

# Building a Strong INRMP

By Fred Powledge, writer and editor

**A**t the basis of virtually every aspect of biodiversity conservation on military lands is The Plan—officially known as the Integrated Natural Resources Management Plan, or INRMP. It is, to the natural resources manager, the equivalent of the mariner’s or flyer’s chart, the foot-soldier’s topographical map. The INRMP declares the installation’s environmental intentions and offers a checklist of how to execute them.

Every natural resources manager interviewed for this guide spoke of the need to work from a realistic INRMP, and the willingness to correct the course if it becomes necessary.

Such a plan is necessary because of the sheer number and importance of conservation issues facing land managers today. These include, but certainly are not limited to, the evolving science of biodiversity conservation; endangered species; invasive and non-native species; funding sources; the need for reliable partnerships; the sustainable multipurpose use of resources; disturbance both natural and human-caused; the plethora of laws and regulations; encroachment by the outside world; public attitudes, and much more. A well-written INRMP takes all these components into consideration and fits them into a master plan that, in a perfect world, both protects the environment and furthers the military mission. The INRMP is more than just an organizing device: Without it, it’s quite likely that everyone involved would be free to run off in separate and quite likely conflicting directions.

And there’s another excellent reason for having an integrated natural resources plan: It’s the law (or rather the laws, as J. Douglas Ripley points out in chapter 3). The Sikes Act of 1960, which is the premier of these laws, provides that the “Secretary of Defense shall carry out a program to provide for the conservation and rehabilitation of natural resources on military installations.” The purpose of the act, named for a Florida congressman, is “the conservation and rehabilitation of natural resources on military installations; the sustainable multipurpose use of the resources, which shall include hunting, fishing, trapping, and non-consumptive uses; and, subject to safety requirements and military security, public access...” In 1997 the Sikes Act was amended to require that the military services write Integrated Natural Resources Management Plans in cooperation with the U.S. Fish and Wildlife Service and appropriate state agencies (usually fish and game departments). A key provision of the act was the establishment of chronologies by which components of the plans must be completed, and each plan had to be revisited and revised, if necessary, no less than every five years.<sup>1</sup>

## Military Mission, Conservation, and Tension

As important as it is for the conservation of biodiversity, the INRMP has another essential element. It must support the military mission. Interestingly enough, “the military mission” is rarely, if ever, defined in INRMP discussions, although for most people it is one of those concepts that one knows when one sees it.

At first glance, there would appear to be an inevitable tension between natural resources and the military mission; oftentimes it is the job of the military to bomb, burn, run tracked and wheeled vehicles over and otherwise destroy the trees, shrubs, wetlands, soils, and nesting areas that fall under the general category of “natural resources.” Are nature lovers and military commanders natural enemies?

It can happen, says Mary Hassell, natural and cultural resources manager at the U.S. Marine Corps headquarters in Arlington, Virginia.

“I do believe, however, that we can serve both,” she says. “I think the key word is ‘compatible use,’ and ensuring that natural resources conservation managers and military activities are integrated. It takes a lot of collaboration and cooperation with different groups that we have. It’s part of our stewardship requirement as a federal agency.

“I’m a forester by training. My grandfather was a farmer. The idea of taking care of the land is nothing new. It’s been around for hundreds and hundreds of years. And that’s our goal: to be sustainable. And [to employ] multiple use. And integrate all that with the military mission. If you weren’t practicing land management for sustainability you would soon destroy your land. So the concept isn’t new. It’s a good-management, best-management tool for keeping our activities ongoing.”

Tim Beaty heads the fish and wildlife branch of the natural resources division at Fort Stewart and Hunter Army Airfield in Georgia, the home of the Army’s 3rd Infantry Division. Beaty agrees that there can be a stereotypical gulf between environmental thinking and military mission. “Some folks don’t see conservation as their number one priority,” he says. “When you’re a military commander in charge of ten thousand or fifteen thousand soldiers who are fixing to go in harm’s way and put their lives on the line to defend the freedom we all enjoy, your number one priority is probably not worrying about salamanders. That’s very understandable.”

But, Beaty adds, that coin has two sides. “There may be a conservationist who you have to convince that not every tank commander is an evil guy. Once you can move past those preconceptions and prejudices and get folks to slow down and look at the facts and talk to one another, very often—I’d say in almost every case—you can find common ground. And begin to work from there and develop trust and develop working relationships. If we can do that one commander at the time, I think we’re beginning to create a culture of understanding within DoD on both sides that the conservation mission has to be sensitive to the training mission. That’s what comes first. That’s what we have to do: meet both missions and not compromise training realism and effectiveness in pursuit of some unreasonable conservation goals.

“It’s frustrating when you face these challenges, but it’s very rewarding when you get there. I love it when the plan comes together.”

But what tricks and techniques does Tim Beaty employ when he’s putting together an INRMP that he hopes will contribute to that culture of understanding?

“It’s going to sound like a cliché, but it’s all about communication and team building. If you don’t know your trainers or your testing community folks, if you don’t understand their culture, and where they’re coming from, then you’ve got to work on that. You’ve got to get to know those guys; take them to lunch; take them to the woods; show them what you know, and be open to learning what *they* know. Recognize that the reason the land is here is because the DoD needs to meet the military mission. And gradually you’ll get an opportunity to help *them* understand that they do have a stewardship—that the Army does have a stewardship responsibility that has to be met. And that you can meet that responsibility by sticking your head in the sand and keeping people out and ignoring and arguing that that responsibility doesn’t exist, or you can meet it by recognizing that that responsibility does exist and you can find a way to meet that responsibility in a way that doesn’t compromise and in fact supports the training mission. One of the buzz phrases we have around here is that a disagreement doesn’t equal disrespect.”

## What is the military mission?

The mission of the U.S. Army is defined in Title 10 of the U.S. Code, Section 3062(a):

It is the intent of Congress to provide an Army that is capable, in conjunction with the other armed forces, of

1. Preserving the peace and security, and providing for the defense, of the United States, the Territories, Commonwealths, and possessions, and any areas occupied by the United States;
2. Supporting the national policies;
3. Implementing the national objectives; and,
4. Overcoming any nations responsible for aggressive acts that imperil the peace and security of the United States.

Kyle Rambo, the natural resources manager at the Navy's Patuxent River Air Station, also appreciates the importance of honoring the wisdom of those who carry out the military mission. "You've got to learn how to see things from the military guy's perspective," he says. Rambo recalls a story about a land manager from another base who complained about the difficulties of convincing flyers that they shouldn't drop bombs on woodpecker habitat. "Then somebody got the bright idea to take the woodpecker colonies and make them part of the training center. Make them 'missile sites.'" Score aviators on how well they avoided the 'missile' installations. It became, he said, "a real training scenario."

Said Rambo: "The thing is to put on the guy's training hat and try to think like him. And all of a sudden these guys are getting scored on how well they *avoid* woodpecker colonies. At Fort Bragg, they do the same thing; they call them 'land mines' and 'mine fields.' And they get scored down on an exercise if they find themselves stumbling around in a 'mine field.'

"Learn the mission. Learn who you're working with and what they do. Learn to speak their language, and hone your people skills, because you're going to be working with people who maybe see the world differently than you do." Learning the mission was an important first step for Rambo when he started working at Pax River. "We were out there in the middle of an airfield putting up wood duck boxes. It never occurred to me that getting big ducks to fly along the runways was a problem. This was back in 1981. We were doing things that were counter to the military mission. We were not being supportive at all. It took me a while to figure it all out."

The Air Force and U.S. Marine Corps hosted numerous public meetings to obtain comment and input for the INRMP for the two million acre Barry M. Goldwater Range in Arizona. (Photo: Douglas Ripley)



(Rambo says more recent innovations have made it less likely that natural resources managers will make what in the future will be regarded as silly mistakes. “Nowadays, we have annual meetings of military biologists. We can share things with each other; use e-mail, the Internet. We can all share and contribute case studies and say, ‘Here’s how we did it.’ We didn’t have that back then. We were all going our own way and trying to figure out how to do it.”)

## The Mission and the INRMP

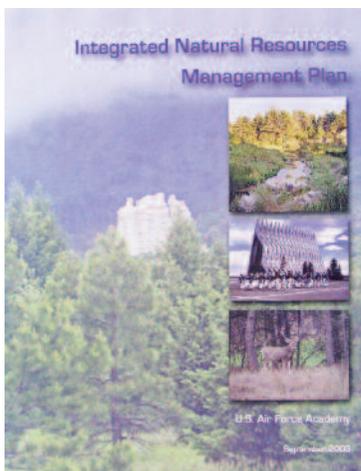
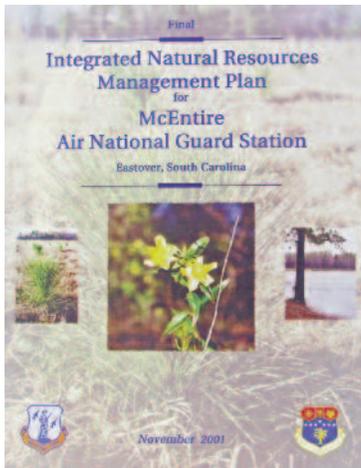
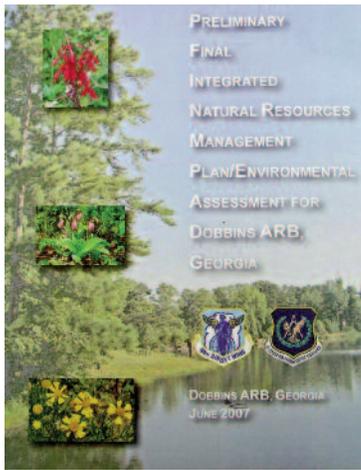
If the cardinal rule for writing a good Integrated Natural Resources Management Plan is to learn (and appreciate) the military mission, then a close runner-up is to assemble vast quantities of information. The INRMP is a living encyclopedia of the natural side of a military installation (several INRMPs refer to it as a “living document”), and also a handy list of what needs to be done and a chronology of how and when to do it. If it is well-written, it also is a valuable educational tool. Few military managers or even skilled biologists can stay current on all the aspects of environmental knowledge these days. A good INRMP is a storehouse of definitions, introducing the installation’s caretakers to the most current thinking on environmental stewardship.<sup>2</sup>

It helps to codify the basic facts and of an installation, sorting them into various management areas. One such compendium of information, examined in the INRMP of one air base, includes:

- a description of the installation—its size, environmental and demographic

The INRMP Task Force Working Group at the Warren Grove Air National Guard Range, New Jersey. The formation of an INRMP Task Force Working Group, composed of representatives from the U.S. Fish and Wildlife Service, state fish and game agency, other state and local environmental agencies, and interested nongovernmental and academic organizations, is an important first step in the preparation of a comprehensive INRMP. (Photo: Douglas Ripley)





characteristics. These include climate, topography, air and water quality, water resources, geology, soil characteristics, existing ecosystems

- fauna
- flora
- endangered, threatened, and rare species (including those included on state as well as federal lists)
- invasive and other exotic species
- facilities and other facets of development
- hazardous and toxic materials
- environmental justice issues

A well-built INRMP will state, up front, its purpose. A concise sample, taken from the document at Dobbins Air Reserve Base, near Atlanta, Georgia, says:

This INRMP is a practical guide for the management and stewardship of all natural resources present on Dobbins ARB, while ensuring the successful accomplishment of the military mission. The INRMP was developed using an interdisciplinary approach in which information was gathered from a variety of organizations. Guidance was also solicited from a variety of Federal, state, and local agencies and groups. A Task Force was formed, which included key base personnel and individuals from various agencies. Representatives from the following Federal and state regulatory agencies were members of the Task Force: the U.S. Fish and Wildlife Service (USFWS) and Georgia Department of Natural Resources (GADNR). These varying perspectives allowed for an accurate portrayal of the status and management needs of local ecosystems, balanced against the requirement for the base to accomplish its mission(s) at the highest possible level of efficiency. (From *Final Integrated Natural Resources Management Plan/Environmental Assessment for Dobbins ARB, Georgia, June 2007*. Compact disc.)

The sample quoted above succinctly makes the point that successful management of natural resources goes hand in hand with a successful military mission. Most skillfully-written INRMPs make this point, though some seem reluctant to grant conservation equal status: "...land management on a military installation must be consistent with the military purposes of the installation," warns the INRMP preliminary document for the Barry M. Goldwater Range, which at 1.7 million acres is the nation's third largest military reservation. (The document is also huge; its executive summary is 36 single-spaced pages long, and the complete INRMP runs to 1,500 pages. They are available at <http://www.luke.af.mil/shared/media/document/AFD-070119-100.pdf> and <http://www.luke.af.mil/library/factsheets/factsheet.asp?id=6348>).

## Sources of Help

INRMPs are frequently, if not always, the product of working groups, assembled for the purpose of gathering material for the plan and, later, for monitoring its progress. Sometimes private consultancy groups or universities are contracted to do the information collection and actual writing of the document. The working groups almost certainly include persons from the base itself, the U.S. Fish and Wildlife Service (USFWS), the state department of natural resources (or fish and game department), and others. The Sikes Act requires that the plan be prepared by the installation, USFWS, and appropriate state agency. Since USFWS's active involvement was mandated by 1997 amendments to the Sikes Act, the agency has developed procedures to assist in producing the plans and in streamlining the

USFWS approval process once the plan is submitted. (Lewis Gorman, USFWS's liaison with the Department of Defense on endangered species matters, says some at DOD might refer to his agency as "*regulators*, but we consider ourselves the *co-operators*. We are excellent partners with each other.")

Anyone can have access to the expertise from a computer screen. USFWS maintains a website, "The Sikes Act—a Dynamic Partnership" at [http://www.fws.gov/habitatconservation/sikes\\_act.htm](http://www.fws.gov/habitatconservation/sikes_act.htm), and within that site there are links to the important aspects of INRMPS—endangered species, fisheries, invasive species, migratory birds, law enforcement, wetlands, and environmental contaminants.

Another fountain of data is the Department of Defense itself, through its DENIX website (<https://www.denix.osd.mil>). The site contains links to INRMP guidance documents; the text of the agreement among the DOD and USFWS and the International Association of Fish and Wildlife Agencies (now called the Association of Fish and Wildlife Agencies); a document titled "Best Practices for Integrated Natural Resources Management Plan (INRMP) Implementation"; and many others.

The DENIX site also contains links to information on state wildlife action plans, which installation managers will find useful in assembling their INRMPS. Such plans now exist for all 56 states and territories. These are federal-state collaborations aimed at collecting information on, monitoring, and designing conservation plans for wildlife. There is more information at <http://www.wildlifeactionplans.org/>.

And the Legacy program itself is a great source of information. The Legacy Resource Management Program was created in 1990 by Congress to financially assist DOD efforts to preserve cultural and natural heritage, while supporting military readiness. (The Legacy Program also supported the development of the original DOD Biodiversity Conservation Handbook in 1996, as well as this updated version.) The program is explained at [http://www.dodlegacy.org/Legacy/intro/LegacyGuidebook\\_print\\_June07.pdf](http://www.dodlegacy.org/Legacy/intro/LegacyGuidebook_print_June07.pdf), with additional information at <https://www.denix.osd.mil>.

Nongovernmental organizations (NGOs) are another useful supplier of wisdom. They include The Nature Conservancy (<http://www.nature.org>) and NatureServe (<http://www.natureserve.org>). Of special interest at the NatureServe site are its reports on species at risk on DOD installations (see <http://www.natureserve.org/prodServices/speciesatRiskdod.jsp>).

Finding funding is a constant interest (and concern) of natural resources managers, as some of them explain in chapter 9. Although there are no Web-based ATM machines to cough up endless streams of money for species counting, wetlands monitoring, and the other components of INRMPS, the Legacy Program does provide a 235-page handbook, "Resources for INRMP Implementation," that explores the budgeting system (one chapter subtitle is "How to get funds.") The link is <https://www.denix.osd.mil>.

The U.S. Fish and Wildlife Service files reports with Congress on its activities and expenditures relating to INRMPS. The June 2006 report, covering the fiscal year 2005, is at <http://www.fws.gov/habitatconservation/FY%2005%20Sikes%20Report%20to%20Congress.pdf>.

## Tips from Experts

Any defense installation's natural resources manager who has been through the INRMP writing process probably deserves to be called an expert in the field. The process is akin to compiling the data for, and then writing, a comprehensive non-fiction book. As Kyle Rambo points out, land managers frequently meet with each other, and stay in touch by e-mail and the Internet, and so a great deal of expertise is available.

Mary Hassell, the Marine Corps's natural and cultural resources manager, believes a key need for the INRMP writer is to have a clear vision of the plan's goals, for most everything else flows from those. "What needs to be concentrated on," she says, "are the goals and objectives, and how well we're doing in implementing the projects that we are listing [in our INRMP]. So, for example, our goal would be compatible with integrated land management, and an objective would be that in order to support that goal would be minimizing soil erosion. And then the project would be a soil erosion control project. So what you're doing is, every year you're sitting down with your colleagues at the Fish and Wildlife Service and your colleagues with the state fish and game or wildlife agency, and you're going over the goals and objectives and projects and your work plan, and you ask 'How well are we doing here? Are the goals and objectives still valid? Do we need to drop some, add some? Is it supporting the recovery of any endangered species that we have? Is it supporting biodiversity; is it minimizing invasive species?'"

To aid in this process, the Navy has developed a Web-based tool, called the "Natural Resources Metrics Builder," that its installations are now required to use. The Metrics Builder is actually a database that lists all the Navy and Marine Corps INRMPS, with categories for seven focus areas. "We look at our partnership effectiveness; we look at opportunities for public recreation—hunting and fishing—and we go into all these focus areas and we actually require our installations that have INRMPS to fill this out in collaboration with our partners, and give a score, from zero to 100, how well they're doing," says Mary Hassell.<sup>3</sup>

Tim Beaty, at Fort Stewart and Hunter Army Airfield, says an INRMP effort must always keep the military mission at the top of its list. In addition to managing thousands of acres of forest to accommodate endangered, threatened, and rare species, and drawing up schedules for prescribed burning, as well as cooperating with nearby landowners and cleaning up toxic spills from the past, Beaty is aware of the need to involve the base's military trainers in his plans for conservation.

In Fort Stewart's case, as at Fort Benning (see chapter 1), the red-cockaded woodpecker was instrumental in joining the concepts of conservation and mission.

"For close to twenty years," recalls Beaty, "there was friction between the woodpecker and the mission." Finally, the base started getting "jeopardy opinions."<sup>4</sup> Similar warnings were received by Fort Benning and Fort Bragg, also "over the damage that was occurring as a result of training."

When land managers at Fort Stewart began more forcefully applying existing timber harvesting rules that left woodpecker habitat untouched, they got flak from another direction. "The Army said, 'Hey, this isn't going to work. This is impacting training,'" said Beaty.

The solution would have thrilled the heart of any dedicated INRMP-writer. "We began to realize that one of the reasons we were having so much friction between



Wildlife Biologist Jim Ozier, (left), Georgia Department of Natural Resources, assisting natural resources managers at Dobbins Air Reserve Base, Georgia, with the development of the base Integrated Natural Resources Management Plan. (Photo: Douglas Ripley)

the mission needs and the woodpecker’s needs was that we were fighting over the same ground,” says Beaty. “What we thought was good woodpecker habitat, places that had woodpeckers in it, was the same place the Army thought was good training land—it was high and dry and open up so they could see and maneuver to it.

“We began to realize that there were a lot of parts of Fort Stewart that *didn’t* look like that. This was about the same time the conservation community was starting to appreciate anew the importance of fire—natural fire—and particularly to recognize that the way we had prescribed fire in the past had been a little too timid—that what this ecosystem really needs is fire in the growing seasons, whereas our prescribed fires tended to be winter fires. As we started doing more proactive use of fire, particularly growing-season fire, we were really liking the results for the woodpeckers, and the Army was really liking the results for training.

“I think what’s made our programs here successful, and supportive of the mission as well as the endangered species, is that the habitat needs are the same. As we focus on trying to make the habitat better, it’s had positive effects on both the woodpecker and the Army.

One lesson Tim Beaty learned from all this is that to compose a solid INRMP, you must “Go back to the mission. Involve your trainers early on. If you don’t already have a good understanding of the mission and what the trainers’ needs and priorities are, get one. And then involve those folks; seek their input and constructive criticism.

“You always have to remember when you’re working with the trainers, especially now, is that we are a nation at war, and these are awful busy folks. It’s really hard for them to find time and drop what they’re doing and read a 600-page, or 100-page, even, management plan. You want to always coordinate with those folks and get their input in a way that makes it easiest for them. You have to ask them what that way is. To send them a 100-page document to review and get their comments back in 10 days is not the best way to do it.”

If a natural resources manager is working on a large installation, such as Fort Stewart, said Beaty, “you’ve got to realize that you can’t eat that cow all at one time. You’ve got to eat it a bite at the time. What we did was come up with some overall objectives and goals and then pencil in the INRMP along with a plan to do more specific prescriptions, as we call them, training area by training area. There’s 120 training areas that make up Fort Stewart—subdivisions of the whole post that can be used to schedule training activities and that kind of thing—to make sure that Company A is not shooting bazookas while Company B is learning how to raise an antenna. Develop a prescription for each one of those areas that identifies the current condition and what are the desired future conditions. Was there an old agricultural field that we want to restore longleaf pine in? Where’s a stand that’s too dense that we need to thin? Where’s a wetland that we want to restore? Those kinds of things.

“Our INRMP is a five-year plan, so we can say, Okay, for the next five years we’re going to do prescriptions on each of these 120 training areas. So we’re trying to do about 25 training areas each year—about two prescriptions a month is what we’re turning out.”

Once the trainers have been consulted, the databases studied, and the prescriptions prescribed, the INRMP must be sold to the base commander. Tim Beaty advocates taking as many expert helpers along for such presentations as possible. “When you do go in to talk to the commander about the plan or anything else, if you talk about the mission and about how your plan supports the mission, and all the good things you’re doing for the mission and what the mission means, be sure to take somebody along from your directorate of plans, mobilization and security, or whatever you call your training organization, and let *him* tell the commander that. If you’re going to have to tell the commander about how this is the law and you need to be in compliance and you’re going to go to jail if he doesn’t do this, take your *lawyer* along. Let your staff judge advocate tell him that.

“You sell the other staff elements on the idea, and let the guy that the general’s paying to be his expert on a particular subject tell him how your plan is going to help him do well in that area.”

## Adaptive Management

And once the plan has been sold to the base commander and everyone else, the natural resources manager has the task of making it work.

What Tim Beaty, Mary Hassell, Kyle Rambo, and many others are advocating is part of what’s often referred to as “adaptive management.” The concept, which has been around for decades, has become a major part of assessing, planning for, and executing big, complicated projects such as those that are required in Integrated Natural Resources Management Plans. Using adaptive management, policies become flexible experiments. For example, a policy to preserve and protect habitat for a certain creature on a military installation (while not only not harming the military mission but actually supporting it) is not set in stone, but rather treated as an effort to be closely watched and modified if required. Formulating the policy and placing it into action during a specified time span (as an INRMP might require) is not enough; managers must calculate over time the responses of the ecosystem to the change. In simplest form, adaptive management might be defined as “learning from the outcome.”

For Mary Hassell, adaptive management is a natural part of biodiversity con-

servation on military lands and waters, and one that is not all that difficult to execute. It's like an annual review, she says: "—the concept of really using the Integrated Natural Resources Management Plan as a tool, and actually using it. It's the concept where 'This is something we're planning to do; we'll take a look at what we're planning to do; we'll fund it and find a way to implement it; and then we'll look at it and see how well we implemented it and see if there's anything we need to change.'

"The military is pretty dynamic. Sometimes we have a new range or a new weapon system, and things are always moving. There are a lot of moving parts. So we have to constantly try to keep up; keep ahead of the game. So far as managing our natural resources is concerned, the projects in an INRMP give us a chance to practice that adaptive management."

In fact, says Hassell, the concept of adaptive management is useful in reminding managers that the INRMP is just a very useful tool, rather than a doctrine that's set in stone. "The big problem that I see with the INRMPS," she says, "is that a lot of money has been thrown at preparing the plans. It's really not the plans that are important; it's what we're doing on the ground that's important. People think they have to completely revise these documents every five years. But the law says the documents have to be *formally reviewed for operation and effect* every five years. That means if the plan is still good, you keep it. You might have some new projects, but there's no need to spend \$100,000 to regurgitate another plan just to put a new date on it. That is something that DoD-wide people have realized. And we're trying to get the word out there that you don't have to redo the sucker every five years, but we really want you to take a look and ask, *How are we doing?*"

#### NOTES

1. As it was originally written, the Sikes Act was a far cry from the DoD environmental policy of today. According to one legislative history of the act, the purpose of the legislation as introduced in 1960 was to certify an informal, pre-1949 arrangement at Elgin Air Force Base in Florida in which base personnel collected fees for allowing hunting and fishing on the base and used the money for restocking. The Sikes Act has been amended several times since 1960, always in the direction of biodiversity conservation as well as wildlife management and recreation. (See [http://search.yahoo.com/search?p=sikes+act+1960&ei=UTF-8&fr=moz2\[hollingsworthfx4.doc\]](http://search.yahoo.com/search?p=sikes+act+1960&ei=UTF-8&fr=moz2[hollingsworthfx4.doc].).)
2. The Dobbins ARB document is a fountain of useful definitions: For instance, noise, a necessary component of an airfield, "is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. It can be intermittent or continuous, steady or pulsating." Wildlife management is "manipulation of the environment and wildlife populations to produce desired objectives." There are dozens more.
3. The Metrics Builder scores installations on seven key areas of interest, arranged by the installation name in a spreadsheet-like database. The areas are "INRMP project implementation," "Listed species and critical habitat," "Partnership effectiveness," "Fish and wildlife management and public use," "Team adequacy," "Ecosystem integrity," and "INRMP impact on the installation mission." A 2005 description of the Metrics Builder may be found at [http://www.enviro-navair.navy.mil/currents/fall2005/Fallos\\_New\\_Conservation\\_Metrics.pdf](http://www.enviro-navair.navy.mil/currents/fall2005/Fallos_New_Conservation_Metrics.pdf). The Metrics Builder site itself is at [https://clients.emainc.com/dcs/navfac/metrics/MetricsAllSum\\_H.asp](https://clients.emainc.com/dcs/navfac/metrics/MetricsAllSum_H.asp). Logon and password are required.
4. The "jeopardy opinions," issued by USFWS in its role as one of the managers of the Endangered Species Act, declared that Fort Stewart's actions would be expected to "reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." The federal agency, as a consultative service on endangered species matters, also can issue declarations of "no jeopardy."

## A Solid INRMP

The Integrated Natural Resources Management Plan for Marine Corps Base Camp Pendleton, in southern California, might be seen as a model of good, instructive reporting. The reasoning behind the lengthy document is expressed lucidly in the first paragraph of its executive summary:

*The mission of the Marine Corps is to win battles and make Marines. The Marines need to train as they fight, which requires access to extensive acreages for training. Over time, military training activities pose the potential for adverse impacts to Marine Corps lands and resources. Unless properly managed, Camp Pendleton lands could be impacted to the point where both the quality of training and conservation value of the land could be diminished. Natural resources management supports the Marine Corps mission by ensuring the health of its lands for long-term use.*

For a look at the complete Pendleton INRMP, see <http://www.pendleton.usmc.mil/base/environmental/inrmp.asp>.