any of America’s military installations sprung up in the middle of nowhere, surrounded by forests, scrublands, prairie, or desert. Musket balls and artillery shells could fall where they may; the assertive purr of propeller-driven airplane engines disturbed few humans. But then came population growth. Towns, cities, and suburbs grew up around the installations, typically to serve the needs of the military community itself. As development edged closer to the military fenceline, both base commanders and adjacent civilians started using the word “encroachment.” The commanders realized that they needed partnerships with members of the civilian community, if for no other reason than a desire to keep the peace at home, as well as around the world. ¹

The need for partnerships became even more apparent as the modern environmental era blossomed. Civilians, scientists, elected politicians, and military commanders learned that the lands they controlled were treasuries of biological diversity, and that it was legally and ethically imperative that the diversity be protected. Some of that land even housed species that elsewhere had been trampled to the point of extinction. The commanders and civilians more fully appreciated, too, that a military installation’s environmental obligations did not end at the fenceline—that whatever a base did to its air, water, foliage, and animals affected the larger ecosystem. Thus it became essential that an installation’s land manager think beyond the fenceline, and that the manager seek out non-military partners to help perform what had become an increasingly complex mission.

Public involvement in an installation’s environmental life is vital. A basic document on the subject, Leader’s Guide to Environmental Public Involvement, published in February 2005 as part of the Army Public Involvement Toolbox², makes that clear. The guide dismissed any notions that “public involvement” is just a synonym for “public relations”:

In making use of public involvement, we are often trying to influence stakeholders so that they understand and accept an Army approach to an environmental concern or a decision based on Army-unique requirements. However, we must remember that the leader’s definition of influence includes involvement. The objective of public involvement is not necessarily to convince others that we are right. Instead, public involvement should provide stakeholders with opportunities to provide input about issues that will improve our decisions…..

By including stakeholders in our decision-making processes, and listening to their input, we give them a reason to become involved with us in a positive way. Over time, that involvement helps build relationships upon which trust is based, and trust is a basic bond of leadership.

And furthermore, says the guide, involving the community with regular two-way communication is a great way to head off conflicts and hard feelings. The 36-page publication sets forth detailed and useful suggestions for encouraging the community’s participation. Some of them are:

- First, build a strategic planning team, made up of representatives of the commander; the public affairs department; a specialist in risk communications; environmental managers, and the medical department. This team will guide the public participation process.
- Assess the community’s concerns and interests and determine how its members get their information.
- Identify the key stakeholders in community-military relations.
- Survey the community, through interviews, telephone surveys, and/or focus groups.
Communicate with the public, through notices, comment periods, meetings, and a publicly available administrative record.

Along the way, provide speakers to inform the public; deal with the media; operate websites.

**Plenty of Examples**

There are abundant examples of effective military-community cooperation. Kyle Rambo, whose work at Naval Air Station Patuxent River\(^1\) was described in chapter 9, has much experience with the subject; his installation has gone through three Base Realignment and Closure (BRAC) processes (and came out a winner each time) in a community that is highly economically dependent on the Navy.

“We’re responsible for 80 percent of the county’s [St. Mary’s County, Maryland] economy,” he says. “The Navy pumps $2 billion a year into the local community.” Furthermore, Pax River has become the leading agency in its home county for environmental information and activity. Other conservation agencies “call us with questions of a technical nature,” he says.

Still, when public hearings were held a few years ago on the base’s future in the BRAC process, Rambo was understandably nervous, even though community leaders (many of them retired Pax River officers) had mounted an intense lobbying campaign to keep the base open. When county officials called for public comment at one of the meetings, a representative of the Sierra Club rose to his feet. Rambo listened apprehensively. “He said ‘I’d just like to be on the record as saying if St. Mary’s County, in terms of development and environment in this county, did outside the gate as well as Pax River does on this Navy base, we would be a lot better.’” (Rambo said his first thought was, “Did anybody get that on film? You can’t buy that kind of support.”)

Buffering has become an important buzzword in military-community relations. At most installations, civilian development and population growth make it highly unlikely that the base itself can be enlarged, even though modern weaponry and training techniques need expanded space. Thus was born the buffering idea.\(^4\) The

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**What are “risk communications”?**

The Army’s guide to public participation recommends that a specialist in “risk communications” be part of the basic strategy team. The guide defines risk as “environmental harm or adverse health effects that could result from human activities or exposure to the environmental conditions at a site.” The guide goes on to say that “Risk communication is at the heart of effective public involvement,” and it’s a factor in almost every decision that involves air, land, or water. Dealings with the community cannot avoid frank discussions of risk; the public’s trust of the military installation is at stake.

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Public meetings at Fort Belknap Indian Reservation, Montana, sponsored by the Montana Air National Guard. Public meetings are an essential tool to improve military-community cooperation. (Photo: Douglas Ripley)
Army led this movement in the nineteen-nineties by acquiring conservation easements on lands around Fort Bragg, North Carolina, that were suitable habitat for the red-cockaded woodpecker. The Army eventually expanded and formalized this strategy into the Army Compatible Use Buffer Program (ACUB).

The Marine Corps followed soon after by acquiring easements on land adjacent to its Marine Corps Base Camp Lejeune, also in North Carolina. In 2003, the Department of Defense broadened the buffering idea to allow military departments (in the words of a DoD document) to:

enter into an agreement with a state or private entity to limit development or property use that is incompatible with the mission, to preserve habitat, or to relieve anticipated environmental restrictions that would restrict, impede, or interfere with military training, testing, or operations on the installation.

Cooperative partnerships have grown in subsequent years to the point where they are everyday instruments in the military land manager’s toolbox. The Fort Carson Regional Partnership is helping to protect what remains of Colorado’s short-grass prairie and the flora and fauna that inhabit it. The Coastal Georgia Private Lands Initiative was established by Fort Stewart and Hunter Army Airfield and their partners to protect some 120,000 acres surrounding the base. And a well-known and celebrated conservation partnership is the Northwest Florida Greenway, a consortium of military, government, and nonprofit organizations that seeks to protect a hundred-mile-long protected corridor of valued biodiversity that connects Eglin Air Force Base and the Apalachicola National Forest. The area has been identified as one of the six most biologically diverse regions in the United States. Again, The Nature Conservancy is an active promoter of the partnership.
Partnerships

At their best, efforts at public participation, conservation easements, and memoranda of understanding are examples of effective partnerships between the military and that part of the public that worries about conserving biodiversity. In such cases, “the public” can mean a small but concerned group of citizens who live near an installation, or it can be a nationally known nonprofit organization that’s interested in environmental protection—or it can be pretty much anything in between. There are many examples of partnerships currently in operation that both protect the environment and further the military mission.

Partnerships may have become almost commonplace in the military’s treatment of biodiversity conservation today, but the services have not always embraced the idea of working with outside organizations focusing on environment—or they have agreed with the idea in theory but done less in practice. In a report on endangered species management to congressional requesters in 2003, the General Accountability Office found:

DoD and other federal land managers have taken some steps to implement interagency cooperative efforts to manage endangered species on a regional basis, but the extent to which they are using this approach for military training ranges is limited. Federal land managers recognize that cooperative management of endangered species has several benefits, such as sharing land-use restrictions and resources and providing better protection for species in some cases. The Departments of the Interior and Agriculture have issued policies, and DoD has issued directives to promote cooperative management of natural resources. They have also outlined specific actions to be taken—such as identifying geographic regions for species management and forming working groups. However, follow-through on these actions has been limited, without many of the prescribed actions being implemented. A few cooperative management efforts have been taken but were generally in response to a crisis—such as a species’ population declining.

Botanists from the Smithsonian Institution observing the field research conducted by scientists from Drexel University of the federally-listed Knieskern’s beaked-rush at the Warren Grove ANG Range, New Jersey. The DoD has obtained invaluable scientific data and advice through cooperative agreements with universities and other public and private scientific institutions. (Photo: Douglas Ripley)
... A strategy that includes a systematic methodology to identify opportunities for cooperative management efforts, funding sources, science and technology sources, and goals and criteria to measure success would facilitate federal land managers sharing the burden of land-use restrictions and limited resources, and potentially help avoid exacerbating constraints on training at affected military installations.\(^8\)

GAO said there were several reasons for this lack of cooperation: Federal agencies were not all that good at sharing information; there were lots of policies but not enough follow-through; land managers sometimes had different thoughts about priorities for endangered species.

Today there’s a vastly changed attitude. Military commanders eagerly seek out the expertise of skilled partners, both within and outside of government. The agency that’s probably at the top of everyone’s list is the U.S. Fish and Wildlife Service (USFWS), a bureau in the Department of the Interior. USFWS is one of the two federal agencies responsible for managing the Endangered Species List, and so it is in constant demand for consultation by military land managers. Jane Mallory, the natural resource specialist at DoD’s Legacy Resource Management Program, lists the Fish and Wildlife Service as a sterling example of a successful partnership.

Asked to define such a collaboration, she said:

There are several common themes that always come up with successful partnerships. One of them is to provide additional resources. It also enhances available expertise. It builds a network based on trust and teamwork. It facilitates sharing of information and nurture of natural resources.

So with these goals in mind, of the successful partnerships we’ve had, the first one on my list is U.S. Fish and Wildlife Service. But we also have successful partnerships with other agencies—Bureau of Land Management, the Forest Service.

Among nongovernmental agencies, Mallory puts The Nature Conservancy at the top of a lengthy list that includes NatureServe.

Many partnerships stand out at the more local level:

**THE ONSLOW BIGHT CONSERVATION INITIATIVE**, a collaborative forum that seeks to protect environmentally sensitive terrain and wetlands around Marine Corps Base Camp Lejeune (http://www.cooperativeconservationamerica.org/viewproject.asp?pid=727);

**THE GULF COASTAL PLAIN ECOSYSTEM PARTNERSHIP**, which seeks to preserve one million acres in Alabama and Florida (http://www.cooperativeconservationamerica.org/viewproject.asp?pid=544); and,

**THE SONORAN DESERT ECOSYSTEM INITIATIVE**, which protects the desert ecosystem in a 55-million-acre area in Arizona, California, and the Mexican states of Sonora and Baja California Norte (https://www.denix.osd.mil).

The Sonoran initiative, writes DoD, is “landscape in scale and collaborative in nature,” and focuses on three connected components:

- Monitoring the ecosystem and coordinating management,
- Biodiversity management that is tailored to specific sites “and yet provides model lessons to apply to other sites . . . across the region”, and
- Management of invasive plants, which are a major threat to the desert ecosystems.

There are many other excellent examples of productive partnerships (see https://www.denix.osd.mil). These include collaborations between military land managers and Indian tribes. (For a document concerning environmental decision mak-
EDUCATIONAL INSTITUTIONS

Educational institutions are important DoD partners in the effort to conserve biodiversity, as was detailed in the chapter 9 discussion of Cooperative Ecosystem Studies Units (CESU).

An example of the value of universities in partnerships may be seen at the Warren Grove Gunnery Range, a 9,416-acre Air National Guard facility situated in the New Jersey Pinelands. The Pinelands, which include the ecologically famous New Jersey Pine Barrens, form an ecosystem that historically has been characterized by periodic fires. When the gunnery range started compiling its Integrated Natural Resources Management Plan, it needed answers to the basic question: Were the range’s activities (which cause a great deal of disturbance to the environment) compatible with the best biodiversity conservation methods?

Fortunately for the range, Drexel University was an eager research partner. It was a match made in heaven: Warren Grove needed conclusive scientific studies, and Drexel’s Department of Bioscience and Biotechnology had dozens of students eager to do them. Drexel also had Walter F. Bien, the director of Pinelands research at the university and a native of the region.

“I guess we’ve done close to a dozen ecological studies since around 2000 or 2001,” Bien said in an interview. “The military would tell you that they get a big bang for their buck . . . ” A big part of that bang is the sheer number of Drexel students involved. “We probably have had easily close to two hundred different people and organizations in those years, so we bring a big network with us,” said Bien. And the payoff is large for the students as well. “Our students will get a thesis out of some of the work they do. They contribute to the reports we give to the government in support of the INRMP. But along with that, they’ll take their research a step further and do maybe a bit more comprehensive work than what was required for the military, and they present at scientific meetings, they publish—whereas a regular contractor might not be doing these kinds of things.”

Nor, he said, would an ordinary contractor be expected to put in the hours the students devote to their work. “For example, this young man working with me on snakes—he probably puts a lot of extra hundreds of hours in a month on his projects simply because he’s trying to get a thesis out of it and he loves what he does. . . . And I learn a lot from my students, and they make me look good. The trick is having good personnel around you.”

One of Bien’s own specialties is the Knieskern’s beaked-rush (Rynchosporastrakenskernii), a federally listed threatened plant that was practically wiped out by development, but that grows happily near and within target zones at the gunnery range. Bien and his students discovered that the plant (its name means “beaked seed”) actually thrives in areas that are periodically disturbed. Bien has written that “military operations, such as mechanical disturbance, ordnance delivery, and prescribed burning, appear to be providing the necessary disturbance regime required for maintaining established sites and colonizing newly disturbed sites.”

As a result of the Drexel group’s findings on the beaked-rush and other plant and animal species, the Air National Guard and Fish and Wildlife Service are committed to long-term monitoring of biodiversity, and they plan continued research into the effects of prescribed burning on seeds and their germination.
Bien is understandably happy about Drexel’s partnership with the Air National Guard. “We’re very fortunate that we have evolved this relationship,” he says. “We almost feel like we’re family at this point. Because we practically live out there. They have been very receptive to what we have done. They work with us; we just have a very good working relationship. I guess that could work in most places, as long as the military would be receptive to that type of a partnership.”

The productive partnership extends, he says, to the Fish and Wildlife Service. Because of the Drexel group’s relationship with the federal agency, “we have gone on to do studies that are probably not even required by the military—like greenhouse experiments, germination experiments, survival experiments…. Again, this will help not only the military but maybe down the road will help to find out about life cycles and maybe aid in delisting a species. These are the kind of things that I’m not sure other people would be doing. That would be a very good example of the value of having a university involved.”

**Partnership Essentials**

Military land managers who are seeking partnerships may not all enjoy the good fortune of having a Drexel University nearby. Jane Mallory feels that a successful partnership is one that brings with it additional resources—expertise, information, maybe even money—to a conservation plan. Partnerships may be established at many levels—between the installation and nongovernmental organization, or university, or other governmental agency. What’s important is the collaboration that the partnerships foster. Such a collaboration produces “a network based on trust and teamwork,” says Mallory, and it “facilitates sharing of information.”

Partnerships to avoid, she said, are those in which the potential partners “have an agenda already, or they have their minds made up [negatively] about the Department of Defense.” Sometimes those mindsets can change, however: “It’s exciting to people to find out that DoD does conservation and natural resources management.”

It helps, say many natural resources managers, to set forth the rules of partnerships in writing. This is often done in a “cooperative agreement” or memorandum of understanding. A typical agreement would explain:

- why the agreement is necessary
- why the parties to the agreement have been selected (or have selected themselves)
- the purpose of the agreement
- the responsibilities of the agreeing parties
- financial understandings: Is any partner committing to the expenditure of funds?
- an understanding of how powers are delegated and administered, how the agreement may be modified and terminated.

An example of such an agreement, between the Department of Defense and The Nature Conservancy, may be found at [https://www.denix.osd.mil](https://www.denix.osd.mil).

Steve Helfert of the Fish and Wildlife Service (see chapter 9) is a huge fan of what he and others call “conservation partnering teams,” which provide a framework for productive partnerships. A major benefit of such organizations is that its structure practically guarantees “very strong communication lines” among its members. “A typical partnering team,” he said, “would be a group that would...
agree to meet face-to-face, other than by telephone or e-mail. Meeting face-to-face could mean once a year, perhaps four times a year. An example would be the South Texas Natural Resource Partnership. They formally meet four times a year with a facilitator.”

The South Texas group, which covers an area that contains three military installations, takes matters a step further by making sure that installation commanders are part of their process. “They say, ‘We want to add an annual executive briefing to our three installation commanders, to brief them on results of the prior year: what have we been doing, what have we succeeded in, what do we continue to do, what issues there are, what solutions.’” The result, he said, is that the conservation planners remain linked “to that component of the military we call the ‘operations training and range’ part of the military command—the folks in uniform who basically are training our troops. It’s very important to stay engaged and linked with that.”

In addition to creating a more formal conservation planning process and keeping commanders involved and up to date, the teams sometimes are good sources of ideas about how to find more money for biodiversity conservation.

How inclusive should the conservation partnership teams be? Helfert thinks that’s one of the first questions the team must tackle. “I would advocate that if indeed there is a conservation partnering team or one in the making, then those local folks look at their local needs. They should ask, Do we need to bring in the county, the local school district, other local governmental entities, that may want to be part of a new ‘partnership’? It may still be that you have just a core group of the military, Fish and Wildlife Service, and the state natural resources agency. They may be the nucleus of that group to look at any and all particular issues and solutions. Or sometimes the solution is to bring in more local folks as stakeholders or part of the team.”

Helfert said it would not be unusual for the partnering team to seek out local groups, saying “You’ve got something we want you to bring to the table.” Such an invitation would be obvious if one of the problems facing an installation is encroachment. The partnership team needs members “who are willing to think outside the military fence line. They think, ‘Aha, the answers to these issues, including encroachment, obviously are going to involve outside players; I need to put on my beyond-the-fence hat and think externally. I need to invite them in. I need to seek their wisdom, their input, if we’re really going to tackle and solve this issue.’”

Who are the best potential partners (and those most likely to help financially)? Helfert is naturally biased toward his own organization, the U.S. Fish and Wildlife Service—and for good reason. USFWS devotes a great deal of its energy to holding conferences and workshops and publishing information of value to military land managers, and its name comes up constantly when military land managers are asked to name their friends. But USFWS is not a source of extensive funding. Helfert’s list also includes the other large national land management agencies, such as the U.S. Forest Service. “They can bring in additional grant funds; they can bring in people on the ground. Say, they have a salamander that’s endangered in the Atlantic coast area, and it’s on Forest Service lands, military lands, state lands. They effectively can be a very positive partner.”

The U.S. Department of Agriculture (USDA) can bring in funds under its Natural Resources Conservation Service (www.nrcs.usda.gov/), which formerly was known as the Soil Conservation Service. “Those USDA funds can go into helping conserve fish and wildlife, endangered species, species at risk, migratory birds;
the list is endless,” says Helfert. Some of the large-scale regulatory programs of the Environmental Protection Agency can be helpful in planning and financing programs that concern water quality, watersheds, and air quality—all of which are as important on military installations as anywhere else. The Fisheries branch of the National Oceanic and Atmospheric Administration (NOAA), which is part of the U.S. Department of Commerce and co-guardian, with USFWS, of the Endangered Species Act, “is another group that we deal with, more so along the coastal areas, that can be a very good partner,” said Helfert. The Bureau of Land Management is on his list, too. As for individual states: “I wish I could tell you all 50 states are equal in terms of funding and conservation. But some states are ahead of others in this respect.” One way to judge state involvement is in the quality and detail of their wildlife action plans.1

Steve Helfert uses New Mexico as a good example of a state that has an effective partnership with the military in protecting the threatened gray vireo. Three military ranges—Kirtland Air Force Base, White Sands Missile Range, and the Army National Guard’s Camel Tracks training range—now have protected areas set aside for the migratory species. “We promote this as an example of where a state has jumped out and said, ‘We have the desire to conserve this bird,’” said the USFWS official. “We need to seek input from the public, from the federal agencies, from the military, from the state agencies, from private landowners, ranchers, The Nature Conservancy, everyone out there on the landscape where this bird occurs.”

There are good examples of effective partnerships, said Helfert, throughout the United States, and many of them are the product of conservation partnership teams. “The important thing is we all like to think it’s led principally by the military because we’re focusing on military land. But it also could go off the lands; it could go around the fenceline. And the leadership may change among the partners, depending on which initiative, which solution. But it’s always going back to the tenet that it will benefit the military.”

NOTES
1. For a detailed look at encroachment, see chapter 4.
4. For more on buffering, see chapter 4 and, at Fort Bragg, chapter 1.
5. The Nature Conservancy is a leader in securing conservation easements, which the organization defines as “a voluntary, legally binding agreement that limits certain types of uses or prevents development from taking place on a piece of property now and in the future, while protecting the property’s ecological or open-space values.” An agreement is signed by a landowner and an entity (unit of government, military base, or a land protection organization) that is known as a “land trust.” Money may change hands, or the easement may be donated. For more on easements, see The Nature Conservancy website at http://www.nature.org/aboutus/howework/conservationmethods/privatelands/conservationeasements/about/art14925.html.


10. For more on conservation at Warren Grove, see the case study that accompanies chapter 8 on disturbance regimes.

11. These relatively new plans, designed to head off declines in wildlife populations, were submitted to USFWS for approval in 2005. Implementation began the following year. Nationally, $68.5 million was appropriated in 2006 for the program. For more on the state programs, now termed “State Wildlife Action Plans,” including links to individual states, see http://www.wildlifeactionplans.org.