

**DEPARTMENT OF DEFENSE
ENVIRONMENTAL SECURITY PROGRAMS**

STATEMENT OF

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BEFORE THE

SENATE ARMED SERVICES COMMITTEE

**SUBCOMMITTEE ON READINESS &
MANAGEMENT SUPPORT**

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ENVIRONMENTAL SECURITY IN THE NEXT MILLENIUM

In February Secretary Cohen, testifying before this Committee, stressed the importance of Defense preparedness so the United States can lead the world into a new, more peaceful century. He underlined how our National Security Strategy works to foster a stable international order, allowing critical regions to be stable and free from domination by hostile powers, where the global economy and trade are free to grow, where democratic norms are widely accepted, and where nations freely cooperate to prevent and also respond to natural and political calamities.

The three elements of the Secretary's defense strategy are: Shape, Respond and Prepare. Environmental Security is active in each of these categories helping:

- **SHAPE** the international security environmental in ways favorable to U.S. interests, promoting regional stability through military-to-military cooperation
- **RESPOND** by supporting critical environment and health requirements of military operations
- **PREPARE** by sustaining access to land, air, and sea for training through responsible management of our installations and training lands.

I'm here today to discuss how Environmental Security supports the Secretary's priorities and defense strategy. In particular, I want to emphasize the importance of DoD's training and testing ranges withdrawn from public lands for military use and which require congressional renewal. My office is working with the military departments on the critical effort of maintaining these lands for military use. Working with the Department of Interior, we're resolving critical environmental issues and developing a joint legislative plan to accomplish successful withdrawal. Without these lands, DoD cannot do realistic training for a wide range of military activities – military readiness will decline.

ENVIRONMENTAL SECURITY VISION AND GOALS

Recognizing the Secretary's top priorities - people, readiness, and modernization – within the context of the hierarchy of the National Security Strategy and the Secretary's Quadrennial Defense Review Strategy – Environmental Security prepared a new vision statement this year. The new vision statement emphasizes the importance of integrating environmental, safety and health activities into DoD operations, protecting readiness through wise environmental management of ranges, and supporting modernization by improving the quality and reducing the costs of defense acquisition and procurement.

VISION: To have fully incorporated environmental, health and safety values into the culture of the Department of Defense. These core values are recognized by the uniformed and civilian customers throughout the Department of Defense and its external stakeholders. They are vital parts of all operational and business decisions whereby the safety and health of our people, protection of weapons systems, facilities, and the environment are integrated into all worldwide national defense activities.

We have identified five specific goals within the Environmental Security program to meet the safety, health and environmental needs of the new millennium.

- Support readiness of U.S. Forces by ensuring access to air, land and water for training and operations
- Improve quality of life by protecting military personnel and families from environmental, safety and health hazards and by providing recreational opportunities (e.g., hunting, fishing, camping, hiking)
- Ensure weapons systems, logistics, installations, et al., have greater performance, lower lifecycle costs, and minimal health and environmental effects
- Serve customers, clients, stakeholders through public participation and advocacy
- Enhance international security through military-to-military cooperation.

These goals are the underpinnings for current activity at Environmental Security. The first goal – supporting readiness – is especially relevant to today's hearing. This year, Environmental Security is working to accomplish a legislative objective which will be essential to our military's training and readiness – the coordination of the withdrawal of public lands for military training in the western United States.

P.L. 99-606 LAND WITHDRAWAL RENEWAL

A major issue that will be before this committee during this first session of the 106th Congress is the renewal of the Public Law (P.L.) 99-606 ranges.

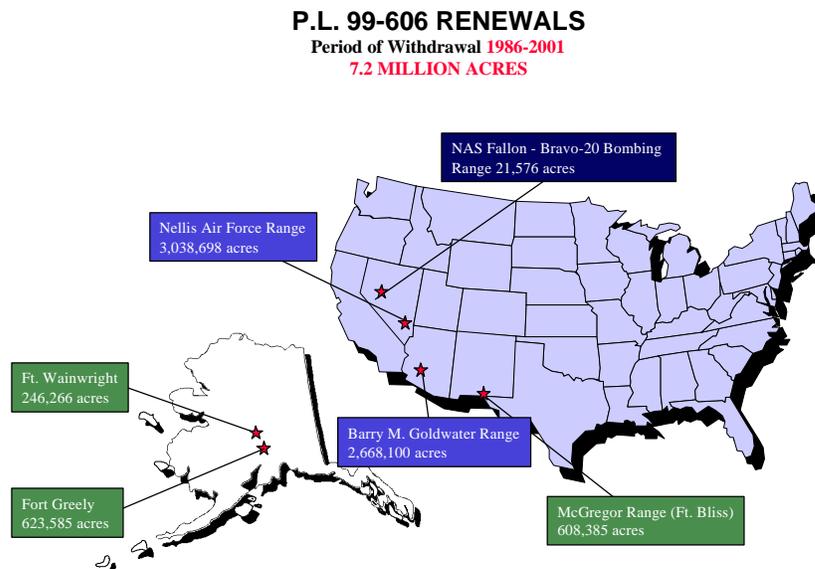
What is P.L. 99-606?

In 1986, Congress passed legislation (P.L. 99-606) in which it withdrew over 7.1 million acres of public lands for military use at six installations. We collectively refer to these six training ranges as the P.L. 99-606 ranges. The withdrawal authority – which lasts 15 years – will terminate in November 2001.

In order to ensure the continued use of these P.L. 99-606 ranges for our military mission, we're working with the Department of the Interior to complete the renewal legislation package. As the law required in its renewal process, the military services are preparing an Environmental Impact Statement (EIS) for each area. The Department of Interior (DOI) plans to submit the renewal legislation during the first session of the 106th Congress, well ahead of the November 2001 deadline.

Where are the P.L. 99-606 Ranges?

The 7.2 million acres legislatively withdrawn under P.L. 99-606 represent 42 percent of the 17 million acres withdrawn from public lands for military use.



These public lands remain extremely important to each of the military services for training and testing – each vital to the national defense mission. Likewise, these lands are important for their ecological, cultural, recreational, and other values – values that are consistent with the DOI mission.

What does “military use of public lands” mean?

DOI would administer these lands if they weren’t withdrawn for military use. However, once withdrawn for military use, DoD manages the lands. DoD’s management responsibility includes a stewardship role – in cooperation with the DOI – over the natural and cultural resources. Under the terms of the withdrawal, this may mean the lands could be available for grazing, mineral leasing, recreation, and other activities.

What is the military significance of these ranges?

Renewing the land withdrawals under P.L. 99-606 will preserve key components of our national defense training base. Clearly, our troops need training that realistically approximates the way they will be required to fight in actual combat. These P.L. 99-606 renewals are therefore indispensable to the present and future readiness of our armed forces.

For example:

- Army – Can’t duplicate Arctic training and test conditions found at Forts Greely and Wainwright, Alaska at any other Army installation in the United States.
- Navy – Naval Air Station Fallon is the only naval facility that can support, train, and house an entire carrier air wing for training. Renewal of its Bravo-20 range allows for training to continue in a real world, multi-threat combat environment.
- Air Force – The Nellis Air Force Range is an essential component of the Nevada Test and Training Range complex. The Range provides realistic, secure simulation of a battle area complete with surface and air defense systems and realistic targets and defensive threats.

- Marine Corps - The Barry M. Goldwater Range is the single most important range now and into the future for Marine Corps aviation training and combat readiness. Marine Corps units - from all areas of the country and off aircraft carriers in the Pacific Ocean - use this airspace and range for operating sophisticated aircraft and weapons systems in realistic conditions. Activities include the actual firing of aircraft guns, missiles, rockets; aerial bombing; air-to-air simulated combat; aerial refueling; the insertion of infantry, ground-based radar units, and STINGER teams; and, ground-based logistics support. The Marine Corps and Navy fly 60 percent of all training sorties on the Barry M. Goldwater and Fallon Ranges. If for some reason these ranges were to become unavailable, Marine aviation training and Marine Air Ground Task Force combat readiness as we know it today would cease to exist.

Why do we need withdrawn public lands?

DoD does not own much of the land on which our military trains. Of the 25 million acres DoD uses, 68 percent – or 17 million acres – are lands withdrawn from the public domain, lands otherwise administered by the Department of the Interior, except for the lands within the National Refuge, which remain under the control of the Fish and Wildlife Service. Yet land, sea, and air are critically important to our ability to test and train.

Until 1958, DoD withdrew lands for military purposes by a Presidential executive order or by a Public Lands Order signed by Secretary of the Interior. After 1958, the Engle Act required congressional action for any withdrawal of more than 5,000 acres for military purposes.

Ongoing Collaboration at Military Training Ranges

The military services take their responsibilities for the stewardship of lands entrusted to their care seriously. We have many examples of the military services working cooperatively with federal and state land management agencies to accomplish their military missions in an environmentally responsible manner. I'd like to highlight a few that involve stewardship activities underway on P.L. 99-606 ranges.

Barry M. Goldwater Range, AZ Interagency Management Committee

The Air Force and other major land management agencies in Arizona have established an interagency collaboration for the Sonoran Desert, known as the Barry M. Goldwater Range Interagency Management Committee or BEC. Members of the Interagency Management Committee include the Air Force, Bureau of Land Management (BLM), U.S. Marine Corps, Arizona Department of Game and Fish, National Park Service, Border Patrol, and Fish and Wildlife Service. The Interagency Management Committee meets regularly to address day-to-day management of the Goldwater Range, and long-range collaborative planning.

Army Land Management Advisory Team at Forts Greely and Wainwright, AK

The Army and BLM signed the Army Land Management Advisory Team's charter which delineates responsibilities, addresses issues of trespass and encroachment and coordinates the Integrated Natural Resources Management Plans on Forts Greely and Wainwright, Alaska.

Environmental Impact Statement at NAS Fallon, NV

Naval Air Station Fallon and BLM are currently engaged in the joint preparation of an Environmental Impact Statement (EIS) covering range improvements to the Fallon Range Training Complex (FRTC). The EIS – prepared with public and State of Nevada participation – will take a 20-year forward look at range improvements including enhancing existing target complexes. Additionally, the Navy is providing funds for a full-time BLM staff liaison for Fallon. The BLM liaison focuses only on issues between the BLM and the Navy at Fallon.

What is the process for renewing the P.L. 99-606 land withdrawals?

DoD and DOI requirements for completing the renewal process include the following steps:

1. Military Services prepare application
2. Military Services prepare environmental documentation (e.g., EIS) in accordance with the National Environmental Policy Act specified under P.L. 99-606
3. Military Services obtain public review and comment
4. Military Services provide final application packages to appropriate BLM State Director
5. DOI prepares proposed legislative renewal for executive level review
6. Administration submits the proposed legislation to Congress

What is the status of the current renewal effort?

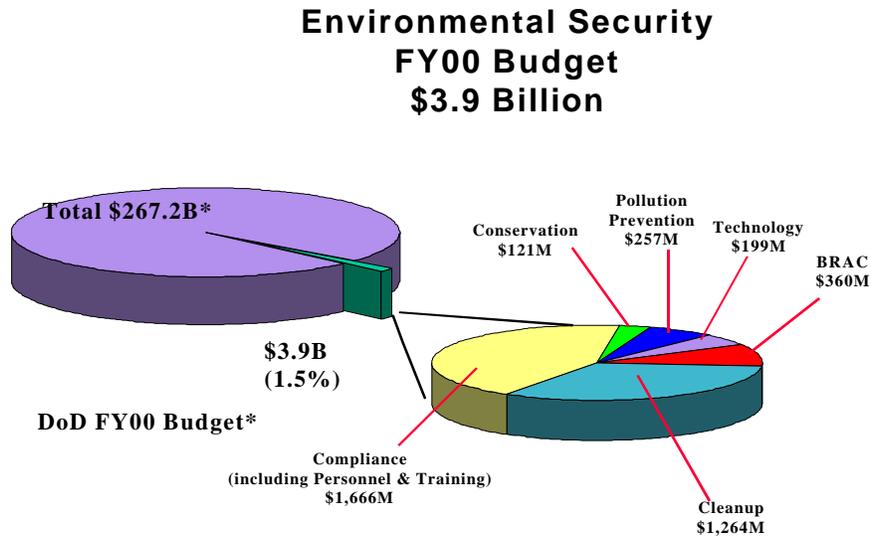
As of November 1998, each of the military services had completed the preparation of their respective draft EISs. By the end of February 1999, the Military Services and DOI completed all public hearings. The military services are now completing the application and supporting documentation for each of the P.L. 99-606 ranges. The Military Services intend to submit the final application packages to the appropriate BLM State Director this month (April 1999).

What is the legislative schedule?

Our goal is to submit the final renewal package as early as possible in the first session of the 106th Congress. In order to achieve this goal, both Departments are engaging at the senior levels to ensure that issues are resolved and progress continues on the legislative renewal package. We hope to complete the legislative package and submit it to the Congress as expeditiously as possible in the 1st session of the 106th Congress.

ENVIRONMENTAL SECURITY PROGRAMS

Environmental Security programs – Technology, Pollution Prevention, Compliance, Conservation, Cleanup (including BRAC), and Force Protection – make up only 1.5% of DoD's overall budget. However, this small investment is pivotal to protecting and cleaning up our installations and complying with the law. While the overall defense budget will increase in the year 2000, DoD's environmental budget continues to



*O51 Functions

decline.

Despite increasing regulatory requirements, our environmental performance continues to improve. The challenge we face is to continue responding to new regulatory requirements, while using cutting edge technologies and innovative business practices – keeping costs down and preserving our vital resources.

The Department of Defense is integrating environmental security into the mainstream of its business. By emphasizing improved processes, partnerships, and innovative approaches, we're reaping the benefits of sound business practices, increased efficiency, and reduced costs.

Improved Processes		Sound Business Practices
Partnerships	⇒	Increased Efficiency
Innovative Approaches		Reduced Costs

A description of Environmental Security's programs – their goals, accomplishments, budget, and future direction – follow.

Environmental Technology

Environmental technology programs are critical to the DoD meeting its environmental requirements in a timely and cost effective manner. The Department is pursuing technologies that will:

- provide for more efficient cleanup of our bases
- reduce or eliminate both solid and liquid waste streams
- preserve our training and testing lands
- reduce or eliminate hazardous air emissions

Environmental Technology Programs

The Department invests in all phases of research and development through a variety of military service and defense-wide programs. DoD invests in the early stages of research and development through the individual research and development programs of the military departments – which address military service-specific environmental technology requirements – and the Strategic Environmental Research and Development Program (SERDP) – which addresses Department-wide technology needs.

SERDP is the Department’s corporate Environmental Quality Science and Technology program encompassing over half of the Department’s investment in Science and Technology. SERDP – a tri-agency cooperative program with DOE and EPA established by Congress in 1990 – capitalizes on the capabilities of the national laboratory system as well as the private sector and leverages other federal investments to meet the DoD’s environmental challenges.

As projects emerge from the research and development phase, they move forward toward implementation through DoD’s demonstration and validation programs – such as the Environmental Security Technology Certification Program (ESTCP). Similar to SERDP, ESTCP is DoD’s corporate demonstration-validation program. A combined tri-Service program office manages both SERDP and ESTCP.

ESTCP’s goals include: demonstrating and validating innovative environmental technologies under real-world conditions, addressing the most urgent DoD environmental needs, and promoting the rapid implementation and use of advanced environmental technologies.

Program	R&D Type	Media	Technology Needs
Military Department’s R&D	Basic and applied research and development	Cleanup, compliance, pollution prevention, and conservation	Service-specific environmental R&D needs
SERDP	Basic and applied research and development	Cleanup, compliance, pollution prevention, and conservation	DoD environmental R&D needs
ESTCP	Demonstration and Validation	Cleanup, compliance, and pollution prevention*	Laboratory-proven technologies with broad DoD market application

* Conservation projects funded through the military department’s Legacy Accounts

Identifying Environmental Technology Needs

DoD's overall strategy for environmental technology is to identify and establish priorities among users' needs and to implement environmental solutions through the development of technologies and their subsequent transfer to the user community. DoD identifies environmental technology needs by the following process:

1. Military Services identify environmental technology needs by prioritizing problems identified by its user communities
2. Technology needs are validated for technical soundness and become candidates for research and development if no other technology exists or is being developed
3. Science and technology community develop project/program proposals based on a prioritized list of technology requirements

DoD maintains close coordination between technology oversight organizations, the researchers, and the users to eliminate redundancy. For example, through a cooperative agreement between the Marine Corps and the Air Force, the Marine Corps Air Station, El Toro, CA, obtained Soil Vapor Extraction (SVE) treatment system equipment from Norton Air Force Base. The Air Force had already successfully used the SVE equipment for its cleanup at Norton before transferring it to the Marine Corps.

The use of the equipment at MCAS El Toro is expected to shorten the length of the cleanup project by six months and save \$1.1 million in cleanup costs. The Navy plans to use the SVE equipment at other Navy and Marine Corps installations upon request.

Implementing Innovative Technologies

Some examples of DoD innovative technologies include:

- *UXO Detection* - The Naval Research Laboratory (NRL), under the ESTCP, has successfully demonstrated, validated, commercialized, and transitioned an advanced system for locating Unexploded Ordnance (UXO). The Multi-Sensor Towed Array Detection System (MTADS) combines state of the art magnetometers, electro-magnetic induction sensors, advanced navigational systems, and innovative sensor processing algorithms.

Benefit: At multiple UXO contaminated sites, MTADS has successfully conducted rapid cost effective surveys with significantly improved detection capabilities as compared to traditional "mag and flag"

approaches. The improved discrimination capability provides a more cost-effective remediation.

- *Physical Separation and Acid Leaching* – The U.S. Army Environmental Center and the U.S. Naval Facilities Engineering Center, under the ESTCP, jointly demonstrated the process of physical separation combined with acid leaching for removing heavy metals from range soil. The density differences between metals and the soil permit separation, and once separated, acid leaching dissolves and washes metals from the soil.

Benefit: For a processing load of 10,000 tons of soil, this technology can save approximately \$370 per ton. In addition, DoD can sell the lead recovered from the separation and leaching process to a smelter for about \$300 per ton. Ft. Polk, LA demonstrated this technology and Twin Cities Army Ammunition Plant, MN implemented it.

FY 2000 Budget and Future Directions

DoD's FY00 budget request for research, development, testing, and evaluation efforts is \$199 million, \$59 million less than the FY99 appropriation. These funds will help create new technological products to support environmental security program goals and objectives.

DoD is addressing several pressing issues in FY 2000 and beyond including:

- unexploded ordnance (UXO) detection, discrimination, and remediation
- in-situ remediation of soils and sediments contaminated with metals
- in-situ remediation of groundwater contaminated with chlorinated volatile organic compounds, metals, energetics or mixtures containing these contaminants
- elimination or control of hazardous air emissions from diesels, turbine engines, ordnance, and industrial processes
- elimination of toxic compounds such as chromium from weapons systems
- preservation of training and testing ranges through adaptive ecosystem management practices

Pollution Prevention

Pollution prevention involves the activities and programs designed to reduce or eliminate pollution problems at the source – instead of trying to control or mitigate their effects. Examples include: conserving energy, water, and natural resources; reducing the use of hazardous materials, including through the use of alternative materials; substituting paints containing air pollutants with new approaches such as powder paint coating; and, recycling costly metals.

Pollution Prevention Goals

Our pollution prevention program achieved great success in FY 1998, as measured by the following performance metrics:

Item	Goal	Through CY97
Hazardous Waste Disposal	Reduce by 50% between CY92 and CY99	Reduced by 48% - just short of CY99 goal.
Toxic Release Inventory	Reduce releases by 50% between CY94 and CY99	Reduced by 56% - met the goal in CY96.
Solid Waste Recycling*	Increase recycling by 50% between CY92 and CY99	Reduced by 55% - met the goal in CY97.
Solid Waste Disposal*	Reduce by 50% between CY92 and CY99	Reduced by 33%.

*New diversion goal established in CY98. Goal is to achieve a 40% diversion rate by CY04.

A Four-Pronged Approach

Our pollution prevention program has a four-pronged approach to meet its goals:

- pollution prevention to achieve compliance
- pollution prevention in weapons system acquisition
- process improvements and material substitution
- partnering

Pollution prevention to achieve compliance:

We're moving from a compliance-driven focus to a goal-oriented approach. Investments in pollution prevention initiatives reduce compliance costs while also providing benefits elsewhere within DoD such as supply and maintenance. For example:

- *Pollution Prevention Guidance Document* - The Services and the defense agencies are sharing information on their pollution prevention discoveries. For example, an Army-led committee developed and published a guidance document – “*Air Quality Management Using Pollution Prevention: A Joint Service Approach, March 1998*” – highlighting successful pollution prevention techniques at our facilities.

Benefit: Saves money across DoD by reducing compliance and disposal costs.

Pollution prevention in weapons system acquisition:

We're considering environmental factors, such as disposal costs, during the design and acquisition stages of weapons systems. By doing so, we're reducing operations and maintenance and compliance costs. Examples include:

- “*Green Ammo*” - Alaska Army National Guard recently became the first military unit to fire “green ammo” – standard service rounds that are lead-free. The ammunition – ballistically identical and as safe to fire as the standard lead-core rounds – reduces environmental compliance and cleanup costs.

Benefit: Use of indoor ranges now closed due to risk of lead exposure to troops; reduced compliance and cleanup costs.

- *C-17 Globemaster Aircraft* – Suppliers and mechanics developed a dry pre-coated sealant for over 730,000 rivets and 590,000 titanium pins used in the C-17. This sealant – which replaced a refrigerated sealant applied before being fitted and requiring hazardous waste disposal of the empty tubes – has simplified the manufacturing process and eliminated the hazardous wastes.

Benefit: For each new C-17, avoids \$2.2 million in cost, avoids 2.3 million labor hours, and reduces maintenance costs.

Process improvements and material substitution:

DoD personnel are looking for opportunities across all areas - including manufacturing, maintenance, and supply – to reduce pollution at the source. Examples include:

- *Rifle Cleaning* – Ft. Lewis, WA implemented an alternative system for the soldiers to clean their rifles in the field. The new system eliminated the use of an ozone depleting substance and reduced cleaning time from *three hours to 15 minutes*.

Benefit: Estimated savings of \$2.7 million in soldier labor cost per year - \$22 million over 10 years.

- *Green Building* – Employees at Seymour Johnson, Air Force Base, NC started a green building project, which reduces the amount of solid waste going to a landfill during construction. The project required the contractor to:
 - divert 75% of construction waste from municipal landfills
 - recycle 75% of construction waste in recycling markets
 - submit a waste management plan
 - use recycled products in building construction

Benefit: Saved \$98,113 due to reduced construction waste disposal costs.

- *Vehicular Battery Consignment Program* – The Defense Supply Center Richmond, VA developed this program which reduces the ordering and recycling costs of commercially available batteries. Instead of our customers ordering, maintaining, and recycling the batteries, the contractor maintains a supply of batteries at participating installations (currently more than 200 DoD sites), maintains ownership until they're purchased, and takes back the old batteries for recycling.

Benefit: Cuts lifecycle and disposal costs from \$160 to \$68 per battery.

Partnering:

Effective working relations between DoD installations, EPA regions, and state environmental regulators are key to sustaining military missions. Partnering creates opportunities for sharing experiences and solutions to environmental problems. Examples include:

- *Pollution Prevention Partnership* - Partnership between DoD and the various states established by the DoD Regional Environmental Coordinators. This partnership conducts non-regulatory pollution prevention site assistance visits and has identified over one hundred opportunities to reduce hazardous waste, air emissions, and water usage.

Benefit: Reduced compliance and disposal costs

- *Environmentally Preferable Purchasing Pilot Project* - In June 1997, DoD awarded a five-year, \$1 million per year contract to maintain and repair the parking lots and access at the Pentagon (and three other facilities) – offering incentives for using environmentally preferable products. The project – which has used products with increased recycled content, reduced volatile organic compound levels, and decreased toxicity – has shown that environmental improvements need not compromise cost or performance.

Benefit: Reduced compliance and disposal costs

FY 2000 Budget and Future Directions

Our FY00 budget request for pollution prevention programs is \$257 million, \$23 million more than the FY99 appropriation. This budget increase is consistent with our emphasis on pollution prevention to achieve compliance. It will be more than offset by reductions in compliance costs – not including savings realized in supply and maintenance. The future direction of our pollution prevention program includes:

- Pollution prevention investments in clean water initiatives will increase in the coming years.
- We'll increase our efforts to purchase environmentally preferable products in order to meet the requirements of Executive Order 13101, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition
- We'll continue to partner with EPA regions and state environmental regulators by sharing experiences and solutions to environmental problems.

Compliance

Compliance includes the activities and programs conducted to meet the standards established by federal, state, and local environmental laws and regulations. Failure to comply with these requirements may:

- place personnel at risk
- jeopardize surrounding air, land, and waters
- result in penalties, shutdowns, or restrictions on mission activities

We strive for full and sustained compliance with all applicable federal, state, and local environmental laws and regulations. Our challenge is to keep pace with the growing requirements under existing environmental laws, such as the Clean Water Act, Clean Air Act, and the Resource Conservation and Recovery Act.

Compliance Goals

Our compliance program achieved great success in FY 1998, as measured by the following performance metrics:

Item	Goal	Status
Underground Storage Tanks (USTs)	Meet the EPA requirements of closing, upgrading, or replacing USTs by Dec. 22, 1998.	Met the regulatory deadline.
National Pollutant Discharge Elimination System Permitted Systems	100% compliance	92% of DoD wastewater systems in compliance in FY98 as compared to 88% in FY97.

Measuring Success

There are two ways we measure success in the compliance program: enforcement actions and fines and penalties.

Enforcement Actions - The number of enforcement actions give an overall indication of how well the Department is meeting regulatory and statutory requirements. We're continuing to reduce the number of open enforcement actions as well as enforcement actions received. Here are some important facts about our enforcement actions:

- The number of regulatory inspections increased significantly in FY98 – up 13 percent since FY94 and up 41 percent since FY97.
- The number of open enforcement actions decreased 76 percent since the end of FY93 and number of enforcement actions received decreased 69 percent since FY93.
- In FY98, over 92 percent of new enforcement actions came from the states.

Fines and Penalties - We can be fined under five laws – the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), the Safe Drinking Water Act (SDWA)(since FY97), the Clean Air Act (CAA), and the Toxic Substances Control Act (TSCA). EPA has limited authority to fine us under the CAA and TSCA while states have no authority to do so. We pay CERCLA stipulated fines and penalties from the Defense Environmental Restoration or Base Realignment and Closure accounts. Here are some important facts about our fines and penalties:

- The number of fines assessed continues to decline significantly.
- State fines are significantly smaller than EPA fines
- Fines will probably not show up in the same fiscal year they're assessed due to a lengthy (12 to 18 months) payment negotiation period.
- In 1998, we paid \$157,920 (\$38,160 in Supplemental Environmental Projects and \$119,760 in cash) – the lowest amount paid since FY94.

A Four-Pronged Approach

To meet our goals, the compliance program has a four-pronged approach:

- pollution prevention to achieve compliance
- innovative methods and process improvements
- new tools to achieve compliance
- partnering

Pollution prevention to achieve compliance:

We are reducing our compliance liability by developing innovative approaches to reduce or eliminate pollution at the source.

For example at Vandenberg Air Force Base, CA, the Air Force chose a new, innovative pollution prevention approach called ENVVEST. This approach allowed the base to avoid costly permitting costs while at the same time improving the air quality around the base.

Issue	Old, compliance-driven approach	New, innovative pollution prevention approach – ENVVEST
Air Permits at Vandenberg Air Force Base, CA	Preparing burdensome, costly paperwork required by Title V of the Clean Air Act.	Vandenberg Air Force Base reached an agreement with EPA and the Santa Barbara Air Quality Control District to fund pollution prevention projects to cut emissions which, when implemented, will eliminate the need for a Title V permit.

Innovative Methods and Process Improvements:

Our personnel are redesigning manufacturing and maintenance processes to reduce the use of hazardous materials. These efforts reduce worker exposure and hazardous waste generation. Examples include:

- *Depainting Parts* – Tobyhanna Army Depot, PA replaced the hazardous substance used to strip epoxy paints from parts with a more environmentally friendly compound mixture. The base is now below the threshold for reporting the use of the hazardous substance.

Benefit: Reduced paperwork and reporting cost. Also, fewer air emissions and less hazardous waste generated.

- *Hazardous Waste Consolidation Site* – Marine Corps Base Camp Lejeune, NC greatly reduced regulatory violations by establishing a hazardous waste consolidation site.

Benefit: Reduced its hazardous waste accumulation sites from 34 to one increasing efficiency, reducing costs, and improving unit-level hazardous waste management.

New tools to achieve compliance:

We're developing data management systems and internal audit programs that assist installations in tracking and satisfying regulatory requirements. An example follows:

- *Enhanced Inspection and Maintenance of Cars Guidance* – The Region III Regional Executive Agent led discussions with EPA and other federal agencies to establish a single procedure for inspection and maintenance programs at federal facilities across the U.S. The guidance standardizes the inspection process and streamlines the recordkeeping requirements – while also addressing temporary duty military and extended deployments.

Benefit: The uniform procedure eases installation compliance and lowers cost in establishing programs.

Partnering:

DoD personnel are coordinating with local, state, and federal regulators to discuss new pollution control technologies and develop new regulatory strategies. For example:

- *Military Munitions Rule* – DoD Regional Environmental Coordinators (RECs) are partnering with state regulators on this rule – which identifies when used and unused munitions become solid and hazardous waste and therefore become subject to the Resource Conservation and Recovery Act. As a result of the RECs’ efforts, 20 states have adopted the rule with seven more expected to adopt it shortly.

Benefit: Standardizes the rule across states and reduces compliance costs

FY 2000 Budget and Future Directions

Our FY00 budget request for compliance programs is \$225 million less than the FY99 appropriation. This continuing downward trend is the result of an increased focus on pollution prevention and the reduction of pollution at the source. This trend will continue as we make the right investments in pollution prevention and adopt improved business practices.

The future goals of the compliance program are to improve performance and support the DoD mission more efficiently. Future goals include:

- Improve water quality and “total water management.” By 2004, invest at least 15 percent of Clean Water Act compliance budget in pollution prevention initiatives.
- Support DoD’s efforts in evaluating the privatization of utilities. Utility privatization should reduce compliance requirements.
- Prepare Consumer Confidence Reports by October 1999 to meet requirements of the Safe Drinking Water Act Amendments of 1996.
- Puget Sound Naval Shipyard, WA will take the lead in an ENVVEST project to tackle watershed problems for Sinclair Inlet using an innovative approach that involves all facilities that impact the watershed. We’ll reinvest any savings in environmental protection.

Conservation

DoD's conservation program protects access to land, sea, and airspace necessary for realistic training and testing exercises – at the same time safeguarding our natural and cultural resources and improving the quality of life for those who live and work at DoD installations.

The conservation program – which manages nearly 25 million acres of land – involves the planned management, use, and protection of the rich and varied natural and cultural resources found on these lands. Among the protected resources are threatened and endangered species and their habitats, archaeological and historical sites, Native American sites, historic buildings, and wetlands.

Conservation Goals

The conservation program measures its success based on completion of cultural and natural resource management plans and resource inventories. Due to changing requirements in the Sikes Act, which Congress reauthorized and amended last year, the required number of natural resource management plans and resource inventories to support these plans increased.

For the natural resource management plans, we are revising those plans that fail to meet the new Sikes Act standards. For the resource inventories, although the actual number of completed biological and wetland inventories increased, the percentage of completed inventories declined due to the new Sikes Act inventory requirements.

What's Required by Law

Many statutes, regulations, and executive orders require us to protect our natural and cultural resources. Some of the statutes include:

- Sikes Act
- Endangered Species Act
- National Historic Preservation Act
- Native American Graves Protection and Repatriation Act
- American Indian Religious Freedom Act
- Marine Mammal Protection Act
- Migratory Bird Treaty Act
- Archeological Resources Protection Act
- Clean Water Act (non-point sources)

Conservation Strategy

To meet these requirements the conservation program focuses on the following strategies:

- Partnering
- Process Improvements
- Land and Resource Management

Partnering:

The Department encourages partnership initiatives at the national, regional, and local levels to build working relationships that assist our conservation efforts. An example of our partnering efforts follows:

- *Sonoran Initiative* - Funded by the Legacy Resource Management Program, this initiative is designed to ease endangered species compliance in the future while protecting the most significant parts of the Sonoran ecosystem. Working with The Nature Conservancy and the Sonoran Institute, the initiative is characterizing the biodiversity of the entire Sonoran Desert. This characterization will permit DoD land managers and those from the U.S. Fish and Wildlife Service, the Bureau of Land Management, and the Mexican Secretariat of Environment (Natural Resources and Fisheries) to make well-informed decisions about the relative significance of rare species on their lands. It will also help identify priority partnership projects. By gaining the perspective on all rare species in the ecoregion, land managers can assess the relative importance of species on the Goldwater Air Force Range and other lands in the Sonoran Desert and avoid those that are truly unique or biologically important.

Process Improvements:

Through developing and implementing process improvements, we reduce costs and efficiently meet our conservation goals. An example of one of our process improvements follows:

- *Fort Huachuca, AZ Watershed* – The Army is doing an alternative futures analysis and planning approach that will identify and mitigate potential development impacts on the San Pedro River watershed. The San Pedro River – the nation’s only federally protected riparian National Conservation Area – is the sole-source aquifer for Fort Huachuca and provides riparian habitat for many rare and at risk species.

Benefit: By protecting the watershed, we’ll ensure the long-term security of the fort and the surrounding communities.

Land and Resource Management:

DoD inventories and management plans provide the scientific information necessary to make decisions that affect resources and military training grounds. Additionally, we must plan for the future use of public land for military use.

We take our responsibility for stewardship of the lands entrusted to our care very seriously. Land conservation investments are essential to our long-term success. DoD invests in preventive management strategies to avoid crises that would impose huge financial burdens. In meeting our responsibilities, we work extensively with other agencies at the national, state, and regional levels to accomplish the military mission in an environmentally sound manner. For example:

- *Interagency Military Land Use Coordination Committee* - In 1997, DoD and the Department of Interior established this Committee to help support interagency collaboration. In FY 1998, the Committee held three interagency policy seminars to promote better communication and understanding of the respective agencies and their missions. The Committee is working to facilitate the reauthorization of lands withdrawn for military use, to improve joint management of these lands, and to address various noise issues.

Benefit: Operational efficiencies, interagency cooperation, and improved integration of military mission and stewardship responsibilities on withdrawn or permitted federal lands reserved for defense purposes.

FY 2000 Budget and Future Directions

Our FY00 budget request for conservation programs is \$121 million, \$10 million less than the FY99 appropriation. We use these funds more effectively by finding innovative processes and technologies to achieve higher levels of efficiency. The Department views its conservation budget as investment in the future.

In FY00, we'll continue to lead stewardship efforts through collaborative planning, process improvements, and comprehensive resource management – embracing interagency relationships as well as promoting interaction between installations and their surrounding communities.

Native American Initiatives

DoD works closely with American Indians and Alaska Natives to address issues of concern to them. Through partnerships with tribes, we promote better relationships with tribal governments. The knowledge gained through these partnerships allows us to improve the process of addressing environmental concerns resulting from past DoD activities.

Native American Policy: Early in 1999, the Secretary of Defense signed the first DoD American Indian and Alaska Native Policy in which we pledged to fully comply with Presidential directives and Executive Orders requiring federal agencies to work with federally recognized tribes on a “government-to-government” basis.

With congressionally-directed funds provided for this purpose, we were able to directly implement the policy with six tribal entities through memorandums of agreement/cooperative agreements. Through these agreements – which treat tribal governments as equal partners – we're able to address environmental impacts that wouldn't otherwise be addressed by other DoD environmental programs.

For example, Vandenberg AFB signed a memorandum of agreement with the Santa Ynez Chumas Indian Reservation's tribe (the Santa Ynez Chumash) concerning the discovery and disposition of Native American Graves and Repatriation Act items. The installation's cultural resources staff meets quarterly with tribal elders to discuss topics regarding current and planned field activities.

Cleanup

Environmental restoration (cleanup) is the remediation or cleanup of hazardous wastes from past practices at our operational and BRAC installations. Before the early 1970s, DoD – like other federal agencies and industry – disposed of their hazardous wastes without full consideration for the environmental consequences. Over time, increasing knowledge about the environment led to a statutory and regulatory framework that required a more systematic and far-ranging cleanup effort across the nation.

In 1986, DoD established the Defense Environmental Restoration Program, whose mission is to:

- clean up environmental contamination at our sites
- minimize risk to human health and the environment
- restore sites to productive use.

Ten years later, the program, which my office centrally managed, devolved into five separate accounts – Army, Navy, Air Force, Formerly Used Defense Sites, and Defense-Wide. We devolved the program to increase responsibility and accountability for environmental cleanup efforts among each military department and the Defense Logistics Agency (which manages the defense-wide account).

Cleanup Goals

The cleanup program has made notable progress in protecting the environment and reducing risks to U.S. troops, their families, and local communities from pollutants due to past DoD practices. In FY98, we performed environmental restoration at 27,549 sites at 1,719 operational and BRAC installations and 2,256 formerly used defense site properties.

Our performance goals for the cleanup program include:

- reducing risk to human health at sites
- making property at BRAC bases environmentally suitable for transfer
- having final remedies in place or achieving response complete status at sites and installations

These goals ensure that cleanup of all sites is planned and that we first cleanup

those sites with the greatest potential for causing harm to human health and the environment.

Active Sites: Specific cleanup goals at operational installations are to clean up to a lower relative risk category or have final remedies in place for the following:

Year	Final Remedies in Place for:
FY 02	50% of high relative risk sites by FY02
FY 07	100% of high relative risk sites by FY07
FY 11	100% of medium relative risk sites
FY 14	100% of low relative risk sites
FY 14	100% of installations and sites remedy in place or response complete

As of the end of FY98:

- About 64 percent of operational and BRAC installations and 60 percent of sites have reached the response complete milestone
- At formerly used defense sites, 45 percent of the sites have reached the response complete milestone, an increase of six percent from the end of FY97
- Overall, more than half of our sites in the restoration program are in the final stages of the cleanup process.

Closing Sites: The BRAC cleanup program also focuses on addressing the most hazardous sites first but stresses cleaning up sites faster so that communities can get the greatest economic and social benefits from reuse of the property. Specific cleanup goals at BRAC installations follow:

Year	Installations	Sites	Acres*	Status of Sites and Acres
FY 01	75% will have remedy in place or response complete	90% will have remedy in place or response complete	75% in categories 5, 6, and 7 will be environmentally suitable to transfer	<u>Sites:</u> 85% of sites are projected to achieve final remedy in place/response complete <u>Acres:</u> 49% of categories 5, 6, and 7 acres will be suitable for transfer from a restoration perspective
FY 05	100% will have remedy in place or response complete	100% will have remedy in place or response complete	100% in categories 5, 6, and 7 will be environmentally suitable to transfer	<u>Sites:</u> 94% of sites are projected to achieve final remedy in place/response complete <u>Acres:</u> 93% of categories 5, 6, and 7 acres will be suitable for transfer from a restoration perspective

*Over three-fourths of the total BRAC acres are transferable now from a restoration perspective. Our goal only pertains to the remaining BRAC acres, all of which can also be transferred now from a restoration perspective using the early transfer authority provided by Congress (CERCLA Section 334).

Meeting Cleanup Goals

In order to meet our cleanup goals, we are focusing on:

- partnering
- refining and streamlining cleanup efforts

Partnering:

We believe that partnerships with stakeholders, based on mutual trust and cooperation, are essential to the success of our cleanup program. Partnerships open the door to innovation and successful solutions to both cleanup and reuse issues. Some examples of DoD's partnership efforts follow:

Partnership	Summary	Benefits
<i>Voluntary Cleanup Agreement with States</i>	In 1998, DoD and the Commonwealth of Pennsylvania signed a landmark multi-site voluntary agreement – creating a comprehensive plan to address and clean up many defense sites in the state ten years earlier than originally planned.	This agreement establishes a model for other states to follow. DoD and the state of New Jersey are currently exploring the possibility of establishing a similar agreement and we'll continue to pursue opportunities for such agreements with other states.
<i>Restoration Advisory Boards</i>	These Boards – comprised of the full range of stakeholders – work to address cleanup issues of concern to the installations and the surrounding communities.	In FY98, we made new resources available to the RABs by implementing the Technical Assistance for Public Participation (TAPP) program, which provides the public with technical assistance on cleanup issues. Five installations – U.S. Army Armament Research, Development, and Engineering Center, NJ; Alameda Naval Air Station, CA; Kelly Air Force Base, TX; Defense Supply Center, Philadelphia, PA; and Former Lowry Bombing and Gunnery Range, CO - participated in the program, which awarded \$109,000 in funding.
<i>Defense and State Memorandum of Agreements</i>	Cooperative relationship with states in which DoD reimburses states for the cost of the technical investigation and cleanup services they provide to defense installations.	We've forged cooperative relationships with 50 of the 56 possible states, territories, and the District of Columbia. These agreements are saving us millions of dollars in cleanup costs by: fostering innovative cleanup methods, reducing cleanup investigation costs, speeding up document review, and exchanging information on transferring technologies.

Refining and streamlining cleanup efforts:

We're pursuing several initiatives to refine and streamline cleanup efforts including:

- *Peer Review* – Involves using a panel of experts – who use their institutional and industry knowledge – to evaluate site cleanup alternatives. This ensures we save money in the cleanup process. All the military services use forms of the peer review process. For example, the Navy uses a Cleanup Review Tiger Team, which reviewed data on 460 sites in 1996. They determined that – counter to conventional wisdom – the greatest cost avoidance can be realized during the early investigative phases when cleanup standards are determined.
- *Communication over the Internet* – We've been quick to embrace the Internet as a fast, cheap, and effective way to communicate information and as a program management tool – permitting faster and more accurate data collection and reporting. Our Internet sites have become sources of comprehensive information on a range of topics. One particularly useful site for those involved in environmental cleanup efforts is the Federal Remediation Technologies Roundtable Remediation Technologies Screening Matrix and Reference Guide – a summary of cleanup technologies based on information from the DoD Components and federal agency cleanup technology publications and Internet sites.

FY 2000 Budget and Future Directions

Defense Environmental Restoration Account Funding:

Our FY00 budget request for environmental restoration at active bases and formerly used defense sites is \$1.264 billion. This is approximately the same total as the FY99 appropriation and \$33 million less than the FY98 appropriation. The request for each Military Department has increased slightly from last year's appropriation while the request for formerly used defense sites has decreased from last year's appropriation to be more in line with last year's request. DoD's risk reduction and site completion goals drive our investment strategy. The goals keep us focused on completing the program by reducing risk and setting priorities for appropriate investigation and cleanup. DoD's goals and initiatives are focusing the program on the most appropriate and effective investments in reducing risk and completing the program.

The cleanup program has a bias for action and a natural trend of increasingly expending more dollars on actual cleanup. However, in FY98, funding for site

investigations increased slightly for the first time in five years reflecting increased regulatory requirements for more investigation and Service initiatives to complete environmental restoration requirements at some installations. This temporary increase in investigations in FY98 led to slightly decreased funding for cleanup, which still comprises almost two-thirds of program funding. Funding for cleanup will increase in future years as more of the investigated sites enter the cleanup phase.

Base Realignment and Closure (BRAC) Funding:

Our FY00 budget request for BRAC cleanup programs is \$360 million, \$327 million less than the FY99 appropriation. This is due to a one-time change to incrementally fund all BRAC (and MilCon) projects. Our total BRAC environmental program funding request is \$814 million, of which \$454 million is an advance appropriation request for FY01. The requirements in implementing this business practice will be:

- Continuing commitment to the BRAC process with no delay or cancellation of projects
- Contracts will be awarded for entire scope of work with funding for the portion actually accomplished in FY 00

Incremental funding is not designed to affect the Military Departments and the Defense Logistics Agency's BRAC program. Environmental cleanup projects will proceed as planned and on schedule. We remain fully committed to meeting the President's fast-track cleanup initiative and to adequately fund BRAC environmental cleanup work.

The cleanup program continues to face new issues and challenges. Several challenges we're currently facing and will continue to face in the next few years include:

- Cleaning up abandoned munitions and contaminated ranges through the use of innovative, cost-effective technologies.
- Establishing a new BRAC environmental restoration account (see legislative proposals below) to clean up the remaining sites after FY01, when the current BRAC account expires.
- Addressing site closeout process issues such as land use controls, optimization of remedial action operations and long-term monitoring, records management, and natural resource damage assessments and claims.

Force Protection

Force Protection includes those aspects of environmental security that are necessary to protect our resources including personnel, equipment, and facilities that are located in the U.S., forward-based, and deployed. These activities encompass safety, occupational health, fire and emergency services, as well as our overseas environmental programs.

From an operational perspective, our environment, safety, and occupational health programs have become another tool for raising the standards and institutional capacity of our allies, both old and new.

Specifically, as U.S. military forces participate in more multinational operations, our allies' improved environment, safety, and occupational health standards will increase multi-national interoperability – leading to greater force protection for U.S. soldiers, sailors, airmen, and their families.

Military-to-Military Cooperation

Military cooperative efforts on environmental issues support the U.S. national security strategy and U.S. foreign and defense policy goals. These cooperative efforts also protect our international access to land, sea, and air for operations and training by demonstrating our ability to protect valuable natural resources.

We recognize that by serving as a role model through engagement in military environmental matters we can help build trust, increase transparency, and help change military attitudes about issues such as civilian/military interactions.

Environmental cooperation with foreign militaries – through such efforts as information sharing and joint development of alternative strategies for addressing common environmental concerns – is a highly leveraged and effective way to engage other militaries in a low threat and non-controversial dialogue that enhances U.S. presence.

Through bilateral and multilateral contacts, we provide interested militaries with an understanding of the necessary tools for meeting their military environmental needs. Some examples follow:

Arctic Military Environmental Cooperation Program

We engage in a trilateral agreement with Russia and Norway called the Arctic Military Environmental Cooperation Program (AMEC). Under this agreement, U.S.,

Russian, and Norwegian military and environmental officials conduct joint activities to address critical environmental concerns in the Arctic.

One of AMEC's main objectives is to help the Russian military address their radioactive and non-radioactive waste problems in the Arctic's fragile ecosystem. One AMEC project – the development of an approved, tested design for casks used for the storage of nuclear submarines' reactor cores – will address one of the Cooperative Threat Reduction program's goals of dismantling Russian strategic ballistic missile submarines.

Congress appropriated \$5 million for AMEC in FY99. We're using these funds to develop prototype technologies – such as a radiation monitoring and environmental safety technology – addressing environmental matters in the Arctic region.

U.S./South Africa Bilateral

We have a very successful bilateral engagement with the South African military. In the past year, we produced a draft handbook on sustainable training range management and a guidebook on the management of the base closure process in South Africa. In the future, this cooperation will address the demilitarization of old, excess munitions and the development of information infrastructure for the environmental departments of the military.

U.S./Canada/Australia Trilateral

As a result of our trilateral efforts with the Canadians and the Australians, we published a commander's guide on the protection of coral reefs and developed an environmental annex for a major binational exercise (Tandem Thrust) – held in the vicinity of the Great Barrier Reef in 1997. As a result of the lack of environmental damage from Tandem Thrust, Australia is planning more exercises with the U.S. in this environmentally sensitive and highly strategic area.

FY00 Legislative Proposals

We are submitting the following legislative proposals for FY00:

BRAC Environmental Restoration Account: This proposal establishes a Base Realignment and Closure (BRAC) Account to pay for all post-FY01 environmental restoration. The BRAC account – the exclusive source of funding of environmental restoration funding at BRAC installations during the BRAC implementation period – is due to expire in FY01, unless Congress acts otherwise. Current projections indicate that there are about \$2.4 billion in environmental restoration requirements (exclusive of any unexploded ordnance/munitions clearance requirements associated with transferring ranges) beyond FY01.

Environmental Quality Annual Report to Congress: Revises the environmental reporting requirements of the Environmental Quality Annual Report, which includes (1) environmental compliance, pollution prevention, and conservation activities and (2) environmental activities overseas. The purpose of this proposal is to reduce DoD data collection and data management requirements and increase the value of the report.

Fresno Drum Response Costs: Authorizes DoD to pay EPA response costs incurred at the Fresno Drum Superfund Site in Fresno, CA. DoD and the U.S. Environmental Protection Agency (EPA) entered into an agreement in May 1998 under CERCLA section 122(h) for payment of EPA response costs at this site. Under this agreement, we have already provided EPA some funding for certain costs from the Defense Environmental Restoration Account (DERA), the account ordinarily used for environmental restoration activities at sites owned or formerly owned by DoD. The agreement also stipulated that DoD seek authorization from Congress in the FY00 DERA appropriation for payment of the remainder of these costs.

CONCLUSION

Secretary Cohen's call for renewed emphasis on people, readiness, and modernization creates a continuing opportunity for Environmental Security to integrate environment, safety, and health into DoD practices. Environmental Security's current leadership efforts in the range renewal issue are evidence of how important environment is to readiness.

During my six years at Environmental Security, I believe the role of environment, safety, and health in defense operations and actions is now stronger than ever. I'm especially proud of our ability to continue to meet regulatory requirements within a tight budgetary environment. I credit the hard work and resourcefulness of the military services, which have produced significant management efficiencies responsible for our progress.

In my office I have a framed poster on the wall from General Krulak, Commandant of the Marine Corps. It says, "The Marines, we're saving a few good species." Thanks to his extraordinary leadership and that of the Army, Navy, and Air Force, DoD is in a good

position to support the mission of protecting our national security while we protect the environment.