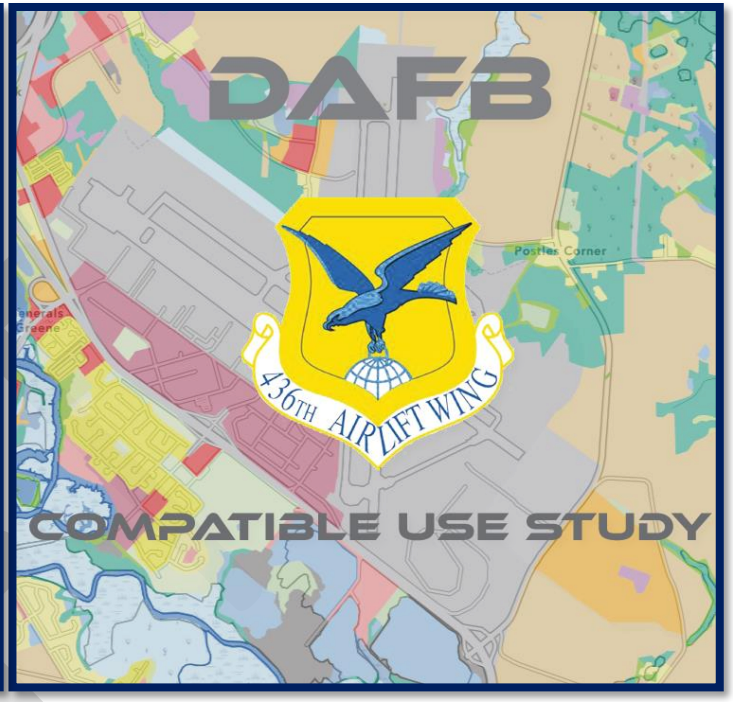

Dover Air Force Base – Compatible Use Plan

In cooperation with Delaware Department of Transportation

Prepared by:

CENTURY ENGINEERING
A Kleinfelder Company

March 2023

The Dover Air Force Base Compatible Use Plan was developed through a collaborative partnership pulling from the knowledge and expertise from key stakeholders throughout the project area. The core project team was supported by a Policy Committee and a Technical Committee. These two committees provided the insight and knowledge that guided the study and the process from initial project kick off to the final report. The efforts of the following individuals and their commitment to the project is acknowledged and appreciated.

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This plan was prepared under contract with the Delaware Department of Transportation, with financial support from the Office of Local Defense Community Cooperation, Department of Defense. The content reflects the views of the Delaware Department of Transportation key committee partners and does not necessarily reflect the views of the Office of Local Defense Community Cooperation.

The Dover Air Force Base (DAFB) Compatible Use Plan (CUP) is a cooperative planning initiative between DAFB, Department of Defense (DoD), state and federal agencies, surrounding jurisdictions, and other stakeholders. The CUP is a tool for surrounding communities and the installation to understand land use planning and develop strategy and implementation actions that support the community goals and the installation's mission. The initiative addresses land use compatibility planning around the installation that supports the installation's mission and operations, while balancing sustainability, viability, and safety of both the base itself and the surrounding communities.

DAFB is located within the City of Dover, DE, and the municipal boundary and land use control are generally to the north of DAFB. The other 3 sides of DAFB are surrounded by the unincorporated areas of Kent County. There are several other smaller municipalities within the study area but none are adjacent to DAFB.

Collaboration and joint planning between DAFB, local jurisdictions, state agencies, federal agencies, stakeholders, and the surrounding communities protects the long-term viability of DAFB while assisting DAFB maintain healthy partnerships to protect the long-term viability of the same entities they depend upon to support the base. The CUP is both a technical and a guidance document. It seeks to identify conflicts between various land use dynamics surrounding DAFB and propose specific and achievable mitigation strategies to protect and enhance not only DAFB but the surrounding communities. The CUP recommendations are the foundation for future action by all of the project stakeholders as they relate to compatible land use. The intent of this plan is to provide a guide to decision makers in promoting decisions, policies, and recommendations that ensure the viability of DAFB long into the future.

The study area is a circle with a radius of five miles created around DAFB (Figure 1). The study area includes Port Mahon which is a recreational area in Kent County, Delaware that also assists DAFB in maintaining services. The area of this circle includes all key Federal Aviation Regulation (FAR) Part 77 airspace, Noise Contours, and Air Installations Compatible Use Zones.

The individuals representing the numerous interests, agencies, businesses, and personnel ensure a varied cross-section of opinions and priorities resulting in feasible, practical solutions that marry the ultimate goals of protecting the safety, security, and long-term viability of both DAFB and the surrounding communities.

Local jurisdictions recognize the importance of maintaining the capability of DAFB by protecting it from urban encroachment and have developed a strong working relationship with DAFB in matters of development planning. Kent County and the City of Dover have taken steps to support the mission of DAFB by adopting land use plans and zoning controls that limit encroachment into the flight paths and operations of the airfield. Continued maintenance of the land use and zoning restrictions currently in place will ensure the viability of DAFB while helping to provide valuable information to the owners and potential owners of impacted properties.

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Glossary

Accident Potential Zone I (APZ I) An area that is less critical than the Clear Zone (CZ), but still possesses a significant risk factor. This 3,000 by 5,000 feet-wide area has land use compatibility guidelines that are sufficiently flexible to allow reasonable economic use of the land, such as industrial / manufacturing, transportation, communication / utilities, wholesale trade, open space, recreation, and agriculture. However, uses that concentrate people in small areas are not acceptable.

Accident Potential Zone II (APZ II) An area that is less critical than APZ I, but still possesses potential for accidents. Accident Potential Zone II, also 3,000 feet wide, is 7,000 feet long extending to 15,000 feet from the runway threshold. High density functions such as multi-story buildings, places of assembly (e.g., theaters, churches, schools, restaurants, etc.), and high-density office uses are not considered appropriate.

Air Installations Compatible Use Zones (AICUZ) The Air Installations Compatible Use Zones, or AICUZ, program is a Department of Defense program designed to promote development compatible with military flight operations. DoD Instruction 4165.57 establishes the AICUZ program that is similar to the Federal Aviation Administration's Federal Aviation Regulation Part 150 program for civil airports. AICUZ is a land use planning program not a land acquisition or land management program.

Bird/Wildlife Aircraft Strike Hazard (BASH) Program to monitor and reduce safety and obstruction hazards caused to aircraft by birds and wildlife in the flight path.

Clear Zone (CZ) Of the three Accident Potential Zones, the Clear zone has the highest probability of accidents. Obstruction free surface (except for features essential for aircraft operations) on the ground symmetrically centered on the extended runway centerline beginning at the end of the runway extending outward 3,000 feet. Accident potential is high enough that land use restrictions prohibit reasonable economic use of land.

Compatible Use Plan (CUP) formally known as Joint Land Use Study (JLUS) Analytical planning study of civilian development patterns and land use activities in the vicinity of a military installation that result in recommendations for instituting compatible civilian land use activities and development patterns that protect and preserve the utility and the operational effectiveness of military installations.

Day-Night Sound Level (DNL) The Environmental Protection Agency (EPA) has adopted a system of four "sound descriptors" to summarize how sound is heard and measured to determine the impact of noise on health and welfare. Specifically, the Day-Night Sound Level (DNL) is a weighted equivalent sound level for a twenty-four hour period with an additional 10decibel (dB) imposed on the equivalent sound levels for night time hours of 10 pm (2200) to 7 am (0700). There are several day-night sound level calculators that can be found online.

Decibel (dB) Unit of measurement for sound in air as perceived by our ears. **(dBA)** Is an average of sound levels over time

Floor Area ratio (FAR) Measurement of a building's floor area in relation to the size of the building's lot or parcel. FAR is expressed as a decimal number and is derived by dividing the total area of the building by the total area of the parcel (building area ÷ lot area).

Incompatible Civilian Development Land use activity and civilian development activity that adversely affects the utility or training

and readiness missions of a military installation. These effects include air, land, water, electromagnetic spectrum intrusion, and intrusive urban lighting.

Mandatory Zone of Frangibility (MZF) Zone in which any above ground feature, that must be sited there due to its function, must be made frangible to the maximum extent possible

Runway airspace imaginary surfaces In graphical form, are the result of the application of obstruction height criteria to Dover AFB. Imaginary surfaces are surfaces in space around airfields in relation to runways. The surfaces are designed to define the obstacle-free airspace at and around the airfield.

A

AICUZ - Air Installation Compatibility Use Zone

APZs - Accident Potential Zones

B

BASH - Bird / Wildlife Air Strike Hazard

BIO - Biological Resources

C

CA - Climate Adaptation

CAMA - Coastal Area Management Act

COM - Communication / Coordination

CTP - Capital Transportation Plan

CUP - Compatible Use Plan

CZs - Clear Zones

D

dB - decibel

DelDOT – Delaware Department of Transportation

DNL – Day - Night Average Sound Level

DNREC – Department of Natural Resources and Environmental Control

DoD - Department of Defense

E

ED - Energy Development

F

FAA - Federal Aviation Administration

FSI - Frequency Spectrum Impedance/Interference

G

GIS - Geographic Information System

H

HA - Housing Availability

I

IE - Infrastructure Extension

J

JUA - Joint Use Agreement

L

LAS - Land / Air / Sea Space Competition

LEG - Legislative Initiatives

LG - Light and Glare

LU - Land Use

M

MAA - Military Awareness Area

MCA - Military Compatibility Area

MCAOD - Military Compatibility Area Overlay District

MIA - Military Influence Area

MPO – Metropolitan Planning Organization

MZF - Mandatory Zone of Frangibility

N

NOI Noise

NVG Night Vision Goggle

O

OEA - Office of Economic Adjustment

OLDCC - Office of Local Defense Community Cooperation

P

PC - Policy Committee

PLUS – Preliminary Land Use Service

POC - point-of-contact

R

RC - Roadway Capacity

REPI - Readiness and Environmental Protection Integration

S

SA - Safety

T

TAC - Technical Advisory Committee

U

UAS - unmanned aircraft system (Drone)

UAV - unmanned aerial vehicle

USAF - United States Air Force

1.1 Introduction

The Dover Air Force Base (DAFB) Compatible Use Plan (CUP) is a cooperative planning initiative between DAFB, Department of Defense (DoD), state and federal agencies, surrounding jurisdictions, and other stakeholders. This plan was prepared under contract with the, Delaware Department of Transportation, with financial support from the Office of Local Defense Community Cooperation, Department of Defense. The content reflects the views of the Delaware Department of Transportation key committee partners and does not necessarily reflect the views of the Office of Local Defense Community Cooperation.

The DAFB Compatible Use Plan is a tool for surrounding communities and the installation to understand land use planning and develop strategy and implementation actions that support the community goals and the installation's mission. The initiative addresses land use compatibility planning around the installation that supports the installation's mission and operations, while balancing sustainability, viability, and safety of both the base itself and the surrounding communities.

DAFB is located within the City of Dover, DE, and the municipal boundary and land use control are generally to the north of DAFB. The other 3 sides of DAFB are surrounded by the unincorporated areas of Kent County. There are several other smaller municipalities within the study area, but none are adjacent to DAFB. The study area is depicted in Figure 1 on page 4

Early in its history, the airbase was surrounded by fields. Today the base is surrounded from northwest to the south by suburban growth centered around Dover. Pressure from growth and development have placed incompatible and potentially incompatible uses within a five-mile radius of the base particularly within the easements, clear zones, APZ 1 zones, and APZ 2 zones.

In response to these pressures the DoD, through the Office of Local Defense Community Cooperation, provides technical and financial assistance to states and local governments to complete compatible use studies to comprehensively understand the concerns of a neighboring military installation around encroachment, opportunities for civilian growth, and to develop actions that work in concert with the installation's mission.

1.2 What is a Compatible Use Plan

DAFB CUP is a document intended to identify concerns and issues and outline strategies to achieve compatibility between on-base land uses and those of neighboring civilian communities. The study is jointly conducted by state and federal agencies, military installation representatives, and local communities. The policy provides guidance to establish and implement the CUP by raising State and local government awareness and interest in supporting the long-term sustainability and operability of DAFB.

The planning process incorporates representatives from the surrounding communities, local and state agencies, DoD, DAFB, and other stakeholders to ensure concurrence and support for the resulting CUP. The policy ensures that civilian actions that encroach or constrain military operations are limited with processes in place to proactively minimize these actions. The policy provides champions for these processes to provide guidance to federal, state, and local agencies to implement the policies. The policy also provides avenues for coordination and support so that the local municipalities and lands surrounding the base can also continue to be viable into the future. Finally, the plan provides a process for

monitoring the surrounding land uses and policy implementation to determine weaknesses or avenues for improvement to continue implementing the plan well into the future of DAFB.

1.3 Study Purpose

Collaboration and joint planning between DAFB, local jurisdictions, state agencies, federal agencies, stakeholders, and the surrounding communities protects the long-term viability of DAFB while assisting DAFB to maintain healthy partnerships to protect the long-term viability of the same entities they depend upon to support the base. The CUP is both a technical and policy document. It seeks to identify conflicts, existing and potential, between various land use dynamics surrounding DAFB and propose specific and achievable mitigation strategies to protect and enhance not only DAFB but the surrounding communities. The CUP is not a regulatory document, Its recommendations are the foundation for future action by all of the project stakeholders as they relate to compatible land use. The intent of this plan is to provide a guide to agency decision makers in promoting decisions, policies, and recommendations that ensure the viability of DAFB long into the future.

Working together allows land use decisions to be monitored and decisions made prior to them becoming issues for DAFB. Mitigating concerns and conflicts through the CUP promotes cooperation and coordination between all entities for the long-term future regardless of personnel changes.

DAFB CUP will serve as a communication engine to enhance the understanding that exists between all major stakeholders by increasing communications about the strong economic and physical relationship between DAFB and its community partners. Throughout DAFB CUP coordination and communication between all stakeholders was implemented to develop methods to maintain and manage this coordination throughout the future. Coordination throughout the entire process was critical to establishing acceptance to the policies and principles that will be prescribed through the plan. Coordination and cooperation will carry through all elements of state and local government decisions including in decision making processes of the local land use agencies and regulatory agencies.

The plan's policies and recommendations intend to improve collaboration between all stakeholders by encouraging cooperative land use and resource planning between DAFB and area stakeholders so that future development is compatible with the training and operational missions at DAFB while, at the same time, seeking ways to reduce operational impacts on adjacent public and private lands.

As part of the DAFB CUP compatibility issues were identified and recommendations were developed. The recommendations include strategies and tools designed to address these compatibility issues including implementation strategies, agencies who will champion the implementation, and timelines for implementation.

In addition to preparing mitigation strategies the plan also includes community-based methods for informing citizens of the reasoning behind the mitigation strategies.

DAFB CUP documented the data gathered, agency and stakeholder coordination, identification of issues, concerns, and conflicts, development of mitigation strategies in a final report inclusive of recommendations and strategies for compatible use between DAFB and all stakeholders.

1.4 Study Goals

The goal of the CUP is to encourage local and state governments to work closely with DAFB to implement measures that prevent the introduction of incompatible civilian development that may impair military operations. It is imperative to preserve and protect the public health, safety, and welfare of those living near DAFB by increasing public awareness of the military missions and contribution to the regional economy.

The CUP planning process is intended to protect and preserve military readiness and defense capabilities while supporting continued community economic development.

The CUP planning process, included data collection and analysis, incorporated the following military mission compatible use factors, as applicable:

- Airspace and land restrictions
- Airborne noise
- Urban growth
- Spectrum encroachment to include cell towers and wireless internet
- Endangered species and critical habitat
- Air Quality
- Water Quality
- Cultural resources, to include National Register and Register-Eligible historic resources
- Delaware National Estuarine Research
- Marine resources (DAFB Port Mahon property, offshore wind turbines)
- Energy compatibility and availability, including solar fields
- Security of the perimeter of the base and airspace to include drone use
- Agricultural preservation
- Opportunities for habitat conservation and passive recreation
- Bird/Wildlife Strike Hazards (BASH)

The CUP planning process includes an Implementation Plan, with monitoring responsibilities identified, to ensure the recommendations advanced in the CUP are realized. The Implementation Plan includes a list of specific public and private actions for each study participant organized by their scheduled execution date:

- Short Term (1-3 years)
- Medium-Term (4-10 years)
- Long-Term (11-20 years)

Each listed action assigns responsibility for the task and includes an estimate of costs and funding sources. These recommended actions include smart land use planning principles and practices to achieve a balance between potentially conflicting interests.

The CUP planning process supports improved communication and establishes formal policies and procedures for military participation and cross-jurisdictional coordination in community development review and planning processes, including proposed alternative energy development projects. CUP project deliverables include a four-page maximum Executive Summary for public distribution and posting on websites or webpages. The Executive Summary includes a description of military operations, graphic display of study area and military operations footprint, identifies community organization structure and participants for both planning and implementation, summary of compatible use issues, and primary compatible use recommendation highlights.

1.5 Study Area

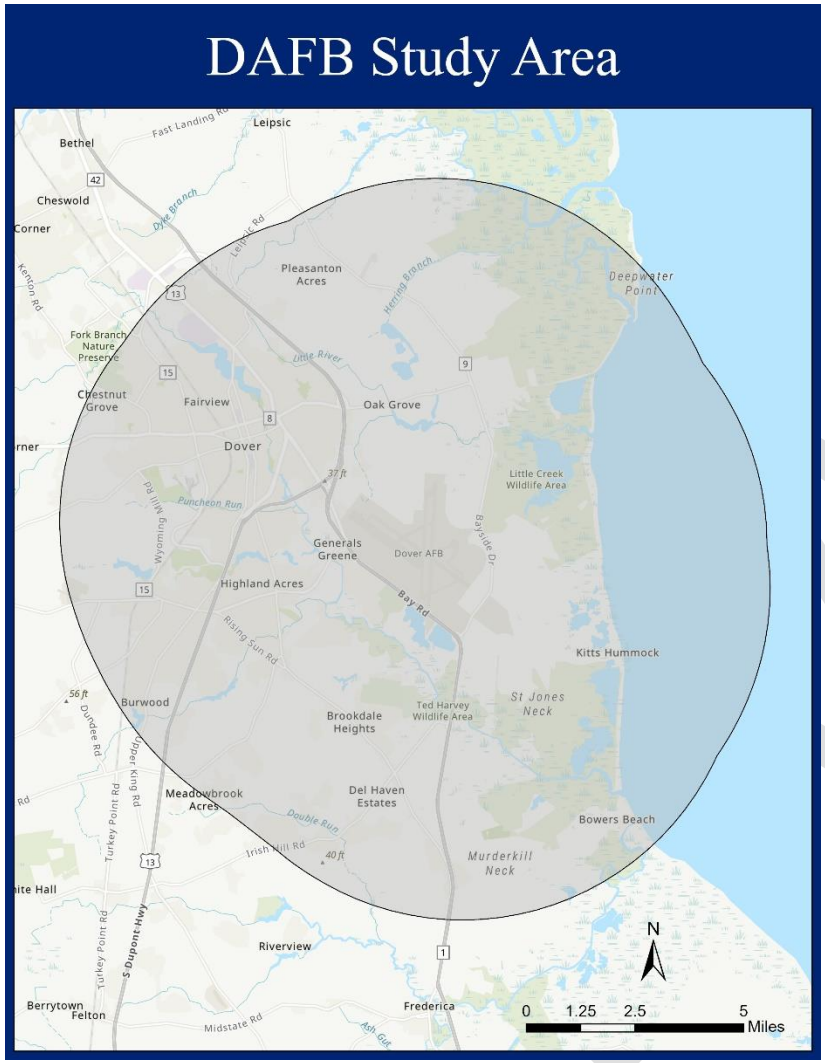


Figure 1 - Study Area

The proposed study area is a circle with a radius of five miles created around DAFB (Figure 1). The area of this circle includes all key Federal Aviation Regulation (FAR) Part 77 airspace, Noise Contours (Map 2), and Air Installations Compatible Use Zones (AICUZ). Key areas of emphasis include:

- Dover Air Force Base
- Portions of the City of Dover, the Town of Little Creek, the Town of Magnolia, the Town of Camden, the Town of Wyoming, the Town of Bowers, and unincorporated Kent County. Study area is east of SR 1 (North of Puncheon Run) or the Saint Jones River (South of Puncheon Run) and then follows as they extend west of SR 1. Study area extends to the Town of Magnolia, and then follows the Saint Jones River to the Delaware Bay.
- Airspace on the Delmarva Peninsula used for low-level training routes

Port Mahon is a recreational area in Kent County, Delaware located four miles northeast of DAFB. It's accessible from the base via a right turn onto Port Mahon Road from SR 9 north. Recreational activities include fishing, launching boats or kayaks, birdwatching, and photography.

Figure 2 - Port Mahon Road Erosion

Current Infrastructure includes a boat ramp, small boat dock, fishing pier, and fuel pipeline. The boat ramp is state maintained. The pier and road require ongoing maintenance to support the supply of jet fuel to DAFB. Large rocks called riprap have been placed along the road to protect it, but the road is still regularly damaged by flooding. The picture in Figure 2 shows the damage to the road from tidal surge and wave action. Delaware Storage and Pipeline is located just off Port Mahon Road and has supplied jet fuel to DAFB since 1960. The jet fuel is delivered to the Delaware Storage and Pipeline above ground storage tanks via barge utilizing the dock located further east on Port Mahon Road. During nor'easter storms and other hightide storm events the road becomes inundated with water and is unpassable. DNREC and DelDOT have partnered to implement the living shoreline project that will provide protection for the roadway against the storm surge. The project is still being developed and prioritized for funding. Maintaining the viability of the Port Mahon Road and the jet fuel delivery infrastructure is vital to the operations and sustainability of DAFB.

1.6 Study Partners and Stakeholders

Numerous study partners and stakeholders were included in the development of this study. Stakeholders and agencies represented in this study include DAFB, City of Dover, Dover/Kent County MPO, Kent County Levy Court, Office of State Planning (OSPC), DNREC, Department of Safety and Homeland Security, Department of Agriculture, State Historic Preservation Office, Towns of Little Creek, Magnolia, Camden, Wyoming, Bowers, Delaware River and Bay Authority (DRBA), Kent Economic Partnership, and DelDOT.

Agencies and agency representatives were distributed into two committees. The Technical Committee consisted of representatives from departments, organizations, or agencies who could assist in supporting the analysis. The Technical Committee provided critical data necessary to inform the process and build the GIS database that served as a tool for issue identification. Some of the information reviewed was sensitive in nature and could not be shared publicly. The committee reviewed technical issues, provided

feedback on study findings. Technical committee members met on the following dates:

January 13, 2022	March 10, 2022	May 6, 2022
July 25, 2022	September 9, 2022	November 4, 2022
December 5, 2022		

The Policy Committee consisted of Stakeholder/agency representatives who compromised the decision-making body of the CUP. This group provided overall policy direction and approved study recommendations and implementation measures. Policy Committee Members met on the following dates:

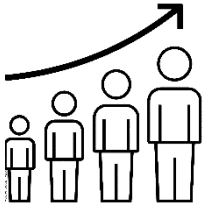
January 13, 2022	April 11, 2022	September 9, 2022
November 4, 2022	December 5, 2022	

1.7 Data Collection Efforts

Land Use and Zoning

Potential Incoming Development

Transportation Corridors (GIS)



Population Forecasts and Trends

Base Operations

Environmental / Natural Resources

The data gathering efforts consisted of a technical and policy evaluation of local, state, and federal guidelines, regulations, and conditions guided by the Policy and Technical committees, as well as a robust public involvement process. Central to the data collection efforts is the collection of regional GIS data for the entire study area. Members of both the policy and technical committees provided information on the data collection efforts.

The data collection for this study included the most recent information available between the dates of September 2021 and August 2022. The data sets listed below are included in a web map that can be used by stakeholders and resource agencies to coordinate and collaborate uses within the study area. In addition, static maps of selected data sets are included in Appendix A.

Land Use and Zoning

- Delaware Land Use Landcover 2017
- Delaware State Parcels 2.0
- Delaware Urbanized Areas 2010
- Delaware Census 2020
- Delaware Census Race
- Delaware Census Housing Units
- Delaware Census Data
- Local Zoning (Appendix A)
- Future Zoning
- DelDOT Development Rights (Appendix A)
- Agricultural Land Preservation (Appendix A)
- Protected Lands (Appendix A)

For the purpose of this study, existing and future land uses were generalized into one of the following six categories:

- Residential: Includes all types of residential activity, such as single and multi-family residences and mobile homes, at a density greater than one dwelling unit per acre.
- Commercial: Includes offices, retail, restaurants, and other types of commercial establishments.
- Industrial: Includes manufacturing, warehousing, and other similar uses.
- Public/Quasi-Public: Includes publicly owned lands and/or land to which the public has access, including military reservations and training grounds, public buildings, schools, churches, cemeteries, and hospitals.
- Protected Lands: Includes land areas designated for recreational activity, including parks, wilderness areas and reservations, conservation areas, and areas designated for trails, hikes, camping, etc.
- Open/Agricultural/Low Density: Includes undeveloped land areas, agricultural areas, grazing lands, and areas with residential activity at densities less than or equal to one dwelling unit per acre. It is important to distinguish between lands that fit this category and wetlands, that have many of the same characteristics, however, are not suitable for development.

Proposed Development

- PLUS Applications – Delaware Planning Development 2.0
- Downtown Development Projects
- Downtown Development Bound
- DelDOT Capital Projects
- DelDOT Planning Studies
- Metropolitan Planning Organization (MPO) Studies
- Active Development Projects
- State Agency Initiatives

Environmental and Cultural Resources

- Delaware Ecological Network 2.0
- Delaware Water 2.0
- Delaware Forestry 2.0
- Delaware Soils 2.0
- Delaware Groundwater Recharge Areas
- Delaware Groundwater Recharge Potential 2.0
- Delaware Wetlands 2.0
- Delaware Watersheds 2.0
- Delaware Tax Ditches 2.0
- Delaware Historic Places
- Lakes and Ponds

A discussion of environmental and cultural resources for this study includes the Delaware National Estuarine Research Reserve (DNERR) which is one of the 30 National Estuarine Research Reserves across the country whose goal is to establish, protect, and manage natural estuarine habitats for research, education, and coastal stewardship. The St. Jones Reserve is one or two reserve areas within the state of Delaware. The reserve was established in 1993 and is a cooperative program between the State of Delaware and the National Oceanic and Atmospheric Administration. The St Jones Reserve features tidal brackish-water and salt marshes dominated by saltmarsh cordgrass, salt hay, and open water of creek, river and bay areas, buffered by freshwater wooded fringe, farmlands, and meadows. The St. Jones River watershed has significant development in upstream non-tidal areas, where urbanized Dover dominates the middle and upper watershed. However, downstream portions of the St. Jones River watershed, where the St. Jones Reserve is located, are still primarily agricultural.

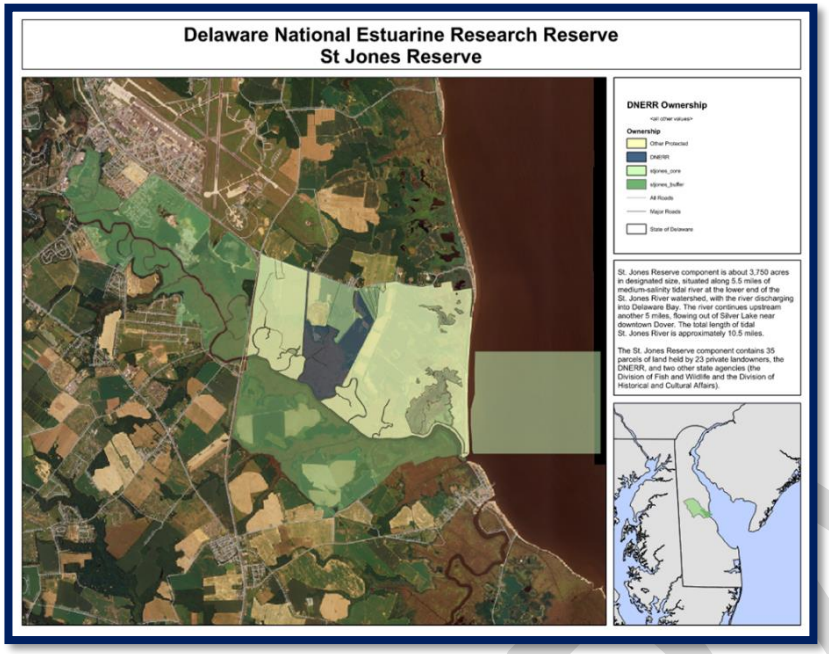


Figure 3 - DNERR Boundary

Land acquisition/protection in the designated areas of the St. Jones Reserve has been very successful with the efforts of DNREC Fish and Wildlife and the Division of Historical and Cultural Affairs. The property acquisitions by these agencies have established a large corridor of protected land of which DNERR is a significant component. Core area acquisition is the primary focus in the St. Jones Reserve. Within the core area, special emphasis is placed on land that adjoins the current DNERR boundaries or borders the St. Jones River. Expanding into these areas will allow for greater research, educational and stewardship opportunities as well as provide space for future building expansions if they become necessary. DNERR will be focusing on land located on the southern side as well as upstream portions of the St. Jones River. Acquisition priorities for the St. Jones Reserve are properties:

- located within DNERR core and buffer areas,
- that lie along the St. Jones River, and
- that will enhance resiliency, preserve or restore ecological function to the St. Jones River

These strategic acquisition areas encompass a large area south of DAFB and will help ensure compatible uses for the future.

More information on DNERR can be found here:

https://documents.dnrec.delaware.gov/coastal/DNERR/2022-DNERR-Management-Plan.pdf

Military and Installation Data

- Noise Contours
- Accident Potential Zones (APZ)
- Airfield Imaginary Surface
- Military Flight Paths
- Airfield Frangible Zone
- Installation Area
- Administrative Boundary
- Explosive QD Arcs

1.8 Compatible Land Use Plan (CUP) Study Analysis

PROJECT START UP

The Compatible Land Use Plan (CUP) Study began in October 2021.

The initial tasks of the study were the development of the work plan and the organizational structure of the supporting committees. The public outreach strategy was also developed.

The project coordination began with a joint kickoff meeting of both the Policy and Technical Committees to discuss the project scope, schedule, and activities on January 13, 2022. The public involvement strategy was discussed and ultimately adopted. Methods of data gathering were also discussed and input was requested from the Committees where appropriate.

DATA GATHERING

The data gathering effort from November 2021 to May 2022 utilized various sources including GIS data layers, policy and regulations, comprehensive plans, zoning and ordinances, and discussions with various agencies and stakeholders.

Included in the data gathering phase was a DAFB installation tour held on April 25, 2022. The red line in Figure 4 indicates the route traveled during the tour. Key information discussed on the tour included operations and uses within the base, some previous issues with adjacent land owners, and a discussion of Port Mahon's importance to the area for fuel deliveries, recreation and some residential areas.

Figure 4 - Base Installation Tour Map

Twenty-two stakeholder interviews were conducted to determine concerns, issues, and possible mitigation strategies. Stakeholder interviews were conducted with the following entities:

1. City of Dover
2. Kent County
3. Town of Camden
4. Kent Economic Partnership
5. Dover / Kent County MPO
6. DNREC Fish and Wildlife
7. DNREC Parks
8. DelDOT Homeland Security and Emergency Management Planning
9. DelDOT Resiliency and Sustainability Office
10. Pennsy Supply Company (Borrow Pit)
11. DAFB Planning
12. DAFB Engineering
13. DAFB Operations
14. Delaware Transit Corporation (DTC)
15. George & Lynch (Hot-mix plant)
16. Department of Safety and Homeland Security
17. Delaware Office of State Planning
18. Municipalities (Magnolia, Wyoming, and Bowers)
19. DNREC Division of Watershed Stewardship
20. Delaware River & Bay Authority (DRBA)
21. Department of Natural Resources and Environmental Control (DNREC) Division of Climate, Coastal, and Energy
22. Department of Agriculture

Several common themes were identified through these discussions including:

- Review and revise existing land use codes including easements, ordinances, overlay zone/zoning districts, density, building use changes/monitoring and Bird Aircraft Strike Hazard (BASH) requirements
- Review communication between DAFB and planning agencies including County, State, DelDOT, Land Use Agencies, and municipalities to fortify the avenues of communication, at their respective agencies, currently in place to solidify their success into the long-term future despite any changes in personnel
- Review the land preservation process to determine whether the current reactive process can become proactive
- Stress the importance of Port Mahon from a climate/resiliency perspective including the safety and on/off shore improvements necessary to fortify this area for both local boaters as well as DAFB fuel deliveries

POLICY/TECHNICAL COMMITTEE MEETINGS, ELECTED OFFICIALS' BRIEFINGS, AND PUBLIC WORKSHOP 1 – MAY 17, 2022

The existing data that was gathered at the commencement of the study was presented to both committees, elected officials, and then presented to the public in a hybrid public workshop held both over Zoom and in-person at the DelDOT Delaware Room. Meetings were held with the Policy and Technical Committees to discuss the data gathered and ensure that data was the most recent and relevant information for this study. Both committees were invaluable in providing additional data. Meetings with the Policy Committee were held on January 13, 2022 and April 11, 2022. Meetings with the Technical Committee were held on March 10, 2022 and May 6, 2022. A Public Officials Briefing was held on May 11, 2022. Information intended to be shared at the first public workshop was presented in a concise format to the public officials who attended. The first public workshop was held on May 17, 2022.

BORROW PIT INTERACTIVE PLANNING SESSIONS (2) SEPTEMBER 27,2022 AND OCTOBER 4, 2022

The existing borrow pits located at 1800 S. Bay Road Dover, Delaware 19901 are considered an area of concern to DAFB mission operations since the borrow pit operations are partially within the Clear Zone and APZ I. Two interactive planning sessions were held to discuss the potential future uses of the Borrow Pits should the borrow pits ever decide to redevelop or sell the property. The meetings, held on September 27, 2022 and October 4, 2022, included participant education on the land use restrictions and possible compatible uses surrounding DAFB, discussion on potential land uses within the disciplines of active recreation, passive recreation, conservation, economic growth and industry, and additional ideas. The second meeting discussed the feasibility of the numerous suggestions received at the first meeting, possible funding sources, and potential maintenance and management entities who could maintain the potential changes.

Over the 2-day interactive planning session it was determined that if and when the borrow pits would ever redevelop the most compatible use would be some level of active recreation. This use would support the efforts of the BASH program and help control habitat and create an uninviting environment for birds and other wildlife. Careful consideration would need to be given to securing the CZ and providing an alternate access location. Based on conversations with the current property owner, Pennsy Supply, the current operations at the borrow pit should continue another 15 to 20 years. The CUP should be referenced by the LU agency should any redevelopment activity take place in the future.

Concerns and potential conflicts with the base were documented throughout the analysis. These concerns were presented to the Technical and Policy Committees for discussion. The list of concerns were enumerated and presented to the elected officials, and then to the public in a second hybrid public workshop held both over Zoom and in-person at the DelDOT Delaware Room.

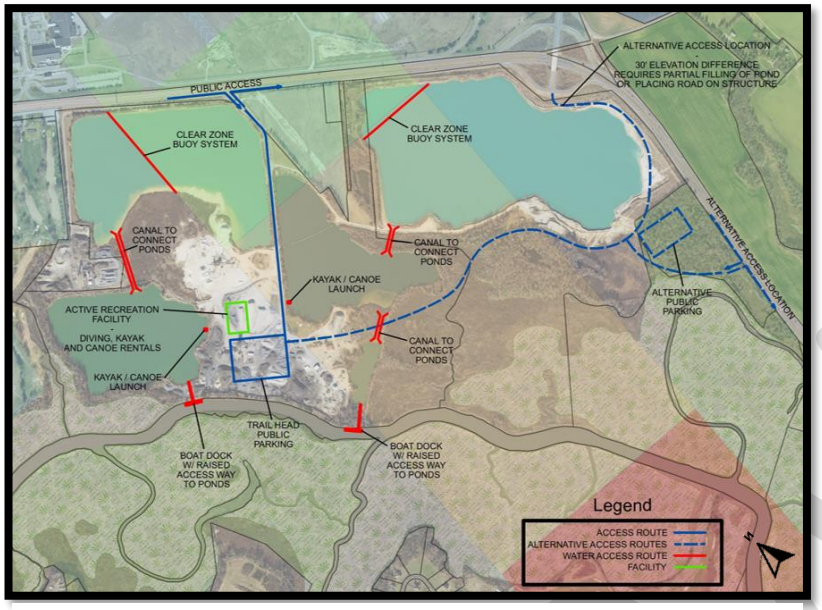


Figure 5 - Interactive Planning Ideas

POLICY/TECHNICAL COMMITTEE MEETINGS, ELECTED OFFICIALS' BRIEFINGS, AND PUBLIC WORKSHOP 2 - NOVEMBER 29, 2022

Concerns were then tabulated and issued potential mitigation strategies which were discussed with the various agencies and project stakeholders. Meetings with the Policy Committee were held on September 9, 2022, November 4, 2022, and December 5, 2022. Meetings with the Technical Committee were held on July 25, 2022, September 9, 2022, November 4, 2022, and December 5, 2022. A Public Officials Briefing was held on November 17, 2022. Information intended to be shared at the first public workshop was presented in a concise format to the public officials who attended. The second public was held on November 29, 2022.

1.9 Public and Stakeholder Engagement

The CUP process has placed a heavy emphasis on public and stakeholder participation to build consensus across varied interests officials, business owners, municipalities, County, City, and State officials. Significant public outreach results in greater community support and input into the planning process and the future for the areas surrounding DAFB. The individuals representing the numerous interests, agencies, businesses, and personnel ensure a varied cross-section of opinions and priorities resulting in feasible, practical solutions that marry the ultimate goals of protecting the safety, security, and long-term viability of both DAFB and the surrounding communities. The goals for public outreach on this project include:

1) Provide opportunities to include the public in the planning process
2) Increase the accessibility and transparency of information available to the public
3) Increase the efficiency of the public outreach process
4) Provide the public opportunities to be heard in the process
5) Final decisions should meet the needs of stakeholders
6) Adhere to the applicable federal and state requirements including the Americans with Disabilities Act of 1990 and Title VI
7) Ensure that all have equal access to information, meeting locations, input opportunities and a voice during the development of the plan

Numerous methods were utilized to inform the surrounding communities of DAFB CUP. Flyers, e-mail notifications, and web page and social media notices were used to advertise the workshops. DelDOT, the project sponsor, created a website housing

all of the data gathered, maps of the project area showing existing conditions, videos and written summaries of all meetings, and advertisements for upcoming events and meetings related to this Study.

Figure 7 -DAFB CUP Webpage

[Dover Air Force Base Compatible Use Study - Delaware Department of Transportation (deldot.gov)]

The GIS web map illustrated in Figure 7 can be accessed online and is the repository of all existing information gathered for the Study that was available to the public to review and use as support throughout the Study for information sharing.

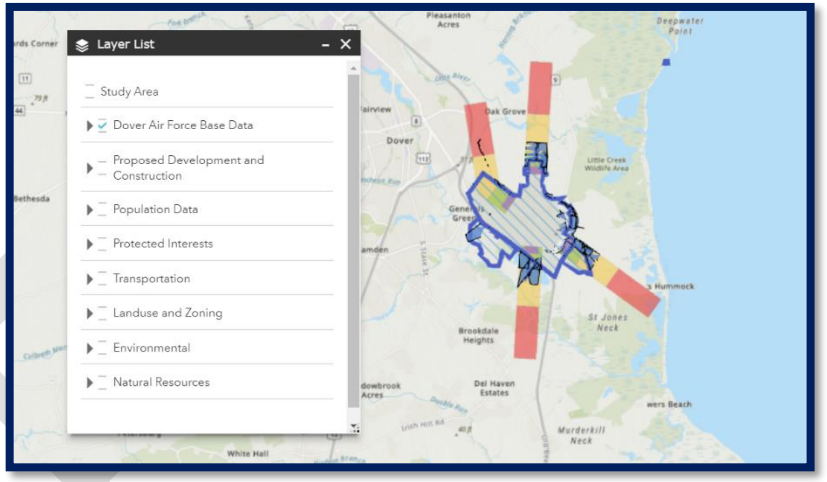


Figure 6 - DAFB CUP GIS Web Map

[Dover Air Force Base Resource Map (Scene) (arcgis.com)]

The City of Dover, Dover Kent MPO, elected officials, and others also assisted in promoting the meetings and community workshops. Elected officials were briefed ahead of all community workshops so that they were in a good position to answer questions should a constituent approach them about this Study.

Throughout the Study various opportunities were provided for the community to provide input and gain information. Each Policy and Technical Committee Meeting was open to the public and provided an opportunity for the community to participate. Two community workshops were held. The first community workshop on May 17, 2022, presented all the existing information gathered during the Study and provided information on what the study is, the goals, participants, and upcoming next steps. The second community workshop was held on November 29, 2022, and presented the

identified conflicts and potential mitigation strategies. In addition, two Interactive Planning Sessions were held for the existing Borrow Pit located at 1800 S. Bay Road Dover, DE 19901. These were held on September 27, 2022, and October 4, 2022.

All these opportunities provided the community and other stakeholders an opportunity to provide their input into the study. The information obtained from these engagements were incorporated into the Study.

The following pictures were taken at the interactive workshops.

2.1 Airport / Community Profile

Several jurisdictions, communities, and airports are within the study area and/or affect the airport's operations. Information on these communities, jurisdictions, and airports provide groundwork for compatible uses for DAFB.

2.1.1 Surrounding Airports

Chandelle Estates is a privately owned general aviation airport open to public use located approximately three miles northeast of Dover, Delaware. Established in 1968, Chandelle Estates is located in an agricultural and light residential area that features a unique "aviation friendly" neighborhood of single-family homes with individual taxiway access situated along the northwest side of the runway. The Airport has a paved runway 2,533 feet in length by 28 feet in width. Any expansion of the runway would be difficult due to physical constraints of a road at one end and woodlands at the other. The Airport has 24 base aircraft and an estimated 1,100 annual aircraft operations. The Airport serves a local set of pilots who use the facility primarily as a recreational and training facility, with relatively minor business use. The primary economic activities on the airport involve flight training, aerial spray operations, the sale of aircraft fuel and oil, rental of hangar and tiedown space, and aircraft maintenance. For the future, it is likely that the facility will continue in its present role until ownership changes or the Airport is converted to a different use.

The Civil Air Terminal (CAT) is located within the city limits of Dover adjacent to DAFB. The CAT occupies roughly 20 acres and has a 2,000 square foot terminal building with 40-space auto parking lot. The airside operations area includes a 6.5-acre aircraft parking ramp with a taxiway connected to DAFB. The CAT is currently operated by

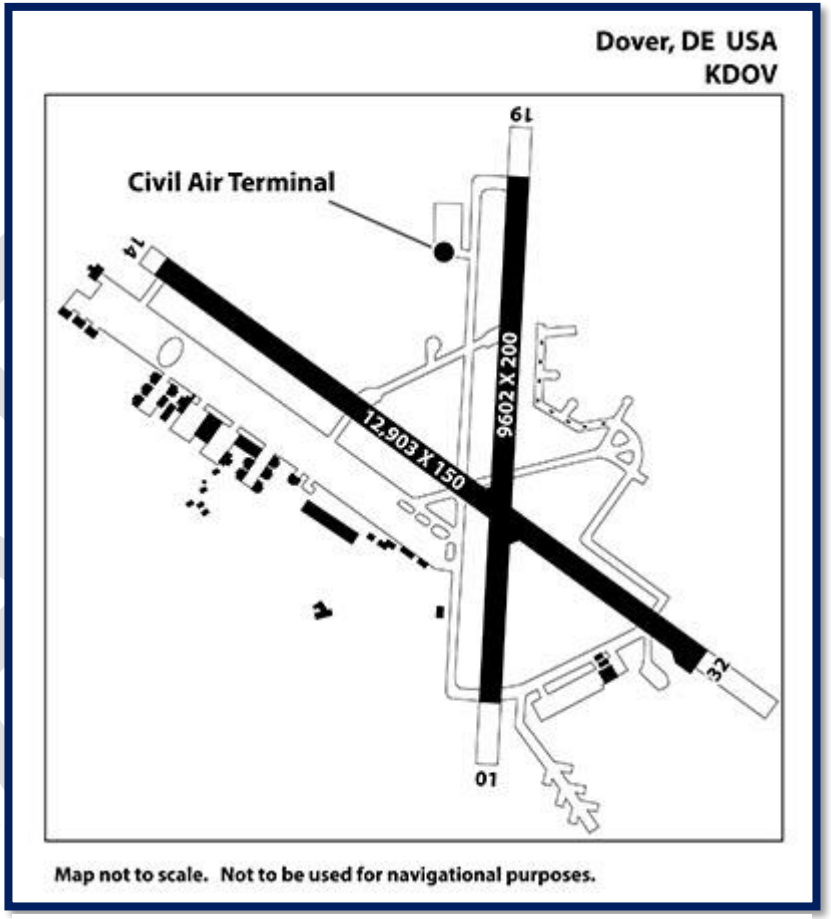


Figure 8 - Location of Civil Air Terminal

the Delaware River and Bay Authority (DRBA) under agreement with DelDOT, its owner. The CAT has no based aircraft, but it does serve as the main air access point to accommodate general aviation aircraft used by NASCAR race drivers and teams traveling to Dover Motor Speedway. In FY2022 the NASCAR race weekend drew 68 high-performance aircraft to the CAT. Many of these business jets

and multiengine turboprops use the expanded ramp for parking during that time.

Delaware Airpark is a publicly owned/public use general aviation airport located approximately one mile west of Cheswold, Delaware and five miles northwest of Dover. The airport is operated by the Delaware River & Bay Authority and features a new terminal building, maintenance hangar, and self-service fuel available by credit card all hours/days of the week.

Delaware Airpark constructed a new 4,200-foot by 75- foot runway parallel to the previous 3,582-foot by 60-foot runway. In addition to the new runway, a new set of T-hangars were also constructed at the Airport. The Airport has 29 based aircraft and had 23,600 annual aircraft operations in 2020.

Delaware State University (DSU) has an Aviation Program featuring a Professional Pilot degree. The flight training program is based at Delaware Airpark. Professional Pilot graduates complete their FAA requirements for the Private Pilot License, Instrument rating, Commercial License, Multi-Engine and Certified Flight Instructor ratings while earning a bachelor's degree. Graduates of the FAA Approved Part 141 Aviation program get hired into a Professional Pilot job leading to a career in aviation. The DSU flight training program opens the door to commercial and/or military aviation careers for those with the ability and tenacity to meet the rigorous academic and physical skills demanded of them. There are more than 125 students and instructors involved in the flight training program.

Jenkins Airport is a privately owned grass strip general aviation airport open to public use, located approximately one mile east of the Town of Wyoming, Delaware and four miles southwest of Dover in a mostly agricultural area. The Airport has turf runways and is surrounded by open fields and some residential development. The Airport has two runways: runway 18/36 is 2,842 feet in length by 70 feet in width and runway 12/30 is 2,035 feet in length by 70 feet in width. Any expansion would be difficult due to physical constraints of a highway (Westerville Road) and property boundaries. The Airport has 20 based aircraft and an estimated 500 annual aircraft operations. The primary economic activities on the Airport are aircraft salvage and parts sales. Jenkins Aircraft Parts buys old or damaged aircraft and salvages parts from those aircraft for use in the repair of other aircraft in the region and across the nation. For the future, it is likely that the facility will continue in its present role until ownership changes or the Airport is converted to a different use.

Smyrna Airport (38N) is located 1 mile east of the city of Smyrna in an agricultural area. The Airport has no paving and is surrounded by open fields and wetlands. The current runway is 2,600 feet in length by 125 feet in width. Any expansion would be difficult due to physical constraints. The Airport has 10 based aircraft and an estimated 1,700 annual aircraft operations. The primary economic activities on the Airport involve aerial spray operations, the sale of aircraft fuel and oil, rental of hangar and tie-down space, and minor aircraft maintenance. For the future, it is likely that the facility will continue in its present role until ownership changes or the Airport is converted to a different use.

2.1.2 Surrounding County and Municipal Areas

DAFB is located in central Kent County, southeast of the City of Dover. The installation's airfield activities primarily impact areas to the northwest and south; these areas include the City of Dover and unincorporated portions of Kent County. Existing land use adjacent to the Base is primarily a mix of commercial, residential, and open space. Smaller areas of industrial and public uses are interspersed

throughout the area. Moderate density residential is prevalent in the City of Dover, with pockets of low-density rural residential scattered throughout unincorporated Kent County. Land to the northeast, east, and south of the Base is largely undeveloped, agricultural, or conservation areas, with pockets of residential use within the municipalities of Camden, Magnolia, Frederica, Little Creek, and Bowers Beach.

Land within the City of Dover comprises a mixture of uses, with suburban residential and commercial uses prevalent. The downtown business district, in the vicinity of Governors Avenue and Division Street, consists of a mix of uses, including public, commercial, and residential. Several residential subdivisions are interspersed among land uses in Dover, northwest of the Base. Commercial land uses are primarily located along major arterial roadways and within the traditional downtown business district. Bally's Dover Casino & Resort and several commercial mall developments dominate the northern Dupont Highway corridor, with strip commercial buildings common from the Base to Bally's Dover Casino & Resort. Public land uses are extensive throughout the City of Dover, including the State Capitol, Bayhealth Medical Center, Delaware State University Downtown, Delaware State University Main Campus, Delaware Technical Community College, and Wilmington University. Delaware State University is located directly to the west of Bally's Dover Casino & Resort, across Dupont Highway. Delaware Technical Community College is located north of the university.

Numerous vacant developable tracts of land are distributed fairly evenly throughout the city limits. The land areas east of SR 1 within the City of Dover have remained predominantly agricultural.

The areas south and southeast of the Base are less developed, with small clusters of developed areas within the municipalities of Camden, Magnolia, Frederica, Little Creek, and Bowers Beach. Several recently constructed residential subdivisions exist south of the Base. Many of these developments contain larger lots that are less than one dwelling unit per acre.

The Pennsy sand and gravel operation, also known as the borrow pit, is located directly south of DAFB. The property is zoned industrial and currently is an active dredging operation.

Kent County and the City of Dover both recently completed comprehensive plan updates, with the county plan adopted in October 2018 and the City of Dover plan adopted by the City Council in February 2019. Both plans include goals and recommendations to protect DAFB from encroachment that may impact mission operations. The City's plan includes a goal to, "Create a favorable and compatible environment for DAFB through a resolute commitment to provide all reasonable planning accommodations to protect the Base." Kent County's plan includes a policy recommendation to, "Continue the positive working relationship between the County and DAFB and maintain zoning requirements that protect the Base from incompatible land uses."

Also, Kent County and the City of Dover both adopted an Airport Environs Overlay Zone (AEOZ), creating a specific overlay zone with regulations to address sound attenuation from noise resulting from the Base and its operations. Kent County adopted an amendment to subdivision regulations requiring that for any new subdivision within the AICUZ environs, a note must be placed on the record plan indicating the property is located "in the vicinity of aircraft operations…which may result in high noise disturbances or the potential for an aircraft accident." Additionally, Kent County and

the City adopted zoning ordinances that require sound attenuating materials to be used in new construction within DAFB AICUZ noise contours. The City of Dover also enacted restrictions on building heights around DAFB based on the transitional surfaces.

Clearly, local jurisdictions recognize the importance of maintaining the capability of DAFB by protecting it from urban encroachment and have developed a strong working relationship with DAFB in matters of development planning. Kent County and the City of Dover have taken steps to incorporate the mission of DAFB by adopting land use plans and zoning controls that limit encroachment into the flight paths and operations of the airfield. Continued maintenance of the land use and zoning restrictions currently in place will ensure the viability of DAFB while helping to provide valuable information to the owners and potential owners of impacted properties.

3.1 Military Profile

DAFB is home to the DoD's largest aerial port and approximately 10,000 Airmen, joint service members, civilians and families. Its personnel are responsible for global airlift aboard assigned C-5M Super Galaxy and C-17 Globemaster III aircraft. Additionally, the 436th Airlift Wing hosts key partners, such as the Air Force Reserve's 512th Airlift Wing, Air Force Mortuary Affairs Operations (AFMAO), the Armed Forces Medical Examiner System (AFMES) and the Joint Personal Effects Depot (JPED), jointly responsible for the dignified return of fallen American service members.

3.2 Strategic Importance (Based on 2018 reports)

DAFB is a strategic asset for the United States Military. DAFB missions provide an extensive economic impact. In 2018 the DelDOT office of aeronautics found that DAFB has an annual economic impact of $564,000,000.00. Total employment at the base is approximately 6,076. The 2018 report also determined that the presence of the base was responsible for the full time equivalent of 1,954 people being employed in Dover and Kent County beyond the military and DoD Civilian population. In total, the base is responsible for the employment of 8,030 people in Kent County, representing more than 10% of Kent County's 78,104 total jobs according to the American Communities Survey (2013-2017).

The Economic Impact Region (EIR) for DAFB is the geographic area subject to significant base-generated economic impacts and is defined as the area within a 50-mile radius of the Base. This area includes the Delaware counties of Kent, Sussex, and New Castle, the City of Dover, and the Towns of Frederica, Little Creek, Rising Sun, Lebanon, and Magnolia. The area most immediately impacted is Kent County and the City of Dover.

DAFB has a substantial economic impact on the local economy totaling $537 million per year according to the 2018 Dover Air Force Base Economic Impact Report. The base operates the largest aerial port facility on the East Coast and serves as a focal point for military cargo movement to Europe and the Middle East. Its mechanized-computerized cargo handling arrangement makes possible the processing of up to 1,200 tons of cargo during a 24-hour period. The air base's military and civilian payroll of $352 million is mostly pumped back into the local economy.

DAFB has a significant impact on the strength of the local economy employing 10,711 people according to the 2018 DAFB economic report and approximately 10,000 base employees and former service men and women have retired to the area and continue to contribute to the local economy. The chart below shows the proportions of types of personal employed by DAFB.

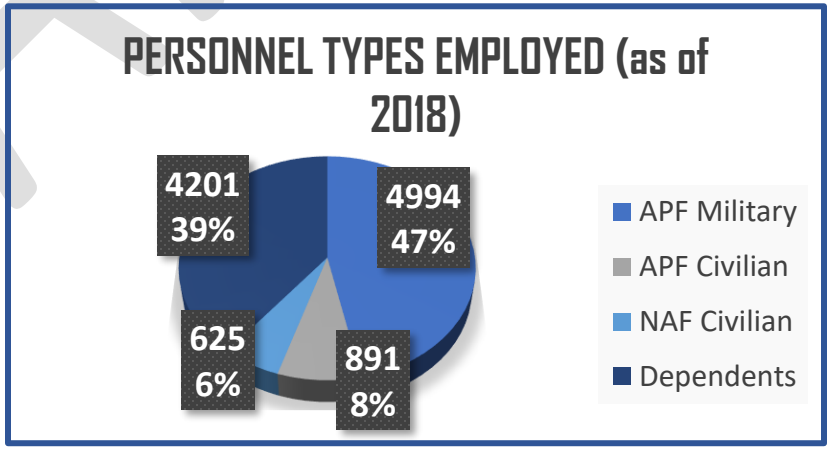


Figure 9 - DAFB Employment

The payroll for the base totals $352 million. The base employs military personnel, dependents of military personnel, and well as

civilian staff. The chart below shows the proportions of total payroll allocated to each type of personnel.

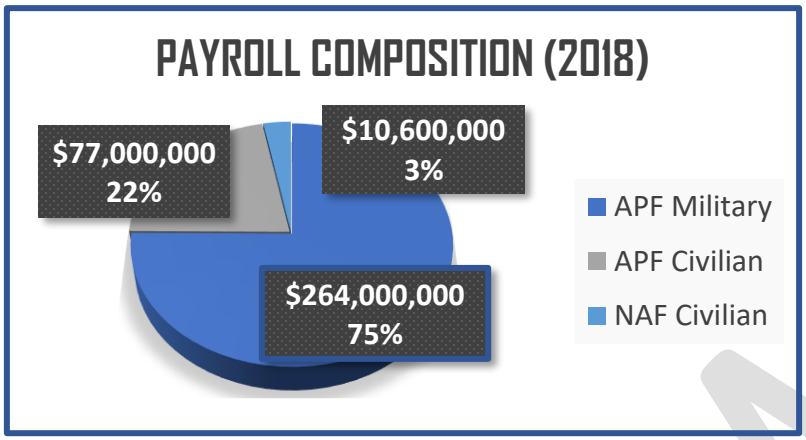


Figure 10 - DAFB Compensation

The graph below displays the economic impacts of DAFB as outlined by a 2018 DAFB Economic Impact Report. The total economic impact from DAFB to the surrounding community was estimated to be $537,000,000 in the 2018 Dover Air Force Base Economic Impact Report.

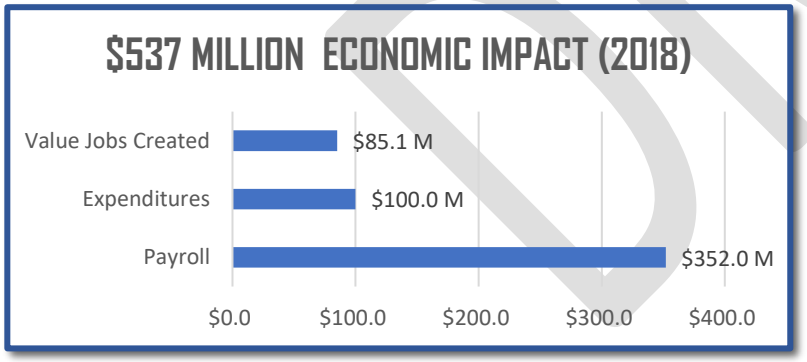


Figure 11 - DAFB Economic Impact

In addition to paying employees, DAFB makes purchases that contribute to the surrounding economy. The base purchases food for staff and residents as well as health and education supplies. It purchases construction materials and hires ancillary contractors as well. The total annual expenditure of the base in fiscal year 2018, according the 2018 DAFB Economic Impact Report, is $100.1 million.

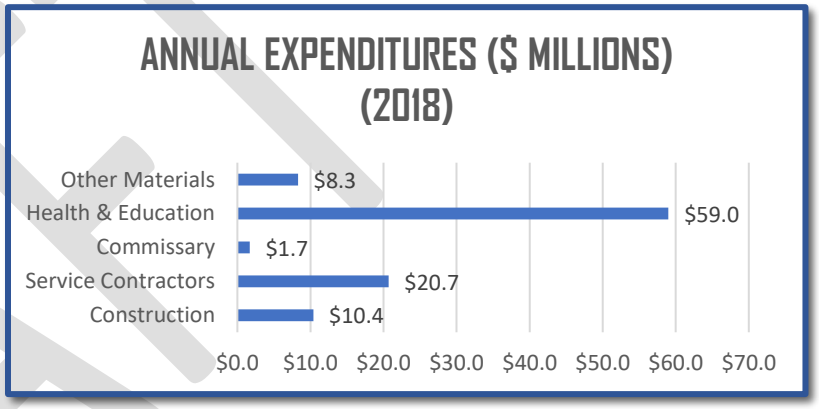


Figure 12 - DAFB - Annual Expenditures

3.3 History and Development Trends

DAFB is located in the "First State" at the center of the Delmarva - Delaware, Maryland and Virginia - Peninsula. The base is located within the City of Dover, DE, whose municipal boundary and land use control are generally to the north of DAFB. The other 3 sides of DAFB are surrounded by the unincorporated areas of Kent County. There are several other smaller municipalities within the study area, but none are adjacent to DAFB. Access to the Base from the north is via Bay Road and SR 1. SR 1 provides access from the south and SR 9 flanks the east side of the Base. From the west, SR 10 provides direct access to the Base via a north gate. DAFB has two active runways, 01/19 and 14/32.

The Dover Air Base was initially constructed as a municipal airport in 1941. Shortly after opening, it was converted to an army airfield after the December 7, 1941, attack on Pearl Harbor. It was renamed the Dover Air Force Base on January 13, 1948, following the establishment of the United States Air Force on September 18, 1947. Currently, the Dover Air Force Base (DAFB) is home to the 436th Air Wing which runs the busiest and largest air freight terminal in the DoD.

DAFB sits next to Dover; the capital and second largest city in the state of Delaware. Within a 5-mile radius of DAFB lie the Towns of Wyoming, Camden, Magnolia, Bowers, and Little Creek. Other populated areas include census designated places Rising Sun, Lebanon, Rodney Village, and the unincorporated communities Little Heaven and Kitts Hummock. The area also includes the Ted Harvey Conservation Area, Little Creek Wildlife Area, and the Dover International Speedway.

Early in its history, the airbase was surrounded by fields. Aerial photography from 1954 shows that the City of Dover was less than 1 square mile, 3 miles northeast of the base. The only other sizable, populated place was the Town of Wyoming with a size of 0.2 square miles located 4 miles west of the base. The base was built alongside US 113; known as SR 1 today. In 1954 Camden, Rising Sun, Little Creek, and Wyoming were simply intersections with a few homes. The Little Creek Wildlife Area, located northeast of the base, was established in 1820.

By 1961, aerial photography shows that Dover had grown into a 2.5 square mile city and Wyoming had grown into a 0.7 square mile town. Housing developments had been constructed along Bay Road and US 13. Rodney Village and Camden's populations had grown. Little Heaven appeared on the map as a small group of homes. DAFB had constructed its own housing development on the other side of SR1. A mobile home park and a housing development had been constructed north of the base.

Aerial photography from 1968 shows Dover had expanded to a 4 square mile city. The city had expanded to Little River and Williams Park in the east and filled in the gap between it and Rodney Village to the south. It also filled in South Salisbury Road to the west. Highland Acres had been built and Camden was filling in north of Lebanon Rd and south of Voshell Mill Road. Rising Sun and Lebanon were crossroads with only a few houses during this time period. The Ted Harvey Conservation area east of the base had been established in 1967. Kitts Hummock was developing into a small waterfront community with a few homes.

The next high quality aerial photography available is dated in 1992. By then, Dover had expanded along US 13 to Cheswold in the north and Dover International Speedway had been built in 1969. Dover Mall had been built in 1982 and the new SR 1 major highway was under construction. The new SR 1 provided traffic relief to the Dover metropolitan area with a bypass around the urban area and replaced US 113 highway access to DAFB. Dover had expanded significantly in the east from US 13 to Kenton Road as developments such as Cranberry Run, Heatherfield East, Weswind Meadows, Continental Park, Westfield, Maple Dale Country Club, Carlisle Village, and Mill Creek Greenway were built.

Camden filled in the area between US 13, South State Street, and Rising Sun Road with housing and expanded developments around Lochmeath Way. Rising Sun and Lebanon expanded, and Eagle Meadows Apartment complex was built in between the two small towns. Housing around South State Street

and Ponderosa Drive was built and incorporated in Magnolia. Rodney Village filled in from US 13 to the railroad.

By 2007, the Magnolia area developed into a sizable municipality that extended from West Walnut Street to Banning Road with developments around Jonathan's Landing Gold Course. The Lebanon area was doubling in size with a new development along Cypress Branch Road. The Rising Sun area expanded with a new development south of Rising Sun Road. The Town of Wyoming added a new business center south of Southern Boulevard and 2 new housing developments north of Old North Road.

Camden significantly expanded with new Walmart and Lowes shopping centers with accompanying retail and restaurant locations. Housing developments filled in much of the area between US 13 and the railroad in Camden. East of US 13, housing developments continued expanding around Lochmeath Way and new developments were being constructed around Peachtree Run.

Dover continued expanding with a new Target shopping center opening in 2001 and housing development north of South Little Creek Road. The first housing development was completed east of SR 1 across from the Dover International Speedway. The gap in between SR 1 and US 13 was filled in with housing north of Scarborough Road. A Redner's Market shopping center and three new developments were built around Main Street and Commerce Street west of US 13.

The SR 1 construction project brought Scarborough/McKee Road to west Dover which encouraged developments around Maple Dale Country Club in all directions to expand. New housing developments were built adjacent to Hazletteville Road. A Food Lion shopping center and retail centers were built north of Hazletteville Road, while public parks and ballgame fields were built to the south. Near DAFB, retail buildings were constructed along Horsepond Road and Charger Way.

Today the base is surrounded from northwest to the south by sprawling urban growth centered around Dover. The north to the southwest is generally comprised of farmland, wildlife conservation areas, and low-lying wetlands. The Dover metropolitan area has expanded to 23.8 square miles. Municipalities have merged to form a continuous urban area along US 13 from Camden to Cheswold. SR 1 is the boundary between urban sprawl to the west and farmland and wetland to the east.

Housing continues to be built in Wyoming with one new development off Southern Boulevard and continued expansion of developments in the southwest Wyoming and Camden area. Camden and Wyoming have merged at this point to form one continuous urban area. New developments are being built on the east side of US 13 south of Camden.

Development has slowed but continues in Dover with a new development on the west side of Commerce Street in between Main Street and McKee Street. The P.O.W./M.I.A. Parkway was built, providing easier access to southwest Dover. A few new buildings are popping up around the new road. Housing developments are being built around Hazletteville Road west of Electric Ave.

As undeveloped land in municipalities becomes scarce, housing developments are built in areas under Kent County jurisdiction. Housing developments are now commonplace south of the base in between US 13 and SR 1. A new housing development is in construction east of Little Heaven.

Residential communities have filled in the land south of Lebanon and west of Rising Sun leaving farmland to the north of Lebanon and east of Rising Sun. Renewable energy investment has been made in the new solar power field east of SR 1 in north Dover. Although east of SR 1 remains mostly farmland for now, roads for several housing developments have been planned west of SR 1 in north Dover.

3.4 Mission

DAFB maintains the following missions:

3.4.1 Heavy Cargo Lift Mission

DAFB is home to the 436th Airlift Wing, commonly known as the "Eagle Wing" and the 512th Airlift Wing, the Reserve associate, as the "Liberty Wing." DAFB is home to the C-5 Galaxy and C-17 Globemaster III. Team Dover's mission focus is to safely fix and fly aircraft, prepare and deploy Airmen, move cargo, and return America's fallen heroes with dignity, honor and respect.

The primary mission of 436th Airlift Wing is to provide strategic global airlift capability. The impact from Dover's mission can be seen all around the globe on a daily basis.

The 436th Airlift Wing (436 AW) is the host unit at DAFB and reports to the Air Mobility Command, headquartered at Scott AFB, Illinois. The vision of the wing is to “Continue to be America’s preeminent expeditionary airlift team.” During wartime, 436 AW is responsible for deployment and resupply of the major combat units of the United States. The Wing also provides administrative, logistical, and medical support to 436 AW units, tenant agencies, as well as retirees and their families who live in the Dover community. The organizational structure of 436 AW consists primarily of a Wing Headquarters, Maintenance Group, Medical Group, Operations Group, and Mission Support Group.

- 436th Airlift Wing (436 AW)
  - The 436th Airlift Wing works around the clock to transport personnel and cargo to all corners of the world in fulfillment of its rapid global mobility mission. The 436 AW is the host unit for DAFB. The 436th Aerial Port Squadron maintains the largest and busiest air freight terminal in the DoD.
  - Mobility Command, headquartered at Scott AFB, Illinois.
  - The vision of the wing is to “Continue to be America’s preeminent expeditionary airlift team.” During wartime, 436 AW is responsible for deployment and resupply of the major combat units of the United States.
  - The Wing also provides administrative, logistical, and medical support to 436 AW units, tenant agencies, as well as retirees and their families who live in the Dover community.
  - The 436 AW houses the Air Force Office of Special Investigations, the Army and Air Force Exchange Service, Defense Commissary Agency, Air Force Mortuary Affairs Operations Center, and Detachment 3 of the 373rd Training Squadron.
  - The 436th Operations Group is home to the wing’s primary flying units, the 3rd and 9th Airlift Squadrons (AS). Flying squadrons in the 512th AW include the 326 AS and 709 AS.
- 512th Airlift Wing (512 AW)
  - The 512 AW is a reserve unit that maintains a mission similar to the 436 AW in a reserve component status. It is the only Air Force Reserve unit located in Delaware.

3.4.2 Mortuary Affairs Mission

DAFB is home to the DoD's largest and most technologically advanced aerial port. DAFB also operates as the only Continental US Port Mortuary in the DoD. The mortuary plays a vital role as a place of honor where the remains of DoD servicemembers killed overseas are received. DAFB also hosts the Armed Forced Medical Examiner System.

Air Force Mortuary Affairs Operations (AFMAO) was created Dec. 15, 2008, as a named activity of the Directorate of Services, Manpower and Personnel, Headquarters United States Air Force. The new organization was activated Jan. 6, 2009. It is AFMAO's mission and privilege to fulfill the nation's sacred commitment of ensuring dignity, honor and respect to the fallen and care, service and support to their families. A solemn dignified transfer of remains is conducted upon arrival at DAFB from the aircraft to a transfer vehicle to honor those who have given their lives in the service of the country.

The AFMAO has a total force staff consisting of active-duty Soldiers, Sailors, Airmen and Marines as well as Guardsmen, Reservists and civilians. The staff also consists of representatives from federal agencies such as the Federal Bureau of Investigation and the Armed Forces Medical Examiner who are responsible for the complete processing of remains. The staff utilizes state-of-the-art equipment to establish positive identification through DNA, dental and fingerprint analysis and autopsy the remains to determine cause of death. The staff also prepares fallen members for transport to their final destination as determined by the family.

- Air Force Mortuary Affairs Operations (AFMAO)
  - AFMAO conducts dignified transfers of the fallen and is responsible for delivering them to their final destination. The State of Delaware and City of Dover are humbled and privileged to host this mission for the United States.
- The Armed Forces Medical Examiner System (AFMES)
  - AFMES determines the cause and manner of death of all active-duty members who die during combat and under federal jurisdiction within the US and overseas. The AFMES Armed Forces DNA Identification Laboratory concentrates on assisting with identifying military personnel who have lost their lives in both current and past conflicts, such as Vietnam, Korea and World War II.
  - Division of Forensic Toxicology supports DoD by performing toxicology testing following military aircraft, ground and sea accidents, as well as for autopsies, and criminal and fitness for duty investigations. The Scientific Division is focused on rapidly detecting mortality due to unexplained circumstances or disease and on analyzing all active duty deaths for trends and possible preventable risk factors. It also leads AFMES' continuing medical education efforts.
  - The AFMES is the only medical examiner system in the federal government and supports other governmental agencies as necessary.
  - AFMES provides comprehensive and innovative medicolegal services worldwide in the areas of death investigations, DNA identification, forensic toxicology and medical mortality surveillance.
- Joint Personnel Effects Depot (JPED)
  - JPED inventories and determines the final disposition of personal effects of those killed in action, wounded, or missing from all branches of the military.
  - Co-located on the Mortuary Affairs campus with the Charles C. Carson Center for Mortuary Affairs, and the Armed

Forces Medical Examiner System. The U.S. Army Human Resources Command and Casualty Mortuary Affairs.

- The attacks on American soil on September 11, 2001, set in motion the groundwork for the beginnings of the Joint Personal Effects Depot. U.S. Army' Mortuary Affairs Specialists (92Ms) were mobilized in support of 24-hour recovery efforts at the Pentagon. A small contingent operation established the first Personal Effects Depot at Fort Myer, Virginia. In March 2003, the JPED relocated to Aberdeen Proving Ground, Maryland. The mission then expanded to include the processing of all the personal effects of Service Members from all branches, as well as Department of Defense Civilians/Contractors killed or injured during Operations Iraqi and Enduring Freedom.
- In July 2008, construction began on JPED's new home at DAFB. Construction of the state-of-the-art, $17.5 Million facility was completed in March 2011. Today, the JPED is comprised of a team of Soldiers, Marines, Airmen, Department of the Army Civilians, and civilian contractors. The JPED Soldiers also support Air Force Mortuary Affairs Operations as members of the Army Liaison Team.

3.5 Facilities

DAFB completed an Installation Development Plan (IDP) in October 2016. The IDP is a comprehensive planning document that describes the installation's past, present, and future physical state and serves as the guidance document for all future facility programming decisions.

The IDP is a guidance document for development decisions at DAFB that will allow mission capability, sustainability, readiness, and modernization. The IDP directs the scale of development, how and where that development should occur, and in what order projects should be phased to best meet the ongoing mission needs and the long-term DAFB IDP vision.

As part of the IDP six planning districts were identified for DAFB. Developable land within each district was delineated and evaluated for its development potential. Within these planning districts, future planning areas are defined to focus future analyses and development studies.

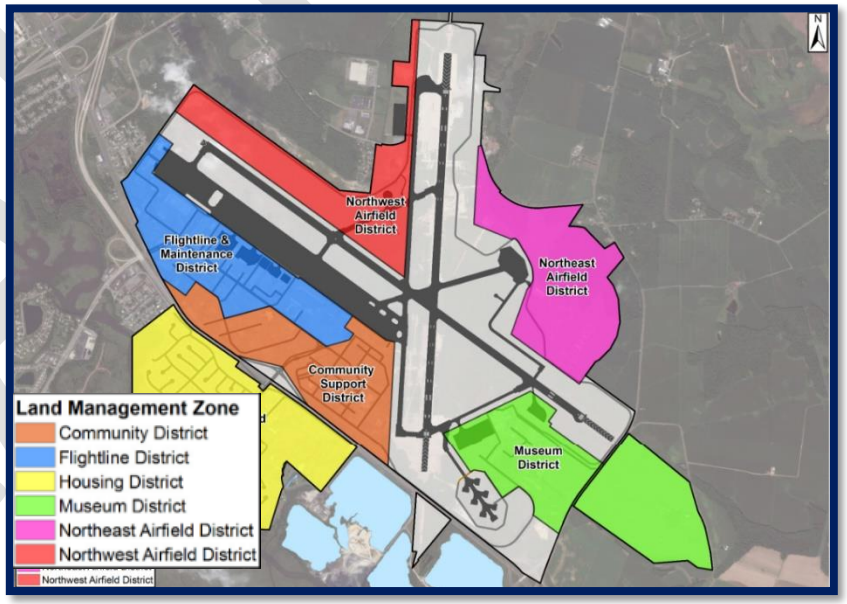


Figure 13 – IDP Planning Districts

It is important that the land uses outside the planning districts are developed in such a way that they don't impact the future expansion needs of DAFB as identified in the IDP. Compatible uses were identified in the IDP and some issues were also noted.

The 2015 Installation Complex Encroachment Management Action Plan (ICEMAP) identifies one of the major regulatory issues as the lack of clarity of easement management practices. This issue directly affects CZ and APZ management. The report states that it is uncertain to installation staff which practices such as BASH and other management techniques would be a violation of these easements. The ICEMAP also mentioned that these easements could cause a strain in the relationship between DAFB and the surrounding communities due to a perceived violation of property rights and harm to economic vitality.

In addition, several of the existing easements held by DAFB were established in the 1940s and 1950s and some lack land use restrictions that would be required per more recent DoD guidance. There have been instances of confusion between DAFB staff and property owners as to the stipulations of these dated easements, and these issues make evident the need for a consolidated, digital database of easements owned by the installation.

3.6 Aircraft Operations

DAFB operations, particularly flying activities, affect land use surrounding the base, specifically as it pertains to flight patterns, aircraft height, number of flights in a time period, and the flight times. According to the 2010 AICUZ Study, an estimate 35,500 annual aircraft operations occur at DAFB, approximately 121 average daily aircraft operations and approximately 26% of all flights occur at night between 10:00 pm and 7:00 am. An aircraft operation is defined as one takeoff/departure, one approach/landing, or a half-closed pattern. A closed pattern consists of two portions, a takeoff/departure and an approach/landing, i.e., two operations. A sortie is a single military aircraft flight from the initial takeoff through the termination landing. The minimum number of aircraft operations for one sortie is two operations, one takeoff (departure), and one landing (approach). Eighty-seven percent of the aircraft flights use the main runway which is illuminated.

DAFB has two runways. Runway 01/19 is 9,600 feet long and 200 feet wide with 1,000-feet-long overruns at each end. Runway 14/32 is 12,900-feet-long and 150 feet wide with a 150-feet long overrun at the northwest end and a 1,000-feet-long overrun at the southeast end. Both runways are Class B runways designed and built for sustained aircraft landings and take-offs. The established elevation for DAFB airfield is 28 feet above mean sea level.

Aircraft arrivals and departures are influenced by other airports in the area. The Chandele Estates Airport is five miles north; Johnson's Airport is four miles south; the Henderson Aviation Airport is 8 miles southwest; the Jenkins Airport is five miles west; the Delaware Airpark is eight miles northwest; and the Smyrna Airport is 11 miles northwest. The location and proximity of these airports relative to DAFB require that arriving and departing aircraft be routed to avoid conflict. Likewise, regional aircraft routings are developed, to the maximum extent practicable, to establish common tracks that serve the arrival and departure "flow" for all the airports within the area.

4.1 Define compatibility

Compatibility can be defined as the balance between military and community needs. Promoting a collaborative environment in which both community and military entities communicate and coordinate in the identification and implementation of mutually-supportive actions allow both parties achieve their objectives. This collaboration provides a context for policies, actions, and recommendations in coordination with general consensus from all parties associated with DAFB and its study area.

The discussion on compatibility cannot be completed without discussing obstructions to air navigation. Obstructions to air navigation are considered to be natural objects or man-made structures that protrude above the planes or imaginary surfaces, and/or man-made objects that extend more than 500 feet above ground level (AGL) at the site of the structure. The DoD works to protect aircraft operational capabilities and assist local government officials in protecting and promoting the public's health, safety, and quality of life. The goal is to promote compatible land-use development around military airfields by providing information on aircraft noise exposure and accident potential. Three basic types of constraints can affect or result from flight operations:

- Noise zones based on noise contours showing the noise levels generated by aircraft operations
- Height limitations
- Clear Zone and Accident Potential Zones (APZ) based on statistical analysis of past DoD aircraft accidents

To reduce aircraft noise in the areas surrounding DAFB, the Base has established noise abatement procedures advising pilots to avoid overflying beach towns. Flight patterns specific to DAFB result from several considerations, including:

- Takeoff patterns routed to avoid noise-sensitive areas, such as the City of Dover, as much as possible
- Criteria governing the speed, rate of climb, and turning radius for each type of aircraft
- Efforts to control and schedule missions to keep noise levels low, especially at night

Coordination with the FAA to minimize conflict with civil aircraft operations. Planning for the areas surrounding an airfield considers three primary aircraft operational/land-use determinants: (1) aircraft accident potential to land users; (2) aircraft noise; and (3) hazards to operations from land uses (e.g., height of structures). Each of these concerns is addressed in conjunction with mission requirements and safe aircraft operations to determine the optimum flight track for each aircraft type. The flight tracks depicted in Figure 14 are the result of such planning and depict the representative flight tracks used for noise modeling.

Figure 14 – DAFB Flight Path

4.2 DAFB Imaginary Surfaces

Runway airspace imaginary surfaces, in graphical form, are the result of the application of obstruction height criteria to DAFB. Imaginary surfaces are surfaces in space around airfields in relation to runways. The surfaces are designed to define the obstacle-free airspace at and around the airfield. Figure 13 depicts the runway airspace imaginary surfaces for DAFB Class B runways. Air Force obstruction criteria in UFC 3-260-01 are based on those contained in Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace, Subpart C. The following paragraphs contain definitions of the runway airspace imaginary surfaces for Air Force Class B runways:

- Primary Surface—An imaginary surface symmetrically centered on the runway, extending 200 feet beyond each runway end, which defines the limits of the obstruction clearance requirements in the vicinity of the landing area. The width of the primary surface is 2,000 feet, or 1,000 feet on each side of the runway centerline.
- Clear Zone Surface—An obstruction-free surface (except for features essential for aircraft operations) on the ground symmetrically centered on the extended runway centerline beginning at the end of the runway and extending outward 3,000 feet. The CZ width is 3,000 feet (1,500 feet to either side of runway centerline). The Mandatory Frangibility Zone (MFZ) is also located within the Clear Sone
- Accident Potential Zone Surfaces—APZ I begins at the outer end of the CZ and is 5,000 feet long and 3,000 feet wide. APZ II begins at the outer end of APZ I and is 7,000 feet long and 3,000 feet wide.
- Approach-Departure Clearance Surface—This imaginary surface is symmetrically entered on the extended runway

centerline, beginning as an inclined plane (glide angle) 200 feet beyond each end of the primary surface, and extending for 50,000 feet. The slope of the approach-departure clearance surface is 50:1 until it reaches an elevation of 500 feet above the established airfield elevation. It then continues horizontally at this elevation to a point 50,000 feet from the starting point. The width of this surface at the runway end is 2,000 feet, flaring uniformly to a width of 16,000 feet at the end point.

- Inner Horizontal Surface—This imaginary surface is an oval plane at a height of 50 feet above the established airfield elevation. The inner boundary intersects with the approach-departure clearance surface and the transitional surface. The outer boundary is formed by scribing arcs with a radius 7,500 feet from the centerline of each runway end and interconnecting these arcs with tangents.
- Conical Surface—This is an inclined imaginary surface extending outward and upward from the outer periphery of the inner horizontal surface for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation. The slope of the conical surface is 20:1. The conical surface connects the inner and outer horizontal surfaces.
- Outer Horizontal Surface—This imaginary surface is located 500 feet above the established airfield elevation and extends outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.
- Transitional Surface—This imaginary surface extends outward and upward at right angles to the runway centerline and extended runway centerline at a slope of 7:1. The transitional surface connects the primary and the approach-departure clearance surfaces to the inner horizontal, the conical, and the outer horizontal surfaces.

NOTE: The outer edge of the outer horizontal surfaces (F) extends to 44,500 feet from the runway centerline.

The illustration on the following page provides a graphical representation of each of the imaginary surfaces.

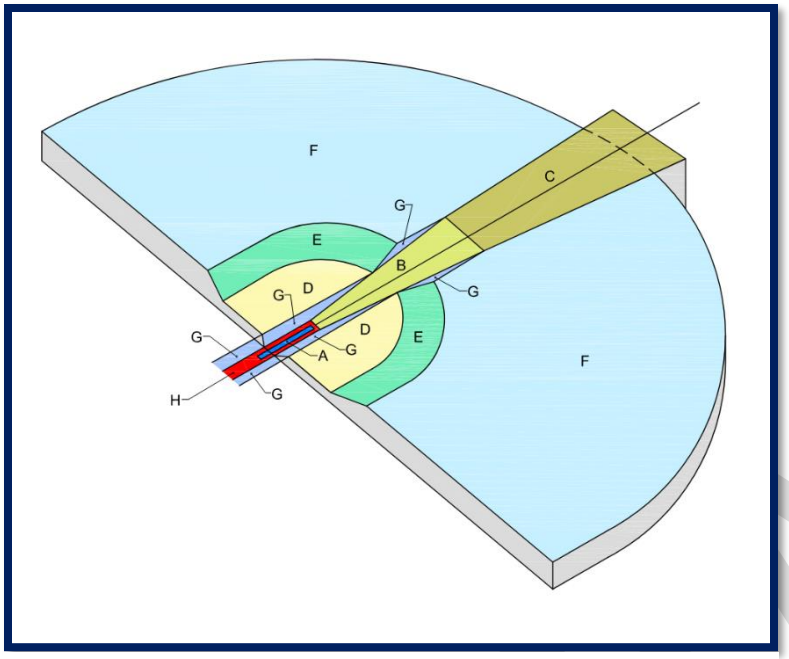


Figure 15 - Imaginary Surfaces

LEGEND:

A *Primary Surface*

B *Approach – Departure Clearance Surface (50:1 Slope Ratio)*

C *Approach – Departure Clearance Surface (Horizontal)*

D *Inner Horizontal Surface (45.72 m [150'] Elevation)*

E *Conical Surface (20:1 Slope Ratio)*

F *Outer Horizontal Surface (152.40m [500'] Elevations*

G *Transitional Surface (7:1 Slope Ratio)*

H *Runway*

The land areas outlined by these criteria should be regulated to prevent uses that might otherwise be hazardous to aircraft operations. The following uses should be restricted and/or prohibited for runways, clear zones, and Accident Potential Zones:

- Releases into the air of any substance that would impair visibility or otherwise interfere with the operation of aircraft (e.g., steam, dust, or smoke)
- Light emissions, either direct or indirect (reflective), that would interfere with pilot vision
- Electrical emissions that would interfere with aircraft communications systems or navigational equipment
- Uses that would attract birds or waterfowl, including but not limited to, operation of sanitary landfills, waste transfer facilities, maintenance of feeding stations, sand and gravel dredging operations, storm water retention ponds, created wetland areas, or the growing of certain vegetation; and
- Structures within 10 feet of aircraft approach-departure and/or transitional surfaces

4.3 Noise Contours

Noise Contours are developed through comprehensive noise studies to guide compatible land use planning efforts by creating an understanding of military activities, operations, and the sounds they produce. The Noise contours provide a comprehensive look at a community's exposure to installation and range noise from current or future military activities. The contours are mapped to depict noise exposure levels (usually in DNL) that guide what land uses are appropriate for those specific noise levels. Land use compatibility guidelines for noise provide agencies with the maximum recommended exposure for specific land uses and activities. For example, recommended maximum exposure levels for industrial land use are higher than recommended sound levels for residential areas or where schools and childcare facilities may be present.

At noise levels between 65-69 decibel (dB) Day-Night Average A-Weighted Sound Level (DNL), the only incompatible land use type is residential without noise level reduction (NLR) materials. Residential uses exist within the DNL 65-69dB noise contours northwest of the Base adjacent to the Runway 14 end and to the south of the Base in the vicinity of U.S. 113, including a portion of the Town of Frederica. A small portion of residential development exists in the 65-69 dB noise contours along Fox Road north of the Runway 14 end. One area of residential development falls within both the DNL 65-69 dB and DNL 70-74 dB noise contours southeast of the Base adjacent to Kitts Hummock Road. Residential uses also exist in the DNL 70-74 dB and DNL 75-79 dB noise contour along Horsepond Road and Lafferty Lane.

Incompatible residential areas exist within the DNL 70-74 dB noise contours near James Road, between the ends of Runways 14 and 19. The majority of these residential areas were constructed prior

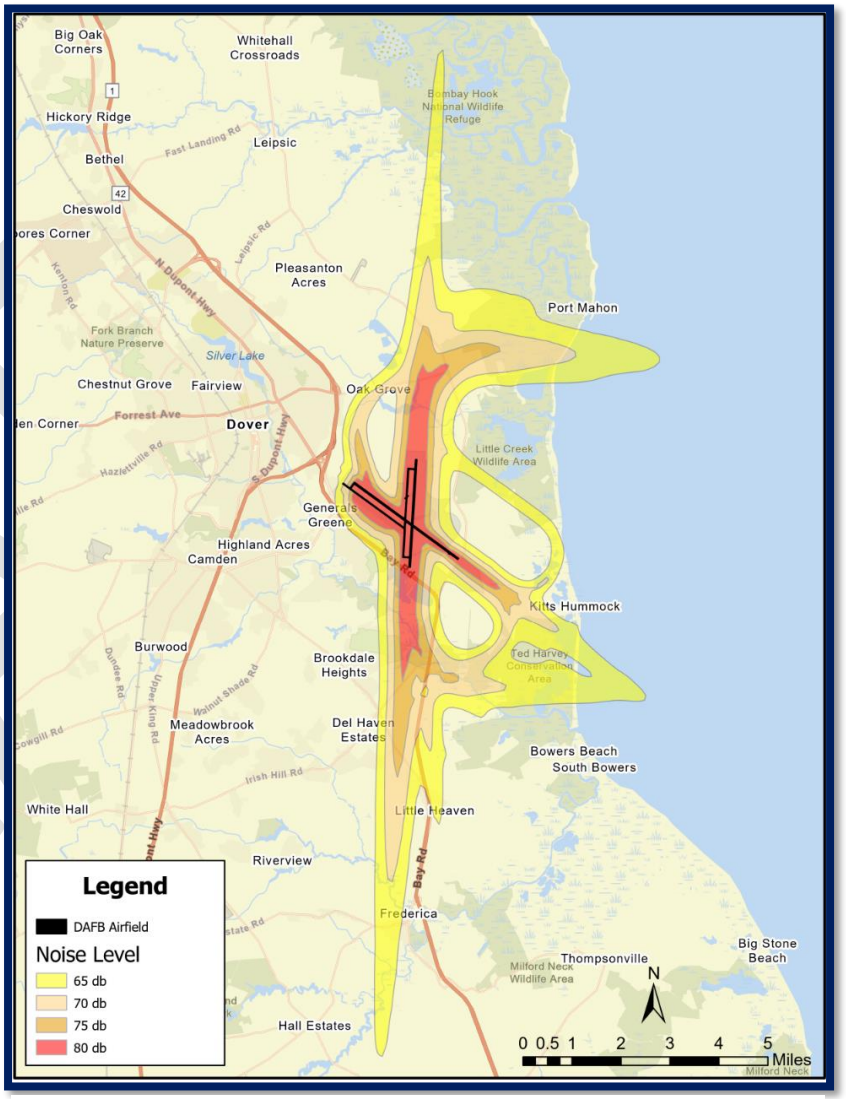


Figure 16 - Noise Contours

to adoption of noise compatible zoning regulations and are

assumed to be incompatible. More recently constructed homes south of the Base may have had NLR measures incorporated into their construction and would be considered compatible.

Additionally, two small areas of public land north of the airfield are within the DNL 75-79 dB and DNL 80+ dB noise contours and are considered incompatible.

Noise Contours have been developed for DAFB based on average busy day aircraft operations data collected. Different sounds have different frequency content. The Environmental Protection Agency (EPA) has adopted a system of "sound descriptors" to summarize how sound is heard and measured to determine the impact of noise on health and welfare. The unit of measurement for sound is a decibel (dB).

The development of the noise contours help installation personnel provide information, recommendations, and assistance as communities develop and implement land use controls, such as zoning, special permits and projects, subdivision regulations, capital improvement programs, building codes, noise disclosure, establishment of easements, and public land acquisition. Working together, the military and its neighboring communities can prevent incompatible development around an installation, such as residential development in high noise zones or near installation boundaries.

Kent County and the City of Dover have adopted the noise contours into their respective overlay zones to identify the geographical area that is subject to the overlay zone. Both overlay zones also define specific uses that are allowed within each dB range starting at 65dB and moving inward toward the center of the base in 5dB increments. Figure 16 depicts the noise contours that have been adopted by Both Kent County and the Coty of Dover.

4.4 DAFB Runway Clear Zones (CZ) and Accident Potential Zones (APZ)

Areas around airports are exposed to the possibility of aircraft accidents even with well-maintained aircraft and highly trained aircrews. Despite stringent maintenance requirements and countless hours of training, past history makes it clear that accidents may occur.

Figure 17 - DAFB Clear Zone and Accident Potential Zones

The risk of people on the ground being killed or injured by aircraft accidents is small. However, an aircraft accident is a high-consequence event and, when a crash does occur, the result is often catastrophic. Because of this, the Air Force does not attempt to base its safety standards on accident probabilities. Instead, it approaches this safety issue from a land-use-planning perspective. Designation of safety zones around the airfield and restriction of incompatible land uses can reduce the public's exposure to safety hazards.

DAFB runways carry three safety zones: the Clear Zone (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II). These zones were developed from analysis of over 800 major Air Force accidents that occurred within 10 miles of an Air Force installation between 1968 and 1995. The CZ has the highest accident potential of the three zones, as 27 percent of accidents studied occurred in this area. Due to the relatively high accident potential, the Air Force adopted a policy of acquiring real estate interests in the CZ through purchase or easement when feasible. APZ I is an area that possesses somewhat less accident potential than the CZ, with 10 percent of the accidents studied occurring in this zone. APZ II has less accident potential than APZ I, with 6 percent of the accidents studied occurring in this zone. While the potential for aircraft accidents in APZs I and II does not warrant land acquisition by the Air Force, land-use planning and controls are strongly encouraged in these areas for the protection of the public.

Accident Potential Zone I is less critical than the CZ, but still possesses a significant risk factor. This 3,000 by 5,000 foot area has land use compatibility guidelines that are sufficiently flexible to allow reasonable economic use of the land, such as industrial /manufacturing, transportation, communication /utilities, wholesale trade, open space, recreation, and agriculture. However, uses that concentrate people in small areas are not acceptable. APZ I requires less than 25 people per acre of land.

Accident Potential Zone II is less critical than APZ I, but still possesses potential for accidents. Accident potential zone II, also 3,000 feet wide, is 7,000 feet long extending to 15,000 feet from the runway threshold. Acceptable uses include those of APZ I, as well as low density single family residential and those personal and business services and commercial/retail trade uses of low intensity or scale of operation. High density functions such as multi-story buildings, places of assembly (e.g., theaters, churches, schools, restaurants, etc.), and high-density office uses are not considered appropriate.

Accident Potential Zones I and II at the northwestern end of Runway 14/32 are aligned to reflect the departure and arrival flight track adjustments resulting from the operations restrictions mentioned in Section 3.3 related to the hangar located off the northwestern end of the runway. Figure 15 depicts the adjusted APZs. The dimensions of APZs I and II at the northwestern end of Runway 14/32 are the same as those described in the two previous paragraphs.

High densities of people should be limited to the maximum extent possible in APZ II. The optimum density recommended for residential usage (where it does not conflict with noise criteria) in APZ II is one dwelling per acre. For most nonresidential usage, buildings should be limited to one story and the lot coverage should not exceed 20 percent.

Table 1 - Runway Compatibility Assessment with CZ and APZ

Runway Concerns and Issues			
Runway Approach	**Clear Zone**	**APZ 1**	**APZ2**
01	The current CZ is either owned by DAFB or has an easement on the property. The borrow pit operation in the CZ is considered incompatible with the CZ criteria.	Although there are no incompatible land uses associated with the Runway 01 APZ I, the sand and gravel operation located there represents a safety concern since birds are attracted to the water body (Bird Aircraft Strike Hazard potential).	The densities, based on current land use, are withing the thresholds for APZ II. There are no incompatible land uses associated with the Runway 01 APZ II.
19	The current CZ is either owned by DAFB or has an easement on the property. There are no incompatible land uses associated with the Runway 19 CZ.	The area within APZ I is agricultural with very low density. There are no incompatible land uses associated with the Runway 19 APZ I.	The area within APZ II is agricultural with very low densities. A large percentage of APZ II is encumbered by a DelDOT easement restricting development rights. There are no incompatible land uses associated with the Runway 19 APZ II.
14	The current CZ has a small area that is not owned by DAFB nor has an easement on the property. There are no incompatible land uses associated with the Runway 14 CZ.	The area within APZ I continues to see development of low density uses included logistics and light manufacturing. Compatibility of commercial uses within APZ I is dependent on densities and intensity of uses. A small area of incompatible existing residential development exists along Horsepond Road and Lafferty Lane.	The APZ II includes areas of public, commercial, industrial, and residential uses. Incompatible land uses include small areas of residential, special events, and the Dover Behavioral Health building.
32	The current CZ is either owned by DAFB or has an easement on the property. There are no incompatible land uses associated with the Runway 32 CZ.	There are no incompatible land uses associated with the Runway 32 APZ I.	The area within APZ I is agricultural and environmentally protected with very low density. There are no incompatible land uses associated with the Runway 32 APZ II.

4.5 Readiness and Environmental Protection Integration (REPI)

The Readiness and Environmental Protection Integration (REPI) program was initiated by the DoD in the early 2000's to help combat any external factor that can limit or restrict military training, testing, and operations on a military installation. These external factors are referred to as encroachments. The REPI Program helps maintain military readiness by mitigating land-use conflicts near installations and addressing regulatory restrictions that inhibit military activities. The REPI Program is administered by the Office of the Secretary of Defense (OSD).

Encroachments can include:

- Lights from residential and commercial development reduce the effectiveness of night-vision training
- Complaints about the noise, dust and smoke generated by military activities result in restrictions on the timing, frequency, and type of training activities
- Competition for frequency spectrum interferes with mission readiness
- Communication towers, wind turbines, highways, and energy transmission lines near or through training areas all hinder realistic training and testing
- Land development that destroys or fragments endangered species habitat pushes those species onto less developed military lands, resulting in increased restrictions on training and testing land.

A key component of the REPI Program is the use of buffer partnerships among the Military Services, private conservation groups, and state and local governments, authorized by Congress at 10 U.S.C. § 2684a. These win-win partnerships share the cost of acquisition of easements or other interests in land from willing sellers to preserve compatible land uses and natural habitats near installations and ranges that helps sustain critical, at-risk military mission capabilities.

The DoD is also working with other federal agencies and stakeholders to create strategies and incentives to protect large landscapes where conservation, working lands, and national defense interests converge – also known as Sentinel Landscapes.

The DAFB has not used the REPI program to date however there are opportunities for future partnerships that have been identified through this study.

4.6 Sentinel Landscapes Partnership

The Sentinel Landscapes Partnership is a coalition of federal agencies, state and local governments, and non-governmental organizations that works with private landowners to advance sustainable land management practices around military installations and ranges. Founded in 2013 by the U.S. Department of Defense, Department of Agriculture, and Department of the Interior, the partnership's mission is to strengthen military readiness, conserve natural resources, bolster agricultural and forestry economies, and increase climate change resilience.

Once a location becomes a sentinel landscape the federal partners work with local partners to equip private landowners with the resources necessary to carry out sustainable management practices on their properties. Sustainable management practices such as farming, ranching, and forestry not only offer economic and ecological benefits, but also protect defense facilities from

incompatible development that can constrain the military's ability to carry out important training and testing activities.

Sentinel landscape partners accomplish their objective by connecting private landowners with voluntary state and federal assistance programs that provide tax reductions, agricultural loans, disaster relief, educational opportunities, technical aid, and funding for conservation easements.

DAFB is part of the New Jersey and Delaware Sentinel Landscape with included the following installations: Picatinny Arsenal, Naval Weapons Station Earle, Sea Girt National Guard Training Center, Joint Base McGuire Dix Lakehurst, Coyle Field, Warren Grove Range, Dover Air Force Base, and New Castle.

The goals of the Sentinel Landscape are:

- Manage encroachment and maintain military readiness / training areas
- Build on existing Federal and State programming
- Protection and management of agriculture, forest, and Natural landscapes including watersheds, rivers, and wildlife
- Partnering with public and private organizations to carry out conservation projects or natural resource restoration efforts around military Installations

4.6 BASH Program

The Bird/wildlife Aircraft Strike Hazard (BASH) program goal is the preservation of capabilities at air installations through the reduction of wildlife hazards to aircraft operations. There are many strategies used within the BASH program to manage and minimize potential habitat that could attract unwanted birds and wildlife. It is critical that the air installation properties and the surrounding properties are managed and maintained to minimize impacts of birds and wildlife on DAFB operations. These include:

- Limiting standing water and incorporating best practice stormwater management strategies.
- Review and incorporate best practices in landscaping and landscape maintenance.
- Maintain grasses and vegetation to a height below 14”.
- Assess potential Bird/wildlife strike hazards annually, or when establishing or revising operational procedures.
- Conducting a stand-alone, year-long, to include all seasons, formal wildlife hazard assessment every 72 months that specifically inspects the immediate Wildlife Exclusion Zone, airfield infrastructure components and perimeter fencing within a 5-mile perimeter from any point of the runway center line. The primary focus of this assessment is to address wildlife issues and habitat, outside of the normal bird concerns, that may be impacting airfield operations.
- Ensure the Wildlife Exclusion Zone is integrated into base mapping products such as imaginary surfaces criteria, land use maps, and operational constraint maps.

Figure 18 on the following page is a sample of the media and print materials used to educate stakeholders and adjacent landowners of the importance of the Bird /wildlife Aircraft Strike Hazard program. The birds and wildlife identified as a concern for the eastern states are prevalent at DAFB considering the surrounding land use and its location relative the Atlantic Flyway migratory bird route.

Figure 18 - Bird / wildlife Aircraft Strike Hazard (BASH) Informational Poster

4.7 Compatible Use Zones Guidance

The DoD recently published *DoD Instruction 4165.57 – Air Installation Compatible Use Zones* which provides information on acceptable uses within the APZ's and certain noise level areas. The updated document, released on December 13, 2020, provides the latest information on the uses that are considered acceptable in the areas around military installations. As stated, the policy is intended to:

a. Promote the health, safety, and welfare of persons on or near air installations by minimizing aviation noise and safety impacts without degrading air installation safety and mission requirements.
b. Promote long-term compatible land use on and near air installations by:
    1. Encouraging State and local governments to adopt enabling legislation and compatible land use regulations into their land use planning and control processes.
    2. Partnering with communities and other eligible entities to protect land through the establishment of restrictive use and conservation easements intended to prevent encroachment on air installations from degrading training, testing, and operations.
c. Limit acquisition of real property interests to the minimum amount necessary to ensure the operational integrity of the air installation.
d. Incorporate AICUZ guidelines into on-base land use planning programs.
e. Integrate AICUZ compatible land use strategies into the test and training range environment for operational noise and safety in accordance with DoDD 3200.15.

f. Promote education and engagement with communities affected by military operations at air installations. Volume 1 of DoDI 5410.19 provides policy for the conduct of public affairs community relations activities and programs throughout the DoD.

The document provides an updated list of land use categories in both the APZ and Noise Contour regions and their compatibility with military operations. This document should be used when reevaluating the current overlay zones for both Kent County and the City of Dover.

The figure below provides an illustration of the detailed descriptions of the land used that are acceptable within the APZs

Table 1. Land Use Compatibility in APZs

Land use Name and SLUCM Category	Clear Zone	APZ-I	APZ-II	Maximum Density
Residential use group (SLUCM Category 10)				
Residential uses, inclusive of all residential units i.e., any type of single or multiple dwelling units	N	N	Y[1,2]	Maximum density of 2 dwelling units per acre
Mobile home parks or courts	N	N	N	
Transient lodgings	N	N	N	
Manufacturing use group (SLUCM Categories 20 and 30)				
Food and kindred products; textile mill products; manufacturing; stone, clay, glass, primary metal and fabricated metal products; manufacturing	N	N	Y	Max FAR 0.56 in APZ II
Fabric products; leather and similar materials; chemicals and allied products; petroleum refining and related industries; rubber and miscellaneous plastic products; manufacturing; precision manufacturing	N	N	N	
Lumber and wood products; manufacturing furniture and fixtures; paper and allied products; printing, publishing, and allied industries; miscellaneous manufacturing	N	Y	Y	Maximum FAR of 0.28 in APZ I and 0.56 in APZ II

Figure 19 - Example of Land Use Categories in APZs

Figure 30 describes the maximum density allowed for each specific Lane Use. Some land uses specify a floor area ratio (FAR) which is the measurement of a building's floor area in relation to the size of the building's lot or parcel. FAR is expressed as a decimal number and is derived by dividing the total area of the building by the total area of the parcel (building area ÷ lot area). FAR is an effective way to calculate the bulk or mass of building volume on a development site and is often used in conjunction with other development standards such as building heights, lot coverage and lot area to encourage a community's desired arrangement and form of development. In this context, higher FARs indicate greater building volume.

The Policy also provides information and recommendations on acceptable uses within certain noise contours. The figure below illustrates the detailed land use categories and their acceptability within certain noise contours.

Table 2. Land Use Compatibility in Aircraft Noise Zones

Land use Name and SLUCM Category	A-weighted DNL/CNEL levels					
	<65 decibel (dB)	65-70 dB	70-75 dB	75-80 dB	80-85 dB	85 dB
Residential use group (SLUCM Category 10)						
Residential uses, inclusive of all residential units (i.e. any type of single or multiple dwelling units).	Y	N[1]	N[1]	N	N	N
Mobile home parks or courts	Y	N	N	N	N	N
Transient lodgings	Y	N[1]	N[1]	N[1]	N	N
Manufacturing use group (SLUCM Categories 20 and 30)						
Manufacturing and industrial uses	Y	Y	Y[2]	Y[3]	Y[4]	N
Precision manufacturing	Y	Y	Y[2]	Y[3]	N	N
Transportation, communication and utilities use group (SLUCM Category 40)						
Rail, motor vehicle, aircraft, marine, and other transportation, and communication systems and utilities	Y	Y	Y[2]	Y[3]	Y[4]	N

Figure 20 - Example of Land Use Categories in Noise Contours

The U.S. Department of Transportation Federal Aviation Administration recently published – *Advisory Circular 150/5190-4B*, dated September 16. 2022 on land use compatibility. This advisory

provides the latest information on acceptable uses near airport facilities. Although not specifically developed for military installations this advisory is applicable to DAFB and the surrounding areas.

This document should be referenced when evaluating and reviewing the existing overlay zones to ensure there is consistency between the FAA guidance and the DoD guidance. The figures below illustrate the specific zones that should be considered when developing an overlay zone for a non-military airport.

Table 5.1 Dimensions for Airport Overlay Zones - Visual Runway

Zone	Inner Width	Outer Width	Length	Height or Slope
A (Runway Protection Zone – Begins at end of turf runway, 200' past hard surface runway)	250'	450'	1,000'	Not applicable
B (Approach zone - Begins at end of turf runway, 200' past hard surface runway)	250'	1,250'	5,000'	20:1
C width (Transitional Surface)		1,050'		7:1
D radius (Horizontal Surface)	Begins at edge of transitional surface	5,000'		150' above runway (excludes approach zone)
E radius (Conical Surface)	Begins at edge of horizontal surface	4,000'		20:1

Figure 21 - Example of Airport Overlay Zones

The corresponding compatible uses are also listed and should be cross referenced with the uses listed in the DoD policy. The following figure illustrates the compatible uses within each zone.

Zone Chart

Land Uses	Zone A	Zone B	Zone C	Zone D	Zone E
Single Family	NC	AR	NC	AR	C
Multi-Family, group living Uses	NC	NC	NC	AR	C
Permitted uses in "C" Commercial District	NC	AR	AR	C	C
Permitted uses in "M" Manufacturing District	NC	AR	AR	AR	C
Basic Utility Uses (i.e., utility substation facilities, electrical substations, water and sewer lift stations, water towers)	NC	NC	NC	AR	C
Sanitary landfills	NC	NC	NC	NC	AR
Solar power, generation equipment, wind generation, wind farms	NC	NC	NC	AR	AR
Communication transmission facilities	NC	NC	NC	AR	AR
Outdoor storage, signs and displays	NC	AR	AR	AR	C
General Community Service	NC	AR	AR	AR	C
Daycare Uses	NC	NC	NC	AR	C
Detention Facilities (i.e., prisons, jails, probation centers, juvenile detention homes, halfway houses)	NC	NC	NC	AR	C
Educational Facilities	NC	NC	NC	AR	C
Hospitals	NC	NC	NC	AR	C
Religious Assembly Uses	NC	NC	NC	AR	C
Communication Transmission Facility Uses (i.e., broadcast, wireless, point to point, emergency towers and antennae)	NC	NC	NC	AR	AR
Parking Uses (i.e., ground lots, parking structures)	AR	C	AR	C	C
Transportation Uses (i.e., highways, interstates, local and county roads)	AR	C	C	C	C
Utility Uses (i.e., solar power generation equipment, wind generators, wind farms)	NC	NC	NC	AR	AR
Farms *– plant and animal with no residential*	AR	AR	AR	C	C
Resident-related (i.e., single-family home, mobile home if converted to real property and taxed)	NC	AR	NC	AR	C

Figure 22 - Compatible Land Use Categories per Zone

4.8 Glint and Glare

Certain land uses in proximity to military installations can produce conditions that interfere with military training, particularly aircraft operations. Among the most common of these hazards stems from the use of excessive or unshielded outdoor lighting. Outdoor lighting systems, especially lighting associated with billboards, gas stations, major roadways, athletic fields, and large commercial or industrial uses, often allow significant light to travel upward into an otherwise darkened sky. The resulting 'light pollution' can obscure pilot vision or interfere with the use of night vision training devices.

Night vision flight training, in which aviators use night vision goggles (NVGs) or other types of night vision systems, is essential to the missions of the modern military. Night vision systems are designed to operate away from civilization and electric lighting. Exposure to stray light can cause the vision screen to white-out, temporarily robbing the aviator of vision.

Delaware is one of just a few states that has laws governing light pollution. 7 Del C 71A § 7101A defines the standards for outdoor lighting within the state.

In addition, there is a threat generated from reflected sunlight off of structures. The most relevant concern is solar fields located adjacent to the airfield. The U.S. Department of Transportation, Federal Aviation Administration published regulations governing the assessment of glint and glare in 78 FR 63276, October 23, 2013. The FAA requires the use of the SGHAT to demonstrate compliance with the standards for measuring ocular impact stated above for any proposed solar energy system located on a federally obligated airport.All sponsors of federally-obligated airports who propose to install or to permit others to install solar energy systems on the airport must attach the Solar Glare Hazard Analysis Tool (SGHAT) report, outlining solar panel glare and ocular impact, for each point of measurement to the Notice of Proposed Construction Form 7460-1.

The DoD also issued instruction 4165.57 that requires the use of SGHAT to assess the glare of solar farms within the vicinity of the airfield.

Military Aviation and Installation Assurance Siting Clearinghouse (The Clearinghouse) works with developers in the power sector to assess risks to national security while promoting compatible domestic energy development. Energy production facilities and transmission projects involving tall structures, such as wind turbines, solar power towers and panels, and electrical transmission towers, may degrade military testing and training operations. In the national system of ground-based surveillance radars, the creation of "clutter" generated from wind turbines can present a hazard to air safety and surveillance. Wind turbines located near military test and training ranges can also impact airborne military radar capabilities. Likewise, solar systems may present hazards to aircraft and air traffic control tower operations due to possible "glint" or longer duration "glare" reflecting off of panels. Finally, the electromagnetic interference from electricity transmission lines can impact critical DoD testing activities.

The Clearinghouse acts as a single point of contact for Federal agencies; State, Indian tribal, and local governments; developers; and landowners, and provides a central forum for internal staffing. This website is a central location to provide information and act as a resource to assist interested individuals and organizations understand the mission impacts of proposed energy projects near military activities, and the Department's Mission Compatibility Evaluation (MCE) process, procedures, and mitigation opportunities.

4.9 State and Local Codes

4.9.1 State Law and Regulations

The Delaware Department of Transportation (DelDOT), under Title 2 of the Delaware State Code, shall have general supervision over aeronautics within this State. It shall encourage, foster, and assist in the development of aeronautics in this State and encourage the establishment of airports and other air navigation facilities.

https://delcode.delaware.gov/title2/title2.pdf

The Office of Aeronautics, within DelDOT, has the responsibly to carry out the duties as described in the Delaware state code and relevant regulations. It has the responsibility to develop a system plan that provides reasonable access to airport facilities for all areas of the state. "Reasonable Access" is defined by a maximum 30-minute drive to reach an airport (any public-use airport/heliport). In support of this goal, the Department is authorized to support the creation and maintenance of public use airports including the Civil Air Terminal located adjacent to DAFB.

The Delaware Aviation Advisory Council (DAAC) is a governor appointed Council whose purpose is to assist the Department in furthering and promoting the interests of aviation in Delaware. The Delaware Aviation Advisory Council shall serve in an advisory capacity and supports the Department in the planning and implementation of aviation system enhancements; supports and promotes aviation education; recommends new or improvements to existing locations, facilities, programs, projects, equipment; and recommends other related activities to support and improve aviation. The Delaware Aviation Advisory Council is made up of 9 members and although the DAFB is not required to be represented on the Council DelDOT has always has a representative from the DAFB on the Council.

DelDOT, under its authority, created a regulation to govern airport obstructions surrounding airports. The primary purpose is the safety of aircraft flight operations and the welfare of persons and real property on the ground. The Delaware Code authorizes the Department through its Office of Aeronautics to require a review of building permit applications. This review shall result in either an approval or disapproval of building permits for any structure that constitutes an obstruction to air navigation.

The Delaware Code also authorizes the Department to remove potentially hazardous existing obstructions in the approach areas to airport runways after compensating the owners of the obstructions.

In addition, the regulation establishes the civil airport imaginary surfaces with relation to the airport and to each runway. The size of each such imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end.

https://regulations.delaware.gov/AdminCode/title2/2000/2150/2152.shtml#TopOfPage

4.9.2 County and Municipal Codes

As a result of the ACUZ study both Kent County and the City of Dover adopted overlay zones to help regulate compatible uses around the DAFB. Kent County adopted the Airport Environs Zoning Overlay (AE) on September 12, 2000. The ordinance has not been revised since its original adoption. The City of Dover adopted their Airport Environs Overlay Zone (AEOZ) on February 12, 2001. The

City late amended the ordinance on August 8, 2016 where they prohibited manufactured homes within the overlay zone.

The purpose of the overlay zones are to protect the public health, safety and welfare from the potential for aircraft accidents associated with proximity to airport operations, the adverse impacts associated with excessive noise from flight operations at the Dover Air Force Base (DAFB) and top reserve DAFB mission integrity; and ensure that the construction of buildings or portions thereof, which are located within those areas that are likely to be affected by aircraft noise associated with flight operations at DAFB, provides for appropriate sound reduction to minimize the impact of such noise on occupants; and ensure that purchasers or lessees of property within airport noise zones are aware of the associated noise levels and the hazards which may endanger the lives and property of the occupants of such property.

Both of the overlay zones establish the boundaries of the overlay zone using the runway Clear Zone and APZ areas as well as the noise contours areas from the ACUZ study. Each overlay zone establishes a land use compatibility table for each of the areas described above. Both ordinances also provide for some exemptions and grandfathering for existing uses. The current boundary of the overlay zones is ate the limit of the 65dB contour shown in Figure 16

Kent County Airport Environs Zoning Overlay (AE)

https://ecode360.com/7605220

City of Dover Airport Environs Overlay Zone (AEOZ)

https://library.municode.com/de/dover/codes/code_of_ordinances?nodeId=PTIICOOR_APXBZO_ART3DIRE_S22AIENOVZOAE

4.10 Unmanned Aircraft System (UAS) or Drones

Drones are allowed in Delaware for recreational and commercial use, subject to FAA regulations and flight controls put in place by local governments. The Federal Aviation Administration (FAA) is responsible for regulating the use of UAS within the state of Delaware. In addition, the Delaware legislature has enacted several supplemental rules specific to Delaware drone operations.

Delaware has certain restrictions for the use of UAS which includes the provisions that no person shall knowingly operate, direct, or program an unmanned aircraft system to fly:

- Over any sporting event, concert, automobile race, festival, or other event at which more than 1500 people are in attendance; or
- Over any critical infrastructure; or
- Over any incident where first responders are actively engaged in response of air, water, vehicular, ground or specialized transport.

Critical infrastructure is defined as petroleum refineries, petroleum storage facilities, chemical storage facilities, chemical manufacturing facilities, fuel storage facilities, electric substations, power plants, electric generation facilities, military facilities, commercial port, harbor facilities, railyard facilities, drinking water treatment or storage facilities, correctional facilities, government buildings, and public safety buildings or facilities.

DAFB is considered critical infrastructure and therefore UAS use is prohibited.

A UAS that is less than 55 pounds can be flown recreationally by following the Drone Laws as defined by FAA Part 107 guidelines. The law requires that all recreational flyers pass an aeronautical knowledge and safety test and provide proof of passage if asked by law enforcement or FAA personnel. The Recreational UAS Safety Test (TRUST) was developed to meet this requirement. TRUST provides education and testing on important safety and regulatory information. Any person using a UAS recreationally must pass the test prior to flying.

Commercial UAS operations in Delaware are approved under the FAA Part 107. There are three main steps drone owners must follow to fly under Part 107 rules:

- Become an FAA-Certified Drone Pilot by Passing the Knowledge Test
- Complete FAA Form 8710-13
- Register your Drone with the FAA

The Operations Over People rule became effective on April 21, 2021. Drone pilots operating under Part 107 may fly at night, over people and moving vehicles without a waiver as long as they meet the requirements defined in the rule. Airspace authorizations are still required for night operations in controlled airspace under 400 feet.

Figure 23 is an image from the FAA UAS use map that provides information on restricted areas and height limitations adjacent to critical infrastructure. The full map can be viewed here:

https://faa.maps.arcgis.com/apps/webappviewer/index.html?id=9c2e4406710048e19806ebf6a06754ad

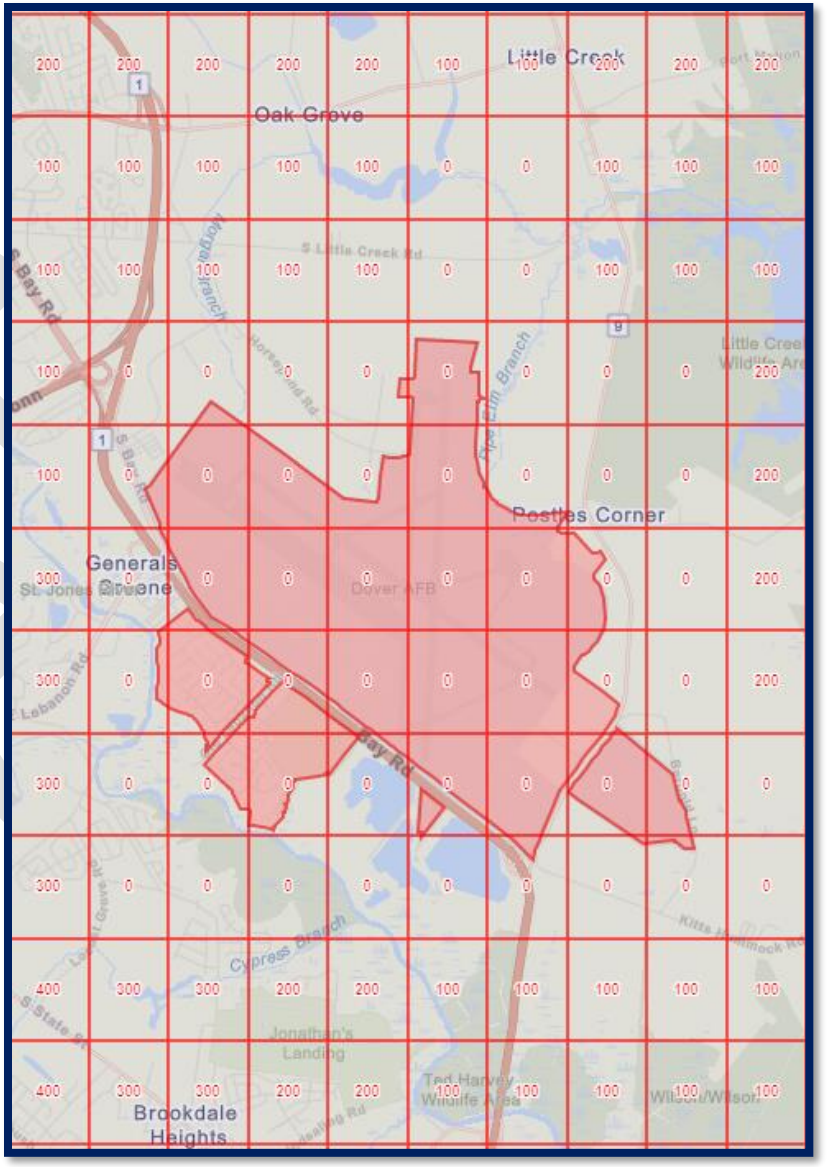


Figure 23 - UAS Restrictions and Height Limits

4.11 Areas of Concern

DAFB has identified areas of concern that are adjacent its physical property but are not owned or controlled by DAFB. These areas, if developed with an incompatible use could impact the base operations. Some parcels within the areas of concern have existing easements on the properties but the language is inconsistent and does not provide the certainty or security that DAFB wants concerning these properties. Another concern is that the location of several of the properties are not within the APZs nor are they within the 65db contour. This poses a challenge for DAFB since the current overlay zones for both Kent County and the City of Dover are defined by the APZs and the 65db noise contour.

Recent examples of potentially incompatible land uses include the solar fields being proposed at the end of runway 19 and the wedding venue development just off of SR9 that is outside the overlay zone.

In addition, there are several areas of concern that are located with the CZ, APZ, and noise contour geographical areas. The Pennsy Supply Company operates an active borrow pit that lies within the CZ. This activity is considered incompatible with the CZ criteria and base operations. The area along Lafferty Lane and Horsepond road is also a concern for DAFB. There are many uses and large events within those corridors that exceed the densities considered acceptable for APZ I and APZ II.

The areas along Lafferty Lane continue to develop with a mix of commercial uses mainly consisting of logistics and light manufacturing. The concern with the development in this area is maintaining and tracking the densities within the APZ I and APZ II areas. As described in chapter 5 and further in chapter 6 there is a need for more monitoring and communication between Kent County / City of Dover and DAFB regarding the current density thresholds and capacities and monitoring any changes.

DAFB also has several existing easements on properties surrounding DAFB. These easements establish certain rights for DAFB to maintain certain height clearances on structures and trees, drainage easements, and safety zones within the prescribed area. Although DAFB is provided certain rights there is inconsistency and some ambiguity within the easement language. Part of the issue is that the easements date as far back as 1951 and the language on most has not been updated since they were originally secured. In addition, the easements are unclear about who owns and who should remove any cleared or trimmed trees. The issue of revenue generated from the lumber harvested has also come to light in recent years. These easements do cover most of the areas of concern as identified by DAFB, however there are areas of concern outside the easements.

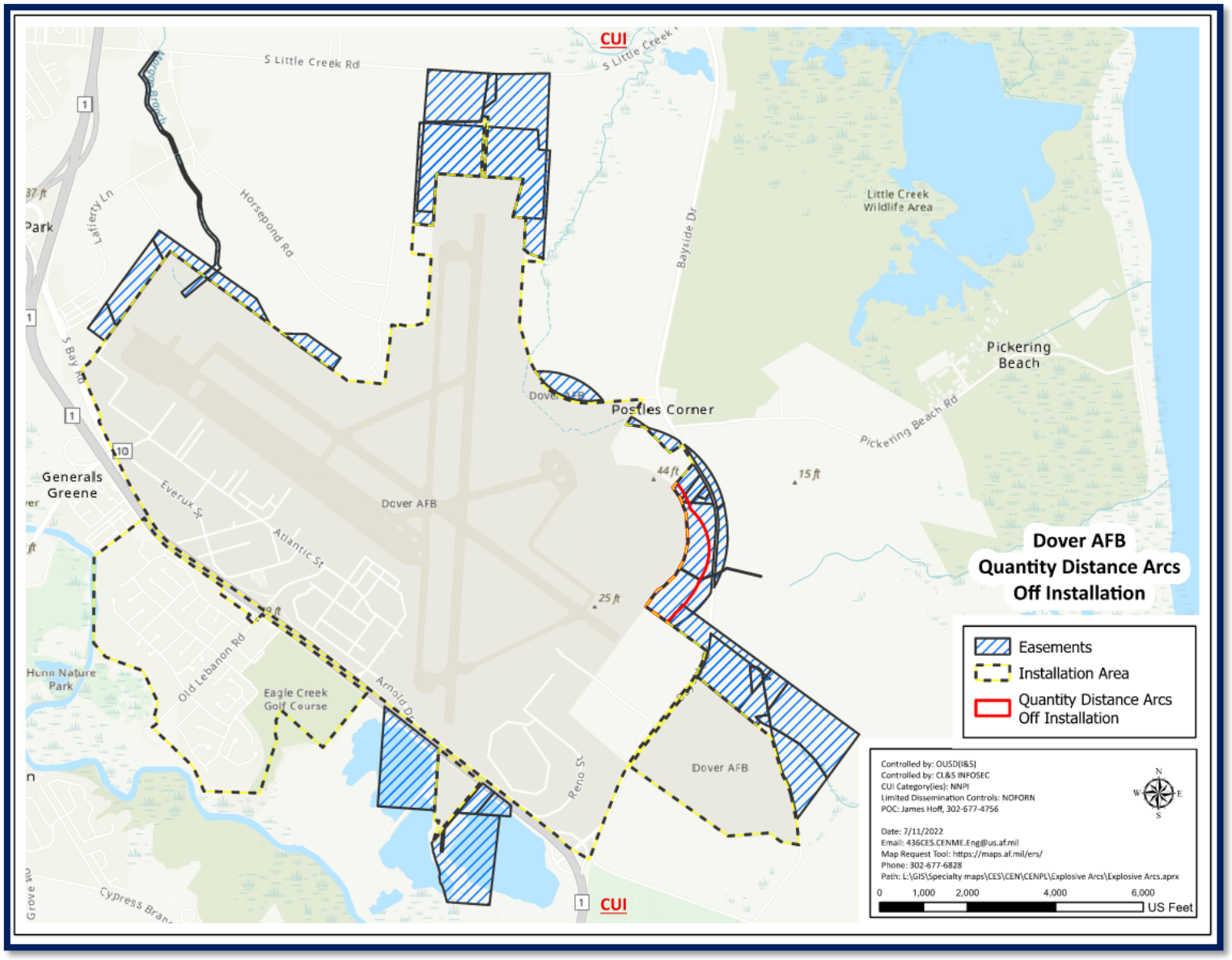


Figure 24 - DAFB – Existing Easement Areas

5.1 Compatibility Assessment

The purpose of the CUP is to ensure the community and DAFB coordinate, communicate, and ultimately implement land uses that are acceptable and beneficial to both DAFB and the community. Often a compromise is required between the two entities to strike the proper balance between community goals and military needs.

A range of factors were evaluated to assist in determining if land uses were compatible with DAFB requirements while still meeting community goals. These Compatibility Factors are listed in Figure 36 below:

Figure 25 - Compatibility Factors

All the discussion topics listed in Chapter 4 provided the basis for the compatibility assessment and analysis that were developed as part of the study and ultimately incorporated into the plan. These tools, along with the input from key stakeholders became the foundation for identifying compatibility issues and developing strategies for mitigation.

5.2 Methodology and Evaluation

Stakeholder engagement and public participation were important methodologies assisting in the development of identifying compatible and acceptable uses within DAFB study area. Stakeholder meetings included state regulatory agencies, state and local government planning officials, and representatives from the Pennsy Supply owned Borrow Pits. Public workshops afforded interested citizens the opportunity to review informational materials and provide feedback to the study team.

Several key issues were identified during these meetings and strategies to address these issues were developed, and are described below:

Biological Resources (BIO)

Biological Resources include all federally protected resources including, Rare, Threatened, and Endangered Species (RTE's), environmental sensitive land, and wetlands. The issues identified include:

- The Rufa Red Knot, recently listed as threatened under the Endangered Species Act (ESA) in 2014, is an example of a locally occurring migratory bird species that has been affected by climate change and which the U.S. Fish and Wildlife Service (USFWS) is seeking to protect by identifying

critical habitat. Flight patterns are maintained above 1000 feet so as to not disturb the habitat. Continued monitoring of threatened and endangered species is critical to protecting the natural wildlife around DAFB.

- Two Wildlife Areas – Little Creek Wildlife Area and Ted Harvey Wildlife Area/Conservation Easement Area will require annual coordination with DNREC and the United States Fish and Wildlife Service (USFWS) to assess impacts. It is currently not known if monitoring is occurring to determine any effects that DAFB may have on these Wildlife Areas. Coordination and communication should occur in an effort to coordinate any expansion efforts to add areas to these refuges. Annual meetings to discuss current efforts and progress on any additional easements is recommended.
- Coordinate with Army Corps of Engineers (ACOE) and Department of Agriculture to protect wetlands and farmlands. Coordination and communication should occur in an effort to coordinate any expansion efforts to add areas to these refuges.

Climate Adaptation (CA)

As our climate changes, both as a result of natural and human activities, mitigation strategies in the form of Climate Adaptation are being developed. Climate changes affect sea levels, weather patterns, as well as numerous natural resources. Both military institutions and the communities where they are located must engage in climate adaptation strategies to mitigate the effects they pose to climate change.

- Threats of sea level rise, particularly as they relate to Port Mahon, which is the main source of jet fuel for DAFB continue to be as issue for DAFB. Consideration should be given to develop a long-range plan to mitigate impacts of sea level rise, analysis of property loss, implement recommendations from the *Port Mahon Road Living Shoreline Project* study completed by DNREC and DelDOT.
- SR 9 and Little Creek Road have been identified as frequently flooded roads. Coordination with DelDOT on their resiliency plans for those roadways is recommended. It is also recommended that a notification procedure to alert DAFB personnel when local roads are closed due to flooding be developed.

Coordination / Communication (COM)

Coordination and communication are key components of an effective CUP. Coordination between the community and the military institution ensures community goals are achieved while land uses that are compatible to the military are implemented. To help with communication, each year, the Wing Commander hosts the "State of the Base" address to civic leaders, congressional representatives, state officials. This brief discusses what the base has done over the past year mission wise, economic impact of the base, and partnerships. This does create an opportunity of open communication however, several issues and opportunities were identified through the analysis process.

- DAFB has identified the Community Planner in the Civil Engineering Squadron and the Public Affairs Office for the 436th Airlift Wing as the two points of contact (POC) for the base. DAFB should ensure the points of contact (POC) have a well-defined job description and responsibility matrix so that as personnel change the communication and coordination does not become neglected.
- Identify other committees or organizations where the POC should be included.

- Provide points of contact to all coordinating agencies to include the Community Planner, the Airfield Manager for airfield issues, Security Forces and Public Affairs for agency coordination and decision-making process inclusion.
- Jurisdictions, including DelDOT, within five miles of DAFB should formalize development reviews by DAFB in planning documents for areas within five miles of DAFB. This includes a need for greater coordination and standardized review process for DelDOT capital projects and maintenance projects within the study area.
- Provisions should specify:
    - Defining planning actions that require military review, such as the development of this Compatible Use Plan.
    - Identification of the Points of Contact in the development review process including Kent County Planning Office, City of Dover Planning Office, DelDOT, and DNREC.
    - Formal procedures for transmitting applications to DAFB.
    - Formal procedures for requesting and receiving comments.
    - Timeline for military responses considering review timeframes specified by state law and local procedures.
    - Continued notification by the City of Dover, Kent County, and the Dover/Kent County MPO, DelDOT to DAFB, as well as any other agencies on all public hearings related to development applications.
- There is a continued need for detailed economic impact data that are inclusive of DAFB to quantify the importance of the military to the region. This data is presented at the annual state of the base brief to state and county officials.
- Need for memorandums of agreement (MOA) for coordination of surrounding jurisdictions.
- Continued collaboration of formalized communication between the DAFB, City of Dover and Kent County staff to facilitate early awareness of planning issues and opportunities prior to transmittal of development applications for military review.
- Inform property owners about programs to protect land around military installations through easement and land use buffers.
- Need for enhanced engagement with congressional stakeholders to preserve partnerships, promote cooperation, and secure funding for the acquisition of land for conservation buffers surrounding DAFB.
- Develop mechanisms for use of other funding sources (REPI) within the existing preservation programs.

Energy Development (ED)

Glint and glare, vertical obstructions, and water quality and quantity are all potential compatibility issues related to the development of energy. The following issues were raised related to the development of energy.

- Include DAFB in any development of offshore wind farms to ensure that wind farms located close to the base assess possible interference with radar.
- Communicate that solar farms near the base must be cleared by the FAA and DOD clearing house. https://www.acq.osd.mil/dodsc/contact/dod-review-process.html
- Determine other possible land uses or development that could require a glint and glare study such as greenhouses.

Frequency Spectrum Impedance / Interference (FSI)

Frequency spectrum impedance on aircraft must be analyzed and monitored to ensure there is no interference with operations.

According to an FAA 5G Statement issued on January 14, 2022, the FAA WIL REQUIRE OPERATIONS OF Boeing 787 aircraft to take additional precautions when landing on wet or snowy runways at airports where 5G C-band service is deployed.

During the two-week delay in deploying new 5G service, safety experts determined that 5G interference with the aircraft's radio altimeter could prevent engine and braking systems from transitioning to landing mode, which could prevent an aircraft from stopping on the runway.

- Wind turbine operations on and around AF installations and ranges can negatively affect safety, aircrew training, and airborne system component testing and training. These impacts can occur whether wind turbines are isolated or located within wind farms. Wind turbines can affect airborne radar systems and ground radar systems, such as those that support air traffic management, NEXRAD for weather, surveillance for national security purposes, and other functions. Wind turbines cause an undesired detection for almost any position the wind turbine is placed within the radar system's detection range. For airborne radars directed at or flying over wind turbines, the radar system could receive returns from both another aircraft and one or more wind turbines, creating a false detection or "clutter" and effectively reducing the radar's probability of desired target detection. Ground radar systems typically see wind turbines appear as static clutter. Airborne radar systems will see turbines as both static and moving clutter.

Housing Availability (HA)

Housing availability must consider the overall housing market in the region as it relates to the demand for housing for military personnel and military family housing. DAFB is limited in housing inventory and relies on local municipalities to provide moderate priced housing for personnel, both rental and through direct sale.

- Conduct a housing requirements market analysis to ensure that off-site housing needs for a variety of housing types can be met within the surrounding community.
- DAFB should provide jurisdictions surrounding DAFB with the results of housing survey outlining DAFB housing needs.
- Update Comprehensive Plan Housing Elements to include strategies that recognize and reflect housing needs associated with DAFB and to ensure there is sufficient land designated on the Future Land Use Map to meet the demand.
- Coordinate with DelDOT to ensure routes from the military housing and DAFB are clear, efficient routes that are well maintained and meet the capacity needs of DAFB.

Infrastructure Extensions (IE)

Infrastructure extensions consider potential improvements to transportation and other infrastructure to better accommodate military personnel living and working on the base. The following infrastructure issues were identified at DAFB. Coordination should continue with DAFB and the Transportation Master plan that is currently under development.

- Improve ability for staff living on base to travel off base for shopping and recreation particularly on other side of SR 1 where amenities cannot be easily accessed with a car.
- Coordinate with DelDOT Delaware Transit Authority to develop Microtransit to serve DAFB.
- A bicycle and pedestrian master plan to connect DAFB housing and the operations side of the base to the Capital City Trail has

been developed but cannot be implemented at this time due to security concerns.

- A bicycle and pedestrian master plan that connects to SR 9 and Kitts Hummock Road has been developed but cannot be implemented at this time due to security concerns.

Glint and Glare (GG)

Glint and glare are issues are typically related to solar energy and lighting at the base. Light and glare issues specific to DAFB include.

- Include solar projects in the State's PLUS process to allow early coordination of impacts. PLUS coordination would require comments from DAFB if within 5-mile radius to DAFB or within flight paths of DAFB.
- Identify, map, and adopt locations acceptable for solar projects within 5-mile radius or within flight paths of DAFB.
- The DoD Siting Clearinghouse requirements and standards published in Title 32, Code of Federal Regulations, Part 211 shall advise and guide the process to facilitate the early submission of renewable energy project proposals to the Clearinghouse for military mission compatible review. Amend applicable local planning documents (Comprehensive Land Use Plans, regional plans, and renewable energy regulations) to incorporate policies and procedures for ensuring coordination of alternative energy development applications with the DoD Siting Clearinghouse. If communities become aware of any wind energy development projects, they should get contact information for the developer and inform them of the need to coordinate with the DoD Clearinghouse.
- Define any other land uses that might require a glint and glare study, such as greenhouses, or other architectural features, such as glass buildings, that could cause glint/glare.
- Dark Skies protection required for military training at night using night vision equipment (light pollution).
- Review lighting requirements within the overlay zones to determine possible impacts to DAFB operations.
- Review lighting requirements within the IPM3 zoning to determine possible impacts to DAFB operations.

Land Use (LU)

Land Use issues typically are best controlled through efficient and effective zoning and comprehensive planning. The City of Dover, Kent County and the surrounding municipalities need to be aware of the needs to of DAFB and how their land use decisions can effect operations at DAFB.

- Revise overlay zone in Kent County and the City of Dover to align with the 65db contour and some distance from DAFB boundary (current code does not cover entire area of concern).
- Expand overlay zones to include Explosive Safety Quantity Distance Arcs - concentric arcs that provide a buffer between ammunition storage and people or structures.
- Revise overlay areas every 10 years or at the time of any jurisdiction's comprehensive plan update, whichever comes first, for any jurisdictions within 5-miles of DAFB and Kent County.
- Review the need for easements/deed restrictions changes.
- Confirm uses and their compatibility with codes such as Greenhouses, RV Parks, Mountain Bike Trails.
- Verify that permitted uses, as identified in the current overlay zones, do not obstruct the airspace, attract birds, create electromagnetic or thermal interference, produce dust, smoke, steam, or light emissions that would impact military operations.
- Monitor new development plan processes and policies for business changes, business licenses, and certificates of occupancy - keep track of "new tenants".
- Review current allowable uses for compatibility with current regulations. These would include higher density events at typically low-density businesses, change in use that would allow

density changes, and/or monitoring of storage/uses that could pose a threat to DAFB.

- Section 22 of the City of Dover Zoning Ordinance doesn't fully limit expansion of existing industry and should be reviewed for possible inclusion of density limits.
- The City of Dover recently created the IPM3 (Industrial Park Manufacturing Zone Industrial Aviation and Aeronautics Center) permitting airports, spaceports, and related facilities; commercial or industrial uses related to aviation or aeronautics; and public and institutional uses that support aviation or aeronautics industries. If the City annexes the employment center as identified in the Kent County Comprehensive Plan they should apply the IPM3 zoning to the annexation.
- Review, revise, and enforce deed restrictions.
- Create a process during plan approval to assess the activities and levels of employees in spaces within the APZ.
- Create a process to require site plan notes or deed restrictions on building reconfigurations.
- Work with Kent County and City of Dover to amend their overlay zone to include zone of frangibility, imaginary slopes and heights, and incorporate notification specifications to DAFB for structures lower than 199' in height
- Review landscaping requirements in overlay zoning for compatibility with reducing bird habitat.
- Define height restrictions for areas surrounding DAFB zoning in better detail.
- Address obstruction heights - FAA is the determining factor for height restrictions; however, structure height addressed by FAA may be insufficient for areas in close proximity to DAFB.
- Perhaps develop a 'reclamation plan" for the borrow pits now, before the use ceases. The plan could specify agreed upon acceptable uses and provide predictability for the eventual transition.
- Revise and re-record all existing easements for consistency Include language in all easements for tree clearing, Bird/Wildlife Aircraft Strike Hazard (BASH), and other specifics, for example who owns the wood and tree remnants produced by the tree clearing.
- Broaden notification area around DAFB for greater awareness and consult with DAFB.
- Create and manage a geo-database of properties with easements and encumbrances to be shared will all agencies.
    - State should develop a multi-agency review of any request to buy back easements. Easements should be retained whenever possible and only allow modifications if proposed use is compatible with DAFB and other preservation goals.
    - Master plan the industrial area now to provide predictability and also to market site. Site could be made shovel ready, or close to it. Master plan would address appropriate uses that are acceptable to DAFB, City, and the County.
- Cell towers can pose a risk to flight operations and must be sited properly and illuminated within 5 miles of the base.

Roadway Capacity (RU)

SR 1 and SR 9 are the primary roadways that serve DAFB and surrounding area. The capacity of traffic these roadways can accommodate contributes significantly to land uses at the base and surrounding region. The following roadway capacity issues were identified at DAFB. DAFB completed the Dover AFB Transportation Plan in January 2023. This plan should be referenced when evaluating any roadway capacity mitigation measures.

- Evaluate alternate access to DAFB from SR 9 to reduce impacts of SR 1 congestion.
- Encourage DelDOT to expand SR 1 to 3 lanes in each direction to mitigate congestion.

- Ensure proper protocols are in place, such as a public affairs notification for coordination between DAFB and DelDOT Traffic Management Center (TMC) for special events.
- Evaluate alternate truck access to DAFB from SR 9 to eliminate impacts to SR 1 for security concerns.
- Ensure process is in place for communication of any incident with DelDOT Transportation Management Center (TMC) and Homeland Security.

Safety Zones (SA)

Development in safety zones restricts certain uses and concentrations of people to protect public safety. Clear Zones and Accident Potential Zones (APZ I and APZ II) are the most common locations for accidents so are the most restrictive areas for development. Safety Zone issues at DAFB include:

- Establish an annual assessment of habitat and other elements in the BASH areas of concern.
- Evaluate Delaware Sediment Stormwater Management Regulations and consider the best management practices for stormwater management.
- Include language in all easements for Bird/Wildlife Aircraft Strike Hazard (BASH).
- Clearly define who services areas within Study Area including all Emergency Medical Technician (EMT) responses.
- Provide information on the restrictions of UAS in and around the base.

6.1 Implementation Plan

The purpose of this chapter is to present the strategies developed, through a series of stakeholder meetings, in an organized and structured way that will lead to future implementation of the recommendations. Representatives at stakeholder meetings included both the Policy and Technical Committees as well as key DAFB personnel, representatives from Pennsy Supply, Delaware Storage and Pipeline, state and federal regulatory agencies, and the public. The purpose of these meetings was to reach a consensus, and the strategies presented are a result of that consensus.

The Compatible Use Plan is the culmination of strategies developed through the stakeholder process and provides recommendations for future implementation. The strategies presented address the compatibility issues presented in Chapter 5.

6.2 Implementation Plan Guidelines

Balancing the goals of all involved stakeholders was the key to the success of this plan. A variety of guidelines were used to develop strategies to ensure the success of this plan. These guidelines include:

- Based on the proposed recommendations the property values surrounding the base should not change
- Some recommendations will require new enabling legislation.
- Assigning a primary responsible party for all action items. In some cases, multiple entities were assigned the primary responsibility. In those cases the entities should work together and select a single primary entity to lead the effort.
- Agreement to develop multiple strategies to address all stakeholder goals to gain full consensus when a single strategy is unable to accomplish this.
- Assurance that no strategies are in conflict with state or federal laws.

6.3 Overlay Zone and Compatibility Zones

Currently both the City of Dover and Kent County have overlay zones for DAFB within their respective zoning codes. These overlay zones have very specific geographic boundaries that are defined using two criteria.

- Accident Potential Zones (APZ)
- Noise contours

These overlay zones have provided specific guidance for proposed developments within these geographic areas, however there is a need for DAFB to be made aware of and provide input on land use activities outside the overlay zones that may pose a risk to the operation and sustainability of the base.

To ensure effective communication and collaboration between the local jurisdictions, regulating agencies, and DAFB a new larger geographic area needs to be created that encompasses all of the areas of concern. A Military Compatibility Overlay Zone (MCOZ) needs to be created to ensure areas not designated for specific compatibility issues is are not negatively affected by local governmental policies or regulations. The MCOZ includes the overlay zones and a 5-mile radius around DAFB. All local land use agencies and regulatory agencies should use the MCOZ as a trigger for coordination and collaboration on any activities with the goal of preventing or mitigating compatibility issues.

6.4 How to read the plan

The strategies developed were designed to address the issues identified during DAFB CUP. The purpose of each strategy is to accomplish the following:

1. Avoid future actions, operations, or approvals that would cause a compatibility issue;
2. Eliminate existing compatibility issues where possible; and
3. Facilitate enhanced, ongoing communication and collaboration as mechanisms for effective compatibility planning and avoidance of future encroachment.

For ease of use, these strategies are presented in a table format showing the issues and strategies and information on how each strategy should be completed. Figure 37 highlights the different features of the strategy table, and the following paragraphs provide an overview of how to read the information.

Issue/Strategy ID

The issue/strategy identification number is an alpha-numeric number that provides a unique reference for each specific issue and corresponding strategy. For example, issue BIO-1 will have a corresponding strategy of BIO-1a.

Strategy Category

The implementation plan identifies the strategy category type to better help the user know what type of approach is needed to implement the specific strategy.

Timeframe

The timeframe column indicates the anticipated time to implementation or task initiation.

Short-term – Strategy can be implemented within one or three years.

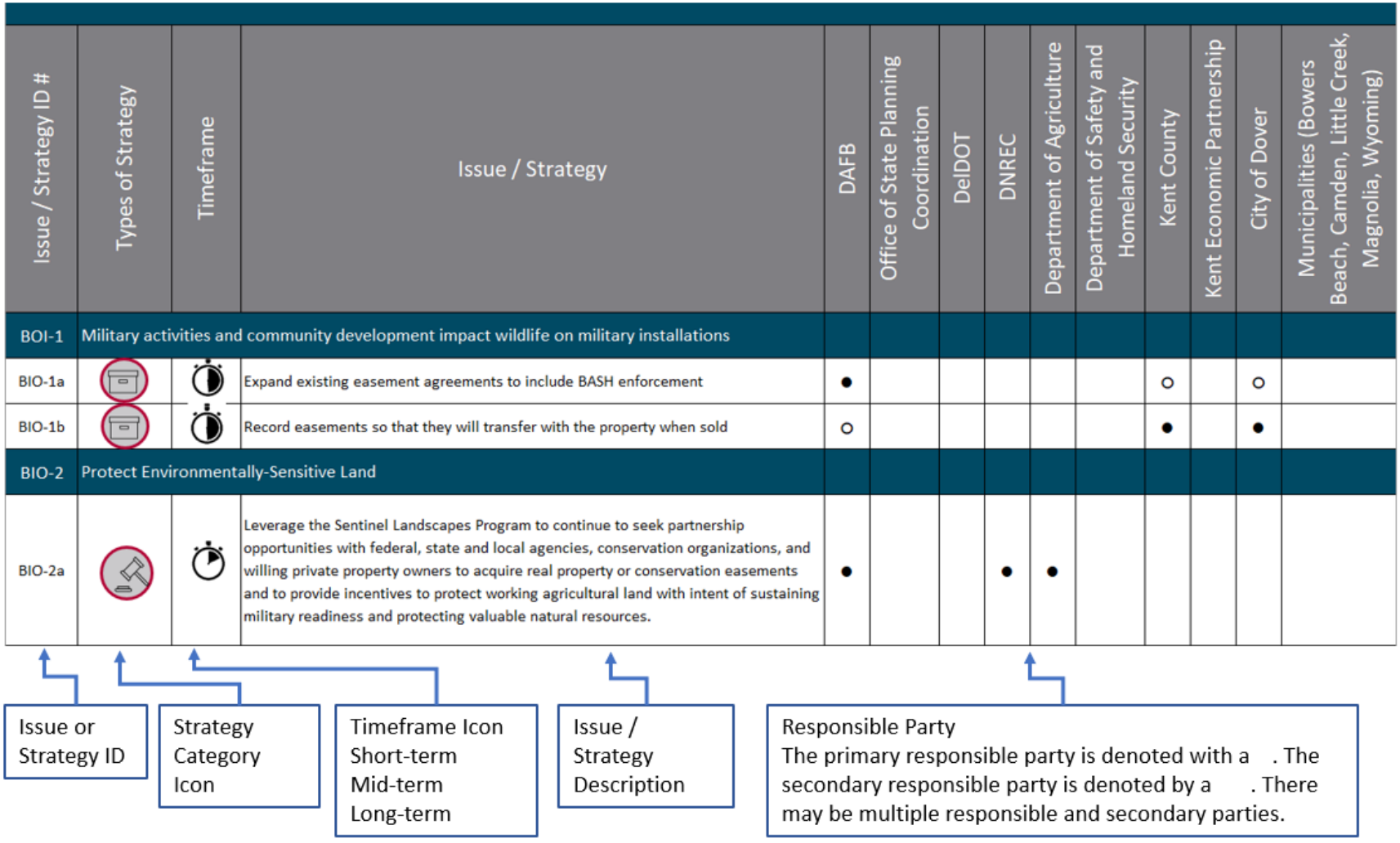
Mid-term - Strategy can be implemented within four to ten years.

Long-term – Strategy can be implemented in eleven or more years.

Upon adoption of the DAFB CUP Study, agencies first task will be to afford funding, review policies, and identify strategies for implementing this CUP. It is also suggested that DAFB and DelDOT create a Monitoring Committee. The Monitoring Committee would serve as a facilitator and agent of the Plan. The Monitoring Committee would attend meetings, request updates, and monitor the task implementation. The Monitoring Committee would also hold quarterly meetings with members of the CUP Study's Police and Technical Committees to keep this Policy in the forefront. Additionally, the Monitoring Committee would prepare a yearly community workshop to summarize efforts to implement this toolkit on a yearly basis. In addition, the Monitoring Committee would prepare a yearly summary report documenting the implementation of the toolkit in addition to documenting the steps taken through the Monitoring Committee to implement the toolkit as well.

Responsible Party

At the right end of the strategy table are a series of columns, one for each jurisdiction, military entity, agency, and organization with responsibility for implementing the CUP strategies. If an entity has responsibility relative to implementing a strategy, a circle is shown under their name. This circle is one of two symbols that represent their role. A solid circle (●) designates that the entity identified has a primary role in implementing the strategy. In cases where there is more than one primary lead indicated then the agencies will collaborate to determine who will take the primary lead role. A hollow circle (○) designates that the entity plays a key supporting role but is not directly responsible for implementation. The responsible parties are identified by their name in the heading at the top of each page.

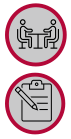


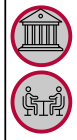
Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
BOI-1	Military activities and community development impact wildlife on military installations												
BIO-1a			Expand existing easement agreements to include BASH enforcement	●						○		○	
BIO-1b			Record easements so that they will transfer with the property when sold	○						●		●	
BIO-2	Protect Environmentally-Sensitive Land												
BIO-2a			Leverage the Sentinel Landscapes Program to continue to seek partnership opportunities with federal, state and local agencies, conservation organizations, and willing private property owners to acquire real property or conservation easements and to provide incentives to protect working agricultural land with intent of sustaining military readiness and protecting valuable natural resources.	●			●	●					

Figure 26 - Implementation Matrix Guide

Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
BOI-1	Military activities and community development impact wildlife on military installations												
BIO-1a			Expand existing easement agreements to include BASH enforcement	●						○		○	
BIO-1b			Record easements so that they will transfer with the property when sold	○						●		●	
BIO-2	Protect Environmentally-Sensitive Land												
BIO-2a			Leverage the Sentinel Landscapes Program to continue to seek partnership opportunities with federal, state and local agencies, conservation organizations, and willing private property owners to acquire real property or conservation easements and to provide incentives to protect working agricultural land with intent of sustaining military readiness and protecting valuable natural resources.	●			●	●					
BIO-2b			Work with Delaware Department of Natural Resources and Environmental Control (dnrec) to expand the Delaware National Estuarine Research Reserve (DNERR) as appropriate	●			●						
BIO-3	DAFB impacts to the two wildlife areas close to the DAFB, Little Creek Wildlife Area and Ted Harvey Wildlife Area/conservation easement area												
BIO-3a			Coordinate with DNREC Fish and Wildlife as needed based on changes to operations, flight paths or aircraft invetory to assess possible impacts	●			●						
BIO-4	Protection of RTEs located within the study area (though mainly in the conservation areas)												
BIO-4a			Currently there are no Rare, Threatened and Endangered (RTE's) species in the project area, however there is a need to monitor species that may be placed on the list	●			●						

Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
CA-1	Sea Level rise may threaten Port Mahon and therefore threaten the main source of jet fuel for DAFB. Port Mahon is also a viable boating pier widely used by the public.												
CA-1a			Develop Long-Range Plan for Sea-Level Rise including mitigating impacts of sea-level rise, high tide flooding, and storm surge to increase resiliency for fuel delivery and mission capabilities.	●		○	●		○				
CA-1b			Analyze the quantifiable impacts of projected real property loss on mission capability and capacity and mitigation strategies. Thee should include an assessment on the impacts of having to truck fuel into DAFB should the barge delivery system fail.	●		○	●						
CA-1c			Implement recommendations from the study done by DNREC/DelDOT re: Port Mahon Road Living Shoreline Project	○		●	●						
CA-2	Frequently Flooded Roadways have been identified on SR9 and South Little Creek Road												
CA-2a			Coordinate with DelDOT on resiliency plans for both SR9 and South Little Creek	○		●	○		○				
CA-2b			Develop a notification procedure to alert DAFB personnel when local roads are closed due to flooding	●		●	○		●				
COM-1	Point-of-Contact (POC) at DAFB to facilitate proactive information-sharing and awareness with surrounding jurisdictions on compatibility planning issues												
COM-1a			Comminicate to surrounding agencies that the Security POC handles safety and security isses, Planning POC is the Community Planner in the Civil Engineering Section for planning and agency coordiantion, Airfield management for anything on the airfield, and all other inquires should go to Public Affairs	●	●	○	○	○	○	●	○	●	○
COM-1b			Identify other committees or organizations where the POC should be included.	●	●				●				

Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
COM-2	Need for greater coordination and standardized development review process for proposed development within the study area												
COM-2a			Formalize DAFB in Development Reviews - Jurisdictions, including DelDOT, within five miles of DAFB should formalize development reviews by DAFB in planning documents for areas within five miles of the DAFB. Provisions should specify: • Defining planning actions that require military review • Identify project within DAFB areas o concern in the DAC process • Notification to DAFB on all public hearings related to development applications	●	○	○	○			●	●	●	●
COM-2b			Standardize the review process for DelDOT capital projects and maintenance projects within the study area	●	○	●							
COM-2c			Develop detailed economic impact data that are inclusive of DAFB to quantify the importance of the military to the region. Use DoD and DelDOT's economic impact study	●							●		
COM-2d			Execute memorandums of agreement (MOA) for coordination of surrounding jurisdictions	●	○					●		●	●
COM-2e			Formalize communication between the military and surrounding jurisdiction staff to facilitate early awareness of planning issues and opportunities prior to transmittal of development applications for military review	●						●		●	●

Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
COM-3	Informing property owners about programs to protect land around military installations through acquisition, easements, land use buffers												
COM-3a			Proactive communication with property owners on Agricultural Land Preservation and the REPI programs	○			●	●		○		○	○
COM-3b			Engage with state and local agencies to secure funding for the acquisition of land for conservation buffers surrounding DAFB. Current approach to land preservation/conservation is re-active; a landowner must come forward and ask to have their land reserved; however, are there steps that can be taken to make this more pro-active.	●		●	●	●					
COM-4	REPI funding was secured but the State was unable to apply the funding to the preservation program												
COM-4a			Develop mechanisms for use of other funding sources within the existing preservation programs. The Sentinal Landscapes program has a pool of non-profit funding sources that can be leveraged to purchase conservation easemenets.	●		●	●	●					
ED-1	Potential for industrial-scale off shore wind energy development that may be incompatible with military missions												
ED-1a			Include the DAFB in any development of offshore wind farms	●	●		○						
ED-2	Potential for large solar farms to develop to the north of the DAFB that may be incompatible with military missions												
ED-2a			Require and enforce Glint and Glare studies including a DoD Clearinghouse review for certain building applications, such as solar farms.	○	●					●		●	●

Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
FSI-1	Concern for future frequency interference on new aircraft												
FSI-1a			Review possible impacts related to frequency interference from cell towers and wifi towers. Ensure regulations require all towers be illuminated at night per FAA guidance.	●						●		●	
FSI-1b			Include Wind Energy Projects into the PLUS process to allow early coordination of impacts. PLUS coordination would require comments from DAFB if within 5-mile radius to DAFB or within flight paths of DAFB.	○	●								
FSI-1c			Develop an overlay zone for prohibiting incompatible wind energy projects within 5-mile radius or within flight paths of DAFB	○	●					●		●	●
HA-1	Need for communities surrounding DAFB to support military personnel housing needs and quality of life standards for service members and their families												
HA-1a			Evaluate Need for Housing Survey - Evaluate whether an updated housing requirements market analysis survey is required to ensure that off-site housing needs for a variety of housing types can be met within the surrounding community.	●	●					○		○	○
HA-1b			Inform local land use agencies of DAFB housing needs - DAFB should provide jurisdictions surrounding DAFB with the results of housing survey recommended in Strategy HA-1a to support DAFB housing needs.	●	●					○		○	○
HA-1c			Update Comprehensive Plans - Update Comprehensive Plan Housing Elements to include strategies that recognize and reflect housing need associated with DAFB and to ensure there is sufficient land designated on the Future Land Use Map to meet the demand.		○					●		●	●

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IE-1	Housing on base is disconnected from amenities on other side of SR 1 and can not be easlity accessed without a car												
IE-1a			Improve ability for staff living on base to travel off base for shopping and recreation.	●		●							
IE-1b			Coordinate with DelDOT Delaware Transit Authority to develop Microtransit to serve the DAFB	●		●							
IE-1c			Develop a bicycle and pedestrian masterplan to connect DAFB housing and the operations side of the base to the Capital City Trail	●		●	○			○			
IE-2	No walking paths or recreation connectivity to amenities / infrastructure off base												
IE-2a			Develop bicycle and pedestrian masterplan that connects to SR 9 and Kitts Hummock Road	●		●	○			○			
IE-2b			Develop a bicycle and pedestrian masterplan to connect DAFB housing and the operations side of the base to the Capital City Trail	●		●	○			○			

Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
LG-1	Glint and Glare studies required for solar farms												
LG-1a			Include solar projects into the PLUS process to allow early coordination of impacts. PLUS coordination would require comments from DAFB if within 5-mile radius to DAFB or within flight paths of DAFB.	○	●								
LG-1b			Identify, Map, and Adopt locations acceptable for solar projects within 5-mile radius or within flight paths of DAFB	○	●					●		●	●
LG-1c			Procedures to Ensure Coordination with DoD Siting Clearinghouse The DoD Siting Clearinghouse requirements and standards published in Title 32, Code of Federal Regulations, Part 211 shall advise and guide the process to facilitate the early submission of renewable energy project proposals to the Clearinghouse for military mission compatible review. Amend applicable local planning documents (Comprehensive Land Use Plans, regional plans, and renewable energy regulations) to incorporate policies and procedures for ensuring coordination of alternative energy development applications with the DOD Siting Clearinghouse. If communities become aware of any wind energy development projects, they should get contact information for the developer and inform them of the need to coordinate with the DOD Clearinghouse.	●	○					○		○	○
LG-1d			Define any other land uses that might require a glint and glare study, such as greenhouses, or other architectural features, such as glass buildings, that could cause glint/glare.	○						●		●	●

Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
LG-2	Dark Skies protection required for military training at night using night vision equipment (light pollution)												
LG-2a			Review lighting requirements within the overlay zones to determine possible impacts to DAFB operations	○			●			●		●	●
LG-2b			Review lighting requirements within the IPM3 zoning to determine possible impacts to DAFB operations	○								●	
LU-1	Overlay zone does not cover all areas of concern; therefore, incompatible uses could develop near DAFB												
LU-1a			Revise overlay zone in Kent County and the City of Dover to read 65db contour and some distance from DAFB boundary (current code does not cover entire area of concern)	●						●		●	○
LU-1b			Expand overlay zone to include Explosive Safety Quantity Distance Arcs - concentric arcs that provide a buffer between ammunition storage and people or structures	●						●		●	○
LU-1c			Expand overlay zone to include the areas of the Civil Air Terminal expantion as indentified in the Kent County Comprehensive Plan as the new employment center	●						●		●	○
LU-1d			Review overlay areas every 10 years or at the time of any jurisdiction's comprehensive plan update, whichever comes first, for any jurisdictions within 5-miles of the DAFB and Kent County.	●						●		●	○
LU-1e			Easements/deed restrictions changes	●									

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LU-2	Are all permitted land uses defined in the overlay zone still acceptable and compatible with DAFB operations?												
LU-2a			Review the latest guidence from DoD and FAA to determine if current uses within the code are compatible.	○						●		●	
LU-2b			Verify that permitted uses as identified in the current overlay zones do not obstruct the airspace, attract birds, create electromagnetic or thermal interference, produce dust, smoke, steam, or light emissions that would impact military operations	○						●		●	
LU-3	The overall density within the APZ is not being monitored as development plans are approved. Uses and density of flex space, warehousing, and rentals need to be monitored long term.												
LU-3a			Develop a process to to track business changes for buildings in the APZ to ensure desnsity goals - keep track of "new tenants"	○						●		●	
LU-3b			Develop a process to preclude unallowable uses such as higher density occupancy or events at a typically low-density businesses							●		●	
LU-3c			Review Section 22 to determine if a stonger limitation on expansion of existing industry should be implemented									●	
LU-3d			Review, revise, enforce deed restrictions	●						●		●	

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LU-4	Parcels have areas outside of APZ zones and also inside. How should encroachments be handled?												
LU-4a			Develop a process to assess the activities and levels of employees in spaces within the APZ during plan approval	○						●		●	
LU-4b			Develop a process to require site plan notes or deed restrictions on building reconfigurations	○						●		●	
LU-5	Development around DAFB affects runway operations												
LU-5a			Kent County and City of Dover amend overlay zone to include zone of frangibility, imaginary surfaces, and incorporate notification specifications to DAFB for structures lower than 199' in height. The Civil air terminal shouldbe included.	○		●				●		●	
LU-5b			Revise tree policy and requirements in easements and zoning	○						●		●	
LU-5c			Define height restrictions for areas surrounding DAFB zoning in better detail	○		●				●		●	
LU-5d			Evaluate obstruction heights - FAA is the determining factor for height restrictions; however, structure height addressed by FAA may be insufficient for areas in close proximity to DAFB	○		●				●		●	
LU-5e			Develop a 'reclamation plan" for the borrow pits now, before the use ceases. The plan could specify agreed upon acceptable uses, including BASH admittance and use, and provide predictability for the eventual transition.	○			●						

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LU-6	Existing DAFB easements on surrounding properties are inconsistent and obscure												
LU-6a			Revise and re-record all existing easements for consistency Include language in all easements for tree clearing, Bird/Wildlife Aircraft Strike Hazard (BASH), and other specifics	●									
LU-6b			Include all easements in the GIS database mapping tool	●									
LU-7	Pressure from development to buy back existing state owned development rights												
LU-7a			Broaden notification area around DAFB for greater awareness and consult with DAFB	●	●	●	●			●		●	●
LU-7b			Create and manage a geo-database of properties with easements and encumbrances to be shared will all agencies	○	●	○	○			○		○	
LU-7c			Develop a multi-agency review of any request to buy back easements. Eeasements should be retained whenever possible and only allow sale if proposed use is compatible with DAFB and other preservation goals.	●		●	●	●		●		●	○
LU-8	Potential for development-related growth once JUA is signed to the North and West of the DAFB												
LU-8a			Master plan the industrial area now to provide predictability and also to market site. Site could be made shovel ready, or close to it. Master plan would address appropriate uses that are acceptable to DAFB, City, County and include the restrictions from the imaginary surfaces.	●	●	○	○	○		●		●	

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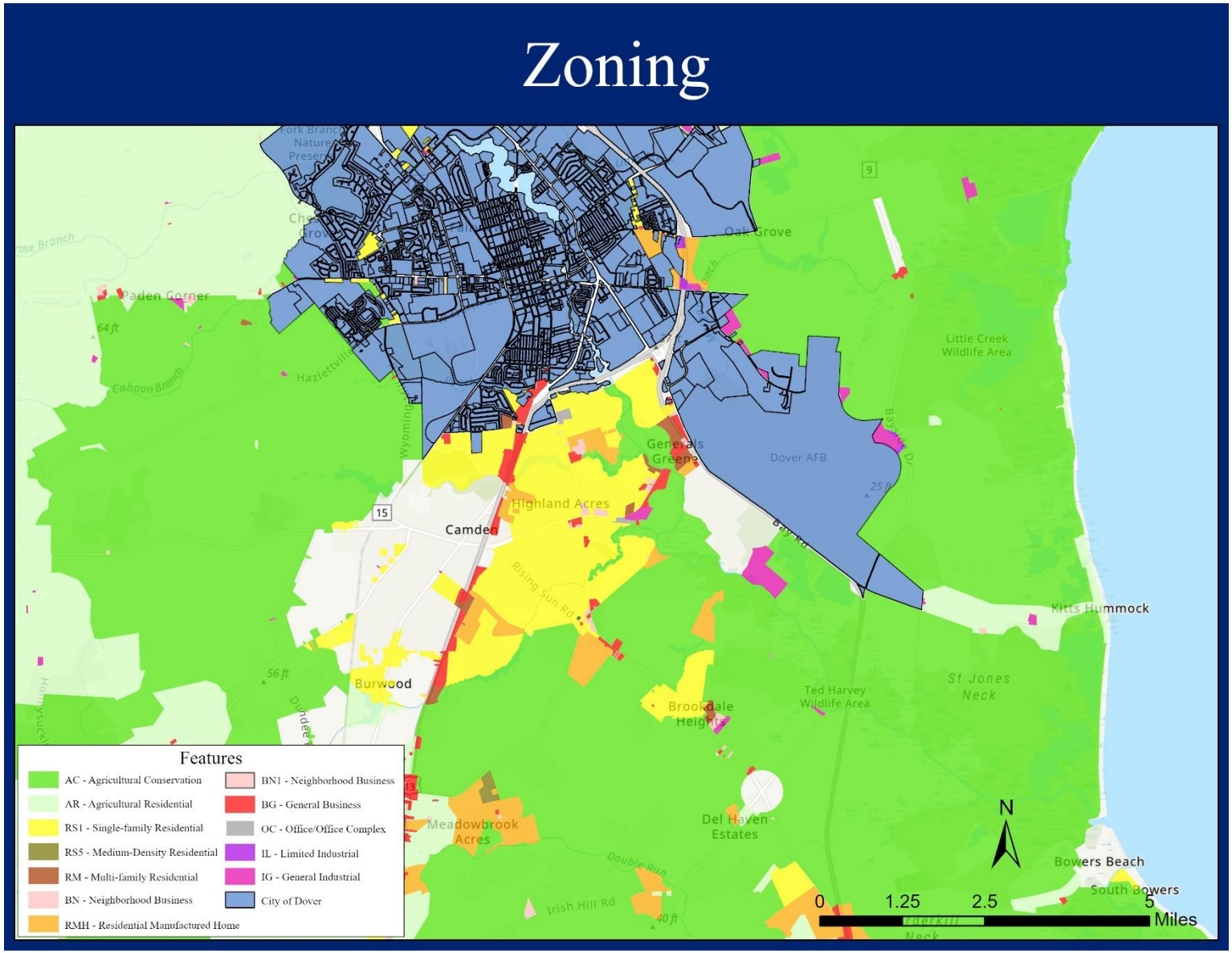
RC-1	Access concerns to and from the DAFB when SR 1 is congested during holidays, events, and accidents.												
RC-1a			Evaluate alternate access to the DAFB from SR 9 to reduce impacts of SR 1 congestion	●		●							
RC-1b			Expand SR1 to 3 lanes in each direction to mitigate congestion	●		●							
RC-1c			Ensure proper protocols are in place for coordination between DAFB and DelDOT Traffic Management Center (TMC) for special events	●		●			●				
RC-2	SR 1 is closed at times when truck inspections detect security concerns												
RC-2a			Dover Air Force Base should relocate the commercial gate to SR9 to reduce impacts of Delawares primary north south route	●		●							
RC-2b			Ensure process is in place for communication of any incident with DelDOT Transportation Management Center (TMC) and Homeland Security	●		●			●				
SA-1	Concern for Bird/Wildlife Aircraft Strike Hazard (BASH) potential												
SA-1a			Establish an annual assessment of habitat and other elements in the BASH areas of concern	●			○						
SA-1b			Review the Delaware Sediment Stormwater Management Regulations and consider the best management practices for stormwater management	○			●						
SA-1c			Include language in all easements for Bird/Wildlife Aircraft Strike Hazard (BASH)	●			○						

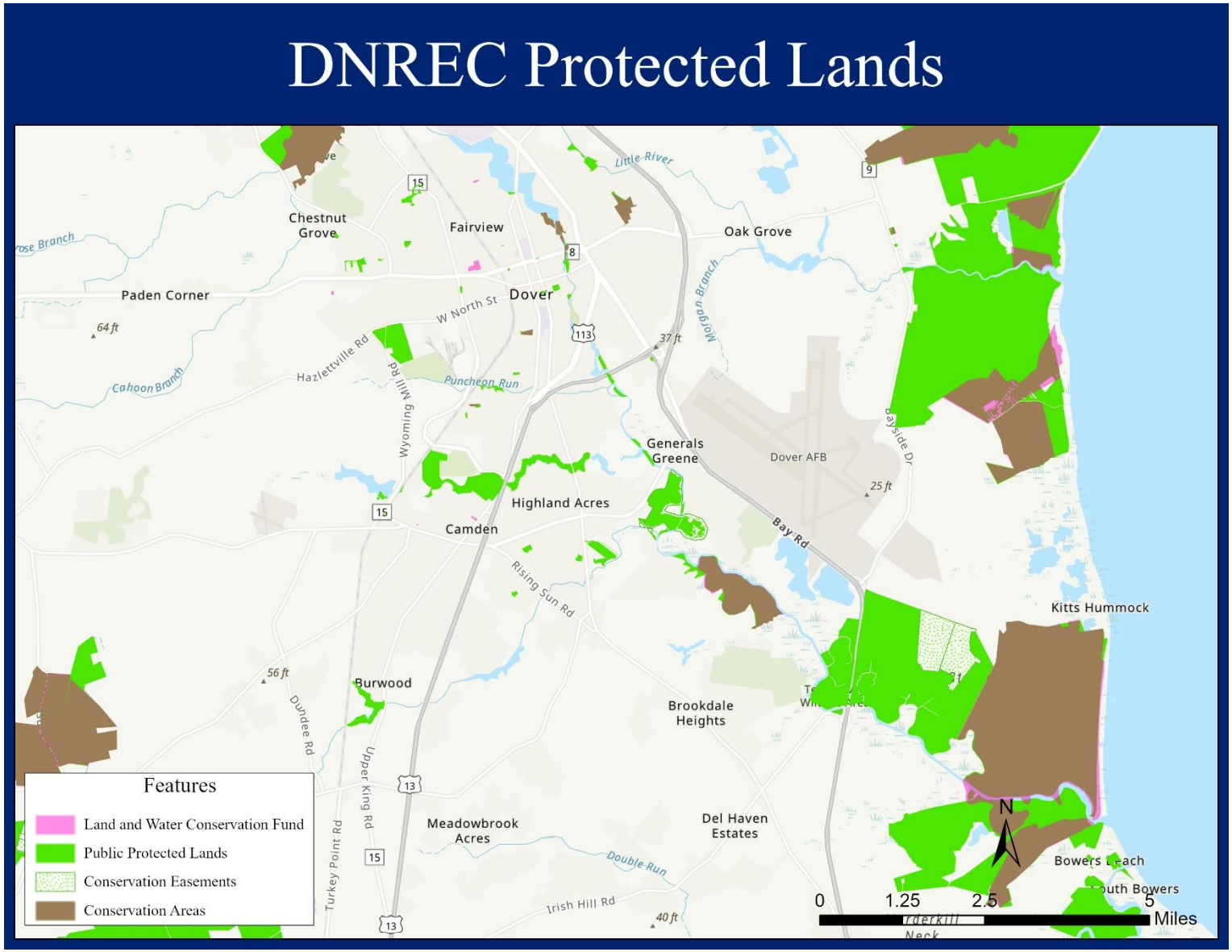
Issue / Strategy ID #	Types of Strategy	Timeframe	Issue / Strategy	DAFB	Office of State Planning Coordination	DelDOT	DNREC	Department of Agriculture	Department of Safety and Homeland Security	Kent County	Kent Economic Partnership	City of Dover	Municipalities (Bowers Beach, Camden, Little Creek, Magnolia, Wyoming)
SA-2	Fire Response												
SA-2a			Clearly define who services areas within Study Area including all Emergency Medical Technicians (EMT) responses	●						●		●	
SA-2b			Establish mutual aid agreements if not in place	●						●		●	
SA-3	Limiting people in the Clear Zone and Accident Potential zones to safe numbers												
SA-3a			Develop clear meassaging to notify people about the hazard the landowner is assuming by having large crowds in APZ 1 or 2	●						●		●	
SA-3b			Provide information on the use of UAS in and around DAFB	●		●			●				

Appendix A - Maps

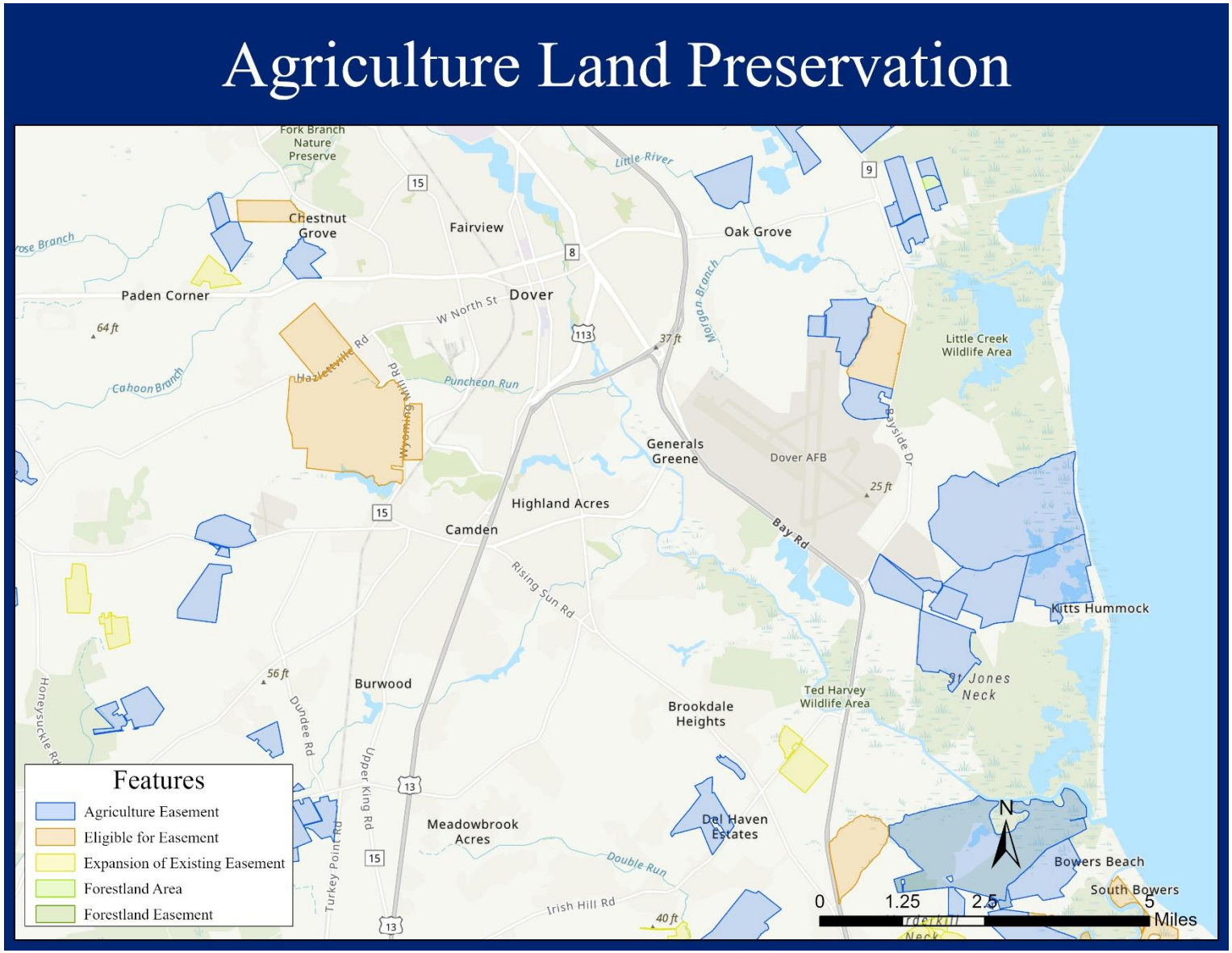
Map 1 – Existing Zoning



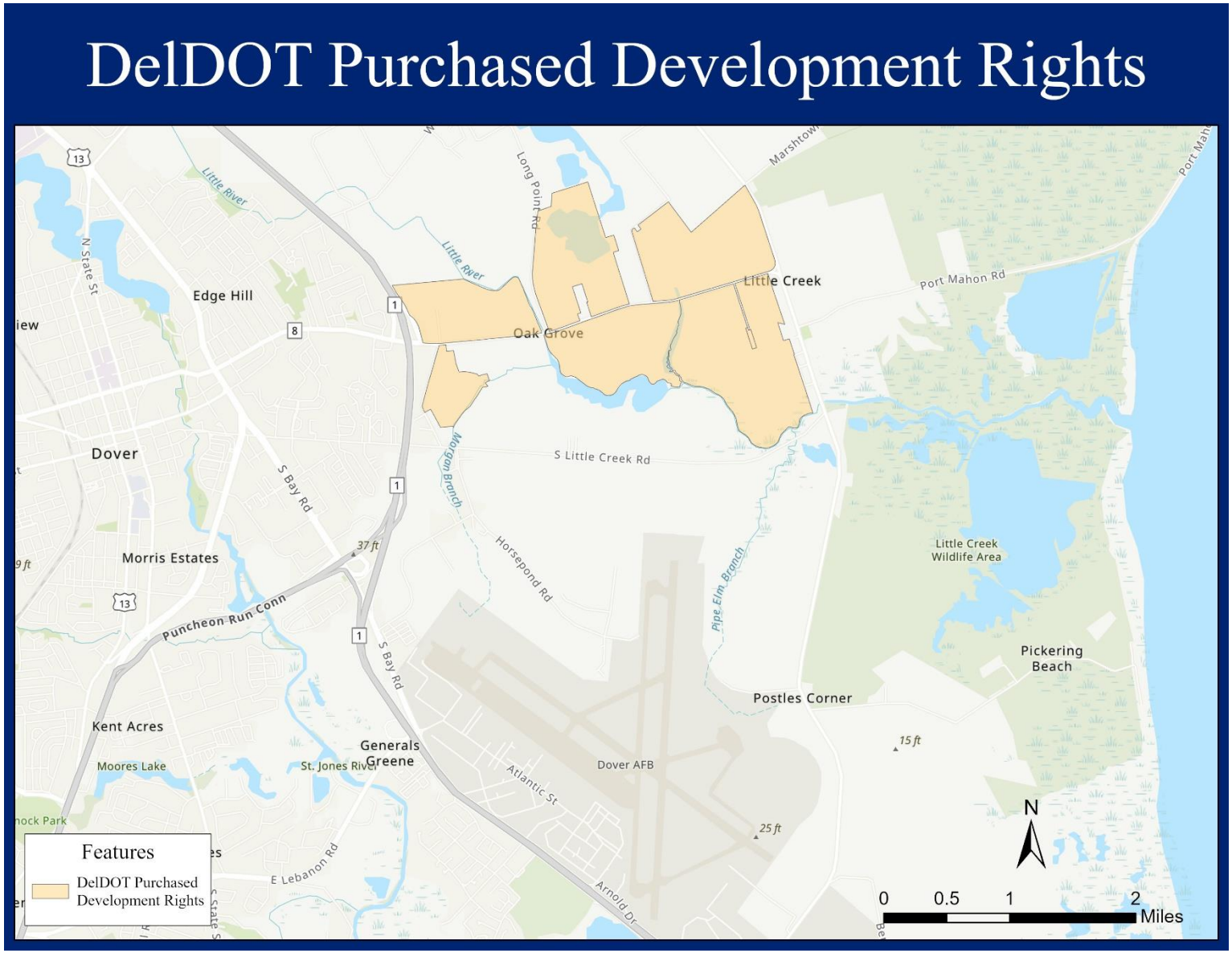
Map 2 – DNREC Protected Lands



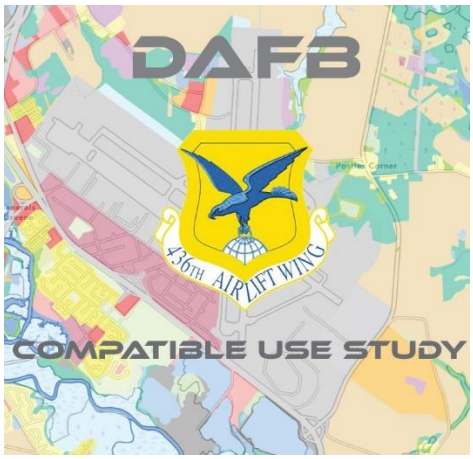
Map 3 – Agricultural Preservation Areas



Map 4 – DelDOT Purchased Development Rights



Appendix B – Public Engagement Strategy



Dover Air Force Base (DAFB) Compatible Use Study Public Engagement Strategy

Adopted (Technical Committee) March 17, 2023

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The Delaware Department of Transportation

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SECTION I: OVERVIEW

This strategic public engagement plan establishes the process and procedures for effective outreach to the Compatible Use Study. Significant public outreach results in greater community support and input into the planning process and the future for the areas surrounding the Dover Air Force Base (DAFB). The Outreach Plan not only fulfills federal requirements, but also serves as a working tool for the project staff to ensure that adequate public notice is given, and the community is engaged throughout the project. It can also be referenced by community members to learn about opportunities for involvement.

GOALS FOR OUTREACH:

1) Provide opportunities to include the public in the planning process
2) Increase the accessibility and transparency of information available to the public
3) Increase the efficiency of the public outreach process
4) Provide the public with more ways to be heard in the planning process
5) Make final decisions that meet the needs of all stakeholders in the study area

The Planning Process

Figure 1 shows an overview of the planning process. While the complete process is far more complex, this diagram offers a general summary of the planning procedures and components that result in our current transportation system.

Figure 1. Planning Process

ABOUT THE COMPATABLE USE STUDY

Purpose

This Compatible Use Study (also known as Military Installation Sustainability) is a strategic planning process undertaken by state or local government in partnership with the military installation to preserve and protect military readiness and defense capabilities, seek ways to reduce the operational impacts on adjacent lands, and support community growth and economic development. A Compatible Use Study is a key tool for compatible land use planning.

Goals

- Enhance communication and understanding between major stakeholders
- Improve collaboration
- Implement strategies
- Inform citizens

Figure 2 illustrates the study area and the geographic extent of the public outreach and engagement. These are not hard boundaries, but a graphical representation of the areas and people that will be engaged through the planning process.

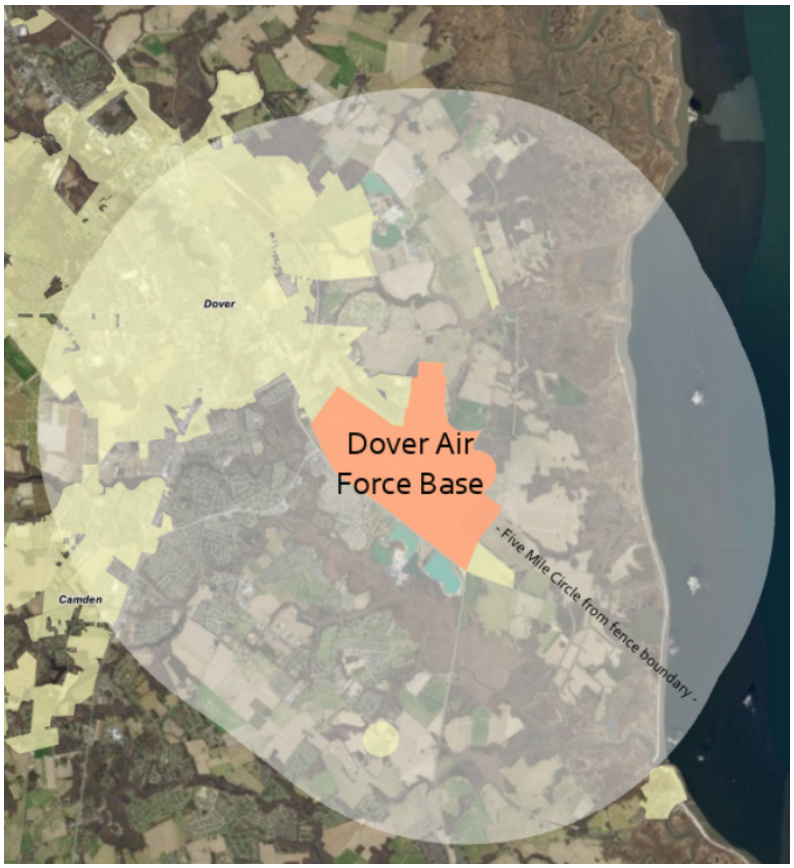

Figure 2. Study Area

OUTREACH AND ACCOUNTABILITY TO THE PUBLIC

Our goal through this project is to not only meet the regulatory requirements for public outreach and engagement but also provide meaningful opportunities that will enhance public input, increase accountability, and maximize transparency. This framework will allow this project to go above and beyond the general policies by outlining measures and strategies based on needs and potential impact. Examples of these measures include outreach to specific target populations, public notice in newspapers or other media outlets in addition to those used regularly, pop-up meetings at events or locations where the target audience can be found, and other similar efforts.

Another way this project will reach the public is through the Technical Committee and Policy Committee. The Technical Committee is primarily made up of planners and engineers from surrounding municipalities, county government, State agencies, and other stakeholders. They will review plans and policies before they are sent to the Policy Committee and are active in implementation of plans and programs. Through this study both committees will be charged with being ambassadors and communication portals for outreach and accountability to the public.

SECTION II: FEDERAL AND STATE REQUIREMENTS

Stakeholder involvement will be achieved through the techniques, practices, and strategies outlined in this plan. This plan will adhere to the applicable federal and state requirements including the Americans with Disabilities Act of 1990 and Title VI. It is the goal of this project to allow equal access for public participation in the planning process. To that end the project team will ensure that all have equal access to information, meeting locations, input opportunities and a voice during the development of the plan.

AMERICANS WITH DISABILITIES ACT OF 1990

The Americans with Disabilities Act of 1990 requires coordination with people with disabilities during the planning process to ensure access to information and meeting locations. Planners, engineers, and builders must provide access for the disabled at sidewalks and ramps, street crossings, and in parking or transit access facilities. Individuals with disabilities must also be able to access sites where public involvement activities occur and where information is posted or presented.

TITLE VI AND NONDISCRIMINATION

This plan and the associated public outreach and engagement will be in compliance with Title VI of the Civil Rights Act of 1964; 42 USC 2000d; related statutes and regulations to the end that no person shall be excluded from participation in or be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal assistance from the U.S. Department of Transportation on the grounds of race, color, sex, or national origin.

In addition, the DelDOT Title VI plan will be followed to ensure transportation planning process. The Title VI plan focuses primarily on minority, low income, and limited English proficient populations.

SECTION III: PUBLIC ENGAGEMENT PLAN

TRANSPARENT, USER-FRIENDLY PRODUCTS AND PROCESSES

Principles
The Outreach Plan seeks to establish a realistic and forward-thinking philosophy for public outreach for the Compatible Use Study. To do this, the Outreach Plan defines meaningful requirements and promotes best practices.

Understandable and Interesting Language / No Jargon
Meeting notices and materials will use appropriate, understandable language — acronyms and other technical jargon will be avoided as much as possible (for a helpful Transportation Planning Glossary, see Appendix E). Efforts are made to create advertising, project campaigns, and slogans that generate the most interest possible. The project team will make reasonable efforts to address identified language barriers in order to provide meaningful access to information on its plans and programs.

Use of Visual Tools
Visualization techniques are used to enhance the public's understanding of the project whenever possible. This is most important where it can simplify confusing information through the use of diagrams and maps. Infographics can also be a very effective way to communicate complex technical material and ideas in an easily digested format for stakeholders and the public.

MEETING FORMATS AND DESCRIPTIONS

The following is a brief description of the meeting types that we expect to deploy as part of the project. This is just a brief description of the format and anticipated outcomes.

Due to the Covid 19 pandemic, the need for a variety of methods to reach out to the community and stakeholders was never more evident. Based on this need, this public involvement strategy will provide options for meeting formats in three ways: live/in-person meetings, virtual meetings through an on-line platform such as ZOOM, and hybrid meetings where there is a live component in combination with a virtual method. Depending on the restrictions in place at the time of the scheduled outreach, in conjunction with a general consensus from the policy and technical committees, each event scheduled for this study maybe held in any of the formats stated previously (live/in-person, virtual only, hybrid).

Meeting Types
- Public meeting
- Charrette/workshop
- Legislative Briefings
- Pop-up meeting
- Open house
- Small group meeting
- Town hall meetings
- Technical Committee and Policy Committee meetings

Public meetings/Workshop
Public meetings will be informal and there are no formal time limits on statements and the agency and/or the facilitator usually answers questions. The purpose of the meeting is to share information and discuss issues, not to make decisions. Comments made during a public meeting do not become part of the official administrative record. Public meetings provide two-way communication, with community members asking questions and the agency/facilitator providing responses. There will be 2 public workshops which will be publicly advertised.

Charrette
This strategy will be used to assess the future of the borrow pit site. We anticipate this being a one day gathering of small groups of people, usually between 10 and 30, led by a small number of specialists with technical expertise. As with all public involvement, the Charrette will be one of the three main methods described in this document: live/in-person, virtual, hybrid consisting of both live and virtual opportunities for attendance. During this Charrette, participants will discuss the future land use of the borrow pit area and perform a visioning exercise to determine possible future uses for the borrow pit that would be compatible with maintaining the mission and operations of the base. Technical experts will help explain any potential conflicts with certain land uses and then lead the participants through an exploratory exercise to envision the future of that area.

Legislative Briefings
There will be two specific legislative briefings to inform the local legislators and elected officials about the study. These briefings will take place just prior to the public workshops so the legislators will have an understanding of the study should any of their constituents contact them. Since land use decisions are primarily left up to local decision makers, the Policy Committee will assist in identifying the best legislators to brief. We anticipate local, elected officials, as well as, state legislators attending the briefings.

Pop-up meeting
A pop-up meeting is another alternative to traditional public meetings. It is a unique, interactive way to encourage community engagement with people who are not usually included by meeting them where they already are. The project team will look for opportunities to help communicate the goal of the project and gain public comment through partnering with the technical committee members and leverage existing meetings and gatherings as opportunities to gain more public input on the study.

Small group meetings
These are meetings with small groups and stakeholders to gain specific information concerning the study. Meetings could be with homeowners or neighborhood groups, civic groups, special interest groups, or other groups of affected or interested parties.

Town hall meetings
These meeting formats are more informal than board meetings and allow the public and members of the representative organization to interact. The main purpose of this type of meeting is to develop open communication between the members and those individuals who control the organization or committee.

Technical Committee and Policy Committee meetings
The Technical Committee is made up of representatives from agencies that are considered major stakeholders. The committee will review information and data and help guide the development of the plan and the potential resolution strategies. The Technical Committee will preview all materials before they are presented to the Policy Committee. The Policy Committee will be kept informed as the study

progresses and will ultimately adopt the study.

TOOLS FOR PUBLIC ENGAGEMENT

Participation Tools

- Comment cards and comment forms
- Stakeholder and community interviews
- Surveys and questionnaires
- Visual preference surveys

Comment cards and comment forms

Comment cards will be made available at every public meeting and all participants are encouraged to fill one out. Comment forms are often used to solicit public comments on specific issues presented at a workshop.

Stakeholder and community interviews

Stakeholder and community interviews will be conducted either face-to-face or by telephone interviews with key local residents, local elected officials, community group representatives and other stakeholders to determine concerns and issues.

Surveys and questionnaires

Surveys will be used throughout the public engagement process specifically during the public meetings and charrette. These will be integrated into the presentations to keep attendees engaged in the process and demonstrate the value of public opinion.

Visual preference survey

A visual preference survey asks participants to rate images of development and facilities based on their initial reaction. A primary goal of this technique is to offer those who are not experts in planning a way to participate by evaluating the desirable and undesirable physical, visual, and spatial features of transportation systems and development.

Web based mapping

A GIS online mapping tool will be developed so the data sets to be viewed in map form which will allow all the stakeholders the ability to compare all the data sets interactively. This tool will help inform the compatibility assessment and provide the public with the opportunity to zoom to a specific area of the study and see potential compatibility issues. It can also be used to map specific strategies as they are developed.

TOOLS FOR INFORMATION DISSEMINATION

Information Dissemination Tools

- Ambassadors
- Direct and email mailings
- Newsletters
- Fact sheets
- Posters and flyers
- Media releases

- Presentations: videos and PowerPoint
- Social media
- Webcasts
- Websites

Ambassadors

We will be asking all Technical and Policy Committee members to serve as ambassadors to the study and help to disseminate information and help inform the public about the study and the upcoming public engagements. The ambassadors will also assist in developing the list of stakeholders identified for community engagement and involvement.

Direct and email mailings

Direct and email mailings will be used to announce upcoming meetings or activities and provide information about the Study. Direct mailings could be postcards, letters, or fliers. Meeting reminders will be sent out in advance of committee meeting and public engagement meetings. An area may be targeted for a mailing because of potential impacts from study and efforts are made to include low-income, minority, disabled, and Limited-English-Proficient (LEP) populations. In order to continue expanding the database, members of the public will be asked if they would like to be included on it when comment forms are dispensed and collected at public meetings.

Newsletters

Email newsletters will be used for ongoing communication as well as to send out updates or notifications on an as needed basis. The goal is to develop a mailing list of interested parties, municipalities, media, and other agencies who have voluntarily added their name and address to the list. Each issue of the newsletter will include contact information, upcoming meetings and events.

Fact sheets

Fact sheets provide summary information about the study. Fact sheets can be distributed at public meetings, on the website, and public places such as community centers.

Posters and flyers

Posters and flyers will be used to announce meetings and events. We will work with the technical committee on placement of the flyers and posters to have the most impact. Some options include government centers, neighborhood shops, religious institutions, social service agencies, employment centers, bus stops/transit hubs, the interior of buses, senior centers, public health clinics, public libraries, community centers and popular meeting places.

Media releases

Press releases are official announcements will be used to advertise the public engagement opportunities. These will most often be used to announce public meetings, surveys and events, and to report the results of studies.

Presentations: videos and PowerPoint

Videos and PowerPoint presentations will be used as informational tools and to document public involvement events. These visual tools will be used for all the meetings and public engagements.

These visual tools will be used to enhance the public's understanding of the study and the data behind

the decision making. This includes using graphics, video, and Geographic Information Systems (GIS), which are all very effective ways to communicate complex technical material and ideas.

Social media

It is the intent of the project team to create a social media presence for the project leveraging existing social media platforms of the partnering agencies. This platform will be used to disseminate information about the study, advertise upcoming engagement opportunities and provide a opportunities for additional public input.

Webcasts

Webcasting will be used to provide a recording of the public workshops that will archived online. This allows those who are interested but unable to attend a meeting to participate and view it on their own time. These techniques are also beneficial for those who are sight or hearing impaired, as webcast presentations can be enhanced to meet the needs of all citizens.

Websites

The project will have a website hosted by DelDOT that will be the repository for all the committee meeting agendas, minutes, and draft materials, as well as public outreach efforts and materials.

Participation Notification

	Technical Committee, Policy Committee	***Elected Official Briefing***	***Public Workshop #1***	***Stakeholder Meetings***	***Charrette***	***Public Workshop # 2***	***Final Report***
Website	x		x		x	x	x
Newspaper			x		x	x	x
Mass mailing			x		x	x	x
Email	x	x		x		x	
Poster			x		x	x	x
Newsletter	x		x		x	x	x
Phone		x		x			