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The Thin Green Line

An Assessment of DoD's Readiness and Environmental Protection Initiative to Buffer Installation Encroachment

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Prepared for the Office of the Secretary of Defense

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Summary

Background and Purpose

When first established decades ago, most U.S. military installations were far from major cities and towns. That is no longer true. A growing population and changing land development patterns over the past several decades have led to lands vital to military readiness being surrounded by urban, suburban, and other types of development. Such development, especially large residential tracts, can limit the installation's operational capability. Complaints about noise, dust, and smoke from aircraft, weapons, and vehicles force commanders to curtail training of certain types or during certain hours. As development destroys or displaces native species of plants and animals, military posts become their critical refuge, and their presence further restricts military operations. These constraints have been so severe in some cases that installations have had to close.

Such pressures are called encroachment. Encroachment can be defined as issues external to military operations that affect or have the potential to affect military installation testing, training, and other operations and overall military readiness.¹

Recognizing the gravity of the problem, Congress provided legislative authority to allow military departments to partner with government or private organizations to establish buffer areas near training and testing areas. The Office of the Secretary of Defense (OSD) created the Conservation Partnering Program (now known as the Readiness and Environmental Protection Initiative (REPI)²) to implement this authority. Under this program, OSD funds the Services to implement compatible land use partnering projects that aim to relieve encroachment pressures on training, testing, and support operations at U.S. military bases—from either incompatible development or loss of natural habitat. The military usually partners with state and local governments and nonprofit organizations to acquire property interests, such as land and conservation easements.³ However, because the military may not own land through this program, the partner usually owns any land that is purchased, whereas the military and/or partner acquires the property easements. DoD also addresses encroachment in other ways,

¹ Encroachment issues include urban growth around military installations, noise and air pollution, endangered species and critical habitat, wetlands, water quality and supply, cultural resources, competition for airspace and maritime space, competition for radio frequency spectrum, and unexploded ordnance and munitions remnants.

² It is important to note that REPI is an official OSD program even though it now has the word *initiative* in its name.

³ A conservation easement is a deed restriction landowners voluntarily place on their property to protect the conservation values of the land, usually in perpetuity.

such as by working with local governments to develop favorable zoning and environmental management activities to help address environmental encroachment. REPI is designed to complement these activities and provide a new approach by allowing the military to partner with other groups to acquire buffering property interests.⁴

OSD wanted to know how effective the program has been so far so that it can set the future directions for the program. It asked RAND's National Defense Research Institute (NDRI) to assess the effectiveness of the OSD Readiness and Environmental Protection Initiative projects and recommend ways to improve the program. In response to this request, NDRI carried out a detailed assessment of the program by examining six installation case studies on site and in depth; by conducting phone interviews at five other installations and Service and NGO headquarters and with regional experts who had insights across multiple installations; by analyzing relevant installation Geographic Information System (GIS) maps, easements, and other installation documents; and by reviewing relevant literature and the public press. Over 60 experts were interviewed including state and local government partners, conservation NGO partners, U.S. Fish and Wildlife and other relevant federal agency staff, landowners participating in the program, and installation and service buffering, encroachment, training, and environmental staff. This research was conducted between June and December 2006.

Study Findings

After conducting this research, NDRI researchers conclude the following:

Encroachment Stems from Two Primary Sources: Sprawl and the Loss of Biodiversity

The former is intuitive and well publicized. Suburban and rural commuter sprawl and a growth in the number and size of resort and retirement communities are encroaching on many installation fence lines. Such development of land has become a state and local issue as governments struggle to adapt their infrastructures and services to rapidly increasing populations. Such sprawl near installations causes many of the different types of encroachment problems. The loss of biodiversity within an ecoregion⁵ (which affects installations in that ecoregion) is less well recognized but also an important cause of one type of encroachment. Biodiversity refers to biological variety and is important to maintaining ecosystem, habitat, and species health. When biodiversity is reduced, native animal and plant species become increasingly scarce. One effect of this reduced diversity is that the number of threatened and endangered species (T&ES) will likely increase, which could profoundly affect any military installation that contains such species. Their presence could result in restrictions on the type and timing of training and testing operations, as has been the case at some installations.

REPI Appears to Be Effective So Far

NDRI researchers applied the following criteria to assess the effectiveness of REPI to date:

⁴ See Chapter Three for a discussion of other DoD activities to address encroachment. Chapter Five and other parts of this report discuss the synergies between REPI and these other DoD activities.

⁵ An ecoregion is a relatively large unit of land or water characterized by a distinctive climate, ecological features, and plant and animal communities.

- promoting military readiness and other mission benefits
- addressing sprawl and limiting other incompatible land use
- preserving habitat and other environmental benefits
- community relationship and partnership benefits
- additional community benefits.

Judging by these criteria, it appears, so far, that REPI has been effective, as evidenced by some initial project accomplishments. REPI projects have shown accomplishments in all five of these areas, as is discussed more below. (See Table S.1 for a sample of the range of benefits from installation buffering projects.) However, more could be done to increase the overall effectiveness of the buffering activities if DoD were to provide more financial support, more policy and implementation guidance, and more implementation support, as is also discussed more below.

At this point, it is unclear whether such activities and accomplishments will be sufficient to solve significant amounts of encroachment, but they show promise. For example, the RAND assessment at Fort Carson supports the claim of a former installation commander who stated that the buffering activities have the potential to prevent 90 percent of the residential sprawl encroachment problems at this installation.⁶ However, it is too soon to tell whether the program will be that successful: It is only three years old, which is a relatively short time when dealing with land acquisition and easement issues that often take several years to complete. Furthermore, it has had relatively modest resources to work with. That said, evidence indicates that REPI has the potential to help buffer military installations against encroachment. OSD started funding projects in 2004. In three years, it has provided over \$40 million to installation projects, has leveraged over \$86 million in partner funds, and REPI-funded projects have been implemented at 24 installations.

With respect to promoting military readiness, the RAND team's assessment showed that at all six case study installations examined in depth, the majority of the buffering projects were in important areas, such as in safety and noise zones for air and ground training. Preventing housing and other incompatible land use in air safety zones and near ground training supports installation operations. Some installations are taking strategic action,⁷ such as Eglin AFB, which is trying to protect a 100-mile-long air corridor. Others are attempting to deal with the potential problem of threatened and endangered species before it affects them, which can provide operational and regulatory flexibility. Fort Carson's efforts to preserve four unique plant species off the installation are noteworthy in this regard. These buffering efforts have the additional benefit of reducing the number of complaints and lawsuits. Some buffering projects have helped joint readiness, but projects could be more effective in this area with more strategic planning and cross-Service coordination for joint long-term use and training buffering. In sum, the installation buffering projects have had some effectiveness in promoting military readiness. However, more could be done to increase the effectiveness and it is too soon to tell if such initial successes will continue and be enough to significantly help protect military readiness from encroachment problems.

⁶ See Appendix C for the assessment of Fort Carson buffering activities and more about the former installation commander's statements.

⁷ In this monograph, strategic action refers to considering the full range of implications from buffering activities, both short term and long term, and acting both locally and regionally.

Table S.1
Range of Benefits from Installation Buffering Activities

Benefit Categories	Subcategories	Sample Benefits	
Promoting military readiness and other mission benefits	Direct testing and training benefits	Helps preserve testing and training space Allows more training to be conducted Helps facilitate joint use and training	
	Minimizing community complaints and interference	Minimizes the effects on surrounding communities and thereby minimizes neighbor complaints about noise, smoke, and other effects and the costs of dealing with them Minimizes light interference, allowing night training	
	Other installation operational benefits	Increases operational flexibility Has increased regulatory flexibility	
Addressing sprawl and limiting other incompatible land use	Preventing incompatible land use	Stopped likely subdivision and development of Yellow River Ravines 11,313 acres near Eglin AFB Prevented a high-rise bridge from being built in the accident potential zone at MCAS Beaufort Stopped construction of three apartment complexes near the end of the runway at NAS Whiting Field	
	Helping local and regional growth management and planning	A county has focused on concentrating development away from the installation Has helped local governments become more interested in protecting open space and managing growth	
Preserving habitat and other environmental benefits	Preserving habitat, biodiversity, and T&ES	Helps to protect habitat, wildlife corridors, biodiversity, and ecosystems Helps protect and sustain T&ES off base Helps keep the black bear off the federal T&ES list	
		Water benefits	Helps protect watersheds Helps with water quality and quantity concerns
		Strategic landscape, regional, and ecosystem management and planning	Helps protect broader ecosystem through the Gulf Coastal Plain Ecosystem Partnership Helps protect specific ecosystems, such as parts of the Central Shortgrass Prairie (CSP) ecoregion
	Other environmental benefits	Improves installation environmental management Helps educate local governments and communities about the need for ecosystem protection and management	
Community relations and partnership benefits	Community relations benefits for the installation and military	Has improved relations with environmental groups, regulators, state and local governments, and landowners Has improved installation public communications process Has improved environmental and overall reputation of the installation	
	Working partnerships benefits	Improves working relationship with partners, in both buffering projects and other activities Helps foster more collaborative approaches to conservation in the region	

Table S.1—continued

Benefit Categories	Subcategories	Sample Benefits
	Benefits regarding internal installation collaboration and management	Has improved installation management's attitudes about collaboration with nonmilitary organizations Has helped improve collaboration and relationships between training and environmental staff
Additional community benefits	Economic benefits	Helps keep the installation as an economic force in the county and region
		Provides economic benefit to farmers, ranchers, and other landowners
		Has helped states and counties leverage conservation funds
	Land preservation and outdoor recreation benefits	Helps preserve agricultural lands, ranch lands, forest lands, and family farms Provides parklands and other local outdoor recreation areas and facilities, such as trails Helps provide recreational access on private and public lands, such as for hunting, fishing, and hiking
Improving quality of life		Helps preserve the agricultural way of life
		Helps maintain local quality of life and community sense of place

NOTE: For more details on these benefits see the discussions in Chapter Five and Appendices B–G.

Turning to the issue of sprawl and other development that is incompatible with military testing and training, the case study research found that the REPI projects and other installation buffering activities are helping to limit incompatible land use near installations. They have prevented some known and likely incompatible development encroachment by preventing subdivisions of land and residential developments and helping to prevent higher-density development in areas with encroachment issues. However, in some cases major incompatible land use, such as large-scale housing developments, still occurs. Buffering projects also help support and complement other DoD activities to address incompatible land use, such as efforts to work with local governments on zoning and land use controls.

Installations have also had some success at preserving habitat and providing other environmental benefits, such as protecting watersheds. The buffering projects have had a wide range of environmental benefits, including helping to preserve habitat, biodiversity, and T&ES; protecting wildlife corridors; and helping with water quality and supply concerns. However, some installations are mostly addressing sprawl and not fully considering T&ES or loss of biodiversity concerns. Only a couple of installations have participated in larger ecosystem collaborations. Such participation can be particularly helpful in stopping biodiversity loss and the resulting T&ES problems. More long-term benefits could and should accrue if installation activities focus more on conservation issues, especially larger ecosystem and ecoregional concerns.

All the buffering activities the RAND researchers studied have also helped improve community relations and working partnerships. These benefits not only help the buffering and environmental programs but also improve the installation's reputation within the community. However, more could be accomplished at some installations, especially if more staff and resources focused on community outreach. In addition, most partners are quite satisfied with the partnership arrangements. For example, NAS Fallon has a very close working relationship

with Churchill County, Nevada. Partnerships based on cooperative agreements accrue both effectiveness and efficiency benefits from outsourcing key functions, such as the appraisal, monitoring, and enforcement processes. REPI-funded projects have also helped facilitate other installation buffering projects and collaborations that were not using REPI project dollars.

Finally, the buffering projects have provided many other benefits to communities, including economic ones (especially to landowners who sell conservation or restrictive easements for buffering). For example, at MCAS Beaufort a landowner who is participating in the program said that the buffering easement program was “like a dream come true.” “I got to get money out of my farm and did not have to sell it.” Such programs also have helped provide parkland, trails, and other recreational facilities. The buffering projects have also helped preserve agricultural, forest, and ranch lands, and have helped to maintain local and regional quality of life. Many of these actions benefit both the local community and the installation, since installation staff, Service members, and their families also take advantage of parklands, trails, and recreational facilities.

In sum, installation buffering projects have had some effectiveness in all five areas. However, more could be done to increase the effectiveness of buffering activities by more focus on joint training buffering, strategic conservation concerns, and community outreach. In addition, it is too early to tell if installation buffering programs will be able to effectively address significant amounts of encroachment.

Zoning Will Not Substitute for Buffering Activities

Some military personnel believe that zoning and other government land use controls can serve the same purpose as the REPI projects. They cannot. Although favorable zoning is beneficial to installations, it can change, and zoning exemptions can be made quickly if local officials wish it. Local politics and policies are likely to change as development pressures increase. As more people who have no experience with an installation move near one and as the local economy becomes less dependent on an installation, there is likely to be less support for the installation. Such a situation will likely lead to changes in zoning and other local land use policies so that they no longer favor the installation, as some installations have already experienced.

There Is Limited Time for Buffering to Have a Useful Effect

DoD has a relatively narrow time window, perhaps a decade, to make substantial gains in buffering installations. During that time, both the price of land and the number of landowners that DoD must negotiate with will likely increase substantially. More large tracts of remaining private open space—farmland, forests, and ranches—are being sold and subdivided for development. These trends will not only make land more expensive but will also make it more difficult to acquire. The fact that land negotiations can take years to complete underscores the need for urgency.

REPI Is Underfunded

In FY 2007, the program was funded by Congress at \$40 million. Given land prices and buffering needs, funding needs to be substantially higher, and because of the urgency involved, additional funding needs to be available soon, if broad buffering objectives are to be realized in a substantive and effective way. For example, some individual buffering easements can cost as much as \$10 million to \$15 million because of current land prices. From our analysis, REPI could easily use \$150 million per year to address encroachment. An annual budget of about

\$150 million or even more would be needed to complete the major buffering that can and needs to be done over the next five to 10 years. However, more analysis is needed to assess the exact amount needed and how fast the program could absorb budget increases.

In the long run, accelerated funding now will in all likelihood save DoD money because land values have been increasing and are likely to continue to increase, since the demand for land seems likely to outstrip supply. Table S.2 illustrates some recent property price trends near U.S. installations and a national average.

This table illustrates how property trends have increased in many areas. For large tracts of land, investing now rather than waiting a few years can have significant savings for the military. To help demonstrate such savings, an analytical case is presented for ranch land in southern Colorado near Fort Carson and two conservation easement appraisals on the Walker Ranch conducted in 2002 and 2006, respectively. The compound annual growth rate (CAGR)⁸ for the Walker Ranch was 37 percent, which means that in 2006, Fort Carson would have to pay 316 percent more than in 2002 for a conservation easement on the Walker Ranch. If inflation and the cost of leasing the 30,000 acres⁹ is taken into account, purchasing a 30,000-acre easement on this property at the end of a five-year period could cost DoD nearly \$21 million more—300 percent more in real terms (using the gross domestic product deflator) (see Appendix I for the details on this calculation). In many places in 2006, land prices have slowed, so such trends and savings may not be as dramatic in the near future. But, they are likely to increase later given the

Table S.2
A Sample of Property Price Trends Near U.S. Installations

Location and Type of Land	Past Price for Land or Conservation Easement in Base Year	More Recent Price for Similar Property in Comparison Year	Compound Annual Growth Rate
Easement on Walker Ranch south of Fort Carson in Pueblo County, Colorado	\$360/acre in 2002	\$1,085 per acre in 2006	37%
Building sites with water in Churchill County (near NAS Fallon)	\$65,000–\$80,000 in 2003	\$150,000–\$200,000 in 2006	25–45%
Santa Rosa County, Florida, property (near Eglin AFB and NAS Whiting Field)	2002 ^a	2005 ^a	15%
National average for agricultural conservation easement	\$1,519/acre in 1999	\$2,899/acre in 2004	14%

SOURCES: Florida data are from the Florida Department of Revenue and the national farmland easement prices are from Kirchhoff (2006).

NOTE: For other sources and more details on the other examples and their calculations, see Appendix I.

^a The data provide the value of real property over time and do not provide price per acre.

⁸ The compound annual growth rate is a calculated value that shows the smoothed annual growth rate for the period the investment was held. It is calculated using the value of the initial investment, the ending value, and the number of years the investment was held. In reality, the value of investments fluctuates and does not necessarily grow monotonically, any given year, therefore this term is best used to compare investments over the same or similar timeframes.

⁹ Fort Carson is leasing some of this ranch land until it acquires sufficient funds to purchase more conservation easements. See Appendix C for more details. It is important to note that the lease amount is minor when compared to the overall easement costs.

proximity of bases to developing areas.¹⁰ Thus, there is an opportunity now for installations to protect land before prices rise as fast again.

In addition, other associated transaction costs will likely be higher in the future because more transactions will be needed once land is subdivided (in other words, acquiring property from one large landowner now is cheaper than dealing with 50 small landowners in the future). Transaction costs include the appraisals; staff time to negotiate, review, and close deals; legal fees and reviews; and monitoring the easements. Such costs are not trivial; for example, the Navy and U.S. Marine Corps (USMC) pay \$20,000 to \$30,000 for just a single property appraisal, so 50 appraisals would cost \$1,000,000 to \$1,500,000. Therefore, DoD would get far more benefit per dollar from investing \$200 million today than it would investing the equivalent amount (adjusted for inflation) evenly over 10 years.

Installations' Programs Are Understaffed

Staffing for the program differs across installations, with work on the program being an additional duty at some locations and a primary responsibility at others. It should not be an additional duty. The program is too complex and its demands are too great to assign it to someone with multiple responsibilities.

Buffering Activities Need to Be More Strategic

Many installations are taking strategic actions in their buffering activities, but more needs to be done. So far, many installations have focused their buffering efforts on adjacent lands. Although these are important, that focus is myopic, and installations need to be more strategic in their approach. A strategic approach has several aspects. First, buffering staff members need to look both further afield and further into the future. For example, low-level flight routes can extend many miles from the installation and require buffering just as much as artillery impact areas. Furthermore, future weapon systems may require more extensive areas. Additionally, buffering staff members need to consider joint use and training requirements and effects when they plan their buffering activities.

Second, many installations need to consider environmental issues more and factor the entire ecosystem and ecoregion into their planning, i.e., take a regional ecosystem approach. Ecosystems cut across county and state boundaries, and encroachment and environmental problems need to be addressed at both the local and regional level to be effective. Given that loss of biodiversity within an ecoregion causes T&ES encroachment, what happens across the entire ecoregion concerns the installations. It is important to note that an installation may successfully address sprawl problems with buffering to solve most of its sprawl-related encroachment problems, but if the installation's buffering program is not addressing biodiversity loss, then T&ES will likely still cause encroachment problems.

Third, DoD also needs to look at what other federal land managers are doing, especially the Bureau of Land Management and the Forest Service. These two organizations along with DoD manage the majority of federal lands containing most of U.S. biodiversity and habitat where biodiversity is most at risk. What they do on the land under their control can affect military installations, particularly with respect to biodiversity loss. Therefore, it is in the instal-

¹⁰ Given the various growth pressures near these and other installations, many local government land appraisers and other experts that RAND researchers interviewed expect prices to rise again near the installations.

lations' own interest to work with other government organizations to preserve species and habitat.

Fourth, just because an installation today is in a remote area and not being encroached on does not mean it does not need buffering. Given the national trends with sprawl, biodiversity loss, and the fact that land is a finite resource, this will likely change. The military needs to take strategic action to buffer these installations as well. In fact, it is easier and cheaper for the military to buffer before major encroachment problems develop.

Creating conservation buffers—and doing it strategically—not only will likely save the military money (as mentioned above) but will allow the military to conduct the full range of training, testing, and other activities necessary to prepare warfighters for success (and to keep them safe) in combat operations.

Additional Policy Guidance Is Needed

As the program has evolved, it is clear that additional guidance is needed. Each Service has implemented the program without comprehensive implementation guidance from OSD. Although some flexibility is needed for different Service needs, lack of overall guidance leads to inconsistencies across the Services, which particularly creates difficulties when two Services are dealing with the same partner. A lack of guidance has also caused some actions to be redone and has slowed the process as different installation and Service staffs spend time debating and figuring out how to implement the program. Given such guidance needs, in summer 2006, OSD working with the Services provided an initial guidance document, “The Department of Defense Conservation Partnering Program Guide.” However, it mostly focuses on how to submit REPI proposals and the criteria for evaluating those proposals. Such guidance needs to be expanded to provide more guidance about ways to implement the buffering program successfully.

Implementation Needs to Be Streamlined and Hastened

Understandably, it can take a long time to negotiate a land transfer or easement with a landowner. However, the military process to assess, approve, and fund a property agreement takes too long, especially if a commercial land developer has cash on hand and can consummate a sale in a matter of weeks. For example, the Navy and USMC appraisal process and easement development and review process to final offer takes months and has taken up to a year at some installations. In addition, acquiring military funds is usually a several-month process. In a competitive environment, the military is at a disadvantage when its partner does not have ready funding to make a deal quickly. Such processes need to be streamlined and other flexibility needs to be built into the system to enable the military to respond quickly to real estate opportunities. Policies and procedures will need to be established to enable responsiveness yet provide reasonable oversight and approvals to prevent waste, fraud, or abuse.

Community Outreach Is Essential

Community outreach is a slow but essential process to any installation buffering program. Establishing relationships with local communities, landowners, nongovernmental organizations (NGOs), and other organizations interested in preserving land from development has shown itself to be an important component of successful buffering programs. It is particularly critical to build trust with the landowners. They must believe that the negotiations are being made in good faith and address their concerns.

Recommendations

DoD Needs to Invest More Resources Soon

Because of the common installation need to act swiftly or lose opportunities to buffer as surrounding lands are subdivided and developed and become too expensive and owned by too many different entities to use for buffering, OSD and the Services need to invest more resources in buffering now. Such resources include financial, manpower, policy guidance, and technical support. Other funds are available and should be pursued. However, the fundamental need is for significantly more funding by Congress and DoD. As discussed above, an annual REPI budget of about \$150 million or even more appears to be readily absorbable for good buffering opportunities. However, more analysis is needed to assess the exact amount needed and how fast the program could absorb budget increases.

Address Other Financial Issues

A number of other financial issues in addition to increased funding also need to be addressed to improve the program.

First, OSD needs to provide multiyear funds for all Services and installations to enable negotiations and deal closures that cross fiscal year boundaries. Second, OSD, the Services, and Congress should work with state and local governments to support funding of land conservation for installation buffering benefit. Third, REPI should assess opportunities for and help support leveraging of other military and federal agency funding, especially for land and ecosystem analysis and preservation, such as funds from the U.S. Department of Agriculture. Fourth, OSD, the Navy, and USMC need to make it clear that the program does not require that partners match (or even come close to matching) military funds. This requirement has the potential to derail valuable buffering agreements. Fifth, Congress and DoD need some flexibility in implementing the “fair market value” requirement in acquiring land interests for buffering. The program should acquire property at less than fair market value if landowners are agreeable, as long as they know the price offered is below the fair market value, or it should allow paying more than the appraised value to beat a competitive bid if that is necessary to get land crucial for buffering. Once such land falls under development, for all practical purposes it is lost to DoD forever. Sixth, OSD needs to speed up the funding process for approving and providing funds to buffering projects. An important part of doing this is that OSD should create an emergency funding reserve. Finally, OSD and the Services should help fund more than just the land acquisition process. Funding for regional growth and ecosystem and ecoregional assessments, collaboration, and management is also needed to help improve the program, especially for addressing strategic issues such as preventing biodiversity loss.

Improve Program Policy Guidance and Focus

REPI needs to build on existing program guidance to expand it to be an overarching program implementation guidance document. Such guidance should include a consistent approach across the Services for how the program should be implemented with reasonable flexibilities built in to facilitate creativeness, deal with local situations, and enable more rapid response to opportunities. Because of the benefits from collaboration and outsourcing key functions, such as the appraisal process, the Army’s “cooperative agreement” approach with partners seems

the best model, rather than the Navy's "real estate" approach.¹¹ This guidance should focus on leveraging expertise from diverse partners when it makes strategic sense and is reasonable to do so. It should also require REPI-funded projects to focus on conservation as much as possible when appropriate and feasible, such as implementing conservation easements rather than restrictive easements to protect land with conservation value. In addition, OSD and the Services should ensure that installations are taking strategic action to address T&ES issues and ecoregional biodiversity loss by participating in broader ecosystem planning and management activities as part of their buffering programs.

Improve the Implementation Process

The process needs to move faster. Clarifying guidance will help, but OSD and the Services need to consider other approaches as well. These include delegating deal-making authority and some funds to the local installation, establishing an optional fixed rate for each installation for a conservation buffer or land price to avoid lengthy appraisals and reviews, and having standard conservation easement documents. These may require changes to current statutes. Often, land that is not adjacent to the installation is important to its buffering activities, such as for protecting flight corridors and habitat. The statute allows the program to use such property for buffering, but some installations consider only areas adjacent to the installation. OSD and the Services should encourage the implementation process to focus more on nonadjacent land. This step would enable installations to take a more strategic approach to buffering.

Improve Community Outreach

Ensuring that there is a full-time installation staff member involved in the buffering program would also help outreach. Other steps include having installation staff participate in local community planning, funding planning coordination and collaboration with local and state governments, presenting encroachment programs to local audiences as a way of illustrating the importance of training and the effect encroachment has on it, and educating the installation staff as well.

Conclusions

REPI projects have demonstrated effectiveness in helping to preserve testing and training operations and promote military readiness by preventing incompatible land use and preserving habitat for T&ES. Buffering projects also have provided other benefits, such as improving installations' images and community relations, improving water quality, providing community parklands, and helping maintain local quality of life. The projects complement other DoD activities to address encroachment. Conservation buffering activities show some promise in helping to solve installation encroachment problems. However, it is too soon to tell if such efforts will prevent significant encroachment problems or at what total cost. In addition, a number of efficiency and effectiveness issues need to be addressed to improve the REPI program so that installations have a better chance to actually prevent most of their fundamental encroachment problems. Most important, Congress and DoD need to provide significantly more funds soon to buffer before the chance to buffer is lost. OSD also needs to develop clear

¹¹ See Chapter Six.

policy implementation guidance that streamlines the implementation process and ensures that installations are taking strategic action, such as strategically helping to preserve habitat and address declining biodiversity. With these and the other suggested improvements, REPI has the potential to help many installations solve most of their major encroachment problems, so these installations' military testing and training operations are no longer restricted or degraded by encroachment.