

Practical Guide to



Compatible Civilian Development Near Military Installations

July 2005

Written by

Office of Economic Adjustment

In cooperation with the National Governors Association Center for Best Practices

Disclaimers

This *Guide* is intended as general information for those interested in community development and civilian encroachment issues that may affect the operational utility of military installations and ranges. This document, including all forms within it, is intended for educational and informational purposes only. It is not to be considered as legal advice for specific statutes or cases. Readers should always obtain legal advice for their own situations from legal counsel.

Technical and descriptive terms used throughout this *Guide* do not necessarily reflect either official Department of Defense terminology or usage, or terms of reference codified in State statutes or local government codes and ordinances. They are generic in their application to assist the reader in understanding the issues, principles, and practices of general land use planning and its relationship to military installations generally.

Readers also should be aware that hyperlinks and Web addresses given were accurate as of April 5, 2005, but may no longer be active. Laws, ordinances, legislation, etc., that are presented herein are current as of January 2005. The reader is encouraged to seek the most current legislation, as it may be amended or recodified from time to time.

The full text may be found in electronic format on <http://www.oea.gov> and <http://nga.org/>.



OFFICE OF THE SECRETARY OF DEFENSE
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Dear Reader,

Military bases and their host communities have a strong, mutually beneficial relationship. For many of these communities, support for our warfighters and their families has included efforts to ensure civilian development around installations is compatible with the ongoing DoD missions for those facilities. Installations also strive to minimize operational effects on surrounding communities. A positive heritage has evolved where communities have successfully collaborated with neighboring installations to ensure compatible civilian development adjacent to the installation, thereby not impairing mission accomplishment.

The Office of Economic Adjustment (OEA) is pleased to present this *Guide* which documents the tools, techniques, and collaborative efforts that have proven successful for communities to minimize incompatible civilian development near our military facilities. This *Guide* was authored and developed through the vision, untiring effort, and expertise of OEA Associate Director James "Mike" Davis.

OEA was assisted by the National Governors Association Center for Best Practices in the preparation of the Guide. The Center assembled representatives from the International City/County Management Association, National Conference of State Legislatures, National Association of Attorneys General, the American Planning Association, Virginia Tech, and the Albany Law School to ensure the accuracy, thoroughness, and responsiveness of the document. The product will help civilians and the military effectively confront and minimize development and operational conflicts through collaborative partnerships.

A handwritten signature in cursive script that reads "Patrick J. O'Brien".

Patrick J. O'Brien
Director
Office of Economic Adjustment

Acknowledgements

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An editorial board comprising representatives of national organizations and universities with expertise in land use issues provided advice and reviewed drafts. However, any opinions, findings, or conclusions contained in this report are those of the OEA and do not necessarily reflect the views or policies of the editorial board members or the organizations they represent. Following are the editorial board members:

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Common Acronyms and Abbreviations

ACUB	Army Compatible Use Buffer Program
AEC	Army Environmental Center
AFB	Air Force Base
AICUZ	Air Installations Compatible Use Zones
AIPD	Airfield Influence Planning District
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
ALUP	Airport Land Use Plan
APA	American Planning Association
APF	Adequate Public Facility
APFO	Adequate Public Facilities Ordinance
APZ	Accident Potential Zones
BASH	Bird Aircraft Strike Hazard
BRAC	Base Realignment and Closure
CD	Cluster Development
CDBG	Community Development Block Grant
CEQA	California Environmental Quality Act
CFCP	California Farm and Conservancy Program
CFR	Code of Federal Regulations
CIP	Capital Improvement Program
CMC	Commandant, U.S. Marine Corps
CNEL	California Noise Equivalent Level
CNI	Chief of Naval Installations
CNO	Chief of Naval Operations
COG	Council of Governments
CZ	Clear Zone
CZMA	Comprehensive Zoning Map Amendment
dB or dBa	Decibel readings measured with A-weighted sound levels
DNL/Ldn	Day-Night Average Sound Level
DoD	Department of Defense
DRI	Developments of Regional Impacts
EA	Environmental Assessment
EAP	Encroachment Action Plan
ECCOG	Eastern Carolina Council of Government
EDA	Economic Development Administration
EIS	Environmental Impact Study (under NEPA)
EP	Encroachment Partnering (Navy)
ESA	Endangered Species Act (under NEPA)
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FICAN	Federal Interagency Commission on Aircraft Noise
FMC	Future Mission Contour
FONSI	Finding of No Significant Impact (under NEPA)
FORSCOM	Army Forces Command

FPZ	Flood Plain Zone
GIS	Geographic Information System
HAP	Housing Assistance Plan
HNZ	High Noise Zone or High Noise Impact Zone
HUD	Department of Housing & Urban Development
INRMP	Integrated Natural Resource Management Plan
JLUS	Joint Land Use Study
JRB	Joint Reserve Base
LAFCO	Local Agency Formation Commission
LBCS	Land Based Classification System
LUCP	Land Use Compatibility Plan
MAPOD	Military Airport Planning Overlay District (Exclusive to Horsham Township, PA – JLUS)
MCALF	Marine Corps Auxiliary Landing Field
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MCC	Maximum Capacity Contour
MCO	Marine Corps
MCOLF	Marine Corps Outlying Landing Field
MIDD	Military Influence Disclosure District
MIOD	Military Influence Overlay District
MIZOD	Military Influence Overlay Zoning District
MIPD	Military Influence Planning District
MIPE	Military Installation Planning Element
MMC	Maximum Mission Contour
MNCPPC	Maryland-National Capital Park & Planning Commission
MOA	Memorandum of Agreement
MOD	Military Overlay District
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
MTR	Military Training Route
MUPD	Multiple-Use Planning District
MxPD	Mixed-Use Planned Development
NAS	Naval Air Station
NCSCP	North Carolina Sandhills Conservation Partnership
NEPA	National Environmental Policy Act
NGA	National Governors Association
NGO	Non-governmental organization
NOE	Nap-of-the-Earth
NS	Naval Station
OEA	Office of Economic Adjustment
ONMP	Operational Noise Management Program
OPNAVINST	Operational Naval Instruction
OSHA	Occupational Safety and Health Act
OZ	Overlay Zone
PROS	Park, Recreation and Open Space
PUD	Planned Unit Development

PZMA	Piecemeal Zoning Map Amendment
RAICUZ	Range Air Installations Compatible Use Zones program (Navy and Marine Corps)
RCMP	Range Complex Management Plan (Navy)
RCW	Red-cockaded woodpecker
RHA	Rural Housing Administration
RMI	Regions of Military Influence
SLR	Sound Level Reduction
SLUCM	Standard Land Use Coding Manual
SWOT	Strengths, Weakness, Opportunities and Threats Analysis
TAP	Theater Assessment Program
TIP	Transportation Improvement Program
TDR	Transfer of Development Rights
TNC	The Nature Conservancy
UPWP	Unified Planning Work Program
U.S.C.	United States Code
USAEC	U.S. Army Environmental Center
USAF	United States Air Force
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFWS	U.S. Fish & Wildlife Service
USN	United States Navy
VA	Veterans Administration



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Military installations play a vital role in national defense and often serve as major economic engines accounting for thousands of jobs and billions of dollars in economic activity and tax revenue. The nation's Governors understand that incompatible development around a military installation can impair its mission by restricting testing and training activities. To prevent encroachment around military installations, the National Governors Association (NGA) adopted an official policy that encourages compatible land use near military installations.

NGA's Center for Best Practices has partnered with the Department of Defense's Office of Economic Adjustment (OEA) to identify strategies that states and localities can employ to discourage incompatible development around military bases. The NGA Center has released two issue briefs on military encroachment, *Military Installations Pressured by Sprawl* and *State Strategies to Address Encroachment at Military Installations*.

Approaches to growth vary widely from state to state. In an effort to identify a broad variety of tools to prevent encroachment, the NGA Center assisted OEA in the preparation of this *Practical Guide to Compatible Civilian Development* by forming an editorial board to advise the author. The board is comprised of representatives of national organizations and universities with expertise in land-use issues. The opinions, findings, and conclusions contained in this *Guide* are those of the author and do not necessarily reflect the views or policies of NGA, the editorial board members, or the organizations they represent. Member organizations of the editorial board are:

- Tara Butler, The National Governors Association Center for Best Practices (NGA Center)
- Paula Cotter and Judith McKee, The National Association of Attorneys General (NAAG)
- Stuart Meck, The American Planning Association (APA)
- Larry Morandi, The National Conference of State Legislatures (NCSL)
- Patricia Salkin, Associate Dean and Director of the Government Law Center of Albany Law School
- Joe Schilling and Jacen McMillen, The International City/County Management Association (ICMA)

The enclosed issue brief, *Planning Tools and Policies to Encourage Compatible Development near Military Installations*, highlights many of the strategies that appear in the *Guide*. The tools described in the *Guide* can be implemented collectively and cooperatively by local, state, and federal government.

John Thomasian
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National Governors Association Center for Best Practices



Issue Brief

Environment, Energy, and Natural Resources
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Planning Tools and Policies to Encourage Compatible Development near Military Installations

Summary

There are several hundred major U.S. Department of Defense (DoD) military installations across the nation, many of which have experienced encroachment from incompatible residential and commercial development.¹ Encroachment can threaten public safety because people located near military installations are potentially exposed to artillery fire, aircraft noise, dust, and even accidents. Ultimately, military installations may be forced to close if encroachment restricts training and operational missions. Military bases are often critical to state economies, generating thousands of jobs and billions of dollars in economic activity and tax revenue. In addition, these military installations often make significant contributions to state homeland security activities. To prevent encroachment, many state and local governments are taking steps to protect the land around their military installations and the health of the economies that rely on them.²

Encroachment can be prevented if local governments, states, and DoD coordinate their efforts to promote compatible land use around military installations. To highlight the opportunities available for such coordination, DoD's Office of Economic Adjustment has released a *Practical Guide to Compatible Civilian Development*.³ The *Guide* describes a variety of strategies that can be employed by military installation commanders, local government officials, planners, community members, and state officials to address encroachment by promoting the use of land surrounding a military installation in a way that is compatible with the military's mission.

Compatible development around military installations can be encouraged at many levels. The *Guide* offers a series of encroachment prevention strategies categorized by local, state, and federal approaches. Land-use decisions are usually made at the local level; however, state and federal governments can provide important policy and legislative direction and guidance.⁴ The goal of the *Guide* is to encourage local, state, and federal governments to coordinate their encroachment prevention efforts and — when appropriate — use a combination of the following approaches and tools:

- General plans and zoning codes that encourage compatible development around military installations
- State growth and development policies that discourage encroachment
- State legislation specifically aimed at preventing encroachment
- State and local capital expenditure policies that direct growth away from military installations
- DoD financial and planning assistance
- Conservation partnerships

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Local Planning Tools to Prevent Encroachment

Encroachment is largely a problem of conflicting military and civilian land uses. To minimize these conflicts, local planning tools can be employed to encourage compatible development, and discourage incompatible development, around military bases. To accomplish this, a community's most effective planning tools are its general plan, zoning code, and capital improvements plan. Within the zoning code, the "overlay districts" and height limitations are particularly effective tools.

Primary Tools: General Plan, Zoning Code, Capital Improvements Plan

In most communities, the most basic planning document is the general plan.⁵ The general plan is the adopted official statement of a legislative body of a local government that sets out its goals, policies, and guidelines intended to direct present and future physical, social, and economic development in its planning jurisdiction.⁶ The community implements its general plan using such tools as the zoning code that regulates land uses and the capital improvements plan that guides public investments.

In the zoning code, the entire community is classified into districts known as "zones" according to intensity of development and appropriate land use, such as residential, commercial, industrial, agricultural, recreational, and conservation. This classification is designed to separate land uses and densities that are incompatible with one another. In its capital improvements plan, a community sets out its plans for constructing public buildings, facilities, and infrastructure, including all major projects requiring the expenditure of public funds over and above annual operating expenses. In many communities, the plan is reviewed annually for conformance with and consistency with the general plan.

Implementation of a general plan through zoning and the making of capital improvements can have profound effects — often unintentional — on military installations. For example, a community might envision meeting its need for additional housing by directing residential growth to undeveloped land close to a military base. To promote this plan, it might zone the land for high density development and make public infrastructure investments even though the development could negatively affect military training activities.

To minimize the land-use conflicts caused by encroachment, planners and community leaders should carefully consider the missions of local military installations when developing or amending their general plans, zoning codes, and capital improvement plans. With a full understanding of what land uses and densities are compatible with military activities, a community can use these tools to curb inappropriate — and promote appropriate — growth around installations. For example, a community could adjust its zoning classifications and capital investments to direct high density residential growth determined to be incompatible with military activities to areas away from installations and to promote lower density commercial or agricultural uses determined to have no negative effects in areas surrounding the installations.

To help local planners and community leaders better understand the consequences of their land-use decisions on military installations, many communities notify the military installation commander of any proposed land-use or zoning changes with respect to property that surrounds the installation. Upon notification, a representative of a local military installation can offer a recommendation regarding the proposed land use or zoning change and explain whether the proposed change will have a negative impact on the military installation's operations.

It is also important to communicate and coordinate with other nearby jurisdictions when making planning decisions affecting installations. Many military installations border a number of different town, city, and county jurisdictions. Incompatible development encroaching upon a military installation is less likely to occur if planning strategies include input from all relevant jurisdictions.

Overlay Districts: Clear Zones, Accident Potential Zones, and Noise Zones

As a supplement to standard zoning, many communities have created "overlay zones" to regulate incompatible development around military installations. Within each such zone certain additional requirements are imposed beyond what is required by the underlying zoning. Overlay zones can take many shapes and forms. Many localities have chosen to create military-specific overlay zones by restricting within defined boundaries certain development and activities that negatively affect military operations. Clear Zones, Accident Potential Zones, and Noise Zones are just a few of the examples of military-specific overlay zones.⁷ Local government definitions of these zones can be broad and often vary. In general, Clear Zones are the most dangerous areas with the highest accident potential. These zones can be located at the end of airfield runways or adjacent to bombing ranges. Accident Potential Zones are like a "footprint" indicating where aircraft or training accidents have historically occurred. Noise Zones cover areas that are subject to high noise levels.

Clear Zones, Accident Potential Zones, and Noise Zones can be included in a local zoning code to restrict incompatible uses of land around military installations

A good example of these zones can be found in Aurora, Colorado, where many city residents may be subject to high aviation noise levels and potential accidents from Buckley Air Force Base as well as local civilian airports. To curb incompatible development surrounding the base and airports, the city zoning code regulates new structures built within what the city has identified as airport districts.⁸ The

designated Clear Zones limit land uses to airport and aircraft operations. In Accident Potential Zones, land use is regulated based upon crash potential; thus, residential uses are restricted. Non-residential uses are permitted, but are limited by density and maximum number of employees. The code also establishes noise contour zones which prohibit residential development in certain areas and, in other areas, require soundproofing standards to be used when constructing residences.

Once a locality has identified where these zones will be located, the regulations could define what type of development and activities are incompatible with the local military installation. For example, given the potential for accidents and elevated noise levels in Clear and Accident Potential Zones,

residential development is often prohibited, but certain industrial, commercial, and agricultural land uses might be allowed.

Height Limits

In some cases, civilian development is incompatible with military activities because of building heights rather than density or land use. This is particularly true in the flight paths of military aircraft and low level military training routes. To avoid conflicts, a community could impose height restrictions on structures that might interfere with flight operations. For instance, a high-rise complex, cell phone tower, or wind turbine could be limited to a certain height in areas close to a military airport.⁹

Other Tools to Prevent Encroachment

There are a variety of other tools that can be used to prevent encroachment that complement the general plan, zoning code, and capital improvements plan. For instance, the local building code could include soundproofing standards to reduce the impact of noise generated by the activity of a military installation. In addition, real estate disclosure requirements could be implemented and enforced that discourage residential or incompatible development around a military base.

Sound Attenuation Standards

To minimize the impact of noise generated by military activities, such as from fixed wing aircraft, helicopters, or gunfire, building codes could require new construction and/or renovation in high noise areas to adhere to prescribed sound attenuation standards. These standards could require the use of soundproofing techniques, such as constructing thicker walls or using additional insulation, to reduce the sound intensity of exterior noise. In addition to noise mitigation, these requirements increase energy efficiency of the home or structure. **North Carolina's** Craven County, home to Cherry Point Marine Corps Air Station, adopted sound reduction standards for residential construction as part of its building code with the goal of reducing interior noise levels due to aircraft operations.¹⁰ For example, the building code requires that all exterior walls be airtight and all windows and doors meet minimum depth standards.

Real Estate Disclosure

Another way to discourage encroachment is to make certain that individuals purchasing, leasing, or renting properties close to a military base are aware of the associated risks and potential quality of life impacts. A requirement that an individual selling or leasing land and/or buildings on land close to a military base must disclose to purchasers or renters the potential for noise and accidents can be a valuable tool to prevent encroachment by serving as a deterrent to incompatible development. Disclosure language, mandated at either the state or local level, could specifically acknowledge that the livability and enjoyment of property by an owner may be limited if the land is subject to aircraft noise and potential accidents.

Government at all levels can play an important role in preventing encroachment. Recognizing the importance of cooperation and communication between all stakeholders, many states and the federal government have focused their attention on encouraging local governments and military installations to work closely together when drafting the general plan.

State Tools to Prevent Encroachment

Military installations have a significant effect on the local communities that host them, but the presence of the military affects the state as well. To protect this relationship, states are taking steps to prevent encroachment by implementing existing growth policies and passing legislation that discourages encroachment as well as directing state and local capital expenditures in a way that supports military installations

Using Existing State Growth and Development Policies to Discourage Encroachment

States can help to prevent encroachment by directing growth and development away from military installations. A handful of states have established model growth policies for consideration by local governments that offer a comprehensive and unified approach to local planning. **Colorado, Maryland, Minnesota, Oregon, Rhode Island, Utah, and Wisconsin** have established statewide policies that support a more comprehensive approach to land use, while also providing communities with the flexibility to respond to local needs. Most of these policies address sprawl and growth concerns, but do not yet specifically protect military installations. However, many states could draw on these broad policies to protect their military bases and even use them as the foundation for statewide legislation specifically aimed at preventing military encroachment.

There are a handful of states that have growth and development policies that could be used to address incompatible development around military installations. **Florida's** land development code requires cities' and counties' plans to be consistent with state development and land-use policies. In addition, the Environmental Land and Water Management Act requires state approval of major development proposals. This statute permits the governor and cabinet to designate up to five percent of land in the state as "Areas of Critical State Concern" (ACSC), which prevents unsuitable development that would endanger resources of regional or statewide significance.¹¹ The act promotes orderly and well-planned growth by regulating development in these areas. The state has the authority to review and revise local government comprehensive plans and land development regulations to ensure that ACSC are adequately protected. In the Florida statute, one of the areas that qualifies for ACSC protection is:

An area having a significant impact upon, or being significantly impacted by, an existing or proposed major public facility or other area of major public investment including, but not limited to, highways, ports, airports, energy facilities, and water management projects.¹²

Florida has not exercised this law to protect military installations, but a military base could fall under the category of “public facility or other area of major public investment,” which could qualify it for an ACSC designation based on state investments in reliable highway, railroad, and port infrastructure around military installations. Since military bases are facilities that serve as a major public investment, it would seem that they could be protected under the ACSC statute. Although Florida has not yet extended the reach of the statute to protect military installations, it has not ruled out this approach.

The Georgia Planning Act provides a similar framework that the state could consider using to prevent encroachment.¹³ The act requires each local government in the state to prepare a long-range general plan to be eligible for certain state funds.¹⁴ The state Department of Community Affairs may designate a natural or historic resource of importance as a “Regionally Important Resource” (RIR) which warrants special consideration by the local government. Much like the requirements in Florida for ACSC, local governments in Georgia must take these RIRs into account when preparing their general plans and discourage land uses which are incompatible with resource protection.¹⁵

Georgia could consider using this act as a means of preventing encroachment by designating the land around a military installation as an RIR; such designation would require a local government to address incompatible development in their general plan. If the local government chooses not to honor the state’s designation, it would become ineligible to receive community development block grants, water and sewer loan funds, recreation grants, regional economic development grants, and the like. To date, Georgia has not applied this statute to military bases, but it is an option that could be explored. Using the state’s planning act in this manner provides an incentive for local governments to protect the land around their military installations and still allows them the power to implement land-use strategies in a way that best fits their needs.

There are several states that have statutes similar to those of Florida and Georgia. States with ACSC statutes to protect ecological resources include **California, Florida, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, North Carolina, South Carolina, Vermont, Virginia, and Wyoming.** Some ACSC laws protect other important state areas with rail service, archeological and historic sites, scenic areas, and recreational land.¹⁶ To date, this type of statutory authority has not been exercised to protect military installations, but states are beginning to consider this as a viable means of protecting the land around their bases. States could explore the possibility of applying these statutes in their current form or fine-tuning the law’s language so that military installations would qualify for protection.

There are a number of other policy options available to states to discourage encroachment. For instance, rather than designate certain land as Areas of Critical State Concern or Regionally Important Resources, a state could identify certain zones as “Regions of Military Influence.” These officially recognized areas would highlight the importance of land around individual military installations by requiring that it receive special consideration by the locality when it prepares its general plans and

zoning regulations. Property under military training routes could also qualify as Regions of Military Influence. The land under these training routes is often subject to the same noise and accident potential as property within close range of a military installation. These air routes used by the military to train are of particular interest to the states because they are often spread geographically across the state, well beyond local jurisdictions. States are in the best position to preserve the integrity of these training routes because they have the opportunity to implement policies that protect larger areas of land on a statewide level.

Crafting State Legislation Specifically Aimed at Preventing Encroachment

While states could use their statewide growth and development policies to protect military installations, many have taken a more direct strategy to prevent encroachment by enacting state legislation specifically aimed at preventing incompatible development around the states' military installations.

Coordination Between Local Government and Military Installation

In response to rapid land development near military installations, a handful of states, including **Arizona, Arkansas, California, Colorado, Florida, Georgia, Illinois, Louisiana, New Jersey, North Carolina, Oklahoma, Texas, Virginia, and Washington** have passed specific legislation to protect their military installations from encroachment.¹⁷ Many of these state laws encourage local land-use authorities to communicate and coordinate with local military representatives when evaluating proposed changes to the use of land that surrounds military installations. This can be accomplished by providing the military installation with the opportunity to comment on whether a proposed change will have a negative impact on the installation's operations and ultimate mission accomplishment.

Definition of Compatible and Incompatible Land Uses

Arizona has emerged as a national leader in protecting its military installations from encroachment by enacting a number of laws that require local general plans to promote compatible land use around the state's military airports and auxiliary airfields.¹⁸ Responsibility for the enforcement of these laws lies with the attorney general. Local governments are required to submit any proposed changes to their general plan to the attorney general for review if the proposed changes affect property located in a High Noise or Accident Potential Zone.

In addition to the notification requirements with respect to military installation commanders found in other states, Arizona law also mandates that new development in all localities meet specific planning, zoning, noise, and real estate disclosure requirements. For example, Arizona law prohibits housing and new school construction in Accident Potential and High Noise Zones on land surrounding a military installation and identifies, through a comprehensive matrix, a variety of compatible and incompatible uses. The law specifically defines the geographic parameters of these zones and requires that maps illustrating the zones be posted on the State Department of Real Estate web site.¹⁹

Real Estate Disclosure Requirements

Disclosure of the potential for noise and accidents around military installations to potential purchasers, lessee, or renters of real estate can be required by local ordinance or state law. **Arizona** law requires proper and timely notice of noise-sensitive uses to prospective purchasers of land in several defined areas of the state. For example, the statute identifies specific land as Airport Influence Areas; this designation requires that owners of the property in the High Noise and Accident Potential Zones notify potential buyers, lessees, or renters that the property is located in the zones, is subject to the requirements of military airport compatibility, and may be subject to aircraft noise and overflights.²⁰ The state also mandates this type of disclosure on land under the military training routes that crisscross the skies of the state.²¹ The State Department of Real Estate is required to post a military training route map on its web site for public reference.

Other states are following Arizona's lead. In 2005, **Maryland** introduced legislation that would require realtors to include notice of military operations and testing in all contracts for home sales. The language included in these sales contracts would explain that the property about to be purchased may be subject to high noise levels as a result of flight operations, munitions testing, or military operations.²²

State Investment Policies that Direct Growth away from Military Installations

Another approach to prevent encroachment is to avoid spending state funds in a way that encourages incompatible development around military installations. This strategy may involve a governor's executive order that limits direct state funding and subsidies that would encourage incompatible development. State funded or subsidized projects such as public roads, schools, and water and sewer infrastructure often result in substantial growth in areas surrounding these improvements. Redirecting this type of funding would minimize the negative impact the resulting growth would have on a military installation.

South Dakota provides a good example of how capital expenditures can be used in a manner that discourages encroachment. Exit 66 of Interstate 90 in the town of Box Elder, South Dakota, used to be located close to Ellsworth Air Force Base. Over time, several gas stations, drive-through restaurants, hotels, and houses began to cluster at the end of the highway exit. As a result, this commercial and residential development grew closer to the military installation. To address these concerns, the state relocated the exit one mile to the east, outside the military installation's accident potential and high noise areas. Today, many of the businesses have relocated.

Federal Assistance to Prevent Encroachment

The federal government can play an important role in encroachment prevention by supporting and encouraging compatible development near military installations. It is DoD policy to promote the local operational mission of the military by working in partnership with federal, state, and local

governments. The goal of this policy is to achieve balance in local land-use matters that may negatively affect the military installation.²³ Despite its strong interest in preserving its military installations, the federal government does not pass and enforce laws that ban development near them. The most valuable contribution the federal government provides to prevent encroachment is to offer policy guidance and financial assistance to states and localities to promote joint compatible land-use planning conducted by the local community in cooperation with the local military installation.²⁴

DoD has a number of programs designed to inform local and state government leaders, planning commissioners, zoning board members, and residents of the impact of military operations. These programs can assist in the implementation of local land-use plans that support the military presence and local economic development while protecting the nearby civilian population from exposure to excessive noise and accident potential.

DoD Accident and Noise Potential Zone Maps

DoD has “Compatible Use Zones Programs” that provide technical information concerning military operations and their potential impact on surrounding property owners. There are several versions of these programs such as Air Installation Compatible Use Zones (AICUZ), Range Installation Compatible Use Zones (RAICUZ), and Operational Noise Management Programs (ONMP).²⁵ Under these programs, the military services develop technical information on noise generated by arriving and departing military aircraft and ground-based range exercises. These programs are managed by each service and the information is provided to the affected local jurisdiction upon completion of each study. The information is provided in map form and indicates noise and accident potential in a geographic and aerial context both on and off the military installation. These programs help state and local government anticipate, identify, and promote compatible land use near military installations to protect the public health, safety, and welfare. The goal of these programs is to have local jurisdictions incorporate this information into their general plans and provide the state the opportunity to consider it when they identify their own encroachment prevention efforts.

The Federal Aviation Administration (FAA) also provides useful information for communities surrounding a military installation. The FAA develops maps that illustrate aircraft flight patterns for commercial and military air traffic. These publicly available maps include restricted air zones and military training routes which state and local governments can evaluate when making planning decisions for land beneath the mapped air traffic.

DoD Financial and Planning Assistance

DoD’s Office of Economic Adjustment (OEA) offers planning assistance to states and localities that want to address encroachment of military installations. OEA encourages communities to adopt land-use controls that ensure compatible development in areas adversely affected by military installations. As an incentive for communities to participate in a joint planning process, OEA offers technical and financial assistance through community planning assistance grants to state and local governments to conduct Joint Land Use Studies. OEA can help communities interpret accident and noise potential

maps and advise them on how these issues could be addressed in the general plan. Recommendations made in these studies help local jurisdictions implement a general plan and land-use controls to make development around a military installation compatible with both the military's mission and a community's development needs.

Conservation Partnerships

Another federal approach available to prevent encroachment is to facilitate the acquisition of land around a military installation by establishing a partnership between the military installation and state and local government or a conservation group. The National Defense Authorization Act for Fiscal Year 2003 allows the Secretary of Defense to enter into agreements with a state, local government, or land preservation group to acquire or accept, on a cost-shared basis, property around a military installation to "address the use or development of real property that would be incompatible with the mission of the installation."²⁶

These partnerships are successful because they often result in win-win solutions. For instance, many conservation groups aim to protect the natural habitat of endangered species. On the other hand, military installations often want the land surrounding them to remain undeveloped for security and safety purposes. If a military installation and conservation group partner to acquire land around a military base, both groups benefit because the land is protected for conservation purposes and the military installation is protected from incompatible development.²⁷

Local, State, and Federal Government All Play a Role in Compatible Development

Military encroachment affects many different stakeholders such as the military installation, the local community, the state, and the federal government. DoD's *Practical Guide to Compatible Civilian Development* offers a number of strategies and tools available to these stakeholders. The tools described in the *Guide* are not just a series of individual approaches to incompatible development. A number of these strategies can be implemented collectively and cooperatively by the local, state, and federal government and other interested parties such as private land owners and conservation groups. The aim of encroachment prevention is not to stop growth, but to ensure that land uses in specified areas are compatible with the scope of military activities at a particular base. Encouraging compatible development in areas surrounding a military installation allows for growth, protects the military's mission, and increases the base's viability and long-term presence.

There is no universal approach to prevent encroachment. Local planning departments and elected leaders can prevent incompatible development around military installations by carefully considering the impact that their general plans can have on a military installation. Some states have growth and development policies which can be used to discourage encroachment. States can also enact legislation such as a statute that requires compatible land use around the state's military installations. Another state legislative strategy is to pass laws that foster cooperation between various stakeholders by encouraging local governments and military installations to work together on proposed land-use

changes that affect the bases. The federal government can also play a significant role by providing guidance and assistance to states and communities through DoD's Joint Land Use Study Program and conservation partnership initiatives. Through a combination of these approaches at all levels of government, a comprehensive and long-term strategy to compatible land use can be established that balances sustainable community development with the mission of the local military installation.

¹ The Department of Defense (DoD) defines the term "military installation" as a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of DoD, including any leased facility. Public Law 101-510.

² For a further analysis of the impact that incompatible development can have on military bases, go to the National Governors Association's (NGA) report entitled "Military Installations Pressured by Sprawl" at <http://www.nga.org/cda/files/100802SPRAWL.pdf>

³ The Department of Defense *Practical Guide to Compatible Civilian Development* can be accessed online at <http://www.oea.gov> or be obtained in hard copy by contacting the Office of Economic Adjustment at 703-604-6020.

⁴ For example, in most cases, state law determines the scope of local land-use decision making authority.

⁵ The general plan may also be known as the comprehensive or master plan. See *A Planners Dictionary*, American Planning Association, Pg. 201.

⁶ *Id.* at 119.

⁷ This issue brief uses the terms Clear Zones, Accident Potential Zones, and Noise Zones as broad, generic definitions that can be included in a local government's general plan. Each branch of the military has a separate definition for each of these zones. For example, the term Clear Zone is used specifically by the Air Force for land at the end of an airfield runway and is not used by the Army for land adjacent to bombing ranges. This issue brief offers the terms Clear Zones, Accident Potential Zones, and Noise Zones as basic encroachment prevention tools that can be used to protect land around a military base regardless of the local installation's military branch membership.

⁸ Aurora, CO adopted various accident potential and noise zones based upon the recommendation of an Air Installation Compatible Use Zones (AICUZ) Study.

⁹ Height limits on these buildings are commonly included in zoning ordinances. Height limits on other structures may be found in zoning ordinances or separate ordinances depending upon the nature of the structure.

¹⁰ These standards were adopted upon the recommendation of the local Joint Land Use Study. See Appendix 10 for the relevant section of the building code.

¹¹ Fl. Stat. §380.05.

¹² *Id.*, at §380.05 (2)(c).

¹³ O.C.G.A., 50-8-1 et seq.

¹⁴ For a list of state assistance programs available to qualified local governments, go to <http://www.nga.org/cda/files/0504StateProgramsGA.pdf>

¹⁵ For more information of Regionally Important Resources, go to <http://www.nga.org/cda/files/0504RegionalResourceGA.pdf>

¹⁶ For a more detailed discussion of Areas of Critical State Concern statutes, go to NGA's report entitled, "State Strategies to Address Encroachment at Military Installations" at <http://www.nga.org/cda/files/032403MILITARY.pdf>

¹⁷ For a more detailed analysis of state encroachment legislation, go to NGA's report entitled, "State Strategies to Address Encroachment at Military Installations" at <http://www.nga.org/cda/files/032403MILITARY.pdf>

¹⁸ ARS §28-8481.

¹⁹ ARS §28-8461 (1), (2), and (9).

²⁰ ARS §28-8461(20) defines geographically the Airport Influence Areas and ARS §28-8484 addresses the disclosure requirements.

²¹ Arizona HB 2662 (2004) and ARS §32-2114.

²² Maryland SB 17 (2005).

²³ Department of Defense Instruction DoDI, Number 3030.3

<http://www.dtic.mil/whs/directives/corres/html2/i30303x.htm>

²⁴ The activities of many federal agencies can affect development around military installations, but DoD and FAA provide the most specific and relevant tools to prevent encroachment.

²⁵ These programs are military branch specific. AICUZ applies to the Air Force and RAICUZ and ONMP apply to the Army.

²⁶ National Defense Authorization Act (NDAA) for Fiscal Year 2003, Section 2684a.

²⁷ See the National Governors Association Issue Brief entitled “State Strategies to Address Encroachment at Military Installations” at <http://www.nga.org/cda/files/032403MILITARY.pdf> for more information on conservation partnerships.

