlights of our sustainability efforts to date. They include:

- The implementation of over 30 Installation Sustainability Programs across the country.

The Army has taken many steps on the path to sustainability, yet there still remains much progress to be made. Current efforts include the development of the Army’s campaign plan to “operationalize” sustainability. Operational sustainability will be applied as an organizing principle throughout the Army enterprise to enable access to the training, materiel and services necessary to provide trained and ready forces required for current and future military missions.

We are extremely proud of our accomplishments thus far and are committed to building upon them in the future, as we work to “Sustain the Mission - Secure the Future.”

"ARMY STRONG!"  
Addison D. Davis, IV  
Deputy Assistant Secretary of the Army  
(Environrment, Safety and Occupational Health)
America’s Army is the strength of the Nation, yet few are aware of a vital component of Army strength: Sustainability. Sustainability is a critical mission enabler that ensures the Army simultaneously meets current as well as future mission requirements worldwide, safeguards human health, improves quality of life, and enhances the natural environment.

Mission accomplishment is the true measure of success or failure within the military, and is part of the Army’s “Triple Bottom Line” (TBL) for sustainability: mission, environment, and community. The need to ensure the mission of training and readiness was the original impetus for launching Army sustainability initiatives.

In many respects, the Army’s march toward sustainability began just short of a decade ago with the establishment of the Army’s first sustainability plan at Fort Bragg, NC. Resource constraints, including restrictions on land use for realistic training due to encroachment and protection of endangered flora and fauna, raised questions as to Fort Bragg’s ability to continue to meet its mission. Sustainable Fort Bragg was launched in 2001 as a cooperative solution to those constraints, and by early 2003, led to the formation of the Sustainable Sandhills as a regional partnership with the surrounding counties. The efforts that formed those programs have since spawned goal-driven sustainability programs at 30 Army installations throughout the Continental United States (CONUS), Hawaii, and Germany.

*The Army Strategy for the Environment* seized on the increasing momentum of Army sustainability and focused the previously autonomous efforts into a unified, long-range vision. Since its release in 2004, the Strategy has served as the foundation for Army sustainability programs. It contains six straightforward goals that directly support the Army’s efforts to make the choices today that will enable it to be ready, effective, and strategically flexible in the future. Five of these goals target crucial areas of Army performance. They are designed to:

- Strengthen Army Operations
- Meet Test, Training, and Mission Requirements
- Minimize Impacts and Total Ownership Costs
- Enhance Well Being
- Drive Innovation.

The sixth goal is foundational and enables the Army to accomplish each of the five targeted goals. That goal is to foster a sustainability ethic in each member of the Army family, and all those who support the Army.

The Army’s next step forward is to “operationalize” sustainability by moving from individual initiatives to an enterprise-wide synchronization of efforts across multiple lines of operation. Operationalized sustainability will better incorporate sustainability in Army planning, training, equipping, and operations, and will establish it as an organizing principle that enables access to training, materiel, and services necessary to provide a trained and ready force required for current and future military missions.

**WHAT HAS THE ARMY DONE:**

• Fort Bragg produces the first Installation Sustainability Plan (ISP). The plan calls into consideration activities and organizations across the installation and identifies specific goals and objectives in order to sustain the Army’s mission at the installation and then tracks the progress of these goals. This sets the stage for future installations in sustainability planning.

• Army develops and adopts the Sustainable Project Rating Tool (SPiRiT) based on the United States Green Building Council’s (USGBC’s) Leadership in Energy and Environmental Design (LEED®) Green Building Rating System™.

• The Office of the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health (DASA-ESOH) creates a position with responsibility for sustainability.

The Army systematically integrates environmental considerations in the design and development of the Stryker family of vehicles, reducing hazardous materials, increasing combat effectiveness, and minimizing cost across its life cycle.

**Stryker**
A Stryker from 3rd Plt., A Co., 1-17 Inf. maneuvers at the MPTR, Yakima Training Center, during a platoon live-fire exercise.

**FACILITIES** - Army Forces Command initiates Installation Sustainability Planning.
• Office of the Director of Environmental Programs (ODEP) assigns its first position with formal responsibility for sustainability in ODEP.

• Additional Army Installations develop ISPs:
  - Fort Lewis, WA
  - Fort Hood, TX
  - Fort Carson, CO
  - Fort McPherson, GA.

• The U.S. Army Corps of Engineers (USACE) adopts its seven Environmental Operating Principles (EOPs), which stress sustainability and developing a global strategy for the environment.
PERSONNEL - DASA-ESOH upgrades the position responsible for sustainability, designating it as the Assistant for Sustainability at the GS-15 level, putting sustainability on par with other major programs.

- Army holds Army-wide Environmental Strategy Forum to design the long-term vision for a new strategy, which would become the strategy for sustainability.

  - The forum charters the general approach that will be used to draft the strategy documents in order to “Sustain the Mission, Secure the Future,” and directs a writing group to draft a 6–8 page high-level document to guide a sustainable Army.

- Fort Campbell joins the ranks of those that have conducted Installation Sustainability Workshops and adopts a program for a sustainable installation. Other installations will continue implementing sustainability through 2008.

  - Group of select, experienced practitioners representing a wide variety of organizational levels within the Army produces the “Guide to a Sustainable Installation in 25 Years or Less” to help more Army installations implement Installation Sustainability.

  - Army revises Army Regulation 70-1, containing requirements for pollution prevention and affirmative procurement to integrate sustainability initiatives during systems acquisition.

  - USACE Regulation 200-1-5 requires implementation of the USACE sustainability-based EOP “across the full spectrum of USACE’s program management initiative and business processes.”

- Fort Bragg enters into the Sustainable Sandhills partnership with the State of North Carolina, the counties surrounding the installation and local stakeholders to form the first-of-its-kind plan to promote sustainability on the regional level.
• The Army G-3 and the Army Assistant Chief of Staff for Installation Management (ACSIM) jointly issue a memorandum, “Army Range and Training Land Acquisitions and Army Compatible Use Buffers (ACUB).” The ACUB program enables states, local governments, and others to preserve lands that protect Army training without the need for the Army to purchase the lands. Authority for ACUB was created by Congressional statute based on experience gained from the Fort Bragg Private Lands Initiative in the 1990s.

• Camp Blanding in Florida establishes the first ACUB.

• U.S. Army Forces Command Installation Sustainability Program receives a White House Closing the Circle Award. The initiative also won Secretary of the Army and Secretary of Defense environmental awards for 2002.

• Assistant Secretary of the Army for Installations and Environment (ASA(I&E)) issues a policy requiring all housing being developed under the Army’s Residential Communities Initiative (RCI) to use SPIRiT assessments and to meet the Gold rating.

Camp Blanding ACUB Species
Red-cockaded woodpeckers are protected on multiple Army installations (including Fort Blanding, FL) in the Southeast Region of US.
Photo by Courtesy U.S. Fish and Wildlife Service.
• The Army drafts, reviews, and publishes its sustainability strategy, *The Army Strategy for the Environment, “Sustain the Mission, Secure the Future”* which is endorsed by the Acting Secretary of the Army and the Army Chief of Staff on October 1, 2004. The strategy introduces the concept of the “Triple Bottom Line” — Mission, Environment, and Community — to the Army.

The Army incorporates the TBL principles into the Installation Sustainability Program and reworks training materials to include these concepts.

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**The Army Strategy for the Environment**


• The Army Sustainability Committee is organized by the Chief of the Sustainability Division at ODEP.

• Program Manager Stryker Brigade Combat Team is awarded the Secretary of the Army Award in the acquisition category for eliminating the use of hexavalent chromium and cadmium in vehicle components.

• Sponsorship of Installation Sustainability migrates from U.S. Army Forces Command (FORSCOM) to the ACSIM.

• Army Environmental Policy Institute (AEPI) publishes roadmap for incorporation of sustainability in the Army National Guard through Lieutenant Colonel Jeffrey Phillips, *An Army National Guard (ARNG) Installation Sustainability Plan (ISP) Modeled to Ensure Long-Term Mission Readiness at ARNG Training Centers*, Army War College and Army Environmental Policy Institute Civilian Research Paper.

• Region IV Department of Defense (DoD)-Environmental Protection Agency (EPA)-States Environmental Conference features “Sustainability 501,” a 4-hour training session provided by Army experts and installation practitioners in sustainability.

• Fort Lewis Public Works wins a National Environmental Excellence Award for Environmental Management from the National Association of Environmental Professionals (NAEP).
• The Army issues Army Regulation 350-19, The Sustainable Range Program, institutionalizing Army best practices for design, management, and use of 11.7 million acres of range and training lands on 115 Army installations worldwide to ensure their sustainability.

• A series of listening, writing, and planning sessions commence with the purpose of drafting a Strategic Action Plan for Army Sustainability. The process starts with the Army Sustainability and Beyond practicum and continues for 2 years, after which the editing and refinement of input, and further vetting, begins leading to a formal coordination of the plan in 2008.

• The Army Sustainability Committee is designated as an officially chartered Army Committee.

• The Army launches its Public Involvement Toolbox, a web-based tool designed to strengthen relations between the Army and communities around installations and ranges. The Toolbox is an early innovation driven by the Army Strategy for the Environment, “Sustain the Mission, Secure the Future” and its emphasis on effective communication between communities and the Army as necessary to sustain the Army mission.

**Army Public Involvement Toolbox**
http://www.asaie.army.mil/Public/IE/Toolbox/default.html

**TRAINING** - The Army conducts its first leadership sustainability training and practicum through the University of Virginia’s Darden School of Business. Each of the approximately 40 attendee/participants were eligible for graduate-level credit for the course titled, “Army Sustainability and Beyond.”
• The Army updates Army Regulation 210-20, Real Property Master Planning for Army Installations, incorporating installation sustainability.

• The Secretary of the Army and the Army Chief of Staff endorse a new Army Energy Strategy for Installations, and the Army promulgates the Army’s Energy and Water Campaign Plan for Installations which lists specific performance measures to accomplish these five sustainability goals:

1. Eliminate energy waste in existing facilities,

2. Increase energy efficiency in renovation and new construction,

3. Reduce dependence on fossil fuels,

4. Conserve water resources, and

5. Improve energy security.

• New DASA-ESOH leadership intensifies emphasis on institutionalizing Army Sustainability.

• Installation Sustainability Workshops are held at: Fort Stewart, GA; Fort Benning, GA; and Fort Jackson, SC.

• The Commander of USACE issues Command Memorandum #12 exhorting the USACE to be the Nation’s leader in “environmental sustainability.” The memo requires sustainable planning and execution, and the education of all USACE employees in the sustainable principles of USACE’s Environmental Operating Principles, which are grounded in sustainability.

Fort Benning, GA

14-year old Riley Woina, of Plymouth, CT, (left) became one of the Army’s newest Rangers during a graduation at Fort Benning. Colonel Michael Linnington, United States Army Infantry School’s Assistant Commandant pinned him with a coveted Ranger tab. Woina, who has been diagnosed with cystic fibrosis, stood in the ranks with other Ranger students at Fort Benning with the help of Fort Benning’s Ranger Training Brigade and the Make-A-Wish Foundation. As part of his wish, Woina spent a week training with the Ranger students. Photo by David Dismukes.
The new big belly solar compactors are one of the ways the Fort McPherson and Fort Gillem, GA communities are going green. The waste bin compacts trash allowing more trash to be condensed into a smaller area.

- The Army issues requirements for sustainable management of waste in Military Construction, Renovation, and Demolition Activities, included among the requirements is a 50% minimum diversion of construction and demolition wastes from landfills.

- The ACSIM provides resources to conduct installation sustainability planning as a strategic initiative.

- Army and Air National Guard units begin planning for state-wide sustainability programs.

- Army conducts two additional week-long graduate leadership education and practicum courses, “Army Sustainability and Beyond” through the University of Virginia’s Darden School of Business, the second in conjunction with the Army War College, both qualify for college credit. Approximately 40 students at the Colonel/Lieutenant Colonel, GS-15/14 grade, attend and participate in each class.

- Army holds a half-day sustainability familiarization for General Officers and Senior Executive Service.

- The Army Deputy Assistant Secretary for Installations and Housing issues a policy update describing and mandating the transition to using LEED®, and requiring all new construction starting with FY08 to meet the LEED® Silver rating.

- The Army issues two separate policies on sustainable technology:
  1. mandating the use of Light Emitting Diode (LED) fixtures in all Army Traffic Lights and
  2. use of non-water using urinals in all new construction beginning in FY10.

- DASA-ESOH requires that Army sustainability include the role of energy conservation, alternative energy, and energy security within the umbrella of Army sustainability.

- National Defense Center for Environmental Excellence (NDCEE) organizes the DoD Sustainability Partnerships and Planning Workshop, hosted by U.S. Army Installation Management Command Pacific at Fort Shafter, Hawaii, to explore the need for a regional sustainability initiative.

- LEADERSHIP - DASA-ESOH briefs senior Army leadership in Director of the Army Staff (DAS) Synchronization Meeting on meaning of and path forward for Army sustainability.

- AEPI commences its Sustainability Lecture Series. The series features distinguished speakers, appearing about 10 times a year, and reaches an expanded audience through Video Teleconferencing and phone lines, including the Pentagon, Army Materiel Command (AMC), and Army Civil Engineering Laboratory, Champaign Urbana (CERL).
• The Association of the U.S. Army (AUSA) publishes its first *Torchbearer* issue for 2007 highlighting Army Sustainability, characterizing it as a “Force Multiplier” and clearly identifying energy issues as within Army sustainability.

• The Army issues an updated Army Regulation 200-1 that includes a requirement for Installation Commanders to incorporate sustainability principles into their Strategic Plans and other planning documents.

• The Secretary of the Army designates the ASA (I&E) as the Senior Official responsible for Army implementation of Executive Order (EO) 13423, “Strengthening Federal Environmental, Energy, and Transportation Management,” within the Army, and the coordinating and reporting Army efforts to the Office of the Secretary of Defense.

• DASA-ESOH updates senior Army headquarters leadership in DAS synchronization meeting on the path forward for Army sustainability, including EO 13423, and designates sustainability points of contact across the Army headquarters.

• Installation Management Command (IMCOM) Europe initiates installation sustainability planning, at U.S. Army Garrison Wiesbaden, Germany.

MATERIALS - The Army promulgates an Energy Reduction Strategy for U.S. Army installations and the Army Civil Works Program for non-tactical vehicles which includes expansion of alternate fuel infrastructure, increased alternate fuel use, increased miles per gallon, reduction in the number of vehicles, and promotion of the use of hybrid and hydrogen fuel vehicles.

• Pennsylvania National Guard initiates first state-wide sustainability workshop. The workshop marks the first time that both the Army Guard and Air Guard components worked together to plan sustainability initiatives.

• The Army begins designing the Army’s eight new Manned Ground Vehicles to utilize hybrid-electric engines.

• The Vice Chief of Staff of the Army issues policy memorandum to provide guidance for accountability to eliminate energy waste, reduce dependence on fossil fuels and improve energy security in the Army.

• The Army begins a program called Net Zero Tactical Fuel Reduction, the goal of which is to reduce fuel used in power generation at forward operating bases or facilities, subsequently reducing the requirement for Soldiers and contractors on fuel hauling convoys.

• The USACE creates the Center for Advancement of Sustainability Innovation (CASI) to provide technical support to all Army installations.

• AEPI, CASI, and Fort Bragg deploy and test the Strategic Sustainability Assessment (SSA) in the 11 county region surrounding Fort Bragg. It is the first geospatially grounded sustainability assessment to allow all participants to project and understand the outcomes of their behavior extending from near-term to long-term implications, on the 25-year horizon. The SSA is a sustainability innovation driven by the *Army Strategy for the Environment, Sustain the Mission, Secure the Future*. The long-term horizon set by the strategy required tools to make realistic long-term planning projections based on sound science and covering the mission, environment, and community interrelationships.

• AEPI advances the understanding of the organizational dynamics needed to transform to a sustainable Army through Colonel Mary E Hallmark, *SUSTAINABILITY: Cultural Considerations*, Army War College and AEPI Civilian Research Paper.

• AEPI publishes, Climate Change and Army Sustainability, in its *Foresight* Publication series which is designed to assist leaders understand and deal effectively with emerging issues.

• Army sustainability is recognized by the White House with the award of the White House “Closing the Circle Award” in the category of “Sowing the Seeds of Change” for the Army Strategy for the Environment, *Sustain the Mission, Secure the Future*, and, subsequent efforts to advance sustainability throughout the Army.

The DASA-ESOH initiates awareness of the economic benefits to the Army from sustainability, and captures this awareness in the new Army TBL, Plus. The “plus” symbolizes the cost reductions and innovation that the Army is receiving through sustainability.
• The Commander of USACE issues Command Memorandum # 4, “Implementing Sustainability,” which calls for USACE to implement the Energy Policy Act (EPAct) of 2005 and EO 13423.

• The ACSIM issues Army Policy Memo, April 2007, Sustainable Design and Develop Policy Update, established several key Army Sustainable Design criteria including:

  - Issuing a policy requiring all new military building construction to achieve a “Silver” rating, as outlined by the USGBC’s LEED® rating system, beginning with FY08 military construction program.

  - Issuing a policy requiring all major renovation and repair projects exceeding $7.5M to incorporate sustainable features where life-cycle cost effective to achieve a minimum of the “Certified” level of the LEED® Existing Buildings rating system, beginning in FY08.

  - Issuing a policy requiring all new construction projects that have not completed concept design prior to the issuance of the policy memo (27 Apr 07) will be designed to reduce the energy consumption level by 30% compared to the baseline building performance rating per the American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc.

  - This memorandum incorporates, expands, and supersedes Secretariat memorandum of 2006 mandating LEED® standards.

• United States Army Environmental Command (USAEC) conducts an analysis of greenhouse gas (GHG) emissions for 65 installations using corporate databases.

• U.S. Army Garrison, Hawaii, completes the installation sustainability planning process, becoming the first Outside Continental United States (OCONUS) installation to do so. USAG-HI then begins the integration process with its Garrison Strategic Plan.

• U.S. Army IMCOM Southeast, Fort Campbell Family Housing, and NDCEE receive funding from the Environmental Security Technology Certification Program to demonstrate and validate zero energy housing technologies and design strategies for military family housing.

• The Army establishes a Secretary of the Army Sustainability Award to recognize outstanding sustainability initiatives throughout the Army. Fort Bragg wins the installation award, and Paul Wirt, the Fort Bragg sustainability lead, is recognized with an individual award.

• Headquarters, Department of the Army G-3 Sustainable Range Program (SPR) wins an NAEP National Environmental Excellence Award for Environmental Management.
• The Army publishes *The Army Sustainability Report for FY 2007* in September 2008, becoming the first federal agency to use the Global Reporting Initiative (GRI) framework to assess and report its performance against GRI’s universally recognized standard.

• The Army commences the formal Army coordination of the Draft *Army Strategic Plan for Army Sustainability*.

• The California National Guard streamlines the installation sustainability workshop process and integrates sustainability planning into the Guard’s strategic plan for all Guard activities across the state of California.

• AEPI publishes a report containing a water and energy costing methodology tool which has been incorporated by the Army’s G-4. Pending the completion of contracting efforts, the Army G-4 anticipates utilizing the Fully Burdened Cost of Fuel tool to look for trade-off analysis and make plans more energy efficient for sustaining the Warfighter.

• USACE establishes the Sustainable Design and Development Directory of Expertise to support Army’s ability to meet its new sustainable building criteria under LEED® standards and to continue to enhance sustainable approaches.

**AEPI**

AEPI mentor and Army War College fellow confer on emerging environmental issues.
By 2008, over 20 Army installations have Installation Sustainability Planning in place or being implemented, including OCONUS bases, and Army National Guard state units, and over 80,000 acres are protected under the ACUB program.

- The Army Net Zero Tactical Fuel Reduction is reducing fuel use through these initiatives implemented since 2007:
  - Foamed/insulated tents currently in use in Iraq to reduce the cost associated with air conditioning and heating.
  - Program established at the Army’s National Training Center to better quantify energy reduction and to test new technology that provides further energy reduction.

- Army Acquisition Community receives the 2008 U.S. EPA International Stratospheric Ozone Protection Award for reducing the use of ozone depleting substances in weapon systems applications.

- Program Manager Close Combat Systems is awarded the Secretary of the Army Environmental Award in the Acquisition Category for eliminating perchlorates from M115/M116 simulators.

- RAND Corporation publishes AEPI sponsored study, *Green Warrior: Army Environmental Considerations for Contingency Operations from Planning Through Post Conflict* which shows that effective management of environmental issues can play a pivotal role in contingency operations.

- AEPI examines the transformation of Army sustainability to Combatant Commands in *Reducing an Insurgency’s Foothold: Army Sustainability Concepts as a Tool of Engagement*, Army War College and Army Environmental Policy Institute Civilian Research Paper by Colonel Tim Hill.
The Secretary of the Army creates the Army Energy Security Task Force (AESTF) to facilitate development of a cohesive Army-wide approach to energy security.

• AESTF recommendations are presented to the Secretary of the Army. All recommendations are approved including the establishment of a Senior Energy Council and the designation of the DASA Energy & Petroleum as the Army’s Senior Energy Executive, who will monitor the Army’s progress toward energy goals.

• The Army holds its inaugural meeting of the AESTF and the Secretary of the Army. This meeting results in the development of an Army Energy Security Strategic Plan.

• The Army holds its first Army Energy Forum, engaging in discussions with industry regarding the need for new Army energy policies and practices and documenting industry recommendations regarding efficient and renewable energy technologies.
Army’s Largest Solar Array Generates More Than Power
The Army’s largest solar array, a 2-megawatt system at Fort Carson, CO, that should produce enough power for 540 homes.

- The Army issues its Army Metering Implementation Plan, with a goal to meet an EPAct 2005 requirement that all electricity use at federal facilities be metered with advance meters by 2012, where practicable.
- DASA-ESOH tasks ACSIM/USAEC to develop a plan and methodology to prepare a preliminary Army-wide GHG inventory.

Fort Lewis
Community Covenant Signing, May 05, 2008, participants gather on stage after the signing of the Puget Sound Army Community Covenant at Clover Park Technical College in Lakewood, WA.