

# Governor's Land Compatibility Task Force Report



May 2012



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue  
Governor

Dee Freeman  
Secretary

April 30, 2012

The Honorable Beverly Eaves Perdue  
Governor for the State of North Carolina  
20301 Mail Service Center  
Raleigh, NC 27699 - 0301

Dear Governor Perdue:

Enclosed is the Governor's Land Compatibility Task Force's Report that you requested as a result of findings during your local and state military summits. The report provides a framework, with implementing recommendations, that is incentive based and allows land compatibility to prevent encroachment on the state's military installations, training areas, and military training routes.

The Land Compatibility Task Force and I believe that we have created a method that allows for mutual mission success and multiple benefits from leveraging state, local and military resources. This approach will not only sustain military operations, but will also ensure sustainment and growth within North Carolina's two largest economic sectors; agriculture and the military that provide \$70 and \$26 billion respectively to the state's economy. Further, the framework is incentives based and provides local community and county governments a means to support land sustainability balanced with economic development needs that identify and assists in better planning by the state, localities, and the military.

Thank you for allowing the task force the opportunity to produce this plan for your review. Please do not hesitate to contact me, or DENR's Military Affairs and Strategic Planning Director, Chris Russo, at 919-707-8640, if you have any questions.

Sincerely,

Dee Freeman

Enclosures

cc: John Nicholson, Governor's Military Affairs Advisor

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## **I. Executive Summary**

The Governor's Land Compatibility Task Force was charged with developing recommendations for maintaining and enhancing the military presence in North Carolina through preservation of land uses that are compatible with the military mission and that also preserve and sustain economic development and natural and cultural resources.

Critical issues impacting the sustainability of the State's military installations include development, loss of access or overly restrictive access to air space and coastal/marine areas, and radio frequency encroachment. Insufficient and uncoordinated land use planning and management are also contributing to the rapid loss of the state's working lands and loss and deterioration of natural resources (lands, waters, and ecosystems).

North Carolina has a vested economic interest in preservation of land uses that are compatible with military activities, and that support agriculture/agribusiness and conservation of natural resources. The military contributes about \$26 billion to the state's economy each year, with businesses in 87 of North Carolina's 100 counties performing defense-related prime contracts in 2011. Agribusiness (food, fiber, and forestry industries) is the number one industry in North Carolina, contributing about \$70 billion dollars and seventeen percent of the state's jobs. The state's natural systems, including its coastal waters, are the basis for the tourism/outdoor recreation and fisheries industries, and provide irreplaceable ecosystem services.

County and municipal governments have primary responsibility for land use planning. However, many rural counties and communities lack capacity to conduct needed planning activities. Another challenge to preservation of compatible land uses is that the interests of private landowners and local communities do not necessarily align with those of the military services or state government agencies. A coordinated incentives program is needed to align these interests with respect to conservation of compatible land uses.

The Task Force has developed a 'multiple benefits' framework to serve as a basis for development of a comprehensive state-wide Land Use Sustainability prioritization process and incentives program that can simultaneously provide for economic sustainability and development, maintain conditions that can support needed levels of military operations and training, and protect the lands, ecosystems and other natural resources that are so important for North Carolina's future. This framework builds upon existing programs developed to protect working lands and conserve natural resources/ecosystems.

This report outlines a practical and cost-effective strategy for maximizing collective returns on public investments. Through implementation of this 'multiple benefits' strategy, North Carolina can provide a national model for how state and local governments and the military can work together to meet common challenges and to produce long-lasting benefits for the state's residents.

Accordingly, the Task Force recommends the Executive Committee of the North Carolina Working Lands Group be charged with initiating and overseeing the following actions

1. Create a Partnership Agreement that includes relevant State agencies, the military services, County and Municipal government organizations, and the higher educational system. This group will be charged with integrating the recommendations from this report into the existing Strategic Plan of the North Carolina Working Lands Group, and will submit an annual progress report to the Governor's Office and General Assembly.
2. Complete preparation of an Integrative Prioritization Map and develop a comprehensive state-wide land use prioritization process that follows the framework outlined in this report and that promotes 'multiple benefits' through leveraging of funding and stacking of incentives.
3. Design an integrative incentives program that will apply the prioritization process to maximize positive outcomes by directly protecting multiple-benefit land uses and will encouraging localization of development within designated areas.
4. Establish a clearinghouse system to manage the land use sustainability prioritization process and integrative incentives program.
5. Oversee development of a mechanism to review current local zoning ordinances and land use plans for consistency with the criteria described in this report, and work with the Community Planning Division of the North Carolina Department of Commerce to help implement the land use sustainability program by providing planning services to cities and counties that need assistance.
6. Work with local government planning agencies and the military installations to resolve immediate encroachment challenges.
7. Identify mechanisms to ensure that infrastructure funding provided by the state does not contribute to incompatible land uses and does support suitable uses.
8. Coordinate, leverage, and create programs for the recovery of Threatened and Endangered Species by state, local, federal, and non-governmental conservation efforts in areas away from military installations and training areas.
9. Develop an outreach plan to engage with and educate the public on land use sustainability issues.
10. Identify strategies and actions that can increase the economic benefits accruing to private landowners who maintain military-compatible uses of working lands.

The Task Force further recommends that the state's four land use-related trust funds be funded to the maximum extent possible in support of military sustainability, and that the Military Affairs Grant Program receive funding for acquisition of easements to address immediate encroachment threats.



## II. Introduction



The Governor's Land Compatibility Task Force was established in response to issues identified as a result of Military Summits conducted with local communities and the state's military installations during October and November 2011. This Task Force was charged with developing recommendations for maintaining and enhancing the military presence in North Carolina through preservation of land uses that are compatible with the military mission and that also preserve and

sustain economic development and natural and cultural resources.

Loss of compatible land uses has had negative impacts on the military, as it has on working lands<sup>1</sup> and important natural resources, landscapes, and species. These form the foundations for three of the major engines of North Carolina's economy – national defense, agriculture/agribusiness, and other outdoor business-related activities – and are major contributors to the economic health and overall quality of life in North Carolina communities.

The military is North Carolina's second largest economic sector, and contributes eight percent of the state's total employment. North Carolina hosts seven military installations including the Army at Fort Bragg and Sunny Point; the Air Force at Seymour Johnson Air Force Base; and the Marines at Camp Lejeune, Marine Corps Air Station New River and Marine Corps Air Station Cherry Point; the North Carolina National Guard; and the Army and Air Force Reserve (Appendix 1). In addition, the United States Coast Guard has fourteen installations in North Carolina, including the Coast Guard Support Center at Elizabeth City.

Development has been identified as a critical issue impacting the sustainability and long-term viability of the State's military installations. Other military concerns include loss of access or overly restrictive access to air space and coastal/marine areas, and radio frequency encroachment. All of these result in restrictions on military training activities that are essential to sustaining military installations and the economic, resource stewardship, and quality of life benefits they provide. Impacts of military growth on local communities and the environment, energy usage and evolving transportation and economic corridors are also important planning considerations. The North Carolina Commanders' Council has recognized these as challenges that the state and its military installations share as a common interest or concern.

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<sup>1</sup> Working Lands are defined as those areas utilized by enterprises that critically depend on the support or use of natural resources on land and water. For the purpose of the Task Force, the term working lands is inclusive of working land as well as working waters.

Insufficient and uncoordinated land use planning and management are also contributing to the rapid loss of the state's working lands and loss and deterioration of natural resources. These lands, waters, and ecosystems are of major importance to the state's economy, well-being and cultural heritage. Approximately ninety percent of these lands and resources are privately owned.

In the face of rapid population growth and other changes in the state, a multiple-benefits strategy needs to be developed and implemented that can simultaneously provide for economic sustainability and development, maintain conditions that can support needed levels of military operations and training, and protect the lands, ecosystems and other natural resources that are so important for North Carolina's future. Such a strategy will require coordination among agencies, local and state governments in order to leverage current state programs and statutes and to synchronize state, legislative, county, and municipal resources in ways that jointly meet high-priority state and federal goals and protect the state's top economic engines.

North Carolina can play a leadership role in establishing compatible land use maintenance mechanisms that simultaneously support the military presence in the state, enhance efforts to conserve valued ecosystem services and wildlife habitat, and preserve working lands and rural livelihoods. The state can provide a national model for how state and local governments and the military can work together to meet common challenges and to produce long-lasting benefits for the state's residents.

The Land Compatibility Task Force includes state government, county government, and North Carolina military representatives that are key players in land conservation, economic development and military affairs support. The Task Force consists of:

David Knight, DENR Assistant Secretary of Natural Resources  
Chris Russo, DENR Director of Military Affairs and Strategic Planning  
Dewitt Hardee, Program Manager, ADFP Trust Fund / Environmental Programs,  
NC Dept. of Agriculture and Consumer Services  
Mallory Martin, Deputy Director, NC Wildlife Commission  
Mark Sutherland, Executive Director, Military Growth Task Force  
Don Belk, Regional Planner, Fort Bragg Regional Alliance  
Mike Lynch, Director, Plans, Training and Mobilization, Fort Bragg  
Paul Friday, Director, Government and External Affairs, MCIEast  
Tim McNeill, Chairman, Harnett County Board of Commissioners  
Stewart Cox, Deputy Commander, 4th Mission Support Group, Seymour  
Johnson AFB  
Richard Woodruff, City Manager, Jacksonville, NC  
Ken Jones, Mayor, Pine Knoll Shores, NC

Advisory Groups were also identified to provide consultation and subject matter expertise to the Task Force throughout development of the report to the Governor. The Advisory Groups were:

The Governor's Advisory Commission on Military Affairs  
The North Carolina Commanders Council  
The Association of County Commissioners  
The League of Municipalities  
The UNC School of Government  
The North Carolina Working Lands Group  
The USDA Natural Resources Conservation Service  
The North Carolina Farm Bureau

The Task Force considered potential expansion of authority of the Natural Heritage Trust Fund, the Parks and Recreation Trust Fund, the Clean Water Management Trust Fund, The Agricultural Development and Farmland Preservation Trust Fund, the North Carolina Wildlife Diversity Funds, and Military Conservation Grants. Further, the Task Force reviewed the North Carolina Military Support Act to identify potential revisions that are supportive of operational sustainment of our military and their mission. The Task Force built upon work done for the state's Conservation Planning Tool and for regional planning efforts spearheaded by the Fort Bragg Regional Alliance and the Military Growth Task Force.

Major questions addressed by the Task Force include:

- How can the state maintain and enhance the military presence in the state in both the short term and the long term?
- Does the state have aligned strategies and tools to sustain and build the military before, during, and after the current climate of force reduction?
- Does the state have the right tools in place to allow local governments to coordinate and assist in preserving the military mission?

A critical consideration for the Task Force was that it is equally important to preserve and sustain economic development, natural and cultural resources, and national defense capability; each is necessary for the long-term well-being of North Carolina's communities and people.

### **III. Economic Context**

The military is North Carolina's second largest economic sector, with military activities contributing about \$26 billion or seven percent of the state's gross product as goods and services each year. North Carolina is home to the third largest concentration of military personnel in the nation. In total, more than 416,000 individuals, or eight percent of total state employment, are either directly employed by the military or Coast Guard, or have jobs with organizations and companies producing products and providing services that support the military in North Carolina. Military growth is expected to increase the state's

gross state product by \$2.9 billion and add 49,000 new jobs by 2013.<sup>2</sup> Defense procurement in North Carolina increased from \$3.6 billion in 2010 to \$4.1 billion in 2011, with businesses in 87 of North Carolina's 100 counties performing defense-related prime contracts in 2011.<sup>3</sup>

The Base Realignment and Closure (BRAC) process is used by the US Department of Defense and Congress to close or realign excess military installations and "better match facilities to forces, meet the threats and challenges of a new century, and make the wisest use of limited defense dollars."<sup>4</sup> The 2005 BRAC decision expanded the military presence in North Carolina, which already had the nation's third-largest active-duty population. North Carolina has the potential to benefit from future BRAC decisions if the state can retain its reputation as the 'Nation's most military-friendly state.'

Working farms and forests are important to North Carolina's economy in their own right, in addition to being compatible with military operations and training. Agribusiness (food, fiber, and forestry industries) is the number one industry in North Carolina, contributing about \$70 billion dollars and employing about 648,000 people, seventeen percent of the state's jobs. In 2007, the forest products industry became the number one manufacturing industry in North Carolina, employing over 100,000 people and contributing \$3.6 billion in wages.<sup>5</sup> Farmlands and working forests also make up an integral part of the state's space, wildlife habitats, groundwater recharge areas and recreational areas.<sup>6</sup> These valuable resources are rapidly being lost to development, with damaging consequences for the state's economy and rural livelihoods.

Sustaining the military presence in North Carolina is also consistent with preserving the state's valued natural resources. Natural resources, including wetlands and forests, help clean our air and our water and provide opportunities for outdoor recreation. They are a major contributor to North Carolina's \$16.5 billion per year tourism industry. In all, land conservation contributes significantly to the economy of North Carolina; every \$1 invested returns \$4 in economic value from natural resource goods and services alone.<sup>7</sup> Undeveloped lands also provide unseen ecosystem services such as nutrient cycling, carbon sequestration, and flood and erosion control; these services are public benefits enjoyed by all North Carolinians but which typically are not appraised when assessing the market value of rural land.

One of the most important ecosystem services is maintaining the health and productivity of North Carolina's estuarine and marine waters. Our coastal waters are among the most biologically productive regions in the nation because of the diversity of habitats available in the largest estuarine system (2.3 million acres) of any single Atlantic coast state. This

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<sup>2</sup> <http://www.uncvtv.org/ncrising/projects/military/history.html>

<sup>3</sup> <http://www.carolinacoastonline.com/articles/2012/03/07/news-times/news/doc4f57937992322351239379.txt>

<sup>4</sup> <http://www.defense.gov/brac/02faqs.htm#01>

<sup>5</sup> <http://www.ag-econ.ncsu.edu/faculty/walden/ncagsz2011.pdf>

<sup>6</sup> <http://www.onencnaturally.org>

<sup>7</sup> Anon., 2011. NC's Return on the Investment in Land Conservation. The Trust For Public Land

system serves as spawning, nursery, and feeding areas for most of state's important coastal fishery species. North Carolina's commercial fisheries generated in-state sales of over \$500 million in 2007.<sup>8</sup>

Efforts are underway in North Carolina to more effectively manage and preserve these coastal resources. Pollutants and habitat stressors resulting from development remain a significant threat to coastal fish habitat;<sup>9</sup> sources of water quality stressors (toxins, excess nutrients and sediment, and bacteria) include nonpoint runoff from land-based activities, point source discharges, and spills and failures of wastewater treatment.<sup>10</sup> Development continues along the state's shoreline, and increasing habitat and water quality degradation to estuarine and ocean fisheries are expected to result in a decline in fish health and stocks. That in turn will result in less fish available for commercial and recreational fishing with additional ancillary reductions in revenue to the regions tourist industry.

Tourism is a major contributor to North Carolina's economy. In 2010, despite the lingering effects of the recession, visitors to and throughout North Carolina spent a record \$17 billion across the state, a nine percent increase over the previous year. This spending directly supported nearly 185,000 jobs for North Carolina residents and generated approximately \$1.5 billion in state and local tax revenues for reinvestment within local communities. Our state was the sixth most visited state in the nation.<sup>11</sup> North Carolina's outstanding natural resources are the main attraction.



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<sup>8</sup> [http://www.st.nmfs.noaa.gov/st5/publication/econ/SA\\_Summary\\_Econ.pdf](http://www.st.nmfs.noaa.gov/st5/publication/econ/SA_Summary_Econ.pdf)

<sup>9</sup> Deaton, A.S., W.S. Chappell, K. Hart, J. O'Neal, B. Boutin. 2010. North Carolina Coastal Habitat Protection Plan. North Carolina Department of Environment and Natural Resources. Division of Marine Fisheries, NC.

<sup>10</sup> 2010 Coastal Habitat Protection Plan

<sup>11</sup> <http://annualreport.visitnc.com/year-in-review/>

## IV. Issues and Challenges



### A. Military Perspective

The United States military maintains combat readiness through intensive training on the ground and in the air. Incompatible land uses in areas used by the military limits the time that training ranges are available and the types of training conducted, thereby negatively impacting military readiness by restricting the military's ability to 'train as they would fight'. In addition to bases and training ranges, areas of concern include off-base air and land corridors that connect military bases and airfields with remote training ranges and/or key air training areas and routes.

Training restrictions can result from community concerns about noise, light pollution, tall structures such as wind towers that physically obstruct air routes, frequency spectrum uses that interfere with operations of military radar or communications equipment, or the presence of cultural and historic resources or endangered species. These factors are heavily influenced by decisions made by local governments and landowners. The missions of the military services in North Carolina thus are dependent on efforts by private landowners, local communities, and the state to protect the military's ability to train and carry out critical activities.

*Encroachment* is urban development surrounding military installations and areas where they test and train that affects the ability of the military to train under realistic conditions. This is a serious problem for installations throughout the United States, and has become a concern in North Carolina as well. Military operations can create intense noise that can disturb communities, increase risks of airplane crashes or exposure to unexploded ordnance, contaminate the environment and damage ecosystems, disturb protected species, stress public infrastructure and services, and generate citizen complaints. At the same time, communities can expand development or other activities in ways that constrict the use of military training areas, permit development that can present obstacles to low-flying aircraft, interfere with night-time training through light pollution, degrade electronic navigation and communication frequencies used by the military, fail to support needed public infrastructure for Department of Defense activities, and through development, force the migration of endangered species onto military property.<sup>12</sup>

A significant characteristic that renders a particular land use 'incompatible' is the routine presence of people too near or under military training and testing activities. Military-compatible land uses include agriculture, forestry, and undeveloped natural, conservation, hunting and wildlife lands; conversion of these lands to residential and commercial uses increases the number of people in that area and thereby reduces military compatibility.

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<sup>12</sup> Berteau and others, 2009. Strengthening National Defense: Countering Encroachment through Military-Community Collaboration. National Academy of Public Administration Report.

Sustained population growth in the state combined with increased competition for resources has resulted in the loss of working lands and natural habitat, and has led to training restrictions. North Carolina is a national leader in the rate of lost farmland; between 2002 and 2007, the state has lost more than 6,000 farms and 300,000 acres of farmland.<sup>13</sup> Since 1957, the United States Marine Corps has lost approximately 85 percent of flight training airspace in eastern North Carolina due to encroachment.

An example of local planning that has potential to restrict military training comes from Camp Lejeune. A largely undeveloped area adjacent to a landing field training area is currently zoned for 'high-density residential' uses (Figure 1). Such development in this area would greatly limit the installation's ability to use this landing field, particularly for nighttime training activities.

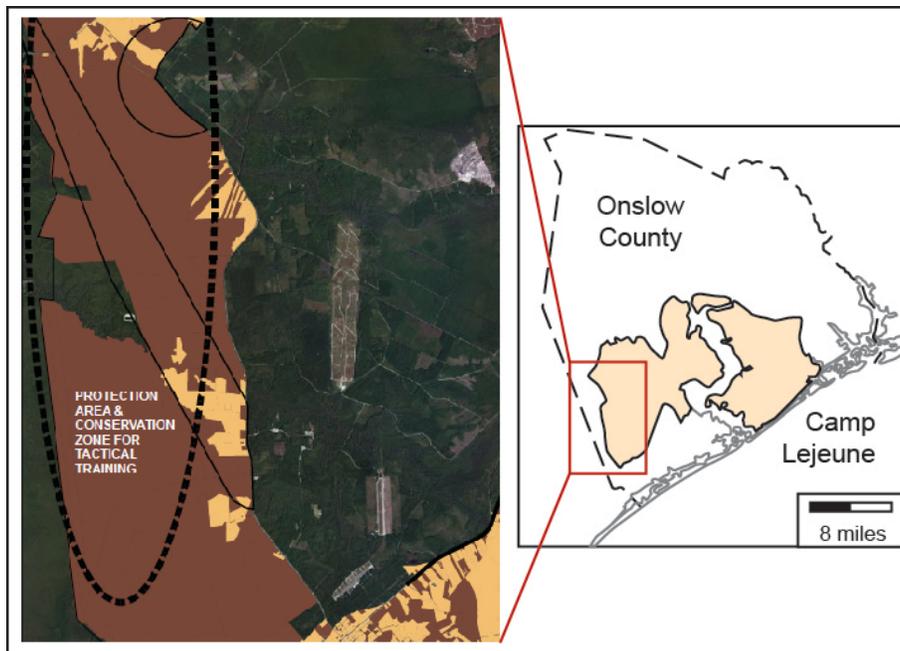


Figure 1. The air photo shows current use of land adjacent to a landing field training area at Camp Lejeune; brown indicates 'vacant' (undeveloped) land, and tan indicates developed land. Most of this land is zoned for 'high-density development'.

Similarly, much of the undeveloped land around Fort Bragg is zoned as "agricultural-residential districts." This classification "intends to accommodate rural uses, including agricultural uses, uses that complement or support agricultural uses, and very low-density residential uses. It encourages residential development that preserves farmland and other open space through flexibly-designed conservation subdivisions." Although useful for encouraging preservation of working lands, this designation is insufficient to preserve military-compatibility. Specifically, there are no procedures or criteria for 'low density' development, and local planning commissions and boards can define it in any way.

<sup>13</sup> USDA National Agricultural Statistics Service

The compatibility challenge has been increased in recent years by a rapid influx of service members and their families into eastern North Carolina. Some of this growth is attributable to the decisions of the 2005 Base Realignment and Closure Commission, while some results from the Army's "Grow the Army" and the Marine Corps' "Grow the Force" initiatives tied to requirements of the conflicts in Afghanistan and Iraq. This influx of personnel represents the largest single job growth event in the state of North Carolina since the World War II era. Although many communities across the nation are grappling with challenges resulting from military growth, eastern North Carolina stands out as one of the most significantly impacted regions.<sup>14</sup> More military growth in our state is anticipated from future Base Realignment and Closure decisions, which will increase both the installations' training requirements and development pressure near the installations and areas where they test and train. Additional changes are anticipated as the military services adjust to changes in the defense threat to the United States. A shift towards asymmetrical warfare (no front lines) has resulted in the need to develop integrated air/land/sea operational methods that rely on air and mobile movement of many small units. In addition, new weapons systems travel farther and faster than previous ones. One consequence of the military services' adaptations to meet these new challenges is that development poses an increasing threat to military training activities. Although military growth is good for the state's economy, state and local governments should take steps to accommodate that growth in ways that support the military mission while promoting long-term economic and environmental health and well-being.

Military-related impact and land use studies have primarily focused on the counties that host military installations or are within close proximity to them. These communities benefit directly from the military presence, but also incur major expenses to provide educational, public safety, medical, transportation, and other services and support programs to military installations and associated families. Although impacts are concentrated in such areas, many other communities play an important role in supporting military training but are located outside of the installations' direct economic influence zones. This separation of military training impacts from military economic benefits makes it difficult for these communities to prioritize military compatibility in their land use decisions. These counties may be asked to maintain military-compatible land uses such as farming or forestry that they perceive as providing limited tax revenue compared to commercial uses, particularly for land restricted by conservation easements.<sup>15</sup> Increasing awareness of military compatibility threats and impacts in these more distant communities has led the military services to increase inclusion of these 'away' counties in planning and management efforts.

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<sup>14</sup> 2009, Regional Growth Management Plan. Military Growth Task Force of North Carolina's Eastern Region, p. vi.

<sup>15</sup> There is a common mis-perception that residential land uses are a net financial benefit for communities. Studies show, however, that although residential land does generate more total revenue per acre than working lands, it requires much more public infrastructure and services, and thus the tax revenues generally are not sufficient to cover the full cost to the community. In contrast, working lands generate more public revenues than they receive back in public services, and so on average subsidize residential land uses; working lands thus have a similar impact on community coffers as other commercial and industrial land uses. (<http://www.farmland.org/documents/Cost-of-Community-Services-08-2010.pdf>)



Wind energy is one of the options being considered as a source of renewable, clean energy. However, North Carolina needs to be careful regarding the siting and design of wind turbines/farms so that they do not close off air corridors that are critical to military training activities. Wind turbines and other types of tall structures such as cell phone towers create low altitude collision hazards.<sup>16</sup> The nearby location of some

types of transmission lines (above ground) to connect the wind turbines to the local power grid can also present a flight hazard to low altitude flight operations. Another compatibility issue posed by wind turbines is their unique electromagnetic 'signature', which can degrade the effectiveness of communications, radar, and other electronic systems. Wind turbines built within the radar line of sight create a stream of false targets (bubbles) on the radar display and obscure the radar coverage behind the wind turbine array. This causes serious problems for military air traffic controllers, fire desk operators and unmanned aircraft collision avoidance observers, who depend on a crisp, uncluttered radar display to manage and direct aircraft movement. It increases the likelihood of collisions, and makes it more difficult for on-site defense forces to identify potential threats in time to react effectively. The only currently proven mitigation technique is to ensure wind farms are neither within radar line of sight of air defense radars nor within close proximity to military training routes. The constraints involved are site-specific, dependent upon the height of the radar unit, the height of the wind turbine, the separation distance between them, and terrain irregularities. In order to avoid training and operational limitations, the military services need to be informed about potential wind projects early in the planning process so that siting issues can be cooperatively worked out.

The military services have recognized that the military bases are embedded within local communities, and that engagement with those communities is important for sustaining the military's ability to function effectively. For example, a 2009 study commissioned by the Department of Defense's Office of Economic Adjustment concluded that collaboration between military installations and surrounding communities was a vital factor in successful encroachment mitigation and prevention. However, that study identified strong obstacles to effective collaboration, including the lack of resources in both the Department of Defense and the communities, and the lack of mutual understanding on each side about the other side's goals, needs, and processes. In addition, existing Department of Defense programs to mitigate encroachment were found to be essentially "one time, as needed" efforts that are not institutionalized, do not exert long-term influence, and that are not monitored to determine resulting impacts. The panel stated that "strong military and community leadership will be required to overcome these obstacles and to provide the impetus and resources to ensure successful collaborative processes that support installation mission readiness needs. Collaboration works better when it is part of

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<sup>16</sup> *Tall towers* are structures taller than 100 feet above ground level; these can pose a collision hazard if located within the flight paths used for low altitude flight operations.

a continuous process. Such a process enables mutual trust and understanding, can support ways to identify emerging problems, and can enable stakeholders to act in a timely manner when specific issues do appear.”<sup>17</sup>

Finally, there is an increasing need for timely sharing of information among the military, state agencies, local governments, and private landowners. The military needs to be informed of decisions with potential compatibility impacts early enough in planning processes to be able to work out mutually beneficial solutions with local representatives. Local and state governments in turn need to be informed about the locations of and requirements for critical mission activities. Information sharing mechanisms need to be developed that provide key information to the appropriate people without creating a security hazard for the military. The military services are working with the state and local governments to find appropriate mechanisms for information sharing.

## **B. Community Perspective**



*1. Local Governments:* Much of the land of importance to the military mission is in rural areas that have been hard-hit by long-term economic trends as well as the recent recession. Local governments in these areas, including small towns and unincorporated areas managed by counties, largely lack the trained personnel and other resources needed for strategic planning and land management. They therefore lack capacity to both

avoid crises and take advantage of opportunities. In addition, loss of military-compatible land uses is likely to occur in situations where community priorities do not line up with military priorities. This lack of alignment tends to be exacerbated when state and federal requirements and incentives are not coordinated and therefore pull communities in conflicting directions.

Land use and development patterns have enormous impacts on the responsibilities of local governments in services as diverse as road construction, water and wastewater infrastructure installation and maintenance, environmental protection, school construction, public safety, and taxation. Many communities in North Carolina are in need of water, wastewater, and transportation infrastructure, both to meet existing needs (including critical public health and environmental concerns, such as failing septic systems) and to provide for future economic development. However, the placement of infrastructure profoundly influences the locations and patterns of new growth. Building new water and wastewater in a previously undeveloped area infrastructure generally leads to loss of open space to new residential and commercial development. Policies and programs that direct development toward existing communities where infrastructure is currently in place can help foster cost-efficient and equitable growth that is compatible with military needs. Strategic investments in infrastructure can improve the local tax

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<sup>17</sup> Berteau and others, 2009. Strengthening National Defense: Countering Encroachment through Military-Community Collaboration. National Academy of Public Administration Report.

base, make public amenities more accessible to more citizens, improve quality of life for residents and reduce development pressures in outlying areas, thereby helping to protect working lands.

Many local jurisdictions in the state's military region lack the institutional resources needed to conduct comprehensive land use and community development planning. As a result, infrastructure decisions may fail to consider efficient land use, life-cycle costs, and system regionalization, and therefore not be conducive to long-term economic sustainability. Military compatibility is rarely considered. In general, communities in North Carolina's military region need additional guidance or assistance from state agencies or regional planning bodies to enable them to make infrastructure decisions and develop plans to ensure new growth is not at odds with sustaining the military mission.

Local governments influence statewide transportation infrastructure planning through an established network of metropolitan and rural planning organizations. While there is general consensus that major transportation improvements are vital for economic development and military mission support, there remains a critical need to integrate transportation improvements with planning for the new growth these improvements would facilitate so as to ensure military compatibility needs are addressed. For example, future improvements to I-95 and US-17 are under study in eastern North Carolina. Both projects are cited as critical for military access, yet unplanned development along these corridors could worsen encroachment upon vital mission training and operational areas.



*2. Private Landowners:* Ninety percent of North Carolina's lands, including those of concern to the military services, are privately owned. Therefore, any effort to conserve military-compatible land uses must consider the needs and concerns of private landowners, and be designed to gain the support and participation of those landowners.

Private landowners face increasing economic pressures to convert farmland and working forests to non-working land uses. Pressures include taxes, loss of economic viability of production activities, and increasing market value of land due to development pressure. Profitability of working lands has been increasingly difficult to achieve over the past couple of decades for a number of reasons, including globalization and consolidation of corporate interests. Increasing consumer demand in North Carolina for locally and sustainably grown food is creating some opportunities for smaller farms, but has had much more limited impact on larger farm operations. Additional economic pressures are anticipated on these working lands with potential reductions of resource assistance

programs in the upcoming US Farm Bill and the ending of the tobacco buyout program in 2014, which will create a revenue gap for private landowners.<sup>18</sup>

Property tax rates can contribute to development pressure. Property taxes are based on appraised fair market value of land and buildings.<sup>19</sup> In rapidly urbanizing areas, the fair market value of a parcel of undeveloped land will be high relative to that land's value as working lands, reflecting the fact that developing a parcel of land greatly increases the purchase price of that land. Basing property taxes on potential future land use rather than present use increases the costs of working that land, which negatively impacts the landowners' ability to remain economically sustainable. Higher taxation rates on working lands therefore increase the economic pressure to shift from military-compatible to incompatible land uses. North Carolina's Present Use Valuation Program for agricultural, horticulture, forestland, and wildlife can reduce the tax burden and thereby reduce development pressure. This generally does not result in a net loss of income to local communities, because working lands contribute more in taxes than their cost of services, even based on present use valuation.<sup>20</sup>

Another factor of concern is the dwindling and aging farmer and forester population. Many are nearing retirement age, and the average age of farmers in North Carolina is 57 years old. Fewer and fewer young people are becoming farmers and foresters due to the tremendous start-up costs, and so there are fewer people interested in keeping these working lands in production. The next ten years are a critical time of transition as current landowners age out – the state's working lands are going to change hands. Most farmers and foresters have not considered how they want to transition their land. They do not generally seek out information or support in how to retain their property, or develop a plan for its transfer as working lands upon their death. Outreach programs and assistance programs that could help with transition planning currently are limited. In the absence of such a plan, the heirs, not wanting to farm, commonly sell the land to commercial developers to get the money and/or avoid inheritance taxes they cannot afford to pay. If the next generation continues to choose not to work the land, then much of that land will be converted to uses that are less compatible with military operations.

Making careful plans for the transfer of ownership of farm property and assets from the current owner to the next can be enough to preserve a farm or working forest for decades. Many options are available when planning an estate or land transfer. Landowners can increase the likelihood of a successful transition that maintains the viability of the farm by obtaining professional assistance early in the process. Navigating the complexities of

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<sup>18</sup> "Tobacco quota buyout legislation (P.L. 108-357, Title VI, Fair and Equitable Tobacco Reform Act of 2004) eliminated federal farm price support for tobacco at the end of the 2004 crop year. Tobacco quota owners and active producers will be paid about \$9.6 billion as compensation for lost rents and to aid in the transition to a free market system." (<http://www.nationalaglawcenter.org/assets/crs/RS22046.pdf>)

<sup>19</sup> *Fair market value* is the estimated price at which property would change hands between a willing buyer and a willing seller. *Present use value* is the value of land in its current use as farmland or forestland, based solely on its ability to produce income, assuming an average level of management.

<sup>20</sup> <http://www.farmland.org/documents/Cost-of-Community-Services-08-2010.pdf>

transition planning is challenging, however, and more outreach and assistance is needed to help landowners develop appropriate plans.



### **C. Resource Conservation Perspective**

Productive farmland and forestland in North Carolina is being lost to development at an alarming rate. North Carolina is a national leader in net loss of both farmland and forestland due to urbanization, and this pace is expected to continue. Forest losses from urbanization and development are permanent – it is effectively impossible to restore removed soils and seedbanks. It is also extremely difficult and expensive to restore developed land back to a productive state for farming. The loss of these working lands has resulted in increased financial threats to families that live and work on the land, and loss of the many public benefits provided by these lands.

The loss of forestland has a number of other negative consequences for communities, including increased wildfire hazard. Development has not only reduced the total acreage of forest, it has also resulted in expanded areas of intermingled homes and forest, with 12 million acres now categorized as ‘wildland-urban interface’, areas where homes and neighborhoods occur next to or within fire-prone natural areas. In 2000, North Carolina had more housing units located within the wildland-urban interface than all but two other states.<sup>21</sup> The remaining forestlands are threatened or in poor condition: natural disasters have damaged over 10 million forested acres since 1986, and insects, disease, and non-native invasive plant species are causing significant damage to the ecological and economic vitality of the state's forests.

Ongoing efforts to conserve the Longleaf Pine ecosystem in eastern North Carolina are central to conserving working lands that support species protection, military training, natural resource preservation, and hurricane damage mitigation. Conservation activities on the military installations have produced significant progress in recovering the Longleaf Pine ecosystem and endangered species such as the Red-Cockaded Woodpecker, but much more is needed on lands outside of the military installations and training areas to reduce the limitations on training activities posed by conservation measures. Some military installations have reached the point where critical training is jeopardized as a result of current conservation efforts on the installations.

North Carolina’s fisheries are also dealing with serious challenges. While coastal North Carolina has historically supported a strong commercial fishing industry, a decrease in the total amount of seafood landed in North Carolina was observed from 1997 to 2007.<sup>22</sup> Although the specific causes for this decrease are currently debated, the three main

<sup>21</sup> Stewart SI, Radeloff VC, Hammer RB (2006) The wildland–urban interface in the United States. *Ecol Appl.* 15(3):799–805 ([http://wildfirelessons.net/documents/The\\_WUI\\_in\\_the\\_US.pdf](http://wildfirelessons.net/documents/The_WUI_in_the_US.pdf))

<sup>22</sup> McInery, S. A., and Bianchi, A. J., 2009. An Economic Profile Analysis of the Commercial Fishing Industry in North Carolina Including Profiles for Interjurisdictionally-Managed Species. NCDENR.

reasons for fish stock declines in coastal waters are over-fishing, habitat loss, and declining water quality. While much of the concern over declining fish stocks has been attributed to overfishing, habitat loss and degradation can make a stock more susceptible to overfishing.<sup>23</sup> The economic recession beginning in 2008 has greatly slowed new development. However, because population along the coast has been growing for decades, pollutants and habitat stressors from a diversity of sources remain a significant threat to coastal fish habitat.

## **V. Opportunities**

State agencies, local governments, non-profit organizations and other key stakeholders operate in a context of limited resources and multiple overlapping and sometimes conflicting critical needs and objectives. Under such conditions, maximum return on the investment of public funds requires leveraging of resources through coordination. Collaborative planning and the creation of working partnerships can help stretch resources, reduce duplicative work and leverage monies toward common goals and achieve multiple benefits, and can assist in avoidance of counterproductive decisions and costly duplication of effort. Therefore, those engaged in decision making processes at both state and local levels should aim for design of systemic, high-leverage, enduring solutions that result in multiple benefits which support all partners and affected communities.

Land uses that are military-compatible also provide economic and environmental returns. Therefore, the inclusion of support for the military mission as a major criterion in land use planning, infrastructure, and other public sector decisions can serve as a mechanism for moving towards integrative strategic planning that produces sustainable progress towards multiple goals.

Effective tools and mechanisms have been developed and implemented to encourage consideration of ecosystem services, wildlife habitat, and working lands preservation in land acquisition and management processes along with economic development criteria, although available funding is arguably inadequate to meet the identified need. We suggest that the benefits obtained from land acquisition, landowner agreements, and management processes could be significantly enhanced by including military priorities as an equal criterion within an integrative set of tools and mechanisms. Such a systems-based approach would take advantage of the fundamental compatibility of military needs and conservation priorities, as well as the economic contributions of rural landscapes. It would provide decision makers with the information they need to make choices that produce the greatest benefits to landowners, the community, and the state with the lowest chance of unanticipated negative consequences.

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<sup>23</sup> 2010 Coastal Habitat Protection Plan

The key to achieving multiple benefits is prioritizing actions that make use of *leveraging* and *stacking* to enhance outcomes. 'Leveraging' refers to the use of one source of funds to attract additional sources of funds.<sup>24</sup> 'Stacking' refers to the practice of allowing a conservation project to produce credits for multiple markets<sup>25</sup> and thus through which landowners receive multiple ecosystem service payments for services generated on a single land parcel.<sup>26</sup> Although the concept of stacking has largely been formally applied to markets for ecosystem services, it can be usefully applied to the more general challenge of prioritization to achieve multiple benefits.

A strategy focusing on cooperation to develop projects that achieve stacking and enhance leveraging has the potential to provide benefits at the local and regional as well as the state level. Regional cooperation among local planners could assist local jurisdictions in making more effective use of limited resources, and could enhance the region's ability to obtain additional resources. Such cooperation would have positive impacts well beyond land use planning. For example, sharing of knowledge and expertise could enhance each jurisdiction's ability to conduct coordinated decision-making about public investments in infrastructure, schools, and the entire of range of services that local governments provide. Counterproductive decisions and costly duplication of effort could be avoided if county school system administrators, transportation agencies, public health providers, parks and recreation professionals, city public works departments, and others work together to coordinate capital facilities planning with land development.



Much work has already been done in our state that makes such synergistic planning possible to achieve. Local governments (county and municipal) have become active in land conservation programs, through local open space, farmland preservation, and watershed protection programs. State agencies, the military services, and regional partnerships have developed maps and decision criteria that can enhance each community's ability to assess the implications of the land use and infrastructure priorities they develop. More work is needed to complete development of these maps and decision criteria, and to integrate them into a set of decision tools that is both useful to and useable by resource-limited county and municipal governments.

A multiple-benefits strategy for land use planning and management needs to include

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<sup>24</sup> This definition differs subtly from another common, definition - the process by which private sector capital is mobilized as a consequence of the use of public sector finance and financial instruments - and with the traditional conceptualization of leveraging as the degree to which a business or an investor utilizes borrowed funds.

<sup>25</sup> Fox, J., Gardner, R. C., and Maki, T., 2011. Staking opportunities and risks in environmental credit markets. *Environmental Law Reporter*, 41(2):10121-10125

<sup>26</sup> Cooley, D., and Olander, L., Stacking ecosystem services payments: Risks and solutions. Nicholas Institute Working Paper, Nicholas School of the Environment, Duke University.

focused attention to economic development in the state's rural communities. Our rural communities have experienced decades of economic decline, and need to be more fully included in state and regional economic development planning in order to turn things around. Rural economic development can take advantage of opportunities offered by sub-sectors with growth potential within agriculture and forestry; new market-based opportunities for keeping working lands in production are being provided by the growing consumer demand for locally and sustainably grown food, increasing export marketing efforts in the global market, and by efforts to develop and increase interest in the use of North Carolina sources of alternative fuel and bio-based products.

The state's farms would benefit from additional resources dedicated to regional, statewide, national and global marketing; such efforts are important for keeping large land tracts in forestry and agricultural production. In addition, a market-based farmland protection strategy could help North Carolina's farmers and supporting businesses capture a larger share of the local food dollar. Demand for sustainably and locally grown foods has been growing nationwide despite the current economic downturn. North Carolina currently has the production land resources for producing more vegetable crops and animals that could be used for local consumption. However, insufficient physical infrastructure and business and logistical support exist to allow these markets to be accessed by small and mid-sized farmers. A few pilot projects across the state are starting to test business models with the potential to address key processing and distribution challenges facing smaller producers. However, funding for these projects has been limited.<sup>27</sup> Key barriers to increasing local food sourcing by institutional food service operations have been identified, and efforts to overcome them need to be expanded.

A market-based land protection program is currently being developed in eastern North Carolina. USMC-Marine Corps Installations East is partnering with the North Carolina Farm Bureau to pilot a market-based conservation system focused on providing incentives to private landowners to maintain their land in military mission compatible uses. Through a reverse auction process, landowners will compete for participation in the program by submitting bids that include the area of land, contract length, and the amount of annual payment they expect. Using ranking criteria that prioritize military interests, the most cost-competitive contracts for meeting these interests will be accepted into the program. With input from stakeholders, this group has identified a military training route in eastern North Carolina as the focus of the pilot project. By using a system that is designed and operated with engagement from landowner organizations, the program is more likely than other available tools to gain landowner interest and acceptance. By using performance contracts instead of conservation easements, the program should be more cost-effective to the military and other sponsors, and is more likely to be widely accepted by landowners in the target area.<sup>28</sup>

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<sup>27</sup> <http://ncsustainablefood.wordpress.com/working-issue-groups/retail-food-service-markets/>

<sup>28</sup> <http://irntr.tamu.edu/media/233187/ncmtr.pdf>

## **VI. Recommended Strategy**

### **A. Criteria and Constraints Guiding Strategy Development**

#### **1. Considerations and Constraints**

The objective of the Task Force was to develop recommendations for supporting and growing North Carolina's National Defense presence through sustaining economic development and natural resources that are congruent with the missions of North Carolina's military installations for now and the future. The recommendations presented in this report are based on a multiple-benefits strategy that emphasizes coordination among state agencies, local governments, the military services, and relevant non-governmental organizations.

The Task Force based its strategy on a number of guiding concepts. These include:

- To be effective, the strategy needs to increase the alignment of individual/local interests and collective goals. North Carolina's undeveloped lands contribute enormously to the state's current and future economy and well-being. Land use decisions are made by individual landowners and local governments, whose interests do not necessarily align with military compatibility, working lands protection, or natural resource conservation goals.
- Combined identification and prioritization of critical requirements for the military services and local and state governments is a prerequisite for joint actions leading to mutual mission accomplishment and multiple benefits. Non-governmental organizations that play a significant role in conservation of undeveloped lands should also be included in this process.
- Development of a strategy that can meet the needs of multiple stakeholders requires an understanding of the needs and expectations of key stakeholders. This can only be achieved if those stakeholders are actively engaged in the process. Therefore, the process should include an early and strong outreach and engagement effort that is coupled with mechanisms for meaningful participation by interested parties.
- To achieve maximum leverage of limited resources and avoid duplication of effort and potential loss of experience-based knowledge, the strategy should focus on mechanisms that can enhance the effectiveness of existing land use planning and conservation programs.
- The state can maximize leveraging of funds from multiple sources by establishing closer partnerships and aligning priorities with the federal government.
- Every landowner's property is important.

The recommended strategy is intended to provide sufficient flexibility to address multiple priorities and capture a range of benefits. Decisions that impact military compatibility are made by many different agencies and offices at state, county, and local governmental levels, based on different criteria and intended to address different issues and concerns. Many types of funding are awarded at the county level; zoning decisions are made at the local level; and purchase and development decisions are made at the parcel level. The

boundaries of areas important to military training and operations generally do not correspond to political boundaries.

## 2. Prioritization Criteria

The resources available for conservation activities are limited. To achieve maximum benefits with those limited resources, a prioritization system is needed that can focus conservation planning efforts on places with the highest value and that are facing the greatest threats. Individual parcels of undeveloped land differ in their contribution to military compatibility, working lands protection, and natural resource/ecosystem conservation. The type and pattern of land uses surrounding a particular parcel is another important factor; a single undeveloped parcel that is surrounded by development provides fewer benefits than a similar parcel that is connected to other undeveloped parcels. Critical natural processes operate at a landscape scale, so conservation is most effective in places where a “critical mass” of connected land is protected through conservation measures. An effective prioritization system will encourage ‘clustering’ of protected lands to maximize multiple natural and economic resource benefits provided to the public by working lands and ecosystems.

The Task Force recommends that three categories of prioritization criteria be included in the prioritization system – military, working lands, and natural lands/ecosystems. A brief description of each follows; these are intended as guidelines for more in-depth consideration during development of tools and incentive programs.



### a. Military Compatibility Criteria:

The military compatibility criteria focus on factors that degrade or have the potential to degrade the military's mission capability. Areas of concern include: installations, operational ranges, training areas, associated special use airspace, air training routes, sea space, radio frequency spectra, and other locations within North Carolina's combined military footprint.

Steps can be taken to address these concerns using criteria predicated on the question “Does the activity, event, change, or development on a given piece of land, sea, or air cause any of the following impacts to operations and training?”

Highest priority would be given to land uses that do not contribute to any of these negative impacts:

- Creation of areas that military aircraft would have to avoid during training
- Reduction of time during which a training area would be available for use
- Prohibition of types of operations and training events
- Reduction of access to training areas or routes
- Fragmentation of training areas and scenarios

- Limitations on application of new technologies
- Restriction of flight altitudes
- Limitations on tactical training
- Limitations to night and all-weather operations and training
- Reduction of live-fire proficiency training
- Increase in personnel requirements, costs, or safety risks impacting the military and communities

As a first step in operationalizing these criteria, representatives of the military services in North Carolina have delineated a combined military-mission footprint. They are in the process of defining prioritization tiers within this footprint based on the type and degree of military use in and impacts on communities. Tier 1 will consist of military “host” counties and municipalities where major military installations are located or in their immediate vicinity. Tier 2 will include counties and municipalities where major training assets are sited such as special use airspace, outlying fields, training ranges, and bombing targets. Tier 3 will cover primarily rural counties located under military training routes and terrain-flying routes not accounted for within Tier 1. Tier 3 will also include counties used for occasional military training such as small-unit infantry maneuvers or helicopter landing practice on remote tracts of land.

The characteristics that contribute to military compatibility vary from parcel to parcel, so individual parcels within the tiers will vary in their importance to the military. Finer-scale prioritization criteria are needed in order to provide information to communities that can effectively influence land use decisions. The different military services have different operational and training requirements, so this finer-scale prioritization process needs to be flexible enough to allow each installation to designate priorities based on their own special interests and requirements. A special prioritization category might be established for lands that are identified as important by more than one installation.

A brief description of the state’s seven military bases, their missions and training priorities is provided in Appendix 1.

b. Working Lands Criteria:

North Carolina’s Working Lands Protection programs have developed prioritization criteria for the different categories of working lands, and have been using these criteria to guide existing incentives programs. Only minor modifications are needed to adapt these existing criteria to include military compatibility.

Working lands can be protected through incentives using criteria predicated on the question “Does the activity, event, change, or development on a given piece of land, sea, or air cause any of the following impacts to working lands and associated economic activities?”

Highest priority would be given to land uses that do not contribute to any of these negative impacts:

- Loss of connections among producers, suppliers and customers

- Degradation of agricultural infrastructure and reduction in sustainability of agricultural and forest economy
- Fragmentation of an existing cluster of protected working lands
- Increase in development pressure on working lands by new public works infrastructure
- Interference with working lands protection by local government land use decisions
- Increase in wildfire hazard

The North Carolina Working Lands Group, a collaboration among state agencies, military services, and non-governmental organizations, has been working to integrate these criteria so as to link the conservation efforts of federal, state and local agencies in the vicinity of military installations to address conservation, economic and sustainability issues. This report draws from their priorities and recommendations.



c. Natural Resources/Ecosystems Criteria:

North Carolina's natural resource conservation programs have developed prioritization criteria for different categories of natural resources, and have been using these criteria to guide existing incentives programs. The focus of these programs is on conserving healthy aquatic and terrestrial habitats, landscape function and connectivity. Only minor modifications are needed to adapt

these existing criteria to include military compatibility.

Natural resources can be protected through incentives using criteria predicated on the question "Does the activity, event, change, or development on a given piece of land, sea, or air cause any of the following impacts to natural resources, environmental quality, or long-term economic opportunities tied to natural resources?"

Highest priority would be given to land uses that do not contribute to any of these negative impacts:

- Alteration of water quality and hydrologic flow patterns in surface waters away from naturally occurring conditions
- Decline in air quality
- Reduction in abundance and diversity of economically and ecologically important terrestrial, aquatic, and marine species
- Degradation of well-functioning ecosystems that are still essentially intact
- Increase in vulnerability to natural and human-induced disasters such as floods, hurricanes, spills of toxic materials, anoxic events, and sea level rise.
- Limitation of economic opportunities in 'green' industries that create jobs by enabling environmental protection, energy independence, waste reduction, and resilience to climate change.
- Decline in tourism and recreation based on the environment and natural resources

More detailed information about these priorities and additional assessment and planning

tools are available at One NC Naturally,<sup>29</sup> a website developed and maintained by the North Carolina Department of Environment and Natural Resources to promote and coordinate the long-term conservation of the State's threatened land and water resources. A more general overview of the State's current natural resource goals and supporting activities is provided by in the North Carolina Department of Environment and Natural Resources 2009-2013 Strategic Plan.<sup>30</sup>

### **B. Integrative Prioritization Map**

An Integrative Prioritization Map can assist in stacking multiple prioritization criteria so as to allow delineation of areas with high potential for providing multiple benefits. Such a map is essential for development and implementation of an effective program that advances multiple mission priorities and common goals. Primary focus areas for multiple-use incentive programs can be identified by combining maps of local governmental land resource priority areas with maps showing recognized lands of importance for agriculture, forestry, wildlife, and natural resource protection and with maps showing military priority. Overlaying key compatible and priority areas can point to opportunities to stack or combine the incentives and resources in the most effective and mutually advantageous ways.

The Task Force has taken the first steps developing an integrative map that delineates state and federal (Military Services, Corps of Engineers, US Fish and Wildlife Service, National Resources Conservation Service, US Forest Service, National Oceanic and Atmospheric Administration, etc.) current and future geographic areas of interest in North Carolina. The integrative map is intended as a tool for targeting of compatible resource, air, lands, and waters use initiatives that support mutual mission accomplishment and multiple benefits. The new element of this integrative map is the combined military mission footprint with priority areas indicated; a preliminary version of this map is currently under development by the Task Force. Maps showing the approximate boundaries of the compatible resource footprint for each of the Military Services are included in Appendix 3.

Additional work is needed to fill gaps in key layers and to extend all of the map layers across the state. Map layers that would be useful for planning purposes include transportation, utilities, energy corridors, wave and wind energy locations and placements, and features of cultural and historical importance.

### **C. Incentives**

The Task Force suggests that an integrative land use incentive program that builds from and enhances current incentive programs would assist state agencies, the military services, local governments, and other partner organizations to move towards more effective and mutually beneficial land use decision making. Such an integrative land use incentive program could:

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<sup>29</sup> <http://www.onencnaturally.org/index.html>

<sup>30</sup> [http://portal.ncdenr.org/c/document\\_library/get\\_file?p\\_l\\_id=328677&folderId=68499&name=DLFE-17762.pdf](http://portal.ncdenr.org/c/document_library/get_file?p_l_id=328677&folderId=68499&name=DLFE-17762.pdf)

- Encourage private landowners to continue military-compatible uses such as agriculture, forestry production, and wildlife conservation in areas that are determined to be important for military readiness and training activities.
- Foster economic growth, infrastructure, and land development policies that focus growth planning and development in areas that are already not military-compatible or are of limited importance for military readiness and training activities, and that are of limited value for protection of working lands and natural resources/ecosystems.
- Promote development and expansion of federal, state, local and public-private partnerships to create supportive conditions in North Carolina for military training and readiness, as well as conservation of natural resources and rural livelihoods.

The rapidity of population growth and land conversion in North Carolina and the extent of impacts of this conversion mean that a regulatory approach to land protection by itself will not produce these multiple benefits. In addition, it is not economically feasible to purchase and permanently preserve the large amount of land required to meet military compatibility needs and other land use conservation goals. Therefore, targeted incentives that can counter development pressures are required for strategic preservation of compatible land uses. Several land use incentive programs currently are in place in North Carolina (Appendix 4) that target working lands and natural resource conservation; military compatibility has not been a focus of these programs.

The military services have identified two priorities for incentives programs: helping local jurisdictions develop and maintain military-compatible land uses, and leveraging the economic benefits of military installations to support military-compatible economic development in both host and 'away' communities. A military compatibility incentive program will need to focus on two levels of decision-making. First, the vast majority of lands deemed critical or important to sustaining the mission of North Carolina's military installations are privately held. Therefore, the protection of military-compatible land uses will require the engagement and cooperation of thousands of North Carolina property owners. Second, the counties and municipalities of the state's military regions must choose to consider land compatibility in their comprehensive planning and capital investment planning processes.

Private landowners need to make land management decisions based on sound business decisions. We cannot expect landowners to defer development or relinquish full, unobstructed use of their land without appropriate compensation. Although their support for the military is strong, landowners will only be able to keep working lands in production if they can earn money from that land. In addition, private landowners understandably resist imposition of limits on what they can do on their property.

The tools most commonly used by local governments for shaping development patterns are local zoning ordinances. In North Carolina, cities have exclusive land use regulatory authority within corporate limits, and most cities with a population of over 1,000 have enacted zoning. Counties have exclusive jurisdiction in unincorporated areas, areas outside municipal limits. Twenty-one counties in North Carolina have no zoning, and

another 15 have only partial county zoning; many of these are eastern counties within the combined military mission footprint (Figure 2). Thus, local land use regulatory ordinances do not now exist for many of the rural areas of concern for future military compatibility. This lack of ordinances limits local capacity for planning and management of land uses/structures and infrastructure improvements that can preserve military compatibility and natural resources and their contributions to long-term economic health of local communities.

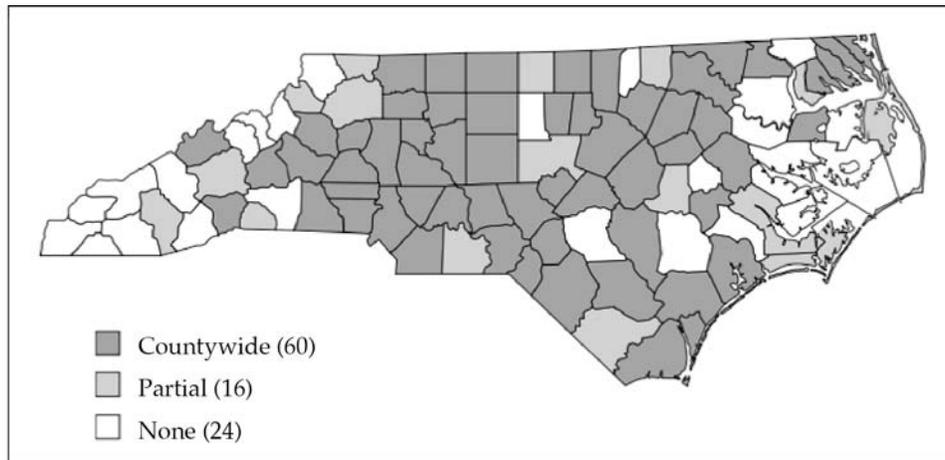


Figure 2. North Carolina Counties that had adopted zoning as of 2004.<sup>31</sup>

Ecosystem and working lands conservation programs across the nation have demonstrated that targeted, strategic investments in well-designed incentive programs can be a cost-effective way to achieve systemic benefits at the scale of landscapes.<sup>32</sup> Such incentives can be monetary, but can also include procedural changes that simplify and speed up required tasks. A well-designed incentive program can promote coordination and partnerships, and can foster innovation. However, poorly designed programs or lack of coordination among multiple programs can limit the value of such programs. Assessment of conservation incentive programs has also shown that disparate conservation programs, each with a complex set of incentives and participation rules, are less effective and efficient than a flexible conservation program that offers several incentive mechanisms to choose from and combine.<sup>33</sup>

Incentives can also be used to direct new development into areas where substantial development and major public facilities are already in place. Designation of *Development Focus Areas* could focus public investments in infrastructure to limit incompatible land uses in areas of particular importance for the military mission and/or natural resource conservation while enhancing regional economic development opportunities.

<sup>31</sup> Source: Owens, D. W., and N. Branscome, 2006. An Inventory of Local Government Land Use Ordinances in North Carolina. Special Series No. 21, UNC School of Government, Chapel Hill, NC.

<sup>32</sup> Casey, F, S. Vickerman, C. Hummon and B. Taylor. 2006. Defenders of Wildlife. "Incentives for Biodiversity Conservation: An Ecological and Economic Assessment."

<sup>33</sup> Casey, F, S. Vickerman, C. Hummon and B. Taylor. 2006. Defenders of Wildlife. "Incentives for Biodiversity Conservation: An Ecological and Economic Assessment."

In addition to enhancing incentives, it is important to identify and eliminate or reduce unintended *disincentives* – regulations or procedures designed for some other purpose that inadvertently encourage landowners and local governments to make choices that make it more difficult to preserve public goods and achieve multiple benefits. An example of a procedural disincentive is the length of time required to complete the state-level review process for land protection acquisitions; sales to private developers can be accomplished much more quickly and with less effort. Landowners cannot be expected to ignore offers from developers and delay selling their land for an extended period of time while the state works through a ponderous decision process. This disincentive could be reduced through development of a fast-track process in which lands deemed important to the long-term sustainability of the military bases can either go through a shortened review process with fewer steps or with pre-approval built in at more points. Likewise, County and local governments might also consider streamlining permitting processes where appropriate.

Incentives can take many forms, with many tested tools, techniques and strategies that can be used to incentivize both landowners and local governments to support military land compatibility goals. For local governments, the list includes ‘growth incentives’ – strategies to boost public and private investment in established development areas, as well as regulatory tools for protecting compatible uses. Private landowners have access to an assortment of incentives and economic enhancements for working lands and natural lands conservation. Work is needed to integrate military compatibility criteria into these tools, and to find ways to link the various programs to achieve stacking and leveraging. By approaching incentives holistically, and looking for multiple benefits, it will be possible to increase the return on public investment into protection of value land uses and resources.

#### **D. Institutionalization**

Success in sustaining working lands to support North Carolina’s two largest economic engines as well as our state’s unique habitats will require a systemic approach and cooperative planning and management processes among agencies and across state, federal, local, and military service levels. Such integrated actions can be accomplished to large degree using current structures at all of those levels, with the addition of mechanisms for cooperation and coordination through which key agencies can work together to develop compatible requirements and priorities. The North Carolina Commanders Council can share priorities with local, county, and state departments through existing leadership and planning forums and commissions, with coordination and management being accomplished through the Governor’s Military Affairs Advisor and in conjunction with North Carolina’s cabinet departments.

The recommendations presented in this report describe a practical strategy to achieve multiple benefits. The Task Force’s priority recommendation is that these recommendations be implemented – the best strategy can accomplish nothing unless it is enacted. All state-level departments, the Legislature, and local governments need to develop implementation plans for both short- and long-term objectives. Appropriate

groups to conduct implementation activities are: the North Carolina Working Lands Group for natural resources, the Governor's North Carolina Military Affairs Advisory Commission Executive Group for policy and legislative support, and the Interagency Leadership Team for joint policy-related transportation and energy. Local integration can be accomplished through Councils of Government, the Association of County Commissioners, and existing cooperative arrangements between the military services and local communities (including the Military Growth Task Force and the Fort Bragg Regional Alliance) in concert with community liaisons from each of the military services. Federal coordination (among the Department of Defense, Military Service Departments, and other key Federal Agencies) can be expanded through interactions with and among current regional Federal agency representatives. In addition, North Carolina's representative to the Southeast Partnership for Planning and Sustainability (SERPPAS) can serve as a liaison directly to the executive levels of the Department of Defense and other relevant Departments (Interior, EPA, Energy, etc.).

Most importantly, cooperative and integrative planning needs to become standard operating procedure for the military installations, state agencies, and county and municipal governments. Organizations that could help with this transition are Regional Councils of Government, which were formed to assist and provide technical support to local governments; the North Carolina Association of County Commissioners; and the North Carolina League of Municipalities. In addition, private landowners and other key stakeholder groups need to be actively engaged in the process. The combined action by the governmental partners listed above can leverage outreach resources to accomplish this critical stakeholder involvement.

State Executive Orders, with limited legislative action to update and clarify current legislation (the Military Affairs Act and North Carolina Military Affairs Advisory Commission Charter) could be used to formalize the roles of the North Carolina Working Lands Group, the Interagency Leadership Group, and the Governor's Military Affairs Advisor in the development and implementation of integrated policy and procedures across the cabinet departments related to land use incentive mechanisms and programs.

A similar, although temporary, task force, the Offshore Wind Economic Development Task Force, was authorized by Executive Order 96. This group was charged with the task of examining state laws and regulations to determine the policy framework and incentives required to support offshore wind development. A similar Executive Order could authorize the Land Compatibility Task Force to identify the role of existing state and federal land use planning, economic development, and conservation programs in supporting military compatibility while also achieving working lands protection and natural resource/ecosystem management goals. The Task Force could also be charged with determining additional authorities needed to support this initiative. The Task Force could propose related legislation to protect military training missions, including issues such as protection of dark skies, regulation of tall structures and wind turbines, and military training real estate disclosures. The Task Force could also make recommendations on amending the North Carolina Military Support Act to support land use planning goals.

## **VII. Recommendations**

The Task Force has determined that a well-designed cooperative and integrative land use planning program can allow North Carolina to preserve military compatibility through actions that also promote working lands protection and natural resource/ecosystem conservation, while promoting sustainable economic development and enhancing rural livelihoods. Therefore, the Task Force recommends that the State of North Carolina build on existing land use and conservation programs to develop and implement such a program that enables State agencies, the military services, local governments, and non-governmental partners to work towards multiple goals and achievement of multiple benefits. The recommended core elements of this program are: an overarching organizational infrastructure and mechanisms to encourage and enable communication and cooperation among all agencies, organizations, and key stakeholder groups; a multiple benefits prioritization framework that can assist existing incentives programs to achieve the benefits of leveraging and stacking and that can guide development of an enhanced incentives program; and an expanded and coordinated program to provide land use planning and compatible economic development assistance to local governments.

Following are the Land Compatibility Task Force's specific recommendations for actions to achieve the objectives described in this report.

The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group should be directed to guide implementation of the following recommendations:

1. a. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group should develop a Partnership Agreement to promote long-term collaboration. The Partnership Agreement should include the following as Signators: the senior members of the North Carolina Working Lands Group,<sup>34</sup> the Secretary of the North Carolina Department of Commerce, and representatives of the North Carolina Association of County Commissioners, North Carolina League of Municipalities, North Carolina Soil and Water Conservation Districts, and the public/private higher education system. This group should be charged with integrating the recommendations from this report into the existing Strategic Plan of the North Carolina Working Lands Group.
- b. Upon the Governor's approval of this report, the report will be forward to the Signators of the North Carolina Working Lands Partnership Agreement for acceptance.
- c. The Task Force recommends that the Governor, in concert with the Executive Committee of the North Carolina Working Lands Group, share the recommendations of this report with the General Assembly and request agreement in principal with the report. We further recommend that the Executive Committee should arrange for an

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<sup>34</sup> North Carolina Department of Environment and Natural Resources, North Carolina Department of Agriculture and Consumer Services, North Carolina Cooperative Extension Services, North Carolina Farm Bureau, and North Carolina Soil and Water Conservation Commission.

Annual Report to be submitted to the Governor's Office and General Assembly to apprise them of progress towards implementation of the recommendations.

2. a. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group ensure that the Working Lands Group complete the Integrative Prioritization Map and establish a comprehensive state-wide land use prioritization process that follows the framework outlined in this report and described in Appendix 3. The process will create clear priorities and incentive mechanisms that integrate not only private/public interests, but military, federal, state, county, and municipal land use actions for protecting or investing in specific land uses or resources. The Task Force further recommends that the Executive Committee of the North Carolina Working Lands Group seek out additional resources to help support this process.
  - b. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group be directed to work cooperatively with the military services and designated working lands protection and conservation partnerships to ensure that the prioritizing and incentive mechanisms promote multiple benefits through stacking of incentives and leveraging of funding so as to achieve maximum benefit from resource expenditures.
  - c. The Task Force further recommends that the Executive Committee of the North Carolina Working Lands Group oversee development of a list of suitability criteria and non-suitable land uses changes that can be used in county and municipal decision processes to determine which land use change decisions must have review/consultation with the military and/or state-level agencies. The list should focus on the types and location of economic development that are compatible with the military mission, and how others that are unsuitable might be rendered compatible through thoughtful design choices.
3. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group oversee development of an integrative incentives program that includes military support zones and applies the prioritization process to promote projects that maximize positive outcomes through leveraging and stacking to directly protect multiple-benefit land uses and encourage localization of development within designated areas, thereby reducing development pressure on priority lands. The program should incorporate the criteria sets listed in this report, and should be based on the Land Use Sustainability Framework presented in Appendix 3 of this report, along with the combined military footprint map currently being developed by the military services. The integrative incentives program should build upon existing incentives programs and include the priorities and incentive mechanisms developed during the implementation process (see Recommendation 2a).
  4. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group oversee development of a clearinghouse system to manage the land use sustainability prioritization process and integrative incentives program, as described in Appendix 3. This system shall provide guidance to local and state governments on land use and resource utilization policies.

5. a. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group oversee development of a mechanism to review current local zoning ordinances and land use plans to assess their compatibility with the criteria outlined in this report and, working with the League of Municipalities and Association of County Commissioners, develop procedures to address identified inconsistencies.
- b. The Task Force recommends that the Governor's Office direct the Community Planning Division of the North Carolina Department of Commerce to help implement the land use sustainability program by providing planning services to cities and counties without the capacity to address the planning recommendations made in this report. These actions must ensure that appropriate and sufficient planning and economic development support is provided to local communities to both preserve compatible land uses on priority lands and to assist military-impacted communities attract new economic development, including defense-related industries.
6. The Task Force recommends that the Governor's Office and General Assembly empower the Executive Committee of the North Carolina Working Lands Group to work with local governments and the military installations to resolve immediate encroachment challenges and to develop appropriate institutional mechanisms for each major military installation to assure effective ongoing coordination of military and local government land use planning, regulation, investment, and education.
7. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group seek mechanisms to better ensure that funding provided by the state for infrastructure (including but not limited to utilities, energy, communications, and transportation) does not contribute to incompatible land uses, and does support suitable uses resulting in multiple benefits for the state and its counties.
8. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group facilitate partnerships to coordinate, leverage, and create programs for the recovery of Threatened and Endangered Species among state, local, federal and non-governmental conservation efforts in areas away from military installations and training areas. This will provide more equity in recovery methods as the military are currently responsible, and accountable, for the majority of these efforts. Such actions will also relieve mandated limitations on military training activities.
9. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group oversee development of an outreach plan to engage with and educate the public on land use sustainability issues. This outreach effort should target military decision makers, local and state planners, local decision makers, public interest groups, and others as designated.
10. The Task Force recommends that the Executive Committee of the North Carolina Working Lands Group oversee identification of strategies and actions that can increase the economic benefits accruing to private landowners who maintain military-compatible uses of working lands. Strategies and actions should encourage: the production and purchasing of locally grown food, fuel, and other bio-based products for

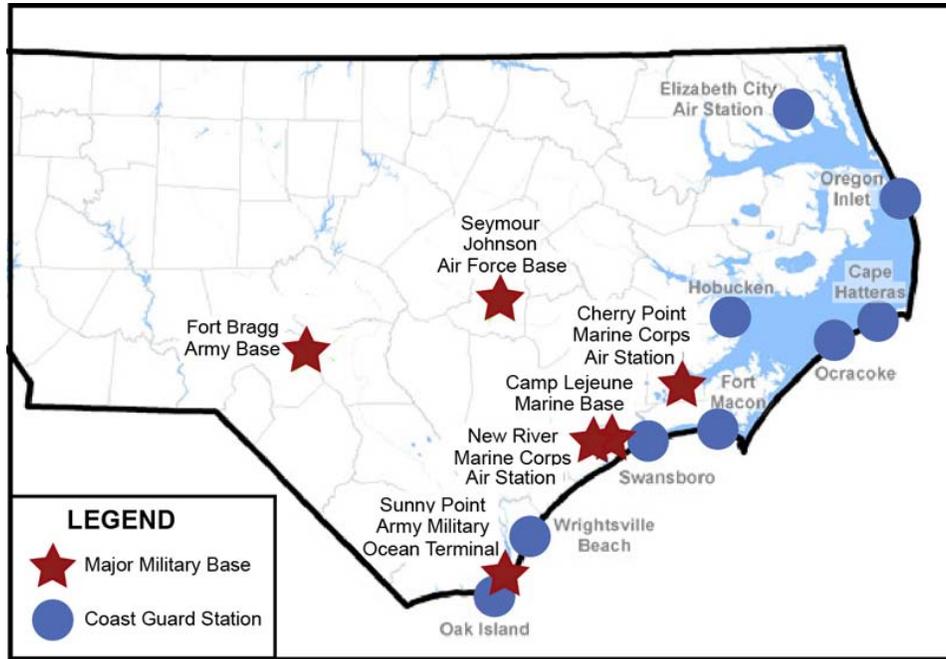
both military and domestic use and export abroad; the preservation and continuance of lands that are of agricultural, horticultural, forestry, or environmental importance; and the development of compatible economic development and use of these important working lands.

11. a. The Task Force recommends that the Agricultural Development and Farmland Preservation Trust Fund, North Carolina Wildlife Diversity Funds, Clean Water Management Trust Fund, Natural Heritage Trust Fund, and Parks and Recreation Trust Fund be funded in the North Carolina budget to the largest extent practical in support of the military services.
- b. The Task Force recommends that the Military Affairs Grant Program, authorized by the Military Affairs Support Act, be funded with \$300,000 to support transaction costs and planning related to acquisition of easements and other landowner agreements to control encroachment on installations, training areas, and training routes. The Grant Program has not been funded since 2007.
- c. The Task Force recommends that the Governor's North Carolina Military Affairs Advisor invite the North Carolina Department of Agriculture and Consumer Services to become a member of the Governor's Advisory Commission on Military Affairs. Further, we recommend that both the North Carolina Department of Agriculture and Consumer Services and North Carolina Department of Environment and Natural Resources (now an ex-officio member) be made full members of the Governor's Advisory Commission on Military Affairs to ensure that land sustainability expertise is fully represented.



## Appendices

### Appendix 1: North Carolina's Military Bases



#### Fort Bragg

*Fort Bragg* is the U.S. Army's premier power projection platform located in the Sandhills region of North Carolina, ten miles northwest of downtown Fayetteville and about fifty miles southwest of Raleigh. The Fort Bragg military reservation extends into four counties: Cumberland, Harnett, Hoke, and Moore. *Camp Mackall*, a U.S. Army training facility, is located approximately seven miles southwest of the westernmost boundary of the Fort Bragg training area, within Richmond and Scotland Counties. Fort Bragg and Camp Mackall combined cover an area of about 254 square miles (160,638 acres).

Fort Bragg is the largest U.S. Army installation by population, with over 56,000 military personnel assigned from several major organizations, including: Forces Command, Reserve Command, U.S. Army Special Operations Command, U.S. Army John F. Kennedy Special Warfare Center and School, U.S. Army Special Forces Command, U.S. Army Civil Affairs & Psychological Operations Command, Joint Special Operations Command, XVIII Airborne Corps, 82<sup>nd</sup> Airborne Division, 1<sup>st</sup> Theater Support Command, 82<sup>nd</sup> Sustainment Brigade, 108<sup>th</sup> ADA Brigade, 20<sup>th</sup> Engineer Brigade, 525 Battlefield Surveillance Brigade, 16<sup>th</sup> Military Police Brigade, 44<sup>th</sup> Medical Brigade, 440<sup>th</sup> Airlift Wing, 43<sup>rd</sup> Air Group, and 18<sup>th</sup> Air Support Operations Group. There are also 14,468 civilian employees, 6,413 contracted civilian employees, more than 75,000 active duty family members, and in excess of 113,000 retirees and their families for a total supported population over 275,000.

Training events conducted on the land and airspace associated with Fort Bragg encompasses a diverse spectrum of activities ranging from training with live ammunition

to computer-enhanced simulations and unmanned aerial vehicles. On average, Fort Bragg trains approximately three million Soldiers, Airmen, and Marines a year. This training includes more than 83,000 combined, joint and aircraft sorties; 111,000 Paratroopers jumping from aircraft during 1,500 airborne operations; and heavy equipment being delivered by parachute 671 times annually.

The counties immediately adjacent to Fort Bragg and Camp Mackall and its training areas are in the top five fastest growing counties in the state. As a result, significant portions of Hoke, Moore Harnett, and Cumberland Counties have been subject to over 400 repeated zoning proposals for proposed subdivisions, zoning actions, and telecom towers that have the potential to impact the installation's activities.

### **Marine Ocean Terminal Sunny Point**

*Marine Ocean Terminal Sunny Point* is located on the banks of the Cape Fear River about 26 miles south of Wilmington in Brunswick and New Hanover Counties. The facility covers 13 square miles (8,500 acres). Operated by the U.S. Army's 597<sup>th</sup> Transportation Terminal Group, MOT Sunny Point is the largest military terminal in the world. It is the key ammunition shipping point on the Atlantic Coast the Department of Defense and the Army's primary east coast deep-water port. The port can handle up to 6 ships simultaneously; a network of 62 miles of railroad tracks move munitions and supplies around the facility.

### **Camp Lejeune**

Marine Corps Base *Camp Lejeune* is located in southeastern North Carolina, along the coast just southeast of Jacksonville in Onslow County. The installation covers 246 square miles (157,400 acres) in Onslow County and includes fourteen miles of beaches. Camp Lejeune is home for more than 47,000 active duty military personnel, and is home base for the II Marine Expeditionary Force, 2nd Marine Division, 2nd Force Service Support Group and other combat units and support commands. The total population of active duty, dependent, retiree and civilian employees is nearly 180,000 people. The base generates almost \$3 billion in commerce each year.

Camp Lejeune has significant urban development to the north, south, and west with moderate residential development on and around the base. There is an increasing propensity for litigation over noise issues, and ranges continue to be targets for threatened and endangered species recovery projects. Noise issues related to military activities affects area residents to the east of the G-10 impact area, to the west of the Greater Sandy Run Area, and in the Verona Loop area. There is also an increased level of concern for housing density underneath the Special Use Airspace to the east due to low level aircraft ingress and egress routes to the east of the G-10 impact area.

### **Marine Corps Air Station Cherry Point**

Marine Corps Air Station Cherry Point is a 19 square mile (12,000 acres) jet base located along the Neuse River adjacent to Havelock in Craven County. MCAS Cherry Point has a population of 56,676, which includes military, civilian employees, family members, and retirees. The installation operates two outlying landing facilities in Carteret County, MCOLF Atlantic and Bogue Field, and two bombing target areas in the Pamlico Sound, including the Piney Island Bombing Range. The Piney Island Bombing Range is a

complex of waterborne and ground-based air-to-surface bombing targets. It is currently home the 2nd Marine Aircraft Wing and the Fleet Resources Center East. MCAS Cherry Point has a population of 56,676, which includes military, civilian employees, family members, and retirees.

MCAS Cherry Point and its outlying properties support all airfield training executed by 2nd Marine Aircraft Wing Units. The proximity of Cherry Point to the City of Havelock and the Crystal Coast has created varying degrees of encroachment pressures. The primary encroachment threats to operations have been situational conflicts related to noise from the airfield, which jeopardize the intensity and effectiveness of airfield operations and can result in workarounds to avoid operations at certain times of day, or using certain angles of approach. Vacation development on and along the outer banks in the vicinity east of these bases has led to increased noise complaints. It is anticipated that the arrival of Joint Strike Fighter aircraft (F35) will increase noise issues. The priority for controlling encroachment at MCAS Cherry Point is to prevent land development on property under Air Installation Compatible Use Zone (AICUZ) noise and accident potential zones, to maximize opportunities to foster compatible working farm and forestlands, and to maintain the full range of ground maneuver training opportunities afforded by the Installation. A major new encroachment concern is the potential placement of wind towers in locations that are not compatible with training operations. Significant portions of both Carteret and Pamlico Counties between MCAS Cherry Point and the Piney Island Bombing Range have been subject to repeated proposals for utility-grade wind energy development.

#### **Marine Corps Air Station New River**

*Marine Corps Air Station New River* is a 4 square mile (2,600 acres) helicopter base located near Jacksonville in Onslow County. Several major tenants of the air station conduct predominately rotary-wing and tilt-rotor operations, including units of the 2<sup>nd</sup> Marine Aircraft Wing (MAW), Marine Air Group (MAG) 26 and MAG 29, and their subordinate aircraft squadrons. MCAS New River has a population of 17,433, which includes military, civilian employees, family members and retirees. Marine Corps Installations East has an on-going concern about continued loss of flight routes connecting ranges and training areas.

#### **Seymour Johnson Air Force Base**

*Seymour Johnson Air Force Base* is located in Goldsboro, North Carolina. The installation covers 3,300 acres and employs over 5,000 military members, 600 Air Force civilians, and several hundred contract employees. Seymour Johnson is home to the 4th Fighter Wing (the base's host wing) and the 916th Air Refueling Wing. The 4th Fighter Wing is the Air Force's largest F-15E "Strike Eagle" base, flying 94 F-15E aircraft. The wing consists of two F-15E combat squadrons and two F-15E training squadrons, annually flying over 13,000 flights and 23,000 hours. The 4th Fighter Wing's training squadrons also provide initial F-15E aircrew training for all F-15E bases. The 916th Air Refueling Wing, the only Air Force Reserve wing in North Carolina, flies ten KC-135R aircraft conducting in air-to-air refueling missions worldwide. The base's 2011 economic impact to the area exceeded \$510 million.

Critical to accomplishing Seymour Johnson's primary mission is frequent use of the 50,000 acre Dare County Bombing Range, (located in Dare County and owned by Air Force), and specific air training routes and operating areas over North Carolina. To continue to be useful for training purposes, these areas must allow realistic combat oriented flying and training, including low level and nighttime operations.

## **Appendix 2: Existing Partnerships, Programs and Initiatives**

The State of North Carolina has been proactive in addressing land use-related challenges by creating partnerships between the military, State agencies and other non-governmental stakeholders with shared interests.<sup>35</sup> Existing partnerships, programs and initiatives that are contributing to preservation of military-compatible land uses are described below.

- Four major trust funds leverage local, state and federal monies for resource conservation: the *Parks and Recreation Trust Fund*, the *Agriculture and Farmland Preservation Trust Fund*, the *Natural Heritage Trust Fund* and the *Clean Water Management Trust Fund*. These trust funds provide dedicated funding for conservation acquisitions, offering critical financial support for maintaining clean air and water, protecting the state's most important natural and/or cultural sites to retain ecological diversity and recreational opportunities, and preserving working farms. These trust funds have accomplished a great deal, despite having limited funds and almost unlimited opportunities to fund worthwhile projects. North Carolina's investment in conservation via these trust funds has returned four dollars for every one dollar spent, in the form of natural goods and services and the impact conservation has on the state's economy.<sup>36</sup>
- The current Military Affairs Act provides for grants in support of transaction costs related to the military purchase of easements under the Department of Defense *Readiness and Environmental Protection Initiative* (REPI). REPI provides federal funds in support of the purchase of conservation land, easements, or landowner agreements on lands around military installations and ranges to restrict land uses that would be incompatible with military missions. This program enables the Department of Defense to work with partners to protect valuable habitat and avoid land use conflicts in the vicinity of priority installations, ranges and those other areas in which military tests and trains. The easements and other landowner agreements typically permit the landowner to maintain ownership and continue current uses as a farm, forest or ranch and do not add military land for training or testing.
- Comprehensive planning efforts have been conducted in the Fort Bragg and Marine Corps Installations East regions, funded largely by the Department of Defense's Office of Economic Adjustment. These integrative, sustainability-based assessments build from previous Joint Land Use Studies (JLUS), and include regional military impacts and potential responses to all sectors tied to quality of life within the region.
- The *North Carolina Commanders' Council* was established in 2008 to serve as the Department of Defense's primary contact with the state. Members include the commanders of the military installations and of the United States Coast Guard Sector

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<sup>35</sup> NC Advisory Commission on Military Affairs, State Cabinet Council, North Carolina Commanders' Council, Working Lands Group, Wind Energy Working Group, Operational Partnerships, Farm and Forest Preservation Programs, NC Biofuels Center, NC Solar Center

<sup>36</sup> North Carolina's Return on Investment in Land Conservation. The Trust for Public Land, 2011. ([http://www.landfortomorrow.org/wp-content/uploads/2011/05/ncs\\_roi\\_in\\_land\\_conservation\\_tpl\\_study\\_feb\\_2011\\_full-version.pdf](http://www.landfortomorrow.org/wp-content/uploads/2011/05/ncs_roi_in_land_conservation_tpl_study_feb_2011_full-version.pdf))

North Carolina and the North Carolina National Guard. The Commanders Council serves both the state and the military as a forum to coordinate on current and future mission and basing challenges, crosscutting training capabilities, and multi-interest education, training, and family support opportunities. The Council also provides information to policymakers and others regarding the activities that occur on the installations, the military sustainability needs in the state, and the military's economic value to the state. The Commanders' Council creates a forum for sustainability discussions, and works to develop a collaborative base for planning, education, and advocacy for the military, policymakers, and stakeholders.

- The *North Carolina Working Lands Group* is a collaborative partnership among state, local, federal, military, private, and non-profit partners. It was established to link the conservation efforts of federal, state and local agencies in the vicinity of military installations. It is working to create and implement an integrated, multiple-benefits strategy through which leveraged resources are used to protect, preserve, enhance, and sustain farms, forests, ranch lands, and working waters in a manner that ensures mutual sustainability of economic, environmental, natural resource, cultural, and national defense missions.

- Through an innovative partnership between Fort Bragg and the conservation community, a recovery program was developed for the Red-Cockaded Woodpecker, an endangered species whose condition is indicative of the health of the longleaf pine ecosystem. This innovative program is considered a model for military-community cooperation, and it represents one of the 'success stories' of the Endangered Species Act: the Red-Cockaded woodpecker was declared 'recovered' in the North Carolina Sandhills by the US Fish and Wildlife Service in 2006.<sup>37</sup> However, many other threatened species are at risk in the region, an indication of the fragile state of the region's important ecosystems. The success of the woodpecker recovery effort has led to more extensive engagement of the military services with Conservation Partnerships in eastern North Carolina, including North Carolina Sandhills Conservation Partnership, Sustainable Sandhills, Sustainable Fort Bragg, Onslow Bight Conservation Forum, Cape Fear Arch Conservation Collaboration, Albemarle-Pamlico Conservation and Communities Collaborative, and the Greater Uwharrie Conservation Partnership.

- In 2007, the *America's Longleaf Restoration Initiative* was formed to serve as an umbrella for the collective efforts of more than 20 state and federal agencies, stakeholders, and organizations across the eight coastal states in the southeastern United States. The Initiative released a range-wide conservation plan for Longleaf Pine in 2009 that outlined range-wide restoration goals, strategies for addressing needed actions and crosscutting approaches to focus strategic on-the-ground implementation in significant geographic areas. The U.S. Forest Service and the U.S. Fish and Wildlife Service are providing joint leadership for implementation of this plan, with the strong support of southeastern states and the Southeast Regional Partnership for Planning and Sustainability (SERPPAS), which is led by the Department of Defense. Inspired by the

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<sup>37</sup> "Fort Bragg Marks Recovery of Woodpecker". The Nature Conservancy in North Carolina, 2006. <http://www.nature.org/wherework/northamerica/states/northcarolina/press/press2500.html>

launch of this regional initiative, the *North Carolina Longleaf Coalition* was formed in 2010 as a collaborative network of diverse stakeholders whose mission is to promote the maintenance and restoration of North Carolina's longleaf pine ecosystem, including its cultural and economic values, while at the same time protecting the military training mission. This Coalition is providing strategic leadership while also supporting local restoration activities. The Coalition coordinates closely with the Conservation Partnerships in eastern North Carolina.

- The 1997 Fisheries Reform Act contains the directive to protect and enhance habitats supporting coastal fisheries. The law currently requires cooperation among four rule-making commissions: Environmental Management Commission, Coastal Resources Commission, Marine Fisheries Commission, and the Wildlife Resources Commission. Recognizing the critical importance of healthy and productive habitats to produce fish for human benefits, the North Carolina General Assembly included a provision in the Fisheries Reform Act instructing the Department of Environment and Natural Resources (DENR) to prepare *Coastal Habitat Protection Plans*. The first Coastal Habitat Protection Plan, published in 2005 and updated in 2010, compiled the latest scientific information on relevant habitats so that management needs can be identified to protect, enhance, and restore associated fish populations. Included within the Plans are all habitats within the coastal draining river basins in North Carolina. One accomplishment of this planning process was increased communication among the divisions and commissions charged with elements of coastal habitat protection and fisheries management.<sup>38</sup>

- The Fort Bragg Regional Alliance is a partnership of the 11 counties and 73 municipalities around Fort Bragg. The alliance leverages the economic development opportunities stemming from an increased military presence as well as encroachment issues that negatively affect Fort Bragg's ability to meet its training mission. Compatible land use is a key to long term military mission sustainability to support that sustainability. The Alliance, through the Agricultural Development and Farmland Preservation Trust Fund, is supporting establishment of Farm Land Protection Plans within the eleven counties of its region. Further, the alliance is also designing a regional landowner engagement initiative promoting compatible land use around Fort Bragg and Camp Mackall. Additionally, the Regional Land Use Advisory Commission (RLUAC); a non-profit organization of twenty local governments: eight counties and twelve municipalities' coordinates land use decisions among the military and the local governments. Specifically, The RLUAC facilitates regional planning, develops land use reviews, and fosters communication and coordination focusing on protecting: the civilian population from negative military impacts; the Long Leaf Pine Ecosystem from destruction; and encroachment on military training areas.

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<sup>38</sup> 2010 Coastal Habitat Protection Plan

### **Appendix 3: Land Use Sustainability Framework**

The Task Force recommends that the following conceptual framework be used to guide development of a comprehensive state-wide prioritization and incentive program and tools based on a multiple-benefits approach. The framework focuses on provision of land use planning, economic development funding and technical assistance to local governments and private landowners in order to (1) develop and maintain military-compatible land uses, while also advancing working lands protection and natural resources/ecosystem conservation goals; (2) leverage the economic benefits of military installations and to support military-compatible economic development for military host communities and military training-impacted communities; and (3) enhance rural livelihoods throughout the state.

The major advance over current practice within the suggested framework is a holistic approach to land use planning, in which multiple objectives are systematically considered in all land use and economic development decisions. The framework incorporates the three sets of prioritization criteria described in this report – military compatibility, working lands, and natural resources/ecosystems – to ensure that public investments achieve maximum benefits. Most conservation programs pay private landowners to maintain particular land uses, and there is a parallel need to provide incentives to local governments and counties to support their efforts to create military-compatible land use policies and economic development programs. Therefore, in addition to protecting key lands from incompatible development, the framework includes incentives to focus development in designated areas, thereby promoting economic growth that does not endanger the military mission or conservation efforts.

Several good programs have been enacted by State agencies and partners for protection of working lands and conservation of natural resources/ecosystems. Military compatibility largely has not been systematically included as a criterion in these programs. Therefore, the framework described herein focuses on tools and policies for military compatibility, and on processes for integrating the three sets of criteria in decisionmaking regarding state and private lands.

An integrative program based on this framework can provide a comprehensive, cost-effective means to implement the recommendations of the Governor's Land Compatibility Task Force. The program would serve to coordinate military compatibility land use goals with working lands and natural resource/ecosystems programs and with the land use, economic development, and conservation goals of local governments, landowners, and other land use stakeholders. It would provide mechanisms by which the state and military can work collaboratively to determine suitable land for the purpose of creating conservation areas that will further support the recovery of threatened and endangered species while, at the same time, reduce existing stresses on the military's ability to train. It would also provide participating cities and counties with incentives and assistance to establish military-compatible land use planning and economic development while helping landowners and local governments to sustain and protect their local economies and natural and cultural resources.

**Framework Design:**

The Task Force recommends that military compatibility be incorporated into statewide land use planning by giving priority to designated lands within the combined military mission footprint of North Carolina military activities. This footprint includes all military-related communities, including remote counties and municipalities that require assistance in protecting military airspace and training areas within their boundaries and with other military-related land use planning issues.

The recommended framework would build upon existing landowner-based conservation programs by providing resources to counties and municipalities. The strategy centers on four concepts and tools designed to encourage land uses that support multiple benefits, including military compatibility, as well as economic development on a statewide scale. These concepts and tools include: (1) a Military Training Tier Map, (2) Military Support Zones, (3) a Land Use Prioritization Process, and (4) a State Clearinghouse. These are described in more detail below.

(1) Military compatibility priorities should be incorporated into land use planning and incentives programs through establishment of a *tiered military training impact and support map*. (A preliminary version of this map is under development by the military services.) This map would be used to classify cities and counties based on the levels to which their land and airspace are required to support military training and the degree to which their budgets, local economies, public services, and land uses are affected by military installations and training activities. This tier system would be used to help identify the type of assistance needed by local governments to support military activities and to promote military-compatible economic development.

This classification system should include three tiers. Tier 1 would consist of military “host” counties and municipalities where major military installations are located or in their immediate vicinity. Tier 2 would include counties and municipalities where major training assets are sited such as special use airspace, outlying fields, training ranges, and bombing targets. Tier 3 would cover primarily rural counties located under military training routes and terrain-flying routes not accounted for within Tier 1. Tier 3 would also include counties used for occasional military training such as small-unit infantry maneuvers or helicopter landing practice on remote tracts of land.

(2) Designation of *Military Support Zones* within the combined military mission footprint can serve to direct resources to land use planning, administrative, and legislative target areas identified by the military services for development of economically viable, military-compatible land uses. All local jurisdictions within the boundaries of Military Support Zones would be eligible to participate in and benefit from designated financial and technical assistance and special legislative and administrative authorities. Delineation of Military Support Zones, their land use characteristics, and military training roles would be provided through an integrated, state-supported mapping program that uses existing data to the maximum extent possible.

*Development Focus Areas* should be designated within the Military Support Zones. These would be designated districts that (1) meet military compatibility criteria,

(2) meet natural resource conservation criteria, and (3) meet specific development criteria, such as the zoning, public infrastructure, transportation, and utilities standards set by the North Carolina Certified Sites Program.<sup>39</sup> Tax revenue from these economic development zones could help to offset the cost to local governments of providing military-related public services. Such zones would be similar in concept to Empowerment Zones, designated areas within which businesses enjoy very favorable tax credits and other advantages, such as planning exceptions.<sup>40</sup>

(3) An integrative *Land Use Prioritization process* should be set up that uses a map-based overlay of multiple priority sets to identify targets for land use planning, investment, and protection mechanisms. The base for this process should be the tiered military training impact and support map with delineated Military Support Zones, overlain with working lands protection and natural resources/ecosystems conservation priority maps. The process should enable all public and private land use stakeholders to identify their land use planning, investment, and protection priorities. These would be overlain on the land use prioritization map to give stakeholders maximum opportunity to identify specific areas for public investment, economic development, protection of working lands, and ecological and resource conservation. Military and public officials could use this process to identify stakeholders interested in protecting or investing in land and resources within all tiers of their military mission footprints and to explore partnering opportunities with them.

(4) A state *Land Use Prioritization Clearinghouse* should be created to coordinate state and federal programs available to local communities for development of multiple-benefit land use plans and to support Development Focus Areas. The state clearinghouse would provide a new venue for bringing non-governmental stakeholders together, coordinating land and resources conservation programs within the state, and promoting ecologically sound economic development.

The Clearinghouse could be modeled on and should cooperate with North Carolina's Environmental Review Clearinghouse, which manages the North Carolina Intergovernmental Environmental Review process. The primary purpose of this established process is to notify potentially affected state/local agencies and the public of proposed state development activities in their jurisdiction. The process also offers a means for agencies with expertise and/or the public to review the environmental assessment/impact documents prepared for the proposed activity and offer comments regarding the adequacy/accuracy of the impact analysis. Federal agencies are encouraged by federal regulation to use State Clearinghouses (where available) as a means of making available their impact documents to state/local agencies and the public for review and comment.<sup>41</sup>

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<sup>39</sup> <http://thrivenc.com/locationtools/nc-certified-sites-program>

<sup>40</sup> Urban Empowerment Zones are under the administration of the Department of Housing and Urban Development, while rural Empowerment Zones are under the administration of the Department of Agriculture. Areas must be nominated by their local governments and meet several specifications in order to be designated an Empowerment Zone. <http://www.oecd.org/dataoecd/20/61/1856947.pdf>

<sup>41</sup> <http://www.doa.state.nc.us/clearing/>

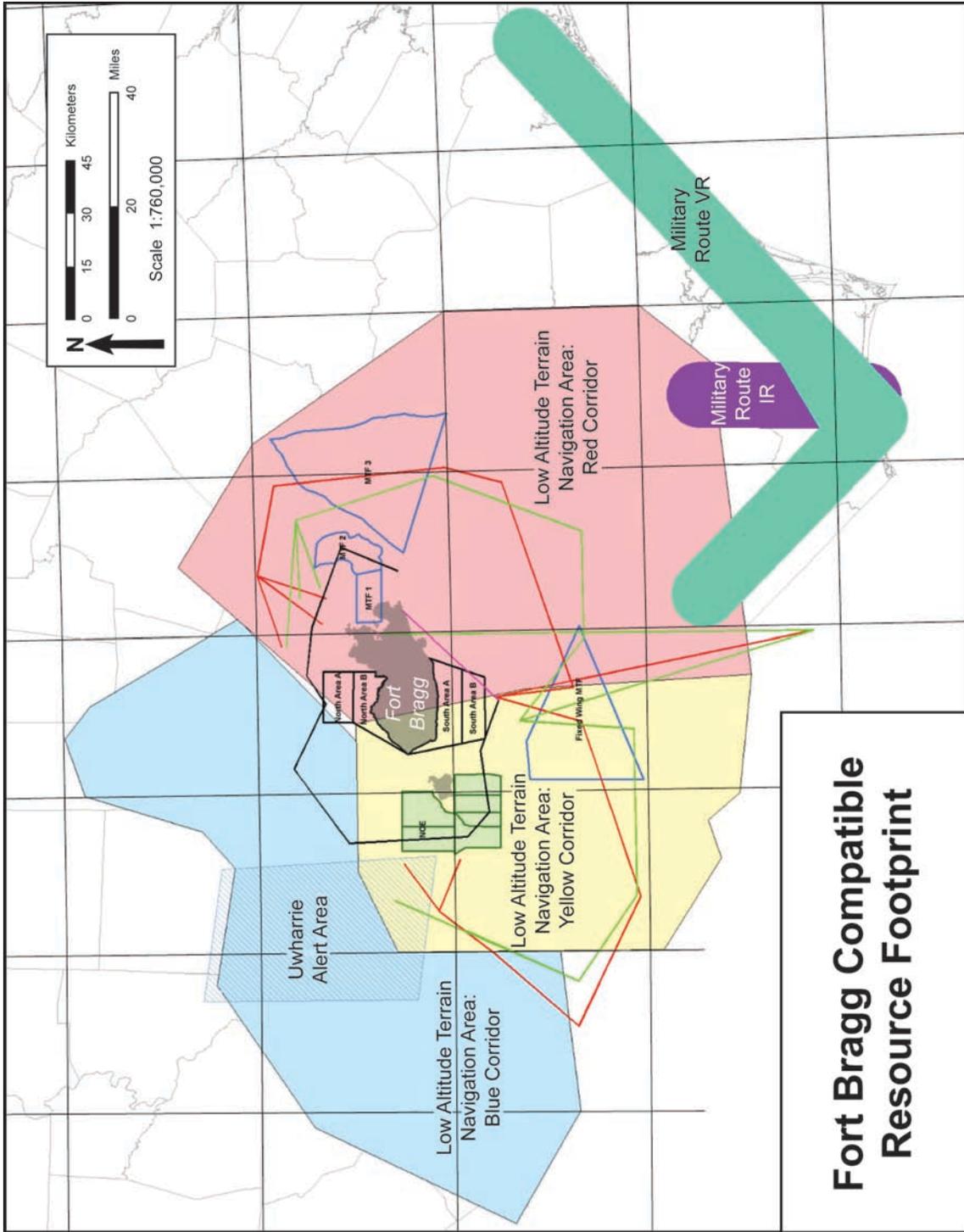
**Implementation:**

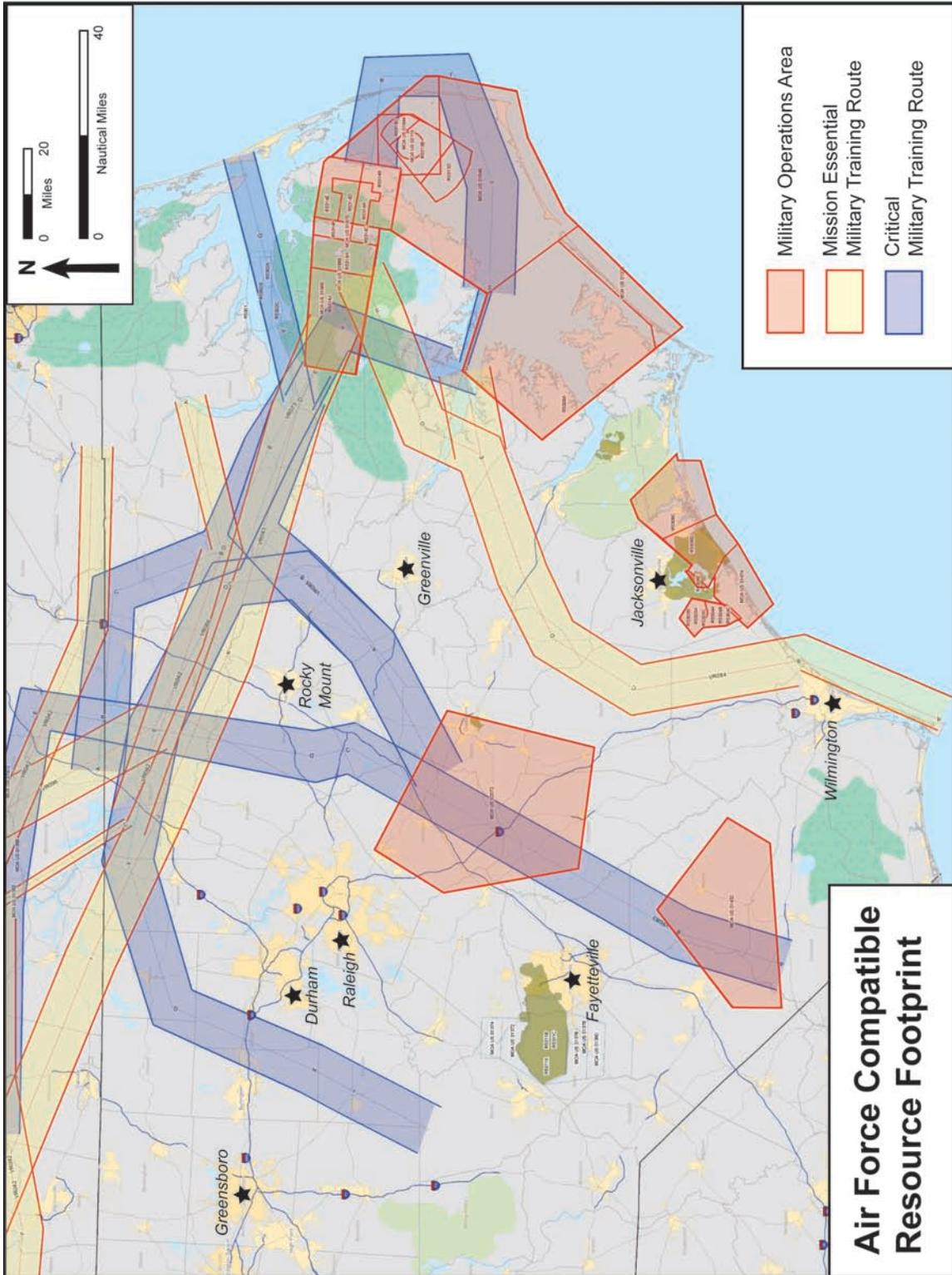
The State Executive Order process could be used to formalize the role of the Governor's Land Compatibility Task Force in developing a comprehensive state-wide land use prioritization and incentives process based on this framework. This role could include identifying incentives for participating counties and municipalities based on the Military Training Tier Map and further defining the Military Support Zones. A similar task force, the Offshore Wind Economic Development Task Force, was authorized by Executive Order 96 to examine state laws and regulations to determine the policy framework and incentives required to support offshore wind development; a Land Compatibility Executive Order could include a similar charter. The Land Compatibility Task Force could be authorized to identify the role of existing state and federal land use planning, economic development, and conservation programs in supporting the recommended land use prioritization and incentives processes, as well as determining additional authorities needed to support this initiative. In addition, the Task Force could propose related legislation to protect military training missions including land use issues such as protection of dark skies, regulation of tall structures and wind turbines, and military training real estate disclosures. It could also make recommendations on amending the North Carolina Military Support Act to support the goals of the proposed process.

North Carolina could implement this process in large part by using existing state and federal programs as well as utilizing new authorities granted for the creation of the Military Support Zones and establishment of the Military Training Tier system. For example, the North Carolina Department of Agriculture and Consumer Services could help military training impact communities to establish or expand their participation in the Voluntary Agricultural District and the Agricultural Development and Farmland Preservation Programs, and to create county Farmland Protection Plans. Existing regional economic development plans could serve as the mechanism to create Development Focus Areas, with assistance from the existing Councils of Government and Economic Development Regions. In addition, the Defense Asset Inventory and Target Industry Cluster Analysis developed by the North Carolina Military Foundation could be heavily utilized to support this effort. The existing Strategic Lands Inventory and related "good maps" could contribute to identification of suitable land. Federal programs, including those of the U.S. Department of Agriculture's Rural Development Administration, could help fund public infrastructure projects for these sites.

**Preliminary Military Compatible Resource Footprint Maps:**

The Army, Marines, and Air Force have identified and prioritized areas of importance to their operations and training activities. Preliminary maps of the Compatible Resource Footprint for each of the Military Services are shown on the following pages.





**Air Force Compatible  
Resource Footprint**



**Appendix 4: Existing Incentive Programs Targeting Working Lands**

- **North Carolina Agricultural Development and Farmland Preservation Trust Fund (ADFP)**

N.C.G.S. 106-744(c) established a trust fund to be administered by the Commissioner of Agriculture. The purpose of the trust fund is to provide monies to purchase agricultural conservation easements and other landowner agreements, and to fund programs that promote the development and sustainability of farming and the transition of existing farms to new farm families. Counties and nonprofit conservation organizations can apply for grants for these purposes. The General Assembly appropriated \$8 million to the trust fund for the 2008 fiscal year and \$4 million for the 2009 fiscal year.

Guidance on the designation and utilization of public-private resources is provided to the ADFP through a Land Use Incentive Ranking System developed by the North Carolina Department of Agriculture and Consumer Services in consultation with the Military Services. This system uses a priority point system, with points assigned to land areas based on the land use criteria listed in the following table. This system is an example of the type of prioritization tools recommended in this report, and will serve as a starting point for development of the recommended integrative Land Use Prioritization process.

Criteria	Points Allocated	Definition
<b>Military Zone</b>	50	Counties designated as being in active military training or of strategic importance to military activities
<b>County Tier</b>		
<b>I</b>	40	Military Designated Counties that receive consistent training and are essential to mission
<b>II</b>	30	Military Designated Counties that receive occasional training and are essential to mission
<b>III</b>	20	Military Designated Counties that receive limited training and are essential to mission
<b>IV</b>	10	Counties that receive little limited training but not essential to mission

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<b>Red Priority Area</b>	25	Land Area use essential for military compatibility training
<b>Green Priority Area</b>	25	Development Focus Areas that are essential for military support industry development
<b>Yellow Priority Area</b>	15	Land Area use essential for military use with limited restrictions
<b>White Priority Area</b>	0	Land Area use not essential for military mission
<b>Compatible Land Programs</b>		
<b>VAD</b>	5	County with active Voluntary Agricultural District Program
<b>EVAD</b>	10	County with active Enhanced Voluntary Agricultural District Program (VAD component already included)
<b>FPP</b>	20	County with a State approved Farmland Protection Plan including VAD or EVAD components
<b>LUP / FPP</b>	35	County with Land Use Plan with Farmland Protection Plan including VAD or EVAD components
<b>Compatible Land Points DTP</b>	50	% of County Land Mass in Deferred Tax Use for Agriculture, Forestry or Wildlife

Ranking Points Formula: Military Zone points + Tier Points + Priority Area Points + Compatible Land Program Points + Compatible Land Points = Ranking Points (Maximum of 200 points)

- **Present-Use Value Tax Program**

Present-Use Value, or PUV, is a program established by N.C.G.S. 105-277.2 to .7 and administered by county assessors. Through PUV, qualifying property can be assessed for property tax purposes based on its use as agricultural, horticultural or forest land. The present-use value is the value of the land based solely on its ability to produce income, rather than at its market value. The difference between market value and the present-use values is maintained in the tax records as deferred taxes. When land

becomes disqualified from the program, the deferred taxes for the current and three previous years, with interest, will usually become payable and due.

**Basic Requirements** - There are minimum acreage requirements for production land: ten acres for agricultural use, five acres for horticulture use, and twenty acres for forest use. Production must follow a sound management plan. Agricultural and horticultural land must have at least one qualifying tract that has produced an average gross income of at least \$1,000 for the three years preceding the application year.

Benefits provided by PUV include protection from increasing land values that are based on development potential and the potential increase in property taxes.

More information can be found at:

<http://www.dor.state.nc.us/publications/property.html>

- **Voluntary Agricultural Districts (VAD)**

Established by N.C.G. S. 106-737 to 743 and administered at the county level, Voluntary Agricultural Districts are designated areas where commercial agriculture will be encouraged and protected. The purposes of the districts are to increase identity and pride in the agricultural community and to increase protection from nuisance suits and other negative impacts on properly managed farms.

**Basic Requirements** - Land must be enrolled in the Present-Use Value program or otherwise be determined to meet the qualifications of the program. The landowner must enter into a revocable agreement to limit development for a ten-year period.

**Benefits** - Benefits of VADs include notification to buyers of nearby property that they are moving into an agricultural area, thereby providing stronger protection to farmers from nuisance suits; abeyance of water and sewer assessments; public hearings on the condemnation of farmland; and representation by an appointed board regarding concerns on threats to the agricultural sector.

- **Enhanced Voluntary Agricultural Districts**

Established by N.C.G.S. 106-743.1 to .5, an Enhanced Voluntary Agricultural District is a VAD formed of one or more farms that are subject to an irrevocable ten-year agreement to limit development. In return for the condition of irrevocability, the landowner receives the added benefits of being able to receive 25 percent of gross revenue from the sale of non-farm products and still qualify as a bona fide farm, and being eligible to receive up to 90 percent cost-share assistance from the Agricultural Cost Share Program.

- **Conservation Easements (or other Landowner Agreements)**

A conservation easement is a written agreement between a landowner and a qualified conservation organization or public agency under which the landowner agrees to keep the land available for agriculture and to restrict subdivision, non-farm development and other uses that are incompatible with commercial agriculture.

**Basic Requirements** - Permanently foregoing the right to subdivide or develop the land being conserved. There will be other limitations on activities to preserve the land's productivity, environmental values, and rural character. The establishment of conservation easements will require upfront costs ranging from \$20,000 to \$40,000. These 'transactional costs' are needed to cover legal services, a survey, an appraisal, long-term stewardship services provided by the conservation partner, and other miscellaneous activities. In some cases grant funds will cover these costs.

**Other Information** Conservation easements and other landowner agreements are flexible and can be tailored to the needs and wishes of the owner. For example, a portion of the property can be left out of the easement, thereby providing an area for future homes and other non-farm activities. Agricultural activities, including forestry, are allowed under the agreement.

The value of a conservation easement is determined by a licensed land appraiser and is typically between 25 percent and 75 percent of the land's market value.

A periodic inspection of the property (usually by a representative of a conservation partner organization) is required to ensure that development does not occur. This provision will be included in the agreement. Public access to the property is not provided by the agreement, unless otherwise specified.

The agreement is recorded on the county's land records and runs with the title. All future landowners must comply with the terms and conditions of the agreement.

**Financial benefits:** Landowners who donate development rights through perpetual easements may be eligible for significant financial benefits through the reduction of federal income, gift, and estate taxes as well as state income tax credits. Proceeds from the state tax credit may be used to purchase land to expand operations or make additional investments in the agricultural business. The value of these benefits depends upon the easement's appraised value and the landowner's financial circumstances.

**Additional value for the surrounding area:** Protecting agricultural land through conservation easements helps maintain the viability of a region's agricultural economic base. Easements can offer a way for communities to work together to protect their working lands, thereby protecting natural resources, wildlife habitat and quality of life while land stays in production and on local tax rolls.

- **Term Conservation Easements (or other Landowner Agreements)**  
Also called Agricultural Agreements, these agreements are similar to conservation easements but apply for a finite period of time agreed to by the landowner and conservation partner.

- **Lease of Development Right**

Cumberland County has created a Lease of Development Rights for land near military operations and Fort Bragg that was identified as 'critical' or 'important' in the 2008 Joint Land Use Study (JLUS). This program essentially allows the landowner to lease the development rights of their land to the county for the same amount as their property tax. The program is intended to encourage landowners to maintain their working lands in order to provide an adequate buffer for the base, its training, and its operations.

- **Right-to-Farm Law**

North Carolina has a right-to-farm law (N.C.G.S. 106-700 to 701 (2006) which protects farm and forestry operations from being declared a nuisance as long as they have been in operation for at least one year and are operated properly and without negligence.

### **Summary Matrix**

The financial resources and/or technical assistance provided by most of the current incentives programs are summarized in the following table, developed for inclusion in One North Carolina Naturally. This table, including contact information for the listed programs, can be downloaded from:

[http://www.onencnaturally.org/pages/FN\\_Funding\\_Programs.htm](http://www.onencnaturally.org/pages/FN_Funding_Programs.htm).

The matrix provides a means to see how similar programs can be leveraged and stacked, thereby using state, federal, and private programs for multiple advantage.

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Program Name	Eligible Land					Conservation Options					Assistance Available				Activities Eligible for Funding												
	Residential	Agricultural	Forested	Prior Converted Wetlands	Wetlands	Riparian Areas	Other	Acquisition via Donation	Acquisition via Purchase	Conservation Easement	Lease	Management Agreement	Restoration	Other	Grant	Loan	Cost Share	Technical Assistance	Other	BMP Implementation	Restoration	Conservation	Preservation	Education /Outreach	Other		
<p>While regulatory options exist, the One North Carolina <i>Naturally</i> initiative is focused on <i>voluntary participation</i> as well as on creating and providing incentives for stewardship. A number of federal and state programs provide financial resources or technical assistance to landowners who want to practice stewardship on their own land. <b>The 3 broad mechanisms for conserving land are:</b></p> <ul style="list-style-type: none"> <li><b>Acquisition</b> – government agencies purchase lands for public purposes</li> <li><b>Stewardship</b> – private landowners implement conservation best management practices</li> <li><b>Conservation Easements</b> – legal restriction of development rights on a parcel of land</li> </ul> <p><i>This is an incomplete listing, and should be used for demonstration purposes only.</i></p>																											
<b>FEDERAL PROGRAMS</b>																											
Conservation Reserve Program–CRP <sup>2</sup>	X		X	X	X								X				X	X	X	X	X	X	X				
Environmental Quality Incentives Program-EQIP <sup>3</sup>	X	X				X							X				X	X		X	X	X					
Farm and Ranch Land Protection Program <sup>3</sup>	X	X						X											X		X				X		
Grassland Reserve Program-GRP <sup>3</sup>	X							X									X	X		X		X			X		
Partners for Fish and Wildlife <sup>5</sup>			X	X	X	X	X				X	X					X	X		X							
Safe Harbor Program <sup>5</sup>			X								X	X					X										
Wildlife Habitat Incentives Program-WHIP <sup>3</sup>	X	X	X	X	X	X	X				X	X					X	X		X	X	X					
Wetlands Reserve Program-WRP <sup>3</sup>				X		X			X		X						X	X		X	X						
<b>STATE PROGRAMS</b>																											
Agriculture Cost Share Program		X		X	X	X						X					X	X		X	X	X					
Clean Water Management Trust Fund-CWMTF	X	X	X	X	X	X	X	X	X		X	X	X		X					X	X	X	X				
Conservation Reserve Enhancement Program-CREP -	X		X	X	X				X		X						X	X	X	X	X	X	X				
Conservation Tax Credit Program	X	X	X	X	X	X	X					X							X		X						
Cooperative Extension Service <sup>4</sup>																		X							X		
Ecosystem Enhancement Program	X	X	X	X	X	X	X	X	X		X								X	X	X	X	X				
Forest Development Program <sup>1</sup>		X	X	X	X	X	X										X	X		X	X						
Forest Legacy Program <sup>1</sup>			X	X	X	X	X	X	X		X		X				X	X	X	X		X			X		
Forest Management Assistance <sup>1</sup>		X	X	X	X	X	X				X						X	X									
Forest Practice Guidelines / BMPs <sup>1</sup>			X	X	X	X	X						X				X	X									
Forestry Stewardship Program <sup>1</sup>			X	X	X	X	X				X	X					X	X									
Game Lands Program-WRC		X	X	X	X	X	X	X	X	X	X	X															
Natural Heritage Trust Fund-NHTF			X	X	X	X	X	X	X	X					X							X	X				
Natural Heritage Program			X		X	X	X		X		X	X						X									
N.C. State Trails System	X	X	X	X	X	X	X								X		X								X		
Parks and Recreation Trust Fund-PARTF	X	X	X	X	X	X	X	X	X	X					X		X				X	X	X		X		
Plant Conservation Program			X	X	X	X	X	X	X			X						X									
Urban and Community Forestry Grant Program <sup>1</sup>	X	X	X	X	X	X	X					X		X	X	X	X	X		X	X		X	X			
<b>NONPROFIT &amp; PRIVATE ORGANIZATIONS &amp; LAND</b>																											
American Farmland Trust		X	X					X	X									X	X								
Audubon North Carolina		X	X	X	X	X	X	X	X	X	X	X						X	X								
Conservation Fund	X	X	X	X	X	X	X	X	X	X					X		X	X			X		X	X	X		
Conservation Trust for NC & 24 member programs		X	X		X	X	X	X	X	X	X	X						X			X	X					
Ducks Unlimited		X	X	X	X	X		X	X	X	X	X			X		X	X		X	X	X					
NC Farm Transition Network			X									X						X	X								
North American Land Trust	X	X	X	X	X	X	X	X	X		X	X					X			X							
NC Coastal Federation	X	X	X	X	X	X	X	X	X		X						X	X	X	X	X	X	X		X		
The Nature Conservancy			X		X	X	X	X	X	X	X	X								X	X	X			X		
Trust for Public Land	X	X	X	X	X	X	X	X	X	X			X					X	X								