



Issue Brief

Environment, Energy, and Natural Resources

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State Strategies to Address Encroachment at Military Installations

Across the nation, military installations are threatened by civilian encroachment. Incompatible residential and commercial development patterns surrounding military bases can jeopardize an installation's mission. When development increases near and around military bases, land-use conflicts arise between mission activities and local communities. Encroachment can threaten public safety and livability because people located near bases are potentially exposed to artillery fire, aircraft noise, dust, and even accidents. Ultimately, bases could close if encroachment restricts training and operational missions.

Military installations are often critical to state economies generating thousands of jobs and billions of dollars in economic activity and tax revenue. To protect the missions of military installations and the health of the economies that rely on them, states and localities are taking steps to address encroachment. They include:

- drafting state legislation that requires compatible land use;
- enacting local zoning, planning, and noise requirements;
- using existing statutory authority to designate the land surrounding military installations as areas of critical state concern;
- acquiring property surrounding military installations; and
- creating state military advisory bodies.

There is no universal approach to prevent encroachment. The aim 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. To achieve this, states have approached land-use issues for military bases in ways that best fit state and local views about land use, economic development, and private property rights.

Background

Civilian encroachment around military installations is beginning to restrict and even eliminate testing and training activities in many locations. Eighty percent of communities surrounding U.S. military installations are growing at a rate higher than the national average.¹ When urban growth and development increase near and around military bases, so do land-use conflicts between mission activities and local communities. For instance, encroaching development has forced many military airports to use only a narrow arrival and departure flight corridor to reduce potential for accidents in the residential and commercial areas that surround them. Many military aircraft carry heavy munitions and cannot take off or land in narrow flight paths if there is a strong headwind. In addition, night training exercises become impractical when the city lights of encroaching development compromise the effectiveness of night vision equipment. In many cases, training can be postponed, restricted, or eliminated.

Online version of this issue brief can be accessed at:
<http://www.nga.org/cda/files/032403MILITARY.PDF>

Economic Importance of Military Installations

By threatening base operations, encroachment also jeopardizes jobs and tax revenue. The military plays a significant economic role at the state and local level. Military installations are often critical to state economies, accounting for thousands of jobs and generating billions of dollars in economic activity and tax revenue. They can be even more important to local economies.

A military installation provides a level of economic stability and security for the local community. The average salary for military personnel (and civilians working for the military) is higher than the statewide average in many places. Economists assert that jobs generated and supported by a military installation play an important role in the local economy because federal defense spending is not affected by the financial ups and downs of the private sector. As a result, the military creates a stable and consistent source of employment and tax revenue for the local and state economy.

Moreover, military installations employ personnel who tend to spend their money locally, benefiting area businesses. Military bases are linked to a large cross-section of the local community including active duty officers, reserve personnel, military family members, and civilians working on base. In addition, retired military officers account for a large segment of the population located near military bases, often choosing to live close to military installations so they can take advantage of the base's recreational and retail facilities.

The substantial contracting needs of a military base also can be important to the local economy. The military procures a large amount of contract work from the private sector for maintenance, supplies, construction, manufacturing, equipment, materials, transportation, communications, and health and food services. Sometimes, defense contractors for research and development or manufacturing intentionally locate near military bases because their work involves testing or other activities associated with a particular installation.

States Responses to Encroachment

Encroachment is a growing problem in many states. Incompatible development around military installations and on land situated under air routes used by the military compromises the missions of installations across the nation. States can protect their military bases by:

- drafting state legislation that requires compatible land use;
- enacting local zoning, planning, and noise requirements;
- using existing statutory authority to designate the land surrounding military installations as areas of critical state concern;
- acquiring property surrounding military installations; and
- creating state military advisory bodies.

State Legislation that Requires Compatible Land Use

In response to rapid land development near military installations, a handful of states, including **Arizona, California, Oklahoma, Georgia, Washington, Virginia, Florida, Texas,** and **Illinois** have passed legislation to protect their military installations from encroachment.

ARIZONA

Arizona has emerged as a national leader in protecting its bases from encroachment. The state has enacted a series of laws that require compatible land use around the its five military airports including Luke Air Force Base (AFB) which is the largest fighter-pilot training base in the world. These laws require new development to adhere to planning, zoning, and noise requirements.

In 1995 the state enacted a [law](#) to address concerns about residential encroachment around Arizona's military airports by requiring all surrounding cities, towns, and counties to adopt land-use plans and enforce zoning regulations that ensure compatible development.² Another law, enacted in 2000, placed enforcement of this statute with the attorney general and required cities, towns, and counties with territory within the vicinity of a military airport to submit biyearly reports demonstrating compliance.³ Civil penalties were established for noncompliance. However, the Home Builders Association of Central Arizona claimed the statute lacked clarity as to what was considered compatible under local land-use plans.

In 2001, Arizona enacted the [Preservation of Military Airports Act](#), which clearly prohibits residential housing on land surrounding a military airport, but allows wastewater treatment facilities and agricultural operations.⁴ The act also mandates that a city, town, or county containing territory in the vicinity of a military airport provide those airports with the opportunity to comment on land use surrounding their installation. The statute further requires the adoption of land-use plans and zoning regulations that are compatible with the high noise and accident potential generated by military airport operations. For example, to address noise concerns, the act mandates that sound attenuation standards be incorporated into all local building codes and requires that developers provide proper and timely notice of noise-sensitive uses to prospective buyers of land in areas surrounding military airports. Such disclosure requirements serve as a valuable tool to prevent encroachment. By informing buyers that the land they may purchase is in a high noise area and at risk for accidents, disclosure requirements may serve as a deterrent to development.

Arizona passed another military airport preservation [law](#) that further elaborates on land-use compatibility and prohibits new school construction in accident-potential and high noise zones.⁵ Additional legislation appropriated funds to support the development of comprehensive land-use plans.

In 2004, Governor Janet Napolitano continued the state's efforts to protect Arizona's military airports by signing a pair of [laws](#) that extends protection to auxiliary airfields.⁶ Auxiliary and outlying landing fields are often located in remote areas some distance from other military installations, but they can serve a valuable supportive role. Even small, ancillary military stations located in remote areas need to be protected from incompatible development because they often provide vital satellite support to larger installations. Recognizing the importance of these sites, Governor Napolitano enacted a law that specifically addresses land-use planning and development around the auxiliary airfields in the state. A [related law](#) prohibits the building of an underground gas storage facility near Luke AFB due to safety concerns about the potential for a military plane crash near the storage of flammable gas.⁷

Arizona also recently enacted a [law](#) that protects the over 20 military training routes crisscrossing the skies of the state. Military pilots use these routes, totaling 5,000 miles in length, to practice low-altitude maneuvers at speeds that generally exceed 400 miles per hour. These designated military training routes are vital for training air crews at low altitudes and high speeds under simulated war conditions. Training consists of military crews reacting to simulated threats, such as anti-aircraft artillery, surface to air missiles, and air threats. Military training exercises usually include high gravity turns, use of an afterburner, and vertical maneuvering with noise estimates for a single event ranging from 110 to 140 decibels – louder than the average rock concert.

The new law defines a military training route as a low-level military route that allows Department of Defense aircraft to conduct flights as low as 100 feet above the ground at speeds in excess of 250 knots. The statute requires that the state land department prepare a military training route map. Each county with land beneath a military training route must record and disclose these routes in the office of the county recorder. In addition, any public report that applies to property under a military training route

must disclose that the land is under a training path. The public report must also note that the State Land Department and the State Real Estate Department maintain military training route maps that are available to the public.

CALIFORNIA

To curb urban encroachment of its military installations, California created the [California Conversion and Retention Council](#), which oversees efforts to minimize base closures. The Council prepared a [study](#) on long-term protection of land adjacent to military installations.⁸

In addition, a 2002 [law](#) requires cities and counties to consider the impact of new growth on military readiness when preparing zoning ordinances or designating land uses that are covered by the general plan for land adjacent to military facilities or underlying designated military aviation routes and airspace.⁹ An advisory planning handbook is planned for local officials, planners, and builders to explain how to reduce land-use conflicts between civilian development and military readiness activities. The act also encourages cooperation between military bases and local planning entities when developing strategies to address growth.

The limitations of this statute lie in its funding provisions and lack of enforceability. Only towns that receive federal funding from the Department of Defense must consider the impact of development on military readiness. If funding cannot be secured, many of these localities may not have the financial capacity to conduct impact studies and draft growth regulations.

OKLAHOMA

In Oklahoma, civilians live only one mile from the weapons range target zone at Fort Sill. As a result, critical firing ranges have been abandoned.¹⁰ To address this concern, the state enacted a law that restricts the use of property within five miles of a military installation that may be hazardous to aircraft operations.¹¹ Under the statute, prohibited or restricted land uses include the release into the air of any substance that would impair visibility, the production of light emissions that would interfere with pilot vision, activities that attract birds or waterfowl, and construction of any structure located within 10 feet of aircraft approach or departure. Minimal residential development is allowed but limited to single-family use on tracts of one acre or more. Residential construction is regulated and inspected under existing municipal building permit and inspection ordinances and procedures.

In 2004, Governor Brad Henry updated the [law](#) to require consistency with the most current recommendations made in Air Force and Army studies.¹² Recommendations from such studies often assist local jurisdictions in developing and implementing land-use controls to make development around a military installation compatible with both the military's mission and the development needs of the community. The shortcoming of this law is that it does not require a municipality to enact an ordinance enforcing these provisions.

OTHER STATES

Many states have enacted laws that aim to address potential land-use conflicts between communities and nearby installations *before* the zoning regulations or land-use restrictions are implemented. This can be accomplished by notifying the military installation of proposed changes to the use of land that surround its base and to provide the installation the opportunity to comment on the proposed changes. A key tool used to prevent encroachment is to have the local land-use authorities and military installations communicate and coordinate when evaluating proposed changes to the use of land that surrounds military bases.

Georgia Governor Sonny Perdue recently signed a [law](#) to require local communities to coordinate with their adjacent installations in considering the impact of zoning decisions on military operations.¹³ The

law requires that a local planning department solicit a written recommendation from a military base's commanding officer when there is a proposed change in zoning of property that is within 3,000 feet of any military base or within its 3,000 foot clear zones and accident potential zones. This provides an opportunity for the local military base to offer a recommendation regarding the proposed land use or zoning change and allows them to explain whether or not the proposed change will have a negative impact on the base's operations. If the commander fails to respond, it is presumed that the proposed development regulation will not have an adverse effect on the operation of the military base.

Washington recently enacted a similar [law](#) which states that "a comprehensive plan, amendment to a plan, a development regulation or amendment to a development regulation should not allow development in the vicinity of a military installation that is incompatible with the installation's ability to carry out its mission requirements."¹⁴ Under the law signed by Governor Gary Locke in 2004, a military installation must be notified of a local government's intent to amend its comprehensive plan or development regulations and the base commander has 60 days to provide a written comment. The statute applies to any city or county that has a military installation "within or adjacent to its border."¹⁵

Governor Mark Warner also signed a similar [law](#).¹⁶ **Virginia** requires that the commander of any military installation be notified at least 10 days in advance of a public hearing on proposed land-use changes. The law provides the commander the opportunity to submit comments or recommendations to proposed changes of local comprehensive plans, zoning maps, or special exceptions involving any parcel of land located within 3,000 feet of a boundary of a military installation.

Florida Governor Jeb Bush recently signed a [law](#) that also provides that a base commander be notified if a "county in which a military installation is either wholly or partially located" proposes land development changes that would "affect the intensity, density, or use of the land adjacent to or in close proximity to a military installation."¹⁷ The law suggests that a base commander's comments address whether the proposed changes will be incompatible with:

- the safety and noise standards established in the Air Installation Compatible Use Zones adopted by a military airfield,
- the Army's Installation Environmental Noise Management Program, and
- the findings of the Joint Land Use Study for the area.

Florida takes this law one step further than other states, facilitating the exchange of information by placing a representative of a military installation (acting on behalf of all the military installations in that jurisdiction) on the county's or affected local government's land planning or zoning board as an exofficio, nonvoting member.

In 2003, **Texas** voters ratified a constitutional amendment approved by the legislature that authorizes the state to establish a revolving loan fund and issue up to \$250 million in general obligation bonds to help defense communities enhance the value of their military installations and promote compatible land use. Under the [law](#), a community near a defense installation may request financial assistance to prepare a comprehensive defense installation and community strategic impact plan which sets forth the communities' long-range goals and development proposals.¹⁸ One objective of the plan is to control the negative effects of future growth on military installations and their training exercises and activities.

This strategic impact plan must include a list of detailed information on land use around the military installation. The plan must identify the proposed distribution, location, and extent of land uses such as housing, business, industry, agriculture, recreation, public building and grounds, and other categories of public and private land use that may impact the military installation. In addition, the plan must identify existing and proposed regulations of land uses – including zoning, annexation, and planning regulations – that may impact the military base. Other elements that are required in the plan include:

- Transportation: location and extent of existing and proposed freeways, streets, roads, and other modes of transportation
- Population Growth: past and anticipated population trends
- Conservation: methods for conservation, development, and use of natural resources
- Open Space: inventory of current open space, analysis of the military base’s forecasted needs for open-space areas to conduct its military training activities, and suggested strategies for a transition from currently developed land to open-space if needed
- Restricted Airspace: creation of buffer zones, if needed, between the military installation and the local community
- Military Training Routes: identification of existing routes and proposed plans for additional routes

Once a defense community has prepared a strategic impact plan, the law “encourages” it to develop, in coordination with the military installation, a planning manual based on the proposals set forth in the plan. The manual should adopt guidelines for community planning and development and the defense community should consult with the military base from time to time to assure that the manual most effectively addresses the current concerns of the installation.

Much like the laws in Arizona, Georgia, Washington, and Virginia, the Texas statute addresses the need to notify a military base if the community proposes an ordinance, rule, or plan that may impact the installation or the training activities related to the base. The community should analyze the comments before a final planning decision is made.

Illinois has taken a different approach to protect their military installations. Enacted in 2003, the [County Air Corridor Protection Act](#) grants any county with a United States Air Force installation with runways of at least 7,500 feet in length the explicit authority to protect the safety of the community by controlling the use of land around that military airport.¹⁹ The county’s authority is limited to the area designated in the Air Installation Compatible Use Zone Study adopted by the Air Force for that installation. The statute notes that if a land use exists or a municipality approves a land use that is incompatible with the Air Force study, and any portion of the affected land is within an area designated in the Air Force study as having a high potential for aircraft accidents or in an area with a high noise level, the county may use eminent domain to acquire either the fee simple title or easement rights to that portion of the affected land.

Local Zoning, Planning, and Noise Requirements

Municipal and county governments often are the first to act when encroachment of their military bases becomes a problem. Localities have responded to encroachment concerns with a variety of approaches, such as establishing strategic land-use plans, with accompanying implementation and enforcement mechanisms, and amending local zoning codes.

Some states promote compatible land use around their military installations by encouraging local governments to anticipate future urban growth patterns. The elements required to be addressed in the strategic impact plans under the recently passed Texas law (described earlier) provide an excellent foundation for these type of land-use plans. These plans should include strategies to prevent encroachment near military installations such as establishing and requiring disclosure of high noise and accident potential zones near military installations, and developing zoning codes that support compatible

<p>Strategic Land-Use Plans Should Consider:</p> <ul style="list-style-type: none"> ▪ Accident Potential Zones ▪ Noise Zones ▪ Military Training Air Routes ▪ Transportation Needs ▪ Open Space/Conservation ▪ Population Growth

development of land located within these zones. If enforced, local zoning ordinances and land-use codes can ensure the compatibility of land surrounding a military installation.

Certain areas of Aurora, **Colorado**, are subject to high aviation noise levels and potential crash hazards from Buckley Air Force Base. To curb incompatible development surrounding the base, the city drafted a zoning code that regulates new structures built within airport districts. The most dangerous areas are designated as “clear zones” where the accident potential is so great that all land uses are prohibited. In designated “accident-potential zones,” land use is regulated to reduce hazards in areas characterized by high noise levels and significant potential of crashes, restricting nearly all residential and commercial land use.

Several **Florida** counties are addressing encroachment of military installations in their local land-use codes. Escambia County, home to Pensacola Naval Air Station, has a land development code that creates various levels of accident potential and noise zones. The code sets forth specific compatible land uses for each zone. Santa Rosa County has a similar code that establishes standards for land use around Eglin AFB.

In **Virginia**, the city of Virginia Beach, home to Oceana Naval Air Station, has adopted a zoning code that limits land uses that are incompatible with airport noise and aircraft accident potential zones.²⁰ Another approach Virginia has taken to address encroachment concerns is to provide disclosure of aircraft noise and accident potential to both prospective buyers and sellers of land near a military installation under the terms of the Virginia Real Estate Board Regulations.²¹ The disclosure language specifically acknowledges that the livability and enjoyment of property by an owner may be limited if the land is subject to aircraft noise and potential accidents.

By serving as a deterrent to incompatible development, disclosure requirements that inform buyers of the potential for noise and accidents can be a valuable tool to prevent encroachment

In **Maryland**, local legislation in St. Mary's County first imposed development restrictions to protect air space around Patuxent River Naval Air Station in 1974. The provisions of the Air Installation Compatible Use Zone (AICUZ) study established two sub-zones, based on accident and noise potential where factors such as development density and height are regulated.

The St. Mary's County Board of Commissioners is in the process of purchasing a deteriorated, 1940s-era residential development in the AICUZ to prevent new housing development. The owner holds grandfathered rights to develop because the property pre-dated the AICUZ. The county has packaged a combination of local, state, and federal funds totaling \$13.7 million to acquire the 84-acre property, relocate remaining low-income residents, and demolish existing structures. The county has also relocated a public library and is moving a school to locations outside of the AICUZ.

Some states already have airport zoning code language in place. For example, **North Carolina** has a [model airport zoning act](#) that protects commercial airports.²² Although most airport zoning codes are designed to protect commercial airports, local governments can use them as a model when drafting language to protect military airports.

Zoning can be a quick fix to prevent incompatible land uses, but it is not always a permanent solution. Zoning restrictions are often put into place only to be removed over time due to pressure from landowners and developers. Zoning decisions are often made by elected officials who fear they might not be re-elected if they upset various constituencies.

Fairfield, **California**, voters responded to this pressure by approving a [ballot initiative](#) that bars the city council from changing current restrictions on the use of land surrounding Travis AFB.²³ Any changes to the current land-use restrictions within the next 16 years will require voter approval. The city's general plan protects Travis AFB by establishing an “urban limit line” and other policies that direct encroaching residential development away from areas where aircraft noise is greater than 60 decibels. The successful ballot initiative gives this land-use plan some teeth by codifying the current urban limit line which the city hopes will protect and support the existing and future missions and operations of the installation.

Federal Planning Assistance

The Department of Defense offers planning assistance to states and localities that want to address encroachment of military installations. The Defense Department programs provide information to local governments about noise and accident potential generated by base operations and the Department encourages communities to adopt land-use controls that ensure compatible development in areas adversely affected by military installations.¹ As an incentive for communities to participate in a joint planning process, the Defense Department’s Office of Economic Adjustment offers technical and financial assistance through community planning assistance grants to state and local governments to conduct [Joint Land Use Studies](#). Recommendations made in these studies help local jurisdictions develop and implement land-use controls to make development around a military installation compatible with both the military’s mission and a community’s development needs.

Designation of Military Installations as Areas of Critical State Concern

Several states have existing statutory authority to protect areas of statewide importance. Development within these “areas of critical state concern” (ACSC)²⁴ is monitored by local governments and/or state agencies to ensure that the use is compatible with the land’s unique traits. In most cases, local governments draft plans that are consistent with the state plan and then apply to a state land development agency for permission to develop within these areas. The majority of the lands protected under ACSC statutes are environmentally sensitive regions such as wetlands, aquatic preserves, and wilderness areas. 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.²⁵ 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.

Florida’s land development code requires cities and counties 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 state land as ACSC, which prevents unsuitable development that would endanger resources of regional or statewide significance.²⁶ 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 critical state land is 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.²⁷

Florida has not exercised this law to protect military bases, but a military installation could fall under the category of “public facility or other area of major public investment,” which would qualify it for an

ACSC designation based on state investments in reliable highway, railroad, and port infrastructure around military installations. Since military installations are facilities that serve as a major public investment, they could be protected under the ACSC statute. Although Florida has not ruled out this approach, it is still exploring other options.

The **Colorado** Land Use Act encourages local governments to designate “areas and activities of state interest” that include “areas around key facilities in which development may have a material effect upon the key facility or the surrounding community.”²⁸ The act defines a key facility as an airport or major public utility facility, such as central office buildings of telephone facilities, power plants, natural gas storage areas, etc.

The following standards apply to areas around key facilities:²⁹

- (a) If the operation of a key facility may cause danger to public health and safety or to property, as determined by the local government, the area around the key facility shall be designated and administered so as to minimize the danger; and
- (b) Areas around key facilities shall be developed in a manner that will discourage traffic congestion, [and] incompatible uses

In addition, areas around airports shall be administered to:

- (I) Encourage land-use patterns of housing and other local government needs that will separate uncontrollable noise sources from residential and other noise-sensitive areas; and
- (II) Avoid danger to public safety and health or to property due to aircraft crashes.³⁰

The provisions in the Colorado Land Use Act provide a good foundation to protect a state’s military installations. The statute’s incorporation of the phrase “facilities shall be developed in a manner that will discourage traffic congestion [and] incompatible uses” provides the basis of authority to protect military installations. The act also specifically discourages the development of housing that would be subject to high noise levels or the potential of danger due to aircraft accidents. This language is very similar to the Arizona and Oklahoma statutes referenced earlier which explicitly protect military airports.

Despite the implicit authority established in this statute to protect installations, no military base has been designated as an areas of state interest by the Colorado Land Use Commission or a Colorado local government. The act could be amended to explicitly include a military installation in the definition of a key facility. Another approach is to evaluate whether a military installation qualifies as a key facility on a case-by-case basis by balancing the dangers and advantages that would result from incompatible development. Under this test, military installations could qualify for protection.

Maryland also has statutory language protecting valuable land:

An Area of Critical State Concern is a specific geographic area of the State which, based on studies of physical, social, economic, and governmental conditions and trends, is demonstrated to be so unusual or significant to the State that the Secretary designates it for special management attention to assure the preservation, conservation, or utilization of its special values.³¹

Protected areas fall into four classes: tidal wetlands, non-tidal wetlands, protection and enhancement of rail service, and special areas which could include military installations. It could be argued that military installations are special areas because land can receive ACSC protected status based on economic studies that indicate it is significant to the state.

Wyoming's [Land Use Planning Act](#) empowers the state land-use commission to define and establish guidelines to protect areas that are of “critical or more-than-local concern.” The commission also assists local governments with the planning and regulation of development in these areas. According to the act:

“Areas of critical or more-than-local concern” mean those areas defined and designated by the commission where uncontrolled growth or incompatible large scale development could result in damage to the environment, life or property, where the short- or long-term interest is of more than local significance.³²

Eligible area lands are historic in value, provide renewable resources, or are subject to natural hazards; however, the act also protects “additional areas that the commission determines to be of more than local concern.” Thus, the statute provides the state land-use commission with broad latitude when selecting areas it believes need protection.

Hawaii also allows for a broad interpretation of protected state lands. Under [Hawaiian law](#),³³ the office of planning is responsible for identifying and analyzing significant issues, problems, and opportunities confronting the state and formulating strategies and alternative courses of action in response to identified problems and opportunities. The first task in their strategic planning directive is to provide in-depth policy research, analysis, and recommendations on existing or potential areas of critical state concern. Although Hawaii currently has not established criteria for the designation of land for ACSC protection, the state planning office could assess the importance of its military installations and identify the threat of encroaching development.

Model Areas of Critical State Concern Statutes

The American Law Institute’s Model Land Development Code and the American Planning Association’s Growing Smart Legislative Guidebook offer model ACSC language that could be used as a statutory foundation for states that want to incorporate these provisions into their own codes. Although no state has yet declared military installations as ACSC, these land-use policies could provide meaningful tools to address encroachment. There are states, such as Maryland and Hawaii, where the requirements to be an ACSC are fairly broad and do not preclude the current protection of military bases. Other states could incorporate model language or fine-tune the existing ACSC language to include specific protection for military installations.

Acquisition of Property that Surrounds Military Installations

A handful of states and localities have ensured compatible land use by acquiring the land surrounding military installations. State governments can accomplish this by purchasing the land, partnering with conservation groups, and exchanging or trading land.

Purchase the Land

Oklahoma, Florida, Arizona, Nevada, Minnesota, California, Colorado, Washington, and North Carolina are just a few of the states that have purchased—or are in the process of purchasing—land around a number of their bases. After identifying land that is needed to effectively prevent encroachment, funding must be secured. Private funding as well as local, county, state, and federal dollars can be used.

Local Funding

Oklahoma voters approved a \$50-million bond measure to purchase private property around Tinker AFB to expand the runways’ safe zone. The cost to the average homeowner is less than \$20 a year, with an increase in property taxes of \$2 a month for 10 years on a \$100,000-home.³⁵ In **Arizona**, Pima County

voters also approved a bond initiative.³⁶ One of the goals of the [initiative](#) is to prevent urban encroachment at Davis-Monthan AFB by allotting \$10 million to buy land near the installation.

Florida allows the use of local taxes to finance the purchase of land. The state has authorized localities to institute a [Tourist Impact Tax](#)³⁷ that must be approved by referendum and can be imposed on transient rental transactions at the rate of one percent. Counties may use these tax revenues to purchase ACSC. If Florida were to designate land surrounding military installations as ACSC, the Tourist Impact Tax could help finance the purchase of the land.

State Funding

Some states allocate funding to buy land surrounding an installation that is dealing with encroachment. For example, **Florida's** Defense Infrastructure Grant Program, established in 1999 by Governor Bush, helps to improve military base infrastructure and provides dual-use benefits to localities throughout the state. The program provides a source of revenue for local governments to finance the purchase of ACSC designated land. The program has received steady support from the legislature to ensure that the state's military facilities are as strong as possible. In addition, Florida is acquiring land around military bases across the state through [Florida Forever](#), a 10-year, \$3 billion land conservation program established by Governor Bush and the Florida Legislature. The state has invested \$683 million to acquire nearly 500,000 acres of land buffering military installations across the state to protect natural resources and benefit military operations.

In **Arizona**, a coalition of public and private groups supporting communities impacted by the state's major military installations worked to pass legislation that would provide funding to purchase land around the state's bases. As a result, in 2004 Governor Napolitano enacted a law that creates a state revenue source with a \$5 million appropriation from the general fund for Fiscal Years 2005 and 2006 and every year thereafter for base preservation.³⁸ The law also allocates \$4.825 million to the state's Military Installation Fund to purchase land or developments rights around military bases.

Options for the acquisition of land around a military base:

- Purchase the land
- Purchase the development rights to the land
- Exchange or trade public land for desired property

Federal Funding

Federal funding also can help defray the cost of acquiring land. For example, the Air Force plans to spend \$21.3 million to buy permanent, restrictive easements on more than 1,768 acres of land to prevent residential development from encroaching on **Arizona's** Luke AFB and to safeguard the training that occurs on the Barry M. Goldwater Range.³⁹

The purchase of easements is a common tool for preventing certain kinds of development on parcels of land. An easement is a legal agreement that can be used to permanently restrict the development or use of land. The Air Force's land acquisition plan for Luke AFB will compensate nearly 50 landowners for easements that allow their continued use of their property for agriculture as long as it is compatible with the base's mission. The landowners will continue to own the land, and when it is sold or transferred, the new property owner will be subject to the same restrictions. The Air Force will spend an additional \$6 million to purchase 273 acres around the Luke AFB munitions storage area to secure transport of live ordnance.

The City of Goodyear in **Arizona** recently enacted an Agricultural Preservation Ordinance which will allow the city to work with landowners to purchase conservation easements to preserve farmland south of

Luke AFB. The city has already spent \$3.5 million to purchase 44 acres of land and hopes to receive federal funding to further support these efforts.

Nevada has also received approximately \$40 million in federal funds that they have used to acquire 413 acres around Nellis AFB.⁴⁰ States can also receive federal assistance under the Farmland Protection Act to pay farmers for development rights to ensure that uses remain agricultural and prevent encroachment of nearby military installations.

How can a state or locality finance the purchase of land around a military base?

- Local bond package
- Dedicated state taxes
- State grant program
- Federal funding
- Partner with conservation group and share the expenses

Military Installations Can Partner with Conservation Groups, States, and Local Governments

Another option available to facilitate the acquisition of land around a base is to establish a partnership between a military installation and state/local government or 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.”⁴¹

Florida was the first state in the nation to take advantage of this law. In 2003, a cooperative agreement between the State of Florida and the Army National Guard was signed to purchase property surrounding Camp Blanding Training Center. The total cost for the 8,737 acres is approximately \$13 million – the state will contribute \$12.5 million and the remaining \$500,000 will be federally funded.

Partnerships between an installation and a conservation group can also achieve great success because they often result in a win-win situation. For instance, many conservation groups aim to protect the natural habitat of endangered species. On the other hand, military bases often want the land surrounding their installation to remain undeveloped for security and safety purposes. If a base and a conservation group partner to acquire land around a military installation, both groups benefit because the land is protected for conservation purposes and the military base is protected from incompatible development.

Late in 2003, the Department of Defense and **Florida** Governor Bush signed an [agreement](#) aimed at protecting base operations as well as significant natural resources in Northwest Florida.⁴² Working with [The Nature Conservancy](#) and many other groups, the Northwest Florida Greenway project will create 100 miles of open space stretching from the Apalachicola National Forest and the waters of the Gulf of Mexico to Eglin AFB.

Camp Ripley is working on a similar arrangement with the **Minnesota** Department of Natural Resources, The Nature Conservancy, and several other conservation groups to preserve a three-mile, 110,000-acre protective buffer around the installation.⁴³ Landowners in the targeted area have been asked to voluntarily sell their property or the land’s development rights in the form of a conservation easement, and to date 67 landowners with a total of 7,171 acres have expressed interest.

Other installations that have submitted paperwork with the Department of Defense to establish similar partnerships include Camp Pendleton in **California**, Fort Carson in **Colorado**, Fort Sill in **Oklahoma**, and Fort Lewis in **Washington**.

Arizona has also expressed a strong interest in taking advantage of the new defense statute by partnering with the [Trust for Public Land](#), cities, towns, counties, and the private sector to purchase land around

Luke AFB's southern departure corridor.⁴⁴ This initiative has the support of the Home Builders Association of Central Arizona.

The partnership between **North Carolina's** Fort Bragg and The Nature Conservancy is another good example of a military installation partnering with a conservation group. These two groups joined forces under the Private Lands Initiative program to purchase conservation easements on land surrounding Fort Bragg – the largest army base in the county. The Nature Conservancy's goal is to protect the habitat of the red-cockaded woodpecker while Fort Bragg wants to prevent incompatible development to maintain its mission. Under this mutually beneficial agreement, the "Partnership" owns the land and the Army manages it. To date, the Army has committed \$9.4 million and The Nature Conservancy has pledged \$7 million. They are working on a similar agreement for Camp Lejeune.

On the federal level, a [cooperative agreement](#) between the Department of Defense and The Nature Conservancy establishes a policy of cooperation and coordination to identify, document, and maintain biological diversity on land near defense installations.⁴⁵

Land trusts play an important role in conservation; they have permanently protected land in all 50 states. The total area comprises more than 6.2 million acres—an area twice the size of Connecticut.⁴⁶ Establishing a joint venture between a military installation and a conservation or preservation group to create a land trust is a good way to address encroachment. Forging these partnerships is an effective tool both financially and environmentally to prevent incompatible development from threatening the installation and the surrounding natural resources.

Buying land is an expensive endeavor; however, purchasing the development rights for land can be a more affordable way to protect areas surrounding military installations. Purchase of development rights to protect land surrounding military installations is a viable alternative to purchasing the land in its entirety. Moreover, if an entity wants to protect military installations, they need only prevent development of "incompatible uses" rather than all development. Some types of development are compatible with the activities of military installations, such as certain commercial, industrial, and agricultural uses. Restricting residential development may only be a portion of an area's development potential. Thus, the cost of buying the development rights for uses incompatible with a military installation's mission could be a fraction of a conventional purchase of development rights agreement.

The Department of Defense also has the authority to transfer surplus real property for natural resource conservation.⁴⁷ If a military installation possesses excess land that the Department of Defense no longer needs, the installation may transfer that property to either a state or conservation group for land preservation purposes. The conveyance is considered a public benefit transfer and is turned over free of charge.

Exchange or Trade Land

Purchasing land or development rights is often a financial challenge. As a result, some states are exploring land exchanges that offer private property owners of land where development could encroach on a military installation the opportunity to trade for land elsewhere in the state. In 2002, **Arizona** voters considered a [proposition](#) to encourage land exchanges among private property owners, the state, and the federal government.⁴⁸ This proposition could have been used to prevent development around Luke and Davis Monthan Air Force Base's and the Yuma Marine Corps Air Station. The initiative failed by the slimmest of margins—49.2 percent in favor and 50.8 percent opposed. Then-Governor Jane Dee Hull strongly supported the proposition as a valuable means of preserving military bases and The Nature Conservancy endorsed it as a way to help consolidate management responsibility under one owner. However, the Grand Canyon Chapter of the Sierra Club and the Arizona League of Conservation Voters opposed the proposition arguing it lacked adequate public review. The measure will likely appear again

on the 2005 ballot with the new title of “military base preservation initiative.” Despite the fact that it is not currently in use, this system is a mechanism that states could consider.

The proposed land exchange program would work as follows: Current Arizona law allows the state to assist a landowner in trading private land, such as property surrounding a military installation, for federal government land. Under the proposed land trade program, the state could take the arrangement one step further and exchange state trust land for the land surrounding the military installation that the federal government has obtained.⁴⁹ As an added benefit, the state could lease the land to farmers and deposit the generated income into the state trust. These agreements balance the needs of all parties. The federal government gets land to preserve open space, the state receives land they can use to protect military bases, and the private landowner acquires property free from the impacts of military training and operations.

Creation of State Military Advisory Bodies

Many states have established military advisory groups to protect state military installations from closure, most immediately under the next round of Base Realignment and Closure (BRAC) currently scheduled for 2005. These commissions facilitate discussions among stakeholders, such as the executive branch, the state legislature, congressional representatives, local and county governments, military base commanders, business interests, and landowners. For many of these commissions, preventing incompatible encroachment around military bases is a priority because encroachment will be a key factor in making base closure or realignment decisions.⁵⁰

In **Arizona**, Governor Napolitano established a [Military Affairs Commission](#) charged with monitoring developments regarding the state’s military installations and to make recommendations on executive, legislative, and federal actions necessary to sustain and expand those installations. In addition, the Southern Arizona Military Airspace Working Group provides a single point of contact for coordination on military issues arising from the development of civilian airports and military operations affecting civilian airports.⁵¹ The group consists of the Arizona Airports Association, the Arizona Department of Transportation, Arizona’s military facilities, and representatives from the cities of Glendale and Phoenix.

Several local groups in Arizona also organize to prevent encroachment of the state’s military bases. The Fighter Country Partnership consists of Arizona residents who desire to support the strategic mission of Luke AFB. The [Arizona Military Regional Compatibility Project](#), whose members include local jurisdictions, military installation representatives, landowners, and other interested parties, is identifying land-use conflicts and developing compatible solutions to protect Arizona’s military airports.⁵²

In **Florida**, the Florida Defense Alliance consists of various stakeholders and oversees the Defense Infrastructure Grant Program, which provides funds to purchase land surrounding military installations to curb encroachment.

The **Georgia** Military Affairs Coordinating Committee (GMACC) works to improve the mission value of the state’s federal military installations and the quality of life of the people who live and work there. During the past two years, it has conducted an evaluation of each base and developed a comprehensive action plan to address any shortcomings identified. The plan is reviewed semiannually and continually adjusted as issues are resolved or new issues surface. Working with the Department of Defense Office of Economic Adjustment, the governor, and the general assembly, GMACC is determining which mitigation options are best suited for Georgia.

At the local level, the 21st Century Partnership is a nonprofit organization funded by individuals and organizations committed to ensuring the continued viability of Robins AFB. The partnership is updating

a study on encroachment and other issues that could affect current or future installation missions exploring concerns about physical obstructions as well as laws that restrict land and air access. Retired Air Force Major General Ron Smith recently issued a warning to the Partnership: “Robins has military value, but we need to take care of such issues as encroachment. If you have encroachment problems, your military value is about zero.”⁵³

The **North Carolina** Advisory Commission on Military Affairs is concerned with urban and community encroachment and the mission readiness of the state’s military installations. This commission has convened representatives from the state’s military bases; local government officials; chambers of commerce representatives; economic development professionals; and environmental, educational, and community leaders to discuss the challenges of encroachment and how to preserve and protect the interests of military installations and base communities. With the support of the governor’s office, the National Governors Association collaborated with the commission in sponsoring a multistakeholder conference on encroachment.

The **Texas** Strategic Planning Commission was established to protect the positive economic impact of the military and defense industry in Texas. The commission partners with local community leadership and defense industries to promote an agenda that best supports Texas defense communities. The commission released a [Master Plan Report for the Texas Defense Communities](#) that recognizes “new construction and takeoff and landing flight paths, within low-level air training routes, near maneuver areas, and in proximity to explosive training areas, has caused the military to scale back and adjust necessary training.”⁵⁴ The commission has urged state and local communities to address encroachment concerns so that the missions of the military installations are not compromised. The report presents recommendations for legislative action.

No “One-Size-Fits-All” Solution to Encroachment of Military Installations

There is no universal approach to prevent encroachment. The aim 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. Therefore, states have approached land-use issues for military bases in ways that best fit state and local views about land use, economic development, and private property rights. **Arizona** enacted legislation to ensure compatible land use around its military installations. This clear, well-defined law is likely the most comprehensive encroachment-prevention plan in the nation. **North Carolina** and **Florida**’s initiative to partner with conservation groups to acquire the land surrounding their military bases prevents encroachment without legislative or regulatory review. Moreover, it allows the state, locality, installation, and/or conservation group to choose the optimal future use of the land. Fine-tuning or amending ACSC statutes is another possible option for states, because the legal framework may already exist to protect installations that are critical to states or localities.

States may also ensure that effective real estate disclosure requirements inform all homebuyers and renters about nearby military facilities and their potential impact on residents. States and localities can also discourage encroachment by limiting infrastructure investments in areas close to military installations. Restricting funding for sewer, road, school, and utility infrastructure can discourage incompatible development as long as it does not affect base needs. Through all of these approaches, states and local governments can help shift some incompatible development to more appropriate locations.

**Reducing Encroachment at Military Installations:
State Approaches and Their Benefits and Challenges**

Strategy	Benefits	Challenges
State legislation to require compatible land use	Provides a clear, well-defined law that requires compatible land use	Passing legislation can be a long, arduous process
Local zoning, planning, and noise requirements	Lets local government decide how best to approach the problem Allows for detailed provisions that can be amended if necessary	Zoning and local land-use plans can be influenced by local special interest groups Enforcement can be uncertain
Statutory authority to designate military installations as protected areas of critical state concern	Legal framework already exists in many states Formally recognizes land surrounding military installations as needing protection	Not all states have this statutory language in place Amending a state statute requires legislative and executive approval
Property acquisition surrounding military installations	Does not require legislative or regulatory review May not require outright purchase of land Allows local determination of future land use	Land purchase requires significant funds Landowner must be willing to sell or trade land or development rights All parties must reach agreement on terms
Create a state military advisory body	Provides a forum and unified voice for all stakeholders Requires no regulation	Does not have regulatory or enforcement authority

Endnotes

- ¹ GAO Report, “Military Training: DoD Lacks a Comprehensive Plan to Manage Encroachment on Training Ranges,” GAO-02-614, June 2002.
- ² Arizona SB 1062 (1995).
- ³ Arizona SB 1514 (2000).
- ⁴ Arizona SB 1525 (2001).
- ⁵ Arizona SB 1393 (2002).
- ⁶ Arizona HB2141 (2004) protects Luke Air Force Auxiliary Airfield and HB2140 (2004) protects Gila Bend Air Force Auxiliary Airfield and Auxiliary Airfield #2 in Yuma County.
- ⁷ Arizona HB2134 (2004).
- ⁸ California SB 1099 (1999); Study: “Forecasting and Mitigating Future Urban Encroachment Adjacent to California Military Installations: A Spatial Approach,” Institute of Urban and Regional Development, University of California, Berkeley (June 20, 2001).
- ⁹ California SB 1468 (2002).
- ¹⁰ Airborne Noise Encroachment Action Plan, 2000.
- ¹¹ Oklahoma HB 2115 (2002).
- ¹² Oklahoma HB 2472 (2004). Studies referenced are Air Installation Compatible Use Zone (AICUZ) studies and the Army Compatible Use Buffers (ACUB) studies.
- ¹³ Georgia Code, Title 36, Chapter 66, Section 6.
- ¹⁴ Washington SB 6401 (2004).
- ¹⁵ Id. section 2, (4).
- ¹⁶ Virginia Acts of Assembly, 2004 Session, Chapter 799.
- ¹⁷ Florida SB 1604, (2004).
- ¹⁸ Texas SB 652 (2003).
- ¹⁹ Illinois Public Act 093-0176.
- ²⁰ City of Virginia Beach Zoning Code, Appendix A, Article 2C, Section 220.1.
- ²¹ Virginia Real Estate Board Regulations, Section 6.3.
- ²² North Carolina General Statutes, Chapter 63, Article 4.
- ²³ City of Fairfield, California, Ordinance No. 2003-10.
- ²⁴ Many states use this designation, although with varying titles, including (but not limited to):
 - Areas of Critical State Concern:**
 - Maryland: Maryland Code: Title 5, Subtitle 6, Section 5-611.
 - [Florida](#): Title XXVIII, Chapter 380, Section 380.05.
 - [New Jersey](#): New Jersey State Plan, (IV.D.3.).
 - [South Carolina](#): Code of Laws of South Carolina: Title 48, Chapter 39, Section 48-39-80 (B)(4).
 - [Hawaii](#): Hawaii Revised Statutes, Chapter 225M, Section 2(b)(2)(A).
 - Areas of Critical Concern:**
 - [Minnesota](#): Minnesota Statutes, Chapter Title Critical Areas, Section 116G.02.
 - [Oregon](#): Oregon Revised Statutes, Chapter 197, Section 197.405.
 - Areas of Critical or More than Local Concern:**
 - [Wyoming](#): Wyoming Statutes, Title 9, Chapter 5, Article 1, Section 102(a)(i).
 - Areas of Greater than Local Concern:**
 - [Washington](#): Washington Consolidated Land Use Code, Heading: Local/Regional Coordinating Board or Process.
 - Areas of Statewide Significance:**
 - [Illinois](#): Illinois Department of Natural Resources, Illinois Natural Areas Inventory, Technical Report (White, 1978).
 - Scenic Areas of Statewide Significance:**
 - [California](#): California Surface Mining and Reclamation Act of 1975, Chapter 9, Article 4, Section 2763.
 - [New York](#): “Technical Memorandum: Identification of Scenic Areas of Statewide Significance in New York State” (Department of State, 1992).
 - Areas and Activities of State Interest:**
 - Colorado: Colorado Revised Statutes, Title 24, Article 65.
 - Areas of Critical Environmental Concern:**

[Nevada](#): Nevada Revised Statutes, Chapter 321, Section 770.

[Massachusetts](#): General Laws of Massachusetts, Part I, Title II, Chapter 21A, Section (2)(7).

Areas of Environmental Concern:

[North Carolina](#): North Carolina General Statutes, Chapter 113A, Article 7, Part 3.

Geographic Areas of Particular Concern:

[South Carolina](#): South Carolina 2001 Code of Regulations, Chapter 30, Section (D)(21).

Fragile Areas:

[Vermont](#): Vermont States, Title, 10, Chapter 158, Section 6552.

²⁵ Rail service land ([Maryland](#)), land of cultural and esthetic value ([Minnesota](#)), archeological and historic sites ([Florida](#)), scenic areas and recreational land ([California](#)).

²⁶ Florida Statutes, Section 380.05.

²⁷ Id., Section 380.05 (2)(c).

²⁸ Colorado Revised Statutes, Title 24, Article 65.

²⁹ Id., Article 65, 65.1-202 (4).

³⁰ Id., Article 65, 65.1-202 (5)(a).

³¹ Annotated Code of Maryland, Article 66B, Section 3.05(a)(1)(vii).

³² Wyoming Statutes 9-8-102.

³³ Hawaii Revised Statutes, Section 225M-2 (b)(2)(A).

³⁵ Air Force Materiel Command Public Affairs Office Web page at http://www.afmc.wpafb.af.mil/HQ-AFMC/PA/news/archive/2002/mar/Tinker_bondissue1.htm.

³⁶ Pima County, Arizona, May 18, 2004 Ballot, Question #1.

³⁷ Florida Statutes, Section 125.0108.

³⁸ Arizona HB2140 (2004).

³⁹ Senator John McCain (R-Ariz.) Press Release, March 2004.

⁴⁰ GAO Report, "Military Training: DoD Lacks a Comprehensive Plan to Manage Encroachment on Training Ranges," GAO-02-614, June 2002.

⁴¹ National Defense Authorization Act (NDAA) for Fiscal Year 2003, Section 2684a.

⁴² Norwest Florida Greenway Memorandum of Partnership Among Department of Defense, State of Florida, and the Florida Chapter of The Nature Conservancy to Conserve Environmentally Significant Lands and Limit Incompatible Development in Norwest Florida, November 2003.

⁴³ Conservation groups involved in the Prairie to Pines Partnership include the Nature Conservancy, the Audubon Society, Ducks Unlimited, Pheasant Forever, and the Minnesota Deer Hunters Association.

⁴⁴ Then Governor Jane Dee Hull letter to Senator John McCain, August 30, 2002.

⁴⁵ Cooperative Agreement, December 13, 1988, can be found at <http://corpslakes.usace.army.mil/employees/cecwon/pdfs/mou/tnc.pdf>.

⁴⁶ National Land Trust Census (September 2001).

⁴⁷ National Defense Authorization Act (NDAA) for Fiscal Year 2003, 10 USCS, Section 2694a.

⁴⁸ Arizona 2002, Ballot Proposition 101.

⁴⁹ Under Proposition 101, the private land need not be near a military installation. Any privately-owned land could be exchanged under this initiative.

⁵⁰ The Base Realignment and Closure (BRAC) Act cites (in part) the following as language that the Department of Defense will use when evaluating what bases to close and/or realign in 2005: "The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

⁵¹ City of Glendale, Arizona Press Release, December 3, 2002.

⁵² For more information on the Arizona Military Regional Compatibility Project, go to: <http://www.azcommerce.com/CommunityPlanning/Compatibility.htm>.

⁵³ "General: Brace for 'mother of all BRACs' Reshaping of U.S. military could mean and end to RAFB depot," *The Telegraph*, Macon, Ga., December 20, 2002.

⁵⁴ Master Plan Report for the Texas Defense Communities, July 17, 2002.