

INTRODUCTION

The Department of Defense's (DoD's) primary mission is to defend the United States and protect its interests abroad. To effectively carry out this mission, DoD must conduct real-time testing and training of tactics, procedures, equipment, and personnel so that they are ready to respond immediately to any threat. Ranges are the lands (and airspace) where DoD conducts tests and training exercises—ranges are necessary to maintain readiness. In recent years, DoD has encountered challenges to maintaining appropriate mission readiness. DoD lands have increasingly become islands of biodiversity in a sea of development. As a result, environmental professionals, lawmakers, and the public have focused increasing scrutiny on DoD's testing and training activities on military ranges.

DoD is committed to providing excellent stewardship of the lands entrusted to its care; responding to stakeholder concerns; and working with stakeholders to identify and resolve issues that affect testing, training, and range sustainability. At the same time, DoD's ranges must remain available to test vital military equipment and effectively train America's men and women in uniform.

DoD has initiated several programs, including the Sustainable Ranges Initiative, to make its military lands sustainable—that is, to ensure that these assets are available for testing and training purposes not only now, but also in the future. DoD is not creating any new ranges, so it must protect and maintain those it already has. This chapter outlines issues surrounding range sustainability, the challenges these issues pose for DoD's Environmental Quality Program, and initiatives currently under way to address them.

SUSTAINABLE RANGE MANAGEMENT



In 1950, a tank needed approximately 1.5 acres for testing and training. Today, tanks are powered by jet engines, rather than internal combustion engines, and require 10 to 20 acres, or more, for testing and training.

U.S. GLOBAL PRESENCE

The U.S. Armed Forces must be highly trained and ready to defend America when at war or to assist allies in peacekeeping missions. The same high standard of readiness is necessary to save lives and prevent future conflicts wherever and whenever American troops are deployed. Peacekeeping and low-intensity conflicts can require even higher levels of specialization. Over the past 50 years, American troops have been involved in peacekeeping and other missions in—

- Korea (1950 – 1953)
- Lebanon (1958, 1982 – 1984)
- Vietnam (1963 – 1975)
- Dominican Republic (1965)
- Libya (1981 and 1986)
- Grenada (1983 – 1985)
- Panama (1988 – 1989)
- Kuwait/Iraq (Desert Shield/Storm, 1990 – 1991)
- Iraq (Kurdish Relief/Southern Watch/Northern Watch, 1991 – 1996)
- Somalia (1992 – 1993)
- Bosnia (Deliberate Force/IFOR/SFOR, 1995 – Present)
- Kosovo (KFOR, 1999 – Present)
- Afghanistan (2001 – Present)

Since 1945, the average time between commitments of U.S. Armed Forces to combat has been four years; but that time has decreased. As a result, U.S. Armed Forces no longer have the advantage of long periods for testing and training after a conflict starts. They must be ready to respond immediately when called.



Marines from the 31st Marine Expeditionary Unit wait to be flown out by Marine Corps CH-46 Sea Knight helicopters after completing a “Training in Urban Environment” exercise in Dededo, Guam.

THE IMPORTANCE OF RANGES

Training troops and testing equipment and weapons requires the use of ranges. Although technological advances have allowed the use of simulators for some activities, there is no substitute for hands-on training. The ability to realistically train gives military personnel the confidence to perform in combat. Live-fire training is crucial to ensuring that new weapon systems perform as expected. Ranges and operating areas provide the physical space, facilities, instrumentation, realism, feedback, and safety required for training and testing. The SROC provides OSD-level oversight on readiness issues and endorses quarterly Readiness Reports for submission to Congress by the Deputy Secretary of Defense.

ENCROACHMENT

As a result of Congressional requirements concerning readiness, in 1997 the Secretary of Defense formed the Senior Readiness Oversight Council (SROC). The SROC is made up of senior leaders from the Office of the Secretary of Defense (OSD) and the Military Services. The SROC reports to Congress and provides OSD-level oversight on readiness issues and endorses quarterly Readiness Reports for submission to Congress by the Deputy Secretary of Defense.

Encroachment, which the SROC defines as external factors that inhibit accomplishment of necessary training and testing, is one of the primary issues affecting range sustainability and, therefore, readiness. Encroachment impacts mission readiness by forcing DoD to reduce the time and space necessary for testing and training exercises. While there are many encroachment issues of potential concern to training and testing operations, DoD has identified eight critical issues that can affect the frequency and realism of these exercises.

Population growth near military ranges has led to competition for space and increased concerns for public health and safety. Resulting legislative, regulatory, or administrative restrictions imposed on military land use for environmental, economic, or social purposes encroach upon DoD's ability to test and train.

The growing challenges that encroachment poses to readiness have received attention from DoD's senior leadership and Congress. Following a June 2000 briefing by the Military Services, the SROC took on an extended role and determined that DoD needed a comprehensive and coordinated approach to address encroachment and to chart a sustainable future for DoD ranges. As a result, the SROC expanded the Defense Test and Training Steering Group to review the impacts of encroachment on DoD's ranges.

EIGHT CRITICAL ENCROACHMENT ISSUES

While there are many encroachment issues of potential concern to training operations, DoD has identified eight critical issues that present challenges to sustainable range management—

- Endangered species protection and critical habitat designations
- Unexploded ordnance and its constituents
- Frequency encroachment
- Maritime sustainability
- Demand for use of airspace
- Air quality
- Noise abatement
- Growth of urban areas.

PRIVATE LANDS INITIATIVE

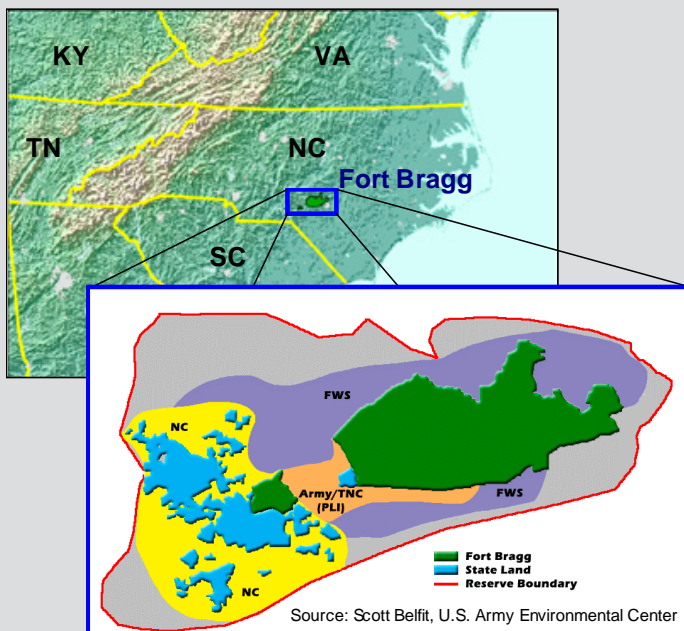
Fort Bragg, North Carolina, is using an innovative approach for managing threatened and endangered species (TES) and to reduce TES-related training restrictions while supporting species' recovery.

Protecting the Red-Cockaded Woodpecker (RCW), an endangered species that lives on the installation, has had a noticeable impact on training at Fort Bragg. From 1994 through 1996, the 82nd Airborne Division, which is based at Fort Bragg, consistently cited the restrictions RCW management and recovery efforts placed on testing and training activities. In 1995 and 1996, the Army's Endangered Species Task Force, which includes representatives from operational, legal, environmental, and installation management staff, along with a similar group from the U.S. Army Forces Command (FORSCOM), renegotiated the Army's RCW guidelines with the U.S. Fish and Wildlife Service (FWS). The revised guidelines, published in August 1996, reduced, but did not eliminate, training restrictions as part of RCW management.

At the same time, the Army Environmental Center, in coordination with and at the request of FORSCOM and Fort Bragg, began work on the Private Lands Initiative (PLI). The PLI is a cooperative effort to acquire long-term management of private lands near Fort Bragg, including a gap between Fort Bragg and Camp Mackall, a satellite training site. The Army's goal is to build a habitat bridge between the two installations that will link the Fort Bragg and Camp Mackall woodpecker sub-populations. By building the habitat bridge, the two populations can genetically mix. Genetic mixing of the populations increases the chances that the RCW will recover more quickly and will lead to a more stable population. Quicker population recovery will allow the Army to lift training restrictions sooner at Fort Bragg. It may take five to eight years before final results from the PLI are realized. This is quicker than the 60

to 80 years needed to grow sufficient RCW habitat (old-growth, long-leaf pine stands) on the installation for population recovery.

The PLI is a cooperative agreement with The Nature Conservancy (TNC) and other Federal, North Carolina, and private organizations. TNC manages the lands acquired, but the Army is permitted to conduct maneuvers on the majority of the lands. Approximately \$60 million is required for the initiative; the FWS will contribute approximately \$30 million, the Army and TNC will contribute about \$10 million each, and the State of North Carolina will contribute \$6 million. The Army hopes to repeat this successful management approach where feasible. It not only preserves habitat but also prevents future encroachment and non-compatible land use issues.



ENDANGERED SPECIES PROTECTION AND CRITICAL HABITAT DESIGNATIONS

For years, DoD has protected endangered species living on or near testing and training ranges. DoD and the Military Services work closely with regulators and stakeholders to create ecosystems that can sustain healthy species populations, while at the same time allowing for necessary testing and training exercises. DoD developed programs to protect a large number of endangered species that now thrive on military training ranges. Encroachment has forced many species on to DoD lands, including ranges, as urban sprawl around installations has driven them out of their native habitats. Examples include the Riverside fairy shrimp and the Pacific Pocket Mouse, which was previously thought to be extinct, at Marine Corps Base, Camp Pendleton, California.

DoD partners with Federal agencies and other land holders, such as local governments, to address regional biodiversity issues. The DoD Conservation Committee, with participants from OSD and the Military Services, supports the SROC's efforts to identify appropriate environmental programs and partnering opportunities that can help achieve regional solutions to endangered species protection.

UNEXPLODED ORDNANCE AND ITS CONSTITUENTS

The issue of unexploded ordnance (UXO) and ordnance debris or constituents has received tremendous attention within DoD and from Congress and the public over the past several years. Although impact areas (the actual target areas where ordnance falls) constitute a very small portion of military training space, and most training ordnance is inert (non-explosive), over time these areas accumulate UXO, UXO constituents (UXO(C)), and target debris. Impact areas and the surrounding safety fans provide well-protected habitat for endangered species since grazing animals and predators, including humans, are fenced out. Safety fans are the safety buffer zones around impact areas; 99 percent of munitions fall within the impact areas, not in the safety fans.



Sailors aboard the USS Enterprise (CVN 65) take a break from the business of the day for meals and relaxation. However, never far away are reminders of the serious mission that every member of the crew supports: Operation Enduring Freedom. Bombs stand ready on the mess decks, prior to their transfer to the flight deck above, for missions over Afghanistan as part of that operation.

Historically, range management practices have been to leave ordnance debris where it fell. This is for both operational and safety reasons, as well as the lack of adequate detection and removal technology. As DoD and the Components address UXO and UXO(C) cleanup at closed, transferred, and transferring ranges, improvements have been made in detection and cleanup technologies (a complete report on these activities is available in the *Fiscal Year (FY) 2001 Defense Environmental Restoration Program Annual Report to Congress*). As these technologies mature, DoD can focus on transferring appropriate capabilities to better manage operational ranges.

In order to better manage military munitions throughout their life-cycle, DoD developed a *Munitions Action Plan*. The FY 2001 Plan identifies actions to help maintain combat readiness through improved environmental stewardship and enhanced explosives safety compliance. Part I of the Plan defines the munitions life-cycle and establishes fundamental principles and overarching DoD strategies for addressing explosives safety and environmental issues. Part II of the Plan establishes specific objectives to improve the management of the munitions' life-cycle. In the Plan, DoD proposes the following short and long-term strategies to address current encroachment challenges in terms of UXO and UXO(C) on operating military ranges—

SHORT-TERM STRATEGIES (6 – 12 MONTHS): ASSESSMENT

- Develop a coordinated plan to obtain data, assess current range conditions, and estimate the environmental impacts of current munitions' use on active and inactive ranges
- Develop an inventory of DoD's active and inactive ranges
- Develop standard DoD munitions expenditure database requirements
- Determine potential operational limitations for active and inactive ranges and corresponding readiness impacts based on current and potential future environmental regulatory requirements.

LONG-TERM STRATEGIES (1 – 5 YEARS): RANGE AND MUNITIONS USE

- Develop and implement a sustainable range management program that integrates testing and training requirements with environmental, explosives safety, and research and development requirements

- Develop range clearance guidance and management procedures based on operational, safety, and environmental constraints associated with the hazards of UXO, UXO(C), target debris, and other associated range scrap
- Identify critical elements, funding requirements, and resources to support a comprehensive sustainable range management program
- Develop and implement improvements in range design to meet long-term mission requirements and facilitate environmental compliance
- Assess specific constraints to DoD's ability to execute its national security mission and minimize readiness impacts associated with compliance with environmental laws and regulations
- Develop and implement a consistent protocol for the inspection, processing, turn-in, accountability, and ultimate sale or disposal of range and munitions residue
- Assess the environmental and human health effects of open burning and open detonation.

By addressing these specific issues, DoD will be better able to understand and manage the use of munitions on testing and training ranges, and will be better able to develop sustainable range management practices that address public concerns.

FREQUENCY ENCROACHMENT

Communication is vital to military readiness—troops must be able to maintain a constant flow of clear, secure, and timely information. Frequency encroachment is a serious concern throughout DoD. The radio frequency spectrum (often called bandwidth) is to the information age what iron and steel were to the industrial age. Constant technological improvements and innovations promise ever increasing commercial radio, TV, satellite, and cell phone capabilities. Technology promises similar increases in military coordination and accuracy, which reduces casualties and collateral damage. Such coordination and accuracy also require the use of specific portions of the radio frequency spectrum. Commercial capabilities and DoD's needs are competing for the same types of frequency bandwidth. While demand from both DoD and the commercial sector is growing, the supply of the resource is not.

Deliberations of the World Radiotelecommunications Conference (WRC) in 1992 led to agreements resulting in reallocation of radio frequency spectrum from Federal government use to the private sector. As modern aircraft become technologically more complex, they require the use of more data; and that data needs to be transmitted at faster speeds. For example, DoD expects—

- *The next generation of air-to-air and air-to-ground missiles to generate 100 times more data*
- *The next generation of stealthy fighter aircraft to require data rates (the rates at which data is transmitted to, from, or internally in a process) faster than 100 megabits per second.*

The DoD estimates that re-engineering the L-band frequencies (1427 to 1435 MHz) for required systems testing will cost \$310 million to—

- *Develop a target control system data link: \$50 million*
- *Develop a common communications server: \$10 million*
- *Replace the ground system (the equipment on the ground that records and measures the activities an aircraft or missile is performing in the air during testing and training activities): \$150 million*
- *Replace airborne equipment: \$100 million.*

The reallocation of the S-band frequencies (2385 to 2390 Mhz) poses a particular problem for DoD. This is because DoD is currently testing several new types of aircraft and missiles that use frequencies that WRC reallocated to non-DoD uses. As a result of spectrum reallocation by Congress, 220 MHz were transferred from Federal use, including 93 MHz used by DoD. DoD estimates that this re-engineering will cost \$235 million. These costs will be divided between—

- *Aircraft—\$40 million per program (4 programs): \$160 million*
 - *Missile—\$25 million per program (3 programs): \$75 million.*
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Since 1992, DoD has lost more than 180 megahertz (MHz) of the radio frequency spectrum previously set aside for military test and training use. This loss has had a considerable impact on operations and training. For example, Fort Hood, Texas, lost frequencies used to support Tactical Land Mobile Radios, causing communication delays because soldiers could not always find an available frequency on their equipment. Loss of frequency spectrum has also impacted major systems including global positioning systems, satellite telemetry, air combat training systems, and mobile tactical communications. These systems play a critical role in national security missions. As the Army relies on networked communications, congestion increasingly intrudes on testing, training, and operations.

DoD is committed to ensuring adequate frequency spectrum resources to meet national security needs. The Range Spectrum Requirements Working Group, at the Under Secretary of Defense level, is pursuing a three-pronged response to frequency encroachment. This approach is intended to defend DoD's current spectrum allocations; develop more spectrum-efficient

communication technologies to improve use of existing bandwidths; and conduct research into other, currently unused, frequencies. Continuing improvements in military communications reduce casualties and collateral damage, but require complex systems and available frequencies.

MARITIME SUSTAINABILITY

Marine resource protection laws, executive orders, and interpretations of Federal and state regulations continue to influence how DoD conducts maritime training and testing activities. Ship operations and the use of essential defensive sonar technologies at sea; the flight of aircraft or missiles over coastal waters; and testing, training, or related maneuvers in ports or off the coasts of military ranges and operating areas can pose challenges to efforts to protect and preserve maritime resources.

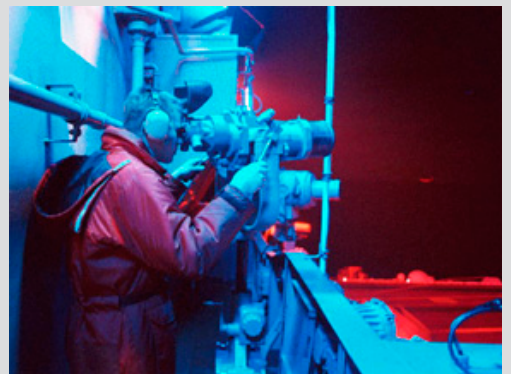
In 2001, DoD designated the Navy as the Executive Agent for Maritime Sustainability. As the Executive Agent, the Navy is addressing the challenge of balancing ocean resource protection requirements with testing and training

PROTECTING THE NORTHERN RIGHT WHALE

A prime example of DoD's commitment to maritime sustainability is the Navy's policy to protect the Northern Right Whale. Working with the National Oceanographic and Atmospheric Administration Fisheries Division, the Navy uses year-round measures to protect whales and other endangered species when operating in the ocean from Charleston, South Carolina, south to Sebastian Inlet, Florida; and from the coast seaward for 80 nautical miles. For example, the Navy specifically adopted measures to protect Northern Right Whales during the calving season (December through March). During this period, the whales give birth and nurse their calves in an area off the coast from Georgia to Florida.

To ensure that military operations do not disturb the whales, the Navy places two trained lookouts with binoculars on surface ships, and one trained lookout with binoculars on surfaced submarines, to watch for the whales. Navy vessels operate with extreme caution at slow, safe speeds in the critical habitat to further ensure the safety of the whales.

The Navy also partially funds state fish and wildlife agencies' efforts to use light aircraft to patrol the Northern Right Whales' migration route to spot and report whale sightings. In March 2001, the Marine Mammal Commission thanked the Navy for its continuing attention to protecting Northern Right Whales. The Commission commented that the Navy's efforts were a noteworthy example of its attention to critical environmental protection needs.



A Seaman stands watch aboard USS George Washington as the forward night lookout, watching for any objects in the path of the ship, including the Northern Right Whale.

needs. In cooperation with the other Military Services, the Navy has assumed responsibility for developing and coordinating an overarching strategy and specific implementation plans for maritime testing and training sustainability.

Recent agreements with the National Oceanographic and Atmospheric Administration Fisheries Division to develop a better scientific understanding of sonar effects on marine mammals and to protect Northern Right Whales off the east coast of the United States exemplify this balancing act. Both the Navy and the Strategic Environmental Research and Development Program are researching underwater noise effects on marine life and the effectiveness of mitigation measures.

DEMAND FOR USE OF AIRSPACE

Most military reservations (all the land, including ranges, and airspace that DoD owns and controls around an installation) were initially located far away from populated areas. Over time, however, population density around military reservations has grown, and with it, the demand for commercial airports. At the same time, dramatic increases in the volume of commercial air traffic have placed more planes in the air, complicating air traffic management and raising the potential for more interaction between commercial and military flights.

In 1998, the Federal Aviation Administration (FAA) initiated the National Airspace Redesign Program to allow commercial aircraft access to more flight paths. As both commercial aviation and DoD develop planes that can fly higher and faster, more commercial and military aircraft may need to use the same airspace. If not carefully planned, the FAA's commercial program could compete with the military's airspace needs, specifically the use of airspace to conduct critical equipment tests and train aircrews.

More technologically advanced aircraft and weapons require larger amounts of airspace for testing and training. This is because of increased speeds and distances required for firing more advanced weapons. However, because these aircraft are more advanced, they need to fly fewer hours and fewer of them are required. The reduction in the number of aircraft will allow more advanced air traffic control capabilities to enable both military and commercial aircraft to safely transit test and training airspace with time and/or distance separation.

Working together, DoD and the FAA can maximize airspace use. DoD's Policy Board on Federal Aviation, in cooperation with the FAA, has formed a joint working group to address emerging national airspace issues. The coordination process between DoD and the FAA is designed to help solve issues regarding airspace use before they become expensive and time-consuming problems.

AIR QUALITY

Military reservations often contribute positively to the air quality of the surrounding areas because these reservations are typically underdeveloped relative to the surrounding area. However, jet aircraft produce ozone; vehicles, helicopters, and artillery produce dust; and maneuver exercise training produces smoke—all of which can migrate into populated areas depending on wind currents.

DoD works to maintain an appropriate balance between air quality concerns and the need for military training operations. This is a particular challenge in designated nonattainment areas or where significant opacity concerns exist. Nonattainment areas are areas that do not meet one or more of the National Ambient Air Quality Standards (NAAQS) designated in the Clean Air Act (CAA) for pollutants known to be hazardous to human health.

DoD's CAA Services Steering Committee, a long-standing working group that includes representatives from each of the Military Services, recently added air quality encroachment concerns to its agenda. The Committee is investigating ways to better enable military testing and training in nonattainment or opacity concern areas while also satisfying the goals of the CAA or other permit requirements.

CLEAN AIR ACT

The CAA contains a special requirement called the Conformity Rule, which applies only to Federal agencies. The goal of the Conformity Rule, which applies only to areas that have not attained or only recently attained the CAA's health-based standards called the NAAQS, is to ensure that Federal agencies' activities do not significantly degrade air quality. The Conformity Rule requires Federal agencies to analyze emissions from proposed projects or activities at Federal installations and offset any potential emissions increases for nonattainment and maintenance areas. The Conformity Rule prohibits Federal agencies from moving forward with a project or activity unless the emissions can be offset.

A Federal agency may obtain offsets by purchasing emissions credits or working with the state government to accommodate the increase in its emissions budget. However, if such accommodations are difficult or impossible, this rule can hamper DoD range upgrades, prevent basing of new aircraft or other equipment in an otherwise desirable location, or delay new training approaches in nonattainment areas. Aircraft emissions have posed the biggest conformity problems. Although the type and tempo of aircraft operations have not been impacted to date, significant funding and manpower has been required in many instances to demonstrate conformity.

OPACITY

Opacity measures the visibility of air emissions. Opacity rules are U.S. Environmental Protection Agency regulations that set standards for air quality. These rules can restrict or prohibit smoke training and mounted maneuvers on ranges for fast cook-off testing for the insensitive munitions program (an ongoing program to ensure military explosives are insensitive to shock or heat until precise detonation conditions are provided), and the use of intentional burns to manage vegetation cover.

Opacity is of special concern near parks and designated wilderness areas. Conflicts may arise between the CAA and the military's need to use smoke during training operations. The goal of the CAA is to make air as clean and clear as possible so that people can see as far as possible. On the other hand, the purpose of using smoke during training exercises is to make the air as cloudy as possible to hide movements and to fire weapons without being seen. Opacity standards may prohibit or limit training, and there are few national security exemptions from these requirements. Military and regulatory authorities agree that training the way U.S. Armed Forces will fight in combat requires accepting some dirty air so that soldiers are skilled in protecting themselves by using smoke in combat.

Opacity requirements are particularly important at Fort Leonard Wood, Missouri, home to the Army's Chemical School and Military Police School. The Chemical School is responsible for training soldiers in using smoke and other methods to obscure movements. Both the Chemical Corp and the Military

Police conduct vehicle maneuvers at Fort Leonard Wood. Fort Leonard Wood has researched air quality impacts associated with smoke and airborne dust. Through negotiations with Missouri regulatory agencies, the installation has successfully obtained an exception in certain circumstances to conduct maneuvers on unpaved roads without using a dust suppressant. As a result, the installation can conduct smoke and obscurant training under their existing air permit. The state also approved the use of a computer program to model and predict air quality. This greatly increases the flexibility to train under all weather conditions.



A tank generates smoke during a training exercise.

NOISE ABATEMENT

Urban development near airports or military reservations often results in increased noise complaints. For years DoD has worked to reduce noise resulting from weapons performance testing and training. At the direction of the SROC in November 2000, the Secretary of Defense initiated the Unified Noise Program within DoD to develop and update noise modeling capabilities and to expand information sharing to better manage noise concerns.

GROWTH OF URBAN AREAS

Urban growth is a byproduct of national prosperity, and is therefore something the Military Services train to defend. However, unregulated growth around military installations can compromise the utility, effectiveness, and mission of an installation.

REDUCING RANGE-RELATED NOISE IMPACTS

DoD works with local communities to encourage legislation on noise abatement that acknowledges allowable levels of noise produced by military aircraft during training activities. DoD also encourages cooperative and proactive land use planning that accounts for existing military testing and training uses that, by necessity, create airborne noise.

AICUZ Program. In the mid 1970s, DoD implemented the Air Installation Compatible Use Zone (AICUZ) Program to assist communities in considering aircraft noise and safety issues in local land use planning processes. The program has been successful where local communities have enacted comprehensive plans and zoning ordinances to protect installations from further encroachment. Communities near installations in Arizona, California, Florida, Maryland, Mississippi, Texas, and other states have enacted responsive zoning. Through the AICUZ Program, installations have engaged in local planning processes and worked with their local communities to maintain operational integrity and mission requirements while fostering compatible development near the installations.

RAICUZ Program. The Navy and Marine Corps implemented the Range Air Installation Compatible Use Zone (RAICUZ) Program to address issues surrounding Navy and Marine Corps air-to-ground ranges. Based on the successful AICUZ Program, the RAICUZ Program addresses noise and safety issues related to deploying live and inert ordnance at Navy and Marine Corps ranges, along with land use development near the ranges.

Red-Cockaded Woodpecker. The U.S. Army FORSCOM hosts an annual working group meeting on the health of the RCW in the FWS's Southeast Region. Installation wildlife managers have reported progress alongside their FWS counterparts. At the most recent meeting, the Army Construction Research Laboratory provided interim guidelines on maximum noise levels and how close various types of training can approach nesting sites without adversely affecting the woodpeckers. This is the first time DoD has had a uniform set of guidelines for predicting noise impacts on the RCW.

DoD works hard to build positive relationships with communities near its installations. By working with communities, DoD can participate in the decision-making processes associated with zoning, easements, and buffer areas to reduce noise issues that arise when civilians live near ranges. DoD maintains several programs that communities can take advantage of to facilitate urban and economic development while contributing to range sustainability. The AICUZ and Environmental Noise Management programs can be incorporated into a larger Joint Land Use Study (JLUS), which DoD's Office of Economic Adjustment partially funds. A JLUS is a cooperative land use planning effort between a local government and an installation that provides a rationale for and policy framework to support land use decisions. These measures are meant to prevent urban encroachment; safeguard the military mission; and protect public health, safety, and welfare.

DoD INITIATIVES ON ENCROACHMENT AND RANGE SUSTAINABILITY



The SROC has met three times since 2000 to discuss encroachment and range sustainability. The Committee directed OSD and the Military Services to analyze encroachment issues and to develop a comprehensive action plan to address them. Several existing and newly established groups are now preparing this action plan as part of DoD's Sustainable Ranges Initiative. Participants in these groups include test and training experts, operators,

and installation and environment personnel within OSD and the Military Services. They are examining common range sustainability issues.

SUSTAINABLE RANGES INITIATIVE

To date, the Sustainable Ranges Initiative has emphasized the eight critical encroachment issues. The Defense Test and Training Steering Group (DTTSG) has developed a preliminary, consolidated package of action plans for each of the eight issues. The DTTSG is also considering other issues and may add them to the Sustainable Ranges Initiative if necessary. In addition to addressing

specific encroachment concerns, the Initiative focuses on developing a comprehensive implementation strategy focusing on policy, funding, organization, legislation/regulation, and outreach.

The objectives of the Sustainable Ranges Initiative in FY 2002 will be to—

- Develop a sustainable range policy
- Address funding and program issues
- Provide recommendations on organization and leadership for range sustainment efforts
- Analyze legislative and regulatory issues related to encroachment
- Recommend possible mitigation measures, including formulating an outreach effort to partner with other agencies and surrounding communities.

A new DoD Directive on sustainable ranges, expected to be signed in FY 2002, will outline a comprehensive policy framework on encroachment.

CONGRESSIONAL HEARINGS

In Spring 2001, congressional interest in encroachment prompted the House and Senate Armed Services Committees and the Government Reform Committee to hold hearings. At each of the hearings, senior leaders from the Military Services and OSD provided detailed testimony on the issues related to and impacts of encroachment on military testing and training activities. Many of the witnesses expressed common concern that poorly coordinated endangered species protection measures adversely affect military training opportunities. Since that time, congressional interest in encroachment and DoD's efforts to mitigate its effects has remained high. In September 2001, DoD provided copies of the DTTSG's preliminary action plans to Committee staff of each committee. In March and May 2002, the House Armed Services Committee Readiness subcommittee and the House Government Reform Committee again held hearings on encroachment, at which Senior Service and OSD leaders further documented the magnitude of impact on readiness.



OUTREACH

DoD and the Military Services have developed and are improving outreach programs at the local and national levels to educate the public about military training requirements. These programs are combined with ongoing efforts to protect and sustain the environment. The programs include—

- Publicizing species-specific and broader research efforts
- Engaging interested stakeholders to ensure that local realtors, developers, and land planners understand the basic aspects and requirements of training and testing in their areas
- Partnering with conservation groups to purchase land for wildlife areas just outside installation fence lines to create buffers against urban development
- Publicizing environmental success stories. For example, 153 Federally listed endangered species make their homes on Army installations. For some species, the protected habitat on military reservations is the reason for their continued survival.

FUTURE DIRECTIONS

Sustaining military ranges and operating areas are vital goals for DoD, as is its commitment to environmental quality. These goals are not mutually exclusive;

“I am encouraged by the comprehensive approach the Department is taking, and the willingness of the Military Services to engage in productive discussions with the appropriate governmental and non-governmental agencies. This type of cooperation is essential ... to ensure that training realism is not sacrificed, and the Military Services are seen as responsible stewards of our natural resources and good neighbors to community residents residing near military installations.”

*—U.S. Representative Solomon P. Ortiz (D-TX),
Ranking Member, House Armed Services
Committee, Subcommittee on Military Readiness,
May 22, 2001*

military ranges may be the last viable habitat for some surviving species. These goals, shared by DoD, environmental groups, military units, and local stakeholders, include researching and developing policies to protect ecosystem viability while achieving realistic military training. A national outreach program is an important step in this direction. Initiatives by local, regional, and national organizations that promote environmental quality also help ensure that the training of U.S. Armed Forces is accomplished and that the ranges they test and train on are sustainable.