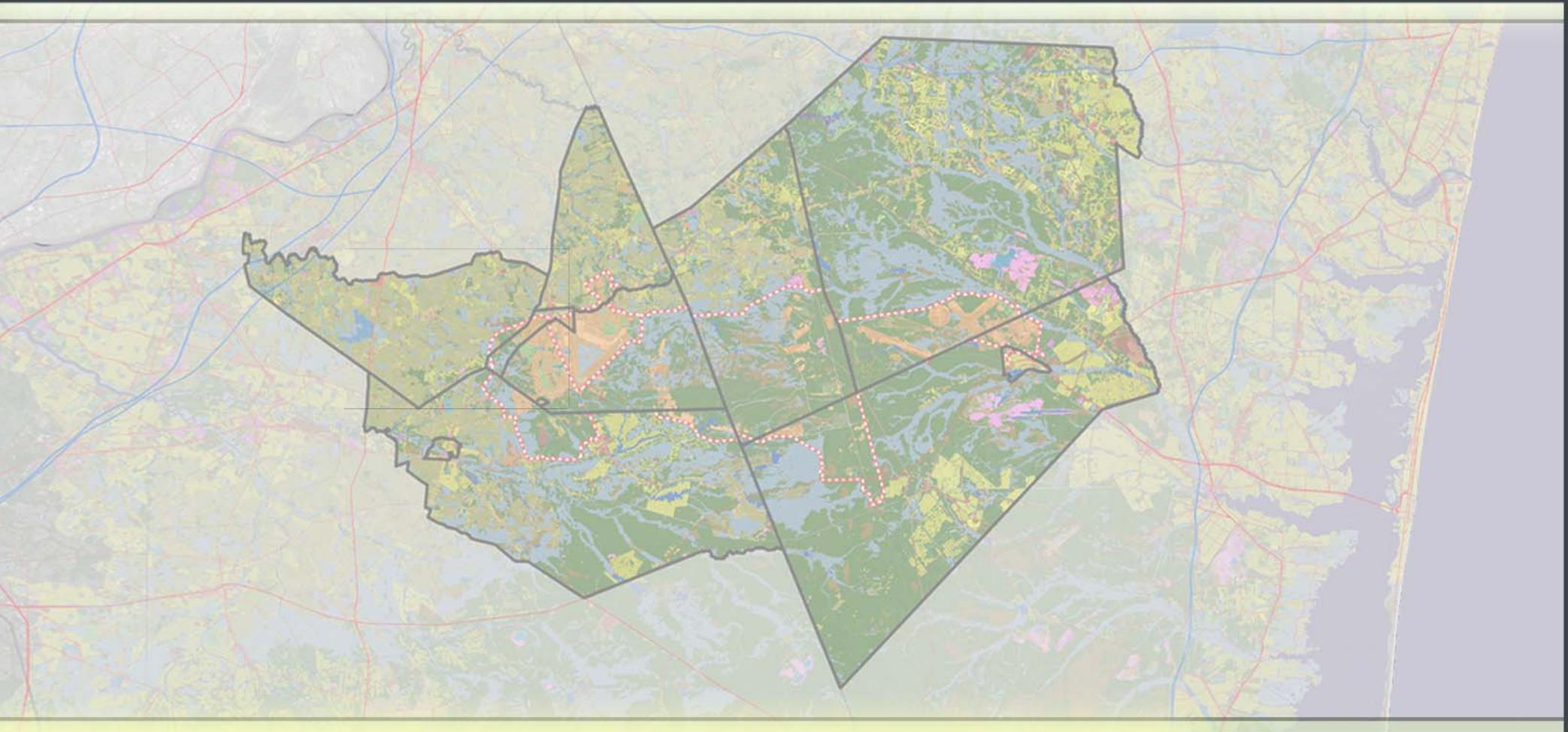


Joint Base McGuire-Dix-Lakehurst

Joint Land Use Study for Counties of Ocean and Burlington



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Creation of Joint Base McGuire-Dix-Lakehurst

McGuire Air Force Base (AFB), Fort Dix, and Naval Air Engineering Station (NAES) Lakehurst, located within Burlington and Ocean Counties in New Jersey, will soon combine to form a Joint Base. The Joint Base extends 20 miles from east to west, encompasses 42,000 acres and employs some 22,000 people. Joint Base McGuire-Dix-Lakehurst will form the nation's only tri-service Joint Base.

The establishment of this Joint Base comes as a decision from the 2005 Base Realignment and Closure (BRAC) commission. BRAC is the congressionally authorized process that the Department of Defense uses to reorganize its military installations by making recommendations for the closure or realignment of installations inside the United States. In selecting military installations for closure or realignment the Department of Defense gives priority consideration to the following criteria:

1. The current and future mission capabilities and the impact on operational readiness of the total force of the Department of Defense, including the impact on joint war fighting, training, and readiness.
2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use for the Armed Forces in homeland defense missions) at both existing and potential receiving locations.
3. The ability to accommodate contingency, mobilization, surge, and future total force requirements at both existing and potential receiving locations to support operations and training.
4. The cost of operations and the manpower implications.
5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.
6. The economic impact on existing communities in the vicinity of military

installations.

7. The ability of the infrastructure of both the existing and potential receiving communities to support forces, missions, and personnel.
8. The environmental impact, including the impact of costs related to potential environmental restoration, waste management, and environmental compliance activities.

The BRAC assessment of McGuire AFB, Fort Dix, and NAES Lakehurst was deemed to meet the acceptable criteria for continued operation and the Joint Base is anticipated to have an increase in military missions.



McGuire In-Flight Refueling

McGuire AFB was established in 1937 and was originally known as Rudd Field. Its origins were a single runway that was adjacent to Fort Dix. Over the years the base grew as it supported World War II efforts. In 1949, the base officially became known as McGuire AFB. McGuire AFB is the only Air Force base in New Jersey and is well known for transporting troops, cargo, and for providing in-flight refueling throughout the world.



Fort Dix Mobilization

Fort Dix has been in existence since 1917 and is currently the largest Army installation in the New York-Philadelphia Metropolitan Area. Fort Dix currently is a training, mobilization, and deployment center. Its primary mission is to provide on the ground training support to active and reserve units of all services and licensed non-Department of Defense (DoD) activities (police, FBI, etc).



NAES Lakehurst catapult testing

NAES Lakehurst was formed around the same time as Fort Dix. NAES Lakehurst began as an ammunition proving ground in 1915, was then acquired by the Army (known as Camp Kendrick), and became Naval Air Station Lakehurst in 1921. NAES Lakehurst may be best known for the Hindenburg crash in 1937 and the subsequent Hindenburg memorial. Hangar One, which housed the Hindenburg, is

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a registered national historic landmark. Today, NAES Lakehurst is known for its research and development for aircraft takeoff and landing from ships at sea.

McGuire AFB will lead the Joint Base administrative tasks including overall property management and each Base is expected to have an increase in activity and mission. With this expected increase, it is important to determine the possible effects to the nearby communities and to determine Joint Base needs in order to continue the military mission. The nearby communities and the Joint Base have an essential relationship that will benefit from reciprocated awareness and communication.

What is a Joint Land Use Study?

When military bases are first established they are often built in remote areas with little to no local population. Over time communities build up around the base often from off-base military housing, local companies offering services on the base, and supportive businesses offering services off base to the newly employed military and their families. The bases become a hub for regional growth due to this increased economic activity.

In 1985, the DoD formally recognized that as communities developed next to the military bases, military missions were impacted. Both civilian and military activities have the potential to negatively impact the other's active land use when those respective activities are in close proximity of each other. The DoD's Office of Economic Adjustment (OEA) began the Joint Land Use Study (JLUS) program to encourage cooperative land use planning between military installations and the surrounding communities where civilian encroachment is likely to impair the operations of an installation.

Joint Base Regional Communities

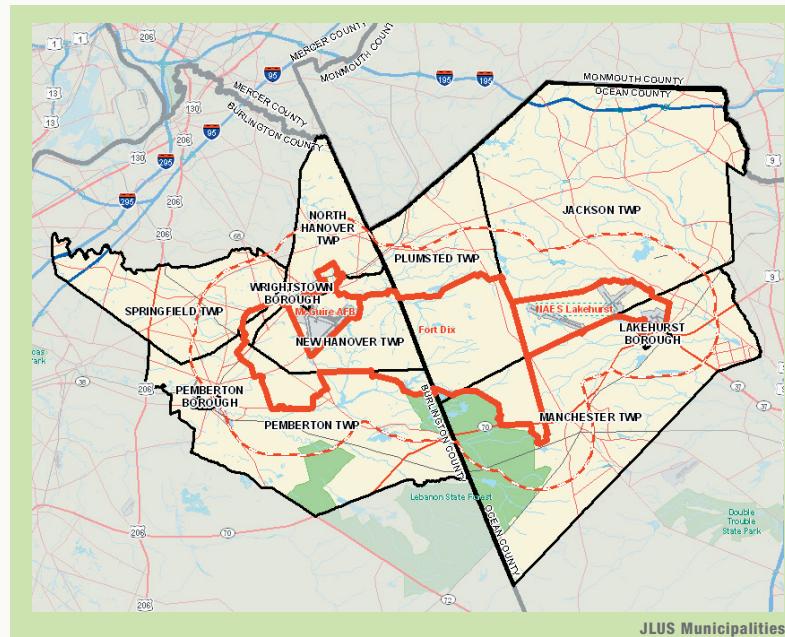
Burlington and Ocean counties are the two largest counties in the state. Despite a large growth in population and employment in the last fifty years, both counties maintain a vast amount of protected open space. The 10 municipalities that are part of this JLUS are Jackson Township, Lakehurst Borough, Manchester Township, and Plumsted Township in Ocean County, and New Hanover Township, North Hanover Township, Pemberton Borough, Pemberton Township, Springfield Township, and Wrightstown Borough in Burlington County.

Ocean County JLUS Communities

Manchester and Jackson Townships are the largest JLUS municipalities in Ocean County and have had significant residential growth in recent years. Jackson Township has grown due to its location with access to major transportation routes, its affordable housing stock,

and its tourism industry, which includes Six Flags, Wild Safari, Hurricane Harbor, and factory outlets. Manchester Township is known for its extensive retirement communities and was one of the fastest growing communities in New Jersey from the mid 1960's through the late 1980's. Despite their recent growth, both municipalities have a large portion of lands that are preserved. Sixty two percent of Jackson Township's overall lands are within wildlife management conservation areas or are designated for preservation, and sixty three percent of Manchester's lands are designated for preservation.

Plumsted Township is primarily an agricultural community that values and is looking to preserve its rural character. Plumsted Township has been active in land preservation and has successfully



preserved more land from development, in excess of 2,500 acres, than any other municipality in Ocean County. Since 2000, new residential growth has mostly been in the northeastern corner of the Township, located adjacent to Jackson Township. There is an ongoing revitalization plan for the New Egypt Main Street business district center.

Lakehurst Borough is the smallest Ocean County JLUS municipality. The Borough is mostly built out with predominantly residential growth and with pockets of commercial development along Route 70 and Union Avenue. Approximately 25 acres of the Borough is newly revitalized NAES Lakehurst housing. Adjacent to the NAES Lakehurst boundary is a light industrial area with a proposed area of light industrial redevelopment.

Joint Base McGuire-Dix-Lakehurst occupies lands within each Ocean County JLUS municipality. Fort Dix occupies approximately half of Plumsted Township and the western part of Manchester Township. Manchester Township, Lakehurst Borough, and Jackson Township have lands within the NAES Lakehurst boundary.

Burlington County JLUS Communities

New Hanover, North Hanover, and Springfield Townships are predominantly active farming communities. Each of these municipalities would like to preserve its rural character. North Hanover and New Hanover Townships are pursuing small regions of redevelopment area growth. New Hanover Township may be pursuing commercial and industrial redevelopment nearest to the Joint Base. North Hanover Township is pursuing an area of redevelopment that would offer commercial services adjacent to Wrightstown Borough. Small amounts of residential and commercial growth can be expected in Springfield Township but a large number of farms have been permanently preserved (approximately 25% of total land area). Springfield Township is also at the forefront of preserving lands for preservation in the state, incorporating for a long time a "right to farm" ordinance.

Pemberton Borough is the smallest Burlington County JLUS municipality and is entirely surrounded by Pemberton Township. The municipality has experienced some residential growth in recent years and is mostly built out for new residential growth. The Borough has a historical "main" street feel on Hanover and Jarvis streets with commercial uses along Hanover and W Hampton Streets.

Pemberton Township is the largest Burlington County JLUS municipality with the largest population. A large amount of Township lands are considered forest, wetlands or agricultural, providing large areas of preservation. Pemberton Township residential lands are within communities such as Brown Mills, Brown Mills Junction, and Presidential Lakes Estates. The Township currently plans for a revitalization and redevelopment of Browns Mills and a new growth center that will be integrated with Pemberton Borough.

Wrightstown Borough has seen past growth due to its location next to the McGuire AFB main gate. In the past, the Borough had supporting commercial development to Fort Dix and McGuire AFB and has limited residential growth. Over the years, as military missions have changed and the on-base population has changed, many Wrightstown businesses have struggled. Recently, Wrightstown is recreating its town center and is incorporating 42 acres that were previously part of Fort Dix. The new Wrightstown growth will be a mixed use development that will have commercial uses and residential development.

Joint Base McGuire -Dix-Lakehurst occupies lands within five of the Burlington County JLUS municipalities, with the exception of Pemberton Borough. McGuire AFB is located in New and North Hanover Townships, and in Wrightstown Borough. Fort Dix is located within New Hanover Township, Pemberton Township, Springfield Township and Wrightstown Borough.

Joint Base Regional Communities Growth

From 1980 to 2000, Jackson and Manchester Townships gained 170 and 132 persons per square mile (ppsm) respectively. During that same time period Plumsted Township (64 ppsm), Springfield Township (18 ppsm), and Pemberton Borough (18 ppsm) also saw an increase in their population density. The other five municipalities in the JLUS had decreasing population densities from 17ppsm (Pemberton Township) to 385 ppsm (Lakehurst Borough). Overall from 1980 to 2000, the state of New Jersey gained an average 165 ppsm.

While the JLUS municipalities combined did not have an overall increase in ppsm from 1980 to 2000, new population estimates show an average population density increase. With the expected increase of base activity, local population densities may also intensify in the near future.

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JLUS process

The JLUS process encourages community decision-makers and installation representatives to study issues of compatibility in an open forum, balancing both military and civilian interests. The JLUS program seeks to empower local communities to work with their neighboring installations to guide the implementation of appropriate land use controls around military installations.

This is the first JLUS for McGuire AFB, Fort Dix or NAES Lakehurst. Prior to this JLUS, each base has interacted with the other JLUS municipalities and with the military installations in a different manner. With the completion of the JLUS, concurrently with the establishment of the Joint Base, a new unified interaction with the community is possible.

The following were the objectives for the Joint Base JLUS.

Community

- Protect the health, safety, and welfare of the existing residents
- Maintain quality of life for community residents
- Guide incompatible land uses away from air strips
- Encourage compatible land uses to locate near the Joint Base
- Maintain the economic vitality of the JLUS communities
- Provide for sustainable growth in an economically, environmentally, and socially sustainable manner

Military

- Protect the health, safety, and welfare of the military personnel
- Preserve the ability of the Joint Base to carry out planned missions, maintain military readiness, and support national defense objectives
- Establish a framework for communication and cooperation between the Joint Base and the surrounding communities

Policy and Technical Committees were created to help guide the yearlong study and to provide feedback during the JLUS. The Policy Committee for the Joint Base McGuire-Dix-Lakehurst study comprised of military representation from NAES Lakehurst, Fort Dix, and McGuire Air Force Base, elected and appointed officials from each participating local government—including the two counties and the ten surrounding municipalities—and senior representatives from the Pinelands Commission, the Office of Smart Growth, and the State Agriculture Development Committee. Also in attendance at the JLUS Policy and Technical Committee meetings were project managers from the Department of Defense's Office of Economic Adjustment and representatives from the offices of Congressman Saxton, Congressman Smith, and Congressman Adler.

Throughout much of the JLUS process, a website www.jointbasenj.org has been available to the public. The website hosts information defining what a Joint Land Use Study is, a "JLUS in the News" element, an interactive public survey, and a dynamic mapper of the JLUS study area. Two public open houses were held in September of 2008 to explain the study and allow for public interaction with representatives from the military bases. A follow up public hearing was held in March of 2009 to present the study findings and recommendations .

Study Scope

The existing and proposed operations of the Joint Base (Section 5) summarize the Base mission and help to determine existing and potential areas of conflicts with the JLUS communities. Noise and safety considerations (Section 6) are often associated with increased Joint Base missions. Identifying areas impacted by high noise levels and safety considerations, that are outside of the Joint Base boundaries, helps determine areas that may be a priority concern to the JLUS communities and the Joint Base.

The community analysis (Section 7) studied how JLUS communities have developed to date, their growth in proximity with the Joint Base, and what lands have the immediate potential for growth that may cause future incompatibility issues given current zoning. Growth potential for each of the municipalities was determined for the 2 mile study area surrounding the Joint Base and should be considered as a general reference utilizing the existing zoning scenarios. Actual build out of the municipalities may be more or less dependent on zoning, state planning considerations, infrastructure capacity, soil suitability, and the possibility of infill development of existing lots.

Growth potential in New Jersey must also take into consideration state land use planning considerations such as the State Development and Redevelopment Plan, the Pinelands Management Areas, and infrastructure capacity (Sections 8 & 9).

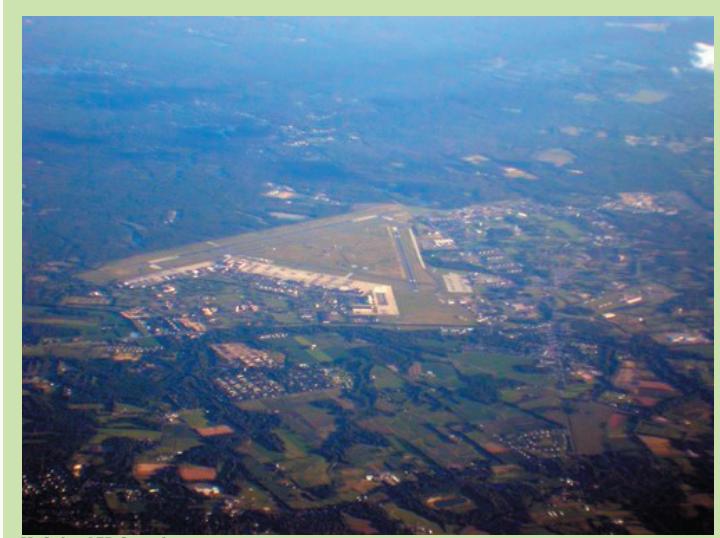
The Joint Base is a regional economic driver that offers potential economic stimulus to the municipalities (Section 10) and lies at the center of many potential compatible growth development opportunities.

Ocean and Burlington Counties, in cooperation with the Joint Base and JLUS municipalities, have been successful in preserving lands near the Joint Base (Section 11) that will help to prevent future compatibility concerns.

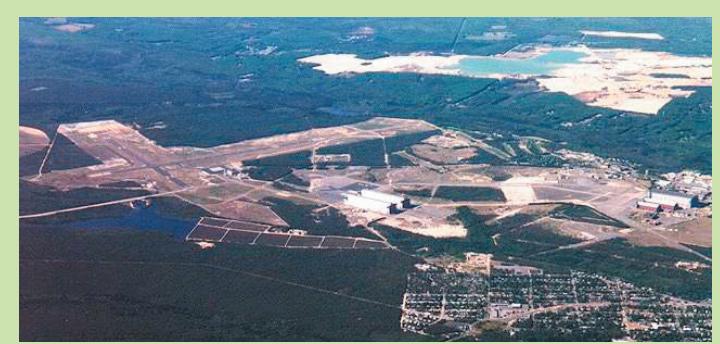
Over the course of this JLUS, the military, municipalities, counties and state agencies were interviewed and were also part of the committees to determine existing issues and concerns. The JLUS analysis incorporated available mapping and data to determining existing or potential concern to the safety of the communities and the protection of the continued military presence and mission. The dominant issues are summarized in the following table and the recommended implementation actions (Section 12) are designed to offer suggested solutions.

A JLUS can have a variety of issues that are pertinent to the prevention of urban encroachment, the safeguarding of the military mission, and the protection of the public health safety and welfare. Concerns may include manmade concerns, natural resources, and the competition for scarce resources. For this JLUS, manmade concerns such as existing and planned land use, safety zones, infrastructure capacity (including water, wastewater, and transportation), local housing availability, interagency coordination, and noise levels were considered a priority.

Table 1 summarizes the identified major JLUS compatibility issues and their proposed implementation action. The compatibility issues were determined from municipal and military base meetings, the JLUS technical and policy committees, DoD guidelines, and public input.



McGuire AFB Overview



NAES Lakehurst Overview

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Table 1. Summary of Identified Compatibility Issues

Identified Issue	Recommendation Category	Recommended Implementation Action
<p><i>Lack of coordinated procedures between JLUS municipalities and Joint Base</i></p> <p><i>Ongoing support for identified JLUS strategies to be implemented</i></p>	JLUS Review and Ongoing Support	<ul style="list-style-type: none"> A-1 Execution of a charter that defines future participation and goals A-2 Create a Joint Base JLUS Implementation Committee A-3 Develop Orientation and Procedures manual for incoming military and civilian officials A-4 Determine when an updated JLUS is warranted
<p><i>Limited public awareness of the Joint Base and Mission</i></p> <p><i>Lack of Municipal dialogue and collaboration with Joint Base entities</i></p> <p><i>No forecast of military training schedules for affected municipalities</i></p>	Communication/Coordination	<ul style="list-style-type: none"> B-1 Designate Joint Base planner(s) for representation at Municipal Meetings B-2 Create a Joint Base JLUS Implementation Committee B-3 Increase dialogue and collaboration B-4 Develop & Maintain a JLUS website link B-5 Update JLUS website
<p><i>Urban Growth – New Residential Development within the 2 mile JLUS Study area</i></p> <p><i>Potential residential and incompatible development of land within Noise Zones and Accident Potential Zones (APZs)</i></p> <p><i>Height of new development may be a Hazard to Air Navigation</i></p>	Land Use Approval	<ul style="list-style-type: none"> C-1 Revision of municipal Master Plans to include Joint Base missions and accident potential zones (APZ) and noise zones C-2 Rezone or incorporate an overlay district for high conflict zoning areas C-3 Create an APZ Overlay Zoning District C-4 Create a Noise Zone/Air Installation Compatible Use Zone (AICUZ) Overlay Zoning District C-5 Use Cluster Development Techniques and Planned Unit Development in land use protection zones (LUPZ) C-6 Use of Noise Attenuation Techniques C-7 Use Zoning Ordinances to impose height restrictions in key Joint Base runway areas

Table 1. Summary of Identified Compatibility Issues (Continued)

Identified Issue	Recommendation Category	Recommended Implementation Action
<i>Noise complaints in residential neighborhoods</i>	Noise and Safety	D-1 Determine Comprehensive Joint Base Impacts D-2 Make available voluntary noise attenuation options D-3 Update and Maintain Regional HUD Noise Map D-4 Establish Joint Base Priority Locations for Possible Acquisition D-5 Acquisition Program
<i>Lack of funding and standards for noise attenuation</i>		
<i>Residences located within safety zones</i>		
<i>No procedures in place for prospective home and land buyers to be aware of proximity to the Joint Base</i>	Community Development	E-1 Develop JLUS Housing and Community Development Subcommittee E-2 Incorporate JLUS Municipal Transfer of Development Rights (TDR) Program
<i>Limited procedures in place to encourage regional growth away from noise and APZs</i>		E-3 Municipalities seeking to preserve land in buffer area through TDR require sewer service E-4 Real Estate Transfer of Ownership Disclosure E-5 Real Estate Joint Base Code
<i>Availability of affordable housing and general quality of life</i>	Affordable Housing Development	F-1 Reduce JLUS municipalities low-moderate income COAH obligations F-2 Develop JLUS Housing and Community Development Subcommittee
<i>Concerns of Commercial Competition with the Joint Base and Local Economic Stability</i>	Economic Development	G-1 Develop JLUS Economic Development Subcommittee

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Table 1. Summary of Identified Compatibility Issues (Continued)

Identified Issue	Recommendation Category	Recommended Implementation Action
<i>There is a lack of adequate infrastructure for JLUS Municipalities</i>	Infrastructure	<ul style="list-style-type: none"> H-1 Further analyze wastewater solutions for JLUS Municipalities H-2 Examine Alternative Routing Measures to offset County Road Closures and Military thru traffic H-3 Develop Military traffic routing plan H-4 Explore transit opportunities for military and civilians H-5 Improve Community Design for Base Entrances
<i>Preservation of Agriculture and Open Space Surrounding the Joint Base</i> <i>Regional Groundwater Protection</i> <i>Protection of Natural Resources</i>	Natural Environment	<ul style="list-style-type: none"> I-1 Continue to Establish Priority Locations for Farmland and Open Space Preservation I-2 Implement County and Municipal farmland and open space preservation plans I-3 Perform locally known contaminant testing of local wells as a precautionary step I-4 Continue environmental impact studies in communication with Joint Base I-5 Implement best management practices, including wildfire management, dust and bird control I-6 Distribute Bird Aircraft Strike Hazard (BASH) Educational Materials I-7 Develop trespass avoidance procedures
<i>Local planning can be subject to regional and state planning regulations and guidelines</i>	Regional and State Planning Influences	<ul style="list-style-type: none"> J-1 Utilize PDC program J-2 Re-evaluate obligations and zoning requirements for Pinelands Management Areas J-3 Amend Jackson Township Pinelands Management Area J-4 Apply for State Plan Endorsement

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