MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND AVIATION ADMINISTRATION

2023 Maryland Aviation System Plan

Interim Update – Technical Report

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Final Report / February 2023

2023

Maryland Aviation System Plan

Interim Update – Technical Report

Prepared by:

AECOM

Prepared for:

MARYLAND DEPARTMENT OF TRANSPORTATION

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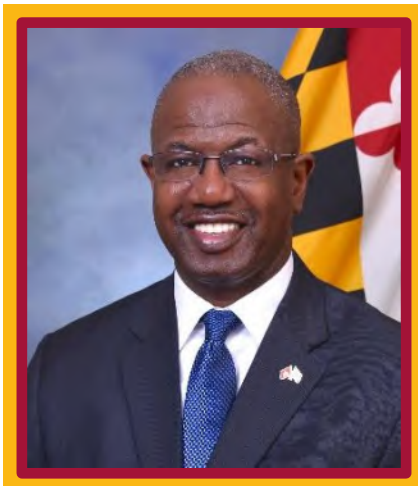

Message from Maryland Aviation Administration Executive Director/CEO Ricky D. Smith, Sr.

Aviation in Maryland is steeped in historical pioneering firsts to modern technological advancements. In appreciation of our past and renewed focus on the future, the Maryland Department of Transportation Maryland Aviation Administration (MAA) is committed to maintaining and improving Maryland's transportation infrastructure and fostering an inclusive aeronautics industry for the benefit and enjoyment to all Maryland residents.

MAA fosters the vitality of aviation statewide and promotes safe and efficient operations, economic viability, and environmental stewardship. Responsible for the operation of Baltimore/Washington International Thurgood Marshall and Martin State Airports, MAA provides friendly, convenient facilities and customer services and develops enhanced domestic and international passenger and cargo opportunities through inter-modalism and state-of-the-art technology.

In addition, MAA fosters and promotes aeronautics statewide. The 2023 Maryland Aviation System Plan – Interim Update (MASP) focuses on all public-use aviation facilities in Maryland, which includes 32 airports, 1 heliport, and 1 seaplane base. The 2023 MASP is based on a comprehensive inventory of existing facilities. It analyzes and reviews key socioeconomic and aviation trends in Maryland and nationwide; evaluates MAA airport roles; forecasts aviation demand; identifies facility needs; and provides an implementation plan and cost analysis, all resulting in system recommendations with the intention to improve the Maryland airport system.

Our vision is to 'be better'. We continue to be powered by a vision to build on our individual and organizational performances in service to every citizen. Our vision compels us – each of us – to explore new heights in service quality to our internal and external partners. Over the last few years, our vision has propelled us to a new level of performance as recognized by our customers, stakeholders, and the industry. I am pleased to present the 2023 MASP which will help guide our strategic decisions and investments in Maryland's airport system.

MAA recognizes the strong contributions of Maryland's aviation and aerospace industry in support of air transportation solutions for life's opportunities. We are strategically investing in the maintenance and enhancement of our airport system to ensure safety, security, sustainability and resiliency. This plan will help Maryland maintain a competitive regional, national and global standing in the aviation industry and provide for positive economic impacts today and into the future.

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Acronym List

0W3	Harford County Airport
1N5	Bennett Airport
1W3	Mexico Farms Airport
2008 MASP	2008 Maryland Aviation System Plan
2G4	Garrett County Airport
2W2	Clearview Airpark
2W5	Maryland Airport
2W6	St. Mary's County Regional Airport
3W3	Kentmorr Airpark
4MD	Pier 7 Heliport
58M	Claremont Airport
AAC	Aircraft Approach Category
ACHP	Advisory Council on Historic Preservation
ACIP	Airport Capital Improvement Program
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALP	Airport Layout Plans
ALS	Approach Lighting System
ANP	Lee Airport
ARC	Airport Reference Code
ASOS	Automated Surface Observing System
ASSET	General Aviation Airports: A National Asset
ATC	Air Traffic Control
ATCT	Airport Traffic Control Tower
Avgas	Aviation Gasoline
AWOS	Automated Weather Observing System
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
BWI	Baltimore/Washington International Thurgood Marshall Airport
CAC	Critical Area Commission
CAD	Computer-Aided Design
CAGR	Compound Annual Growth Rate
CATEX	Categorical Exclusion
CBE	Greater Cumberland Regional Airport
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGE	Cambridge-Dorchester Regional Airport
CGS	College Park Airport
CSPP	Construction Safety and Phasing Plan
CWA	Clean Water Act
d-CS	Digital Chart Supplements
DMW	Carroll County Regional Airport/Jack B. Poage Field
d-TPP	Digital Terminal Procedures
EA	Environmental Assessments

EIA	Energy Information Administration
EIS	Environmental Impact Statement
ESN	Easton/Newnam Field Airport
eVTOL	Electric Vertical Take-Off and Landing
FAA	Federal Aviation Administration
FBO	Fixed-Based Operator
FCA	Forest Conservation Act
FCP	Forest Conservation Plan
FDK	Frederick Municipal Airport
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FME	Tipton Airport
FSD	Forest Stand Delineation
GA	General Aviation
GAI	Montgomery County Airpark
GAMA	General Aviation Manufacturers Association
GCO	Ground Communication Outlet
HGR	Hagerstown Regional Airport/Richard A. Henson Field
HIRL	High Intensity Runway Lights
IATA	International Air Transport Association
IDA	Intensely Developed Areas
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IPaC	Information for Planning and Conservation
LDA	Limited Development Areas
M06	Havre de Grace Seaplane Base
MAPA	Maryland Aid to Private Airports
MD1	Massey Aerodrome
MDA	Maryland Department of Agriculture
MDE	Maryland Department of the Environment
MDNR	Maryland Department of Natural Resources
MDOT MAA	Maryland Department of Transportation Maryland Aviation Administration
MERLIN	Maryland's Environmental Resources and Land Information Network
MHT	Maryland Historic Trust
MIHP	Maryland Inventory of Historic Properties
MIRL	Medium-Intensity Runway Lighting
MSC	Flood Map Service
MTN	Martin State Airport
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NLF	Natural Laminar Flow
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPIAS	National Plan of Integrated Airport Systems
NRHP	National Register of Historical Places
NWI	National Wetlands Inventory

OXB	Ocean City Municipal Airport
PAPIs	Precision Approach Path Indicators
PFC	Passenger Facility Charge
PVASIs	Pulsating/Steady Burning Visual Approach Slope Indicators
RCA	Resource Conservation Areas
RCO	Remote Communication Outlet
REIL	Runway End Identifier Lighting
RJD	Gooden Airpark
ROFA	Runway Object Free Area
RPZ	Resource Protection Zone
RSA	Runway Safety Area
SAFs	Sustainable Aviation Fuels
SBY	Salisbury-Ocean City/Wicomico Regional Airport
SSPRA	Sensitive Species Project Review Areas
TAF	Terminal Area Forecast
TEL	Tetra Ethyl Lead
UASCE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
VASIs	Visual Approach Slope Indicators
VGSI	Visual Glide Slope Indicator
VHF	Very High Frequency
VKX	Potomac Airfield
W00	Freeway Airport
W29	Bay Bridge Airport
W41	Crisfield-Somerset County Airport
W42	Fallston Airport
W48	Essex Skypark
W50	Davis Airport

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CHAPTER 1

Inventory and Data Collection

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1 INVENTORY AND DATA COLLECTION

1.1 Introduction

The Maryland Department of Transportation – Maryland Aviation Administration (MDOT MAA) airport system consists of aviation facilities, including airports and special facilities, that are open for public-use. The purpose of this chapter is to present a comprehensive inventory of existing facilities and conditions of the MDOT MAA airport system. The inventory data collected for this 2023 Maryland Aviation System Plan – Interim Update (2023 MASP) provides a foundation for understanding the existing system's current conditions and enables a comparison to the facilities inventoried in the 2008 Maryland Aviation System Plan (2008 MASP). Further, the data collected for this chapter will be used for future system analyses, evaluations, and recommendations in the 2023 MASP.

1.2 Overview of Existing Airport System

There are 34 public-use aviation facilities included in the MDOT MAA airport system comprising 32 airports, 1 heliport (Pier 7 Heliport), and 1 seaplane base (Havre De Grace Seaplane Base). The facilities included in the MDOT MAA airport system are also referred to as the system airports.

The 2008 MASP classified each facility into a functional role within the Maryland system based on level of service and activity. MDOT MAA's roles include:

- **Air Carrier Airports:** Air Carrier Airports support commercial airline activities. Where capacity constraints do not impose limits, this airport classification can also support all types of general aviation activities. Any airport without the prerequisite of scheduled airline service was classified into one of the remaining categories based on its level and type of activity and Federal Aviation Administration (FAA) National Plan of Integrated Airport Systems (NPIAS) designation.
- **Reliever Airports:** Reliever Airports support corporate/executive and private use general aviation activities. In some cases, these airports function as relievers to larger, more congested Air Carrier Airports. These airports should be able to accommodate corporate jet aircraft. This facility classification can also support recreational general aviation activities and flight training.
- **General Airports:** This classification of airport serves light to medium multi-engine and single engine aircraft flying for business, pleasure, and training.
- **Local Airports:** Local Airports include facilities that support small general aviation aircraft. Single-engine aircraft represent the primary aircraft type; however, some light twin-engine aircraft are also accommodated. This airport classification supports private pilots that may use flying for business or pleasure and require minimal support facilities. Airports in this category are not in the NPIAS and have fewer than 20,000 operations and/or less than 40 based aircraft.
- **Special Facilities:** A Special Facility may or may not fit into one of the categories above but based on its features would misrepresent the true role of the facility. This classification supports very few based aircraft. However, their importance and the facilities they need to support their users are in excess of what their numbers of based aircraft and operations would typically indicate. Havre de Grace Seaplane Base and Baltimore's Pier 7 Heliport are included in this category.

Of the 34 public-use aviation facilities, there are 3 Air Carrier Airports, 6 Reliever Airports, 15 General Airports, 8 Local Airports, and 2 Special Facilities. Since the 2008 MASP, MDOT MAA airport role classifications remain unchanged.

In addition to the 34 public-use aviation facilities in the MDOT MAA airport system, there are 182 private-use aviation facilities in the state of Maryland, including airports, heliports, and a seaplane base. Private-use facilities are limited use and have restricted access, and therefore do not contribute to the MDOT MAA airport system. These facilities are not part of the MDOT MAA system and are not analyzed in the 2023 MASP.

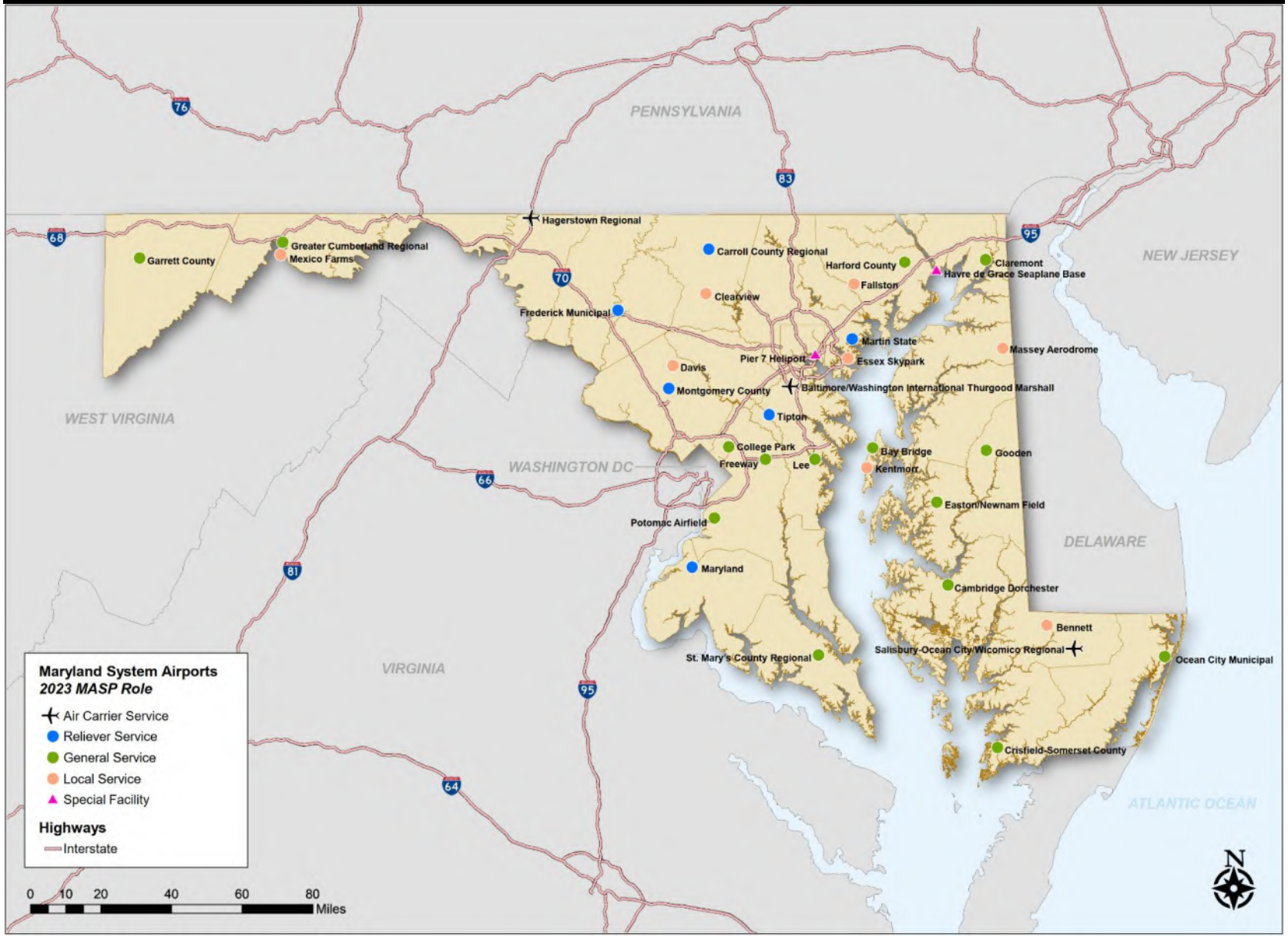
Table 1-1 identifies each airport's name, identifier code, and associated city.

TABLE 1-1: OVERVIEW OF EXISTING AIRPORT SYSTEM

MDOT MAA Role	Airport Name	Associated City	Airport Identifier Code
Air Carrier	Baltimore/Washington International Thurgood Marshall Airport	Baltimore	BWI
	Hagerstown Regional Airport/Richard A. Henson Field	Hagerstown	HGR
	Salisbury-Ocean City/Wicomico Regional Airport	Salisbury	SBY
Reliever	Carroll County Regional Airport/Jack B. Poage Field	Westminster	DMW
	Frederick Municipal Airport	Frederick	FDK
	Martin State Airport	Baltimore	MTN
	Maryland Airport	Indian Head	2W5
	Montgomery County Airpark	Gaithersburg	GAI
	Tipton Airport	Odenton	FME
General	Bay Bridge Airport	Stevensville	W29
	Cambridge-Dorchester Regional Airport	Cambridge	CGE
	College Park Airport	College Park	CGS
	Crisfield-Somerset County Airport	Crisfield	W41
	Easton/Newnam Field Airport	Easton	ESN
	Garrett County Airport	Oakland	2G4
	Greater Cumberland Regional Airport	Cumberland	CBE
	Ocean City Municipal Airport	Ocean City	OXB
	St. Mary's County Regional Airport	Leonardtown	2W6
	Claremont Airport	Elkton	58M
	Freeway Airport	Bowie	W00
	Gooden Airpark	Ridgely	RJD
	Harford County Airport	Churchville	0W3
	Lee Airport	Annapolis	ANP
	Potomac Airfield	Friendly	VKX
Local	Bennett Airport	Salisbury	1N5
	Clearview Airpark	Westminster	2W2
	Davis Airport	Laytonsville	W50
	Essex Skypark	Baltimore	W48
	Fallston Airport	Fallston	W42
	Kentmorr Airpark	Stevensville	3W3
	Massey Aerodrome	Massey	MD1
	Mexico Farms Airport	Cumberland	1W3
Special	Havre de Grace Seaplane Base	Havre De Grace	M06
	Pier 7 Heliport	Baltimore	4MD

Figure 1-1 identifies the 34 system airports' location and their 2023 MDOT MAA classification carried forward from the 2008 MASP.

FIGURE 1-1: LOCATION MAP OF MDOT MAA AIRPORT SYSTEM



Source: AECOM 2022.

1.2.1 Key System Changes Since 2008 MASP

The 2008 MASP included 36 public-use aviation facilities as part of the Maryland airport system. Over the past decade, changes to the Maryland airport system include 2 facility closures and 2 facility name changes:

- Washington Executive/Hyde Field (W32) closed in 2022.
- Suburban Airpark (W18) closed in 2017.
- Cecil County Airport has been renamed to Claremont Airport; the airport's identifier 58M remains unchanged.
- Ridgely Airpark has been renamed to Gooden Airpark; the airport's identifier RJD remains unchanged.

Changes to specific facilities at airports since the publication of the 2008 MASP are noted in Section 1.4 System Airport Inventory Data.

1.3 Data Collection Process and Methodology

This inventory process consists of collecting and verifying data at each facility. To launch the data collection effort, an airport questionnaire containing questions about key facilities was developed and sent to each airport sponsor for completion. The goal of the airport questionnaire was to collect information that was inventoried in the 2008 MASP and any additional facility information that was agreed upon with MDOT MAA as important to catalog for this 2023 MASP. Airport sponsors were requested to provide information on existing facilities in April 2020. Due to the coronavirus disease 19 (COVID-19) pandemic, the study was paused after the distribution of the questionnaires. As of July 2021, the study was restarted and data collection resumed. A sample airport questionnaire is provided in **Appendix A. Sample Airport Questionnaire**.

An inventory database was created to catalog and store information collected from airport sponsors. The inventory database is the basis for the information presented in this chapter; data was collected between April 2020 and July 2021 and was finalized in October 2021. Additional sponsor outreach was conducted to resolve missing, incomplete, or inconsistent information. It is noted here that due to potential impacts of COVID-19 on airport activity, the airport questionnaire requested 2019 information on based aircraft counts and general aviation operations.

The inventory database is used in this chapter to present a comprehensive snapshot of existing facilities, airport activity, and current conditions for all system facilities. It will also serve as the basis for subsequent analyses as part of the 2023 MASP and can be utilized by MDOT MAA, as needed, to reference inventory data for each facility.

To supplement any missing information, the following data sources were utilized:

- MDOT MAA Airport Data
- FAA Digital Chart Supplements (d-CS)
- FAA Digital Terminal Procedures (d-TPP)
- FAA Form 5010, Airport Master Record
- FAA Terminal Area Forecast (TAF)

1.4 System Airport Inventory Data

Inventory data has been collected, organized, and presented in the following major categories.

- Airport ownership
- Federal airport role classifications
- Runway and taxiway facilities
- Airfield support facilities
- Fuel facilities
- Aircraft parking
- Airport services
- Security facilities
- General aviation activity
- Planning studies

To compare changes in Maryland's airport system since the 2008 MASP was published, where available, specific facility changes are listed under each section.[1] A comparison to the 2008 MASP is not provided if the facility inventoried in this 2023 MASP was not included in the 2008 MASP's inventory collection.

The following sections provide definitions and summaries of the facilities, services, and equipment collected in the inventory data process. Inventory tables are provided at the end of the chapter, starting on Page 1-18.

1.4.1 Airport Ownership

No airports have changed ownership from public to private (or vice versa) since the 2008 MASP. As of October 2021, of the 34 facilities, 18 are publicly-owned and 16 are privately-owned. It is noted that Suburban Airpark (W18) and Washington Executive/Hyde Field (W32) were privately-owned; W18 and W32 closed and are no longer part of the MDOT MAA airport system. Pier 7 Heliport (4MD) was not included in the 2008 MASP's inventory. 4MD is included in this 2023 MASP and is a privately-owned facility.

Table 1-2 presents information on each facility's ownership status.

1.4.2 Federal Airport Role Classifications

A facility's classification establishes the role that the facility plays in the Maryland and National Airspace System. MDOT MAA airport roles are described in Section 1.2 Overview of Existing Airport System. At the federal level, federal airport roles are defined in the following plans:

- FAA National Plan of Integrated Airport Systems (NPIAS)
- FAA General Aviation Airports: A National Asset (ASSET)

The NPIAS includes airports open to the public and eligible for federal funding. The FAA determines role classifications for commercial service and general aviation airports as part of the NPIAS.[2] Of the 3,304 airports included in the NPIAS, 396 provide commercial service and are classified as "Primary" airports. The remaining 2,908 landing facilities (which include airports, seaplane bases, heliports, gliderports, and balloonports) have historically been referred to as general aviation airports. Within the General Aviation category, 123 of these airports are "Non-primary Commercial Service" airports. General aviation aircraft mainly use these airports, but these airports support some level of commercial service and have between 2,500 and 10,000 annual commercial passenger enplanements. An additional 250 general aviation airports in the NPIAS are considered "Reliever" airports. Reliever airports are high activity general aviation activity airports that provide metropolitan areas with congested large commercial service airports with an alternative for general aviation activity. All remaining airports included in the NPIAS are considered general aviation airports.

Of the 34 Maryland system airports, 18 are NPIAS airports and 16 are non-NPIAS airports. Since the 2008 MASP, Maryland system airports' role classification in the NPIAS has changed per the 2021-2025 NPIAS Report. Two airports became non-NPIAS airports. These changes are listed below:

- Gooden Airpark (RJD) was a General Aviation airport; it is now non-NPIAS.
- Potomac Airfield (VKX) was a Reliever airport; it is now non-NPIAS.

Recognizing the unique roles played by the general aviation airports throughout the US, the FAA conducted a study in 2012 to further classify the general aviation airports included in the NPIAS.[3] The report documented the importance of the nation's general aviation airport system and established new categories or roles for general aviation airports. FAA's ASSET classifications apply to all Reliever and General Aviation airports included in the NPIAS. In 2014, the FAA completed a second study to further consider classifying General Aviation airports, especially those that initially fell within the "Unclassified" category.[4] At this time, Unclassified airports continue to be included in the NPIAS, but are

[1] The 2008 MASP inventory included Suburban Airpark (W18) and Washington Executive/Hyde Field (W32), which are no longer part of the MDOT MAA airport system; additionally the 2008 MASP did not perform an inventory review of Pier 7 Heliport (4MD), which is now included in this 2023 MASP's inventory update.
[2] *National Plan of Integrated Airport Systems (2021-2025)*
[3] *General Aviation Airports: A National Asset, May 2012.*
[4] *ASSET 2: In-Depth Review of the 497 Unclassified Airports, March 2014.*

not eligible for entitlement FAA funding as they do not meet the basic criteria for NPIAS inclusion. However, these airports are still eligible to compete for discretionary funding from the FAA.

A summary of FAA ASSET categories or roles for general aviation airports is shown below.

- **National (88 airports):** Supports the national airport system by providing communities with access to national and global markets. These airports have very high levels of activity with many jets and multi-engine propeller aircraft. National airports average 249 total based aircraft including 30 jets.
- **Regional (492 airports):** Supports regional economies by connecting communities to regional and national markets. Of the Regional airports, 53 airports have limited air carrier service and 140 are designated as relievers for primary commercial service airports. Regional airports average 92 total based aircraft including 3 jets.
- **Local (1,278 airports):** Supplements local communities by providing access to local and regional markets. These airports are located near larger population centers but not necessarily in metropolitan areas. Of the Local airports, 73 airports have limited air carrier service. Local airports average 34 based aircraft and no jets.
- **Basic (840 airports):** Supports general aviation activities, often serving aeronautical functions within the local community such as emergency response and access to remote communities. Basic airports average 9 based aircraft and no jets.
- **Unclassified (243 airports):** These airports have limited activity. There are 55 privately-owned unclassified airports in this category.

Of the 18 NPIAS airports in MDOT MAA's airport system, 15 are general aviation airports that have an assigned role in the FAA ASSET; the remaining 3 airports are commercial airports that are not classified in the FAA ASSET. Of the 15 General Aviation airports in the FAA ASSET, 2 are National, 5 are Regional, 6 are Local, and 2 are Unclassified.

Table 1-2 presents information on each facility's MDOT MAA classification in the 2008 MASP, FAA NPIAS status, and FAA ASSET roles.

1.4.3 Runway and Taxiway Facilities

Table 1-3 presents information on each facility's runway and taxiway system, including runway length and width, taxiway type, lighting systems, and approach capabilities.

- **Airport Reference Code (ARC):** An airport's ARC consists of the Aircraft Approach Category (AAC) and the Airplane Design Group (ADG). The AAC relates to the operational characteristic of aircraft approach speed and is denoted by a letter; the ADG relates to a grouping of airplanes based on tail height or wingspan and is depicted by a Roman numeral.

Aircraft Approach Category	Approach Speed
Category A	< 91 knots
Category B	Between 91 and 121 knots
Category C	Between 121 and 141 knots
Category D	Between 141 and 166 knots
Category E	Greater than 166 knots

Airplane Design Group	Tail Height (feet)	Wingspan (feet)
Group I	< 20	< 49
Group II	20 to < 30	49 to < 79
Group III	30 to < 45	79 to < 118
Group IV	45 to < 60	118 to < 171
Group V	60 to < 66	171 to < 214
Group VI	66 to < 80	214 to < 262

Source: FAA Advisory Circular 150/5300-13B, dated March 31, 2022.

- **Number of Runways**: The number of runways at each facility is listed. For facilities that have more than one runway, a primary runway is designated.
- **Runway Designation**: The facility's primary runway's designation is presented.

- **Runway Length**: The facility's primary runway's length in feet.

  Since the 2008 MASP, 6 airports have had changes to their primary runway length equal to or greater than 50 feet. The following 4 airports have increased primary runway lengths:

  - College Park Airport (CGS): runway length increased by 373 feet. CGS's primary runway length is now 2,980 feet.
  - Harford County Airport (0W3): runway length increased by 856 feet. 0W3's primary runway length is now 2,856 feet.
  - Maryland Airport (2W5): runway length increased by 740 feet. 2W5's primary runway length is now 3,740 feet.
  - Salisbury-Ocean City/Wicomico Regional Airport (SBY): runway length increased by 900 feet. SBY's primary runway length is now 6,400 feet.

  The following airports have decreased primary runway lengths:
  - Bay Bridge Airport (W29): runway length decreased by 190 feet. W29's primary runway length is now 2,713 feet.
  - Crisfield-Somerset County Airport (W41): runway length decreased by 93 feet. W41's primary runway length is now 2,397 feet.

- **Runway Width**: The facility's primary runway's width in feet.

  Since the 2008 MASP, 6 airports have had changes to their primary runway width equal to or greater than 15 feet. The following 4 airports have increased runway widths:
  - Davis Airport (W50): runway width increased by 25 feet. W50's primary runway width is now 50 feet.
  - Gooden Airpark (RJD): runway width increased by 20 feet. RJD's primary runway width is now 70 feet.
  - Harford County Airport (0W3): runway width increased by 35 feet. 0W3's primary runway width is now 75 feet.
  - Maryland Airport (2W5): runway width increased by 25 feet. 2W5's primary runway width is now 75 feet.

  The following 2 airports have decreased primary runway widths:
  - Baltimore/Washington International Thurgood Marshall Airport (BWI): runway width decreased by 50 feet. BWI's primary runway width is now 150 feet.
  - Kentmorr Airpark (3W3): runway width decreased by 15 feet. 3W3's runway width is now 75 feet.

- **Runway Lighting**: Runway lighting provides guidance for pilots when navigating on the runway. There are 3 types of runway lighting: High Intensity Runway Lights (HIRL), Medium Intensity Runway Lights (MIRL), and Low Intensity Runway Lights (LIRL). Airports with non-FAA standard runway lighting are noted with "NSTD."

  As of October 2021, 28 facilities have runway lighting on the primary runway, a net decrease of 2 facilities compared to the 2008 MASP.

  Since the 2008 MASP, Fallston Airport (W42), which previously had non-standard runway lighting, no longer has runway lighting. Suburban Airpark (W18) and Washington Executive/Hyde Field (W32) had runway lighting but are no longer part of the MDOT MAA airport system. Pier 7 Heliport (4MD), which was not analyzed in the 2008 MASP inventory process, has perimeter lighting.

- **Approach Lighting System (ALS)**: An ALS guides pilots when approaching to land on a runway. There are several types of ALS. The 3 types that are prevalent at the study airports are listed below:
  - High Intensity Approach Lighting System with Sequenced Flashing Lights (ALSF2)
  - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)
  - Omni-Directional Approach Lighting System (ODALS)

  Of the 34 facilities, 4 airports have approach lighting systems on the primary runway.

- **Runway End Identifier Lights (REILs)**: REILs enable pilots to identify the runway threshold during approach for landing and consist of flashing white high-intensity lights installed at either corner of a runway end. REILs provide enhanced visibility during times of low visibility and in urban environments that have other lighting near the airfield. The presence of REILs lighting at the study airport's primary runway is provided.

  Of the 34 facilities, 21 airports have runway end identifier lights on the primary runway.

- **Taxiway System**: The taxiway type that serves the primary runway is presented. Different taxiway types include full parallel, partial parallel, turnaround, or none.

  As of October 2021, 22 facilities have full parallel taxiways. Since the 2008 MASP, 5 facilities have constructed full parallel taxiways:
  - Claremont Airport (58M)
  - Davis Airport (W50)
  - Harford County Airport (0W3)
  - Maryland Airport (2W5)
  - St. Mary's County Regional Airport (2W6)

  The following 2 airports that had full parallel taxiways in the 2008 MASP now have partial parallel taxiways:
  - Baltimore/Washington International Thurgood Marshall Airport (BWI)
  - Greater Cumberland Regional Airport (CBE)

  The following 3 airports identified incorrect taxiway types in the 2008 MASP:
  - Havre de Grace Seaplane Base (M06) reported a full parallel taxiway in the 2008 MASP; M06 does not have a taxiway.
  - Mexico Farms Airport (1W3) reported a turnaround taxiway in the 2008 MASP; 1W3 does not have a taxiway.
  - Ocean City Municipal Airport (OXB) reported a full parallel taxiway in the 2008 MASP; OXB has a partial parallel taxiway.

- **Visual Glide Slope Indicator (VGSI)**: VGSIs are lighting systems that assist pilots in aligning their aircraft with the correct and safe glide path for approach when landing at an airport; they include angled red and white lights in different patterns that indicate the angle of the approach glide path. The 3 types that are prevalent at the study airports are listed below.
  - Precision Approach Path Indicator (PAPI) on the left or right side of the runway.
  - Visual Approach Slope Indicator (VASI) on the left or right side of the runway.
  - Pulsating/Steady Burning Visual Approach Slope Indicator (PVASI) on the left or right side of the runway, normally a single light unit projecting 2 colors.
  - Approach Path Alignment Panels (APAP) used for alignment of an approach path, which may or may not be lighted, on the left or right side of the runway.

  Of the 34 airport facilities, 26 airports have at least 1 VGSI on the primary runway.

- **Approach Capability**: Approach capability for the primary runway is categorized into precision, non-precision, or visual. The approach capability of a runway is primarily determined by the type of navigational aids available to the pilot. Precision approach provides both lateral and vertical navigation through ground-based navigation aids or satellite generated navigation data displayed in the cockpit.[5] Non-precision approaches are instrument approaches that provide lateral navigation, but do not provide vertical guidance. A visual approach, the most basic approach capability, is a non-instrument approach where the pilot approaches by visual reference, remaining clear of clouds.

  Of the 34 facilities, 6 airports have a precision approach, which remains unchanged from the 2008 MASP.

[5] Area Navigation (RNAV) instrument approach procedures with Localizer Performance with Vertical Guidance (LPV) are not considered a precision approach by the FAA and in the 2023 MASP.

Pier 7 Heliport (4MD), which was not analyzed in the 2008 MASP inventory process, has a visual approach.

1.4.4 Airfield Support Facilities

Table 1-4 presents other critical support facilities that are located on the airfield and assist for safe and secure airport operations.

- **Weather Reporting**: Weather reporting systems provide on-site weather updates and offer an additional safety buffer for pilots using the airport, especially during periods of inclement weather. The 2 types of weather reporting systems prevalent at the system airports are listed below.
    - Automated Weather Observing System (AWOS): There are 9 types of AWOS that offer varying levels of reporting capabilities.[6] At a minimum, all AWOS types report the altimeter setting. More advanced systems may also report visibility, wind data, temperature, cloud/ceiling data, dew point, and precipitation data.
    - Automated Surface Observing System (ASOS): ASOS report the altimeter setting, wind data and usually temperature, dew point, density altitude, visibility, cloud/ceiling data, precipitation identification and intensity, and freezing rain occurrence.

  Since the 2008 MASP, the number of airports with ASOS has remained the same. As of October 2021, 4 airports have ASOS.

  The 2008 MASP incorrectly reported that Potomac Airfield (VKX) did not have a weather report system. This airport has AWOS in service that was installed prior to 2008. In 2008, after the publication of the 2008 MASP, 1 additional airport, Lee Airport (ANP) installed an AWOS. As of October 2021, 14 airports have AWOS.

- **Airport Traffic Control Tower (ATCT)**: The ATCT is an on-airport facility where personnel control flight operations within an airport's designated airspace and vehicle operations on the ground.

  Since the 2008 MASP, 1 additional airport, Frederick Municipal Airport (FDK) has installed an ATCT. As of October 2021, 6 airports have ATCTs.

- **Air Traffic Control (ATC) Communications**: Being able to communicate with air traffic control via Very High Frequency (VHF) radio while still on the ground can greatly expedite flight operations when flying on an Instrument Flight Rules (IFR) flight plan, especially in areas without cell phone coverage. This can be accomplished through the air traffic control facility on the field, or, lacking that, a Remote Ground Communication or Ground Communication Outlet (RCO or GCO) that provides dedicated VHF communications on the ground.

  Since the 2008 MASP, Tipton Airport (FME) no longer has ATC communications.

  As of October 2021, 10 airports have ATC communications.

- **Rotating Beacon**: Rotating beacons identify the location and type of an airport and consist of a rotating light with a specific pattern of colored flashes; at civilian airports, they have alternating single green and white flashes. Pilots may use rotating beacons to identify an airport's location on approach or when way finding.

  Since the 2008 MASP, the number of airports with a rotating beacon remained the same.

  Suburban Airpark (W18) and Washington Executive/Hyde Field (W32) had rotating beacons but the airports are no longer part of the MDOT MAA airport system. Since the 2008 MASP, Maryland Airport (2W5) has installed a rotating beacon. In addition, Pier 7 Heliport (4MD) which was not analyzed in the 2008 MASP's inventory process, also has a rotating beacon.

  As of October 2021, 28 airports have rotating beacons.

[6] The 9 types of AWOS include: AWOS-A, AWOS-AV, AWOS-1, AWOS-2, AWOS-3, AWOS-3P, AWOS-3PT, AWOS-3T, and AWOS 4.

- **Segmented Circle**: Segmented circles aid pilots in locating airports and provide a centralized location for such indicators and signal devices on an airport. The segmented circle is installed so that the circle is in a position affording maximum visibility to pilots in the air and on the ground.

  Since the 2008 MASP, 1 additional airport, Baltimore/Washington International Thurgood Marshall Airport (BWI) has installed a segmented circle. As of October 2021, 14 airports have segmented circles.

- **Wind Indicators**: Wind Indicators provide information about airfield wind direction and intensity to pilots for their use in course adjustment prior to landing or after takeoff. Wind indicators, such as wind cones or windsocks, are free rotating hollow fabric shapes installed near runway ends; they are often lighted to allow their use at night or in other times of reduced visibility.

  All system airports have wind indicators.

  It is noted that in the 2008 MASP, Suburban Airpark (W18) and Washington Executive/Hyde Field (W32) had lighted wind indicators but the airports are no longer part of the MDOT MAA airport system. Pier 7 Heliport (4MD), which was not analyzed in the 2008 MASP's inventory process, also has a lighted wind indicator.

  Since the 2008 MASP, the 2 following airports have upgraded their wind indicators to be lighted:
  - Kentmorr Airpark (3W3)
  - Maryland Airport (2W5)

  As of October 2021, 30 airports have lighted wind indicators.

1.4.5 Fuel Facilities

Table 1-5 presents information on the fueling services provided at each facility, including the provision of Aviation Gasoline (AvGas) and Jet A fuel. The table also identifies airports that provide fueling 24-hours, either through self-serve systems or through prior arrangements made with the airport or a Fixed-Based Operator (FBO).

- **AvGas**: 100LL Aviation gasoline is used to fuel most piston engine aircraft in the GA community.

  Compared to the 2008 MASP, there is a net decrease of 2 airport providing AvGas. Davis Airport (W50) now provides AvGas. Gooden Airpark (RJD) no longer provides AvGas.

  Additionally, Suburban Airpark (W18) and Washington Executive/Hyde Field (W32) had provided AvGas but are no longer part of the MDOT MAA airport system.

  As of October 2021, 26 airports provide AvGas.

- **Jet A**: Jet A fuel is utilized by turbine engine aircraft.

  Compared to the 2008 MASP, the number of airports that provide Jet A fuel decreased by 1; 3 airports no longer provide Jet A fuel, including:
  - Bay Bridge Airport (W29)
  - Claremont Airport (58M)
  - Gooden Airpark (RJD)

  Two facilities now provide Jet A fuel:
  - College Park Airport (CGS)
  - Harford County Airport (0W3)

  Pier 7 Heliport (4MD), which was not analyzed in the 2008 MASP's inventory process, also provides Jet A fuel.

  In the 2008 MASP, Suburban Airpark (W18) had provided AvGas, but is no longer part of the MDOT MAA airport system. Additionally, Washington Executive/Hyde Field (W32) had provided both AvGas and Jet A, but the airport is no longer part of the MDOT MAA airport system.

As of October 2021, 17 airports provide Jet A fuel.

- **24-Hour Fuel**: 24-hour fueling allows for aircraft users to fuel after airport operational hours, either through self-serve systems or through prior arrangements made with the airport or FBO.

  Compared to the 2008 MASP, a net increase of 6 airports provide 24-hour fueling services; 9 additional airports provide 24-hour fueling services:
  - Cambridge-Dorchester Regional Airport (CGE)
  - Clearview Airpark (2W2)
  - Davis Airport (W50)
  - Easton/Newnam Field Airport (ESN)
  - Fallston Airport (W42)
  - Garrett County Airport (2G4)
  - Greater Cumberland Regional Airport (CBE)
  - Montgomery County Airpark (GAI)
  - Salisbury-Ocean City/Wicomico Regional Airport (SBY)

  Two airports no longer provide 24-hour fueling services:
  - Freeway Airport (W00)
  - Gooden Airpark (RJD)

  Suburban Airpark (W18) and Washington Executive/Hyde Field (W32) had provided 24-hour fueling but are no longer part of the MDOT MAA airport system while Pier 7 Heliport (4MD), which was not analyzed in the 2008 MASP's inventory process, provides 24-hour fueling services.

  As of October 2021, 22 facilities offer 24-hour fueling services.

1.4.6 Aircraft Parking

Table 1-6 presents an inventory of the aircraft parking capacity at each facility. Aircraft are typically parked in T-Hangars or conventional hangar buildings or on paved and grass tie-downs.

Since the 2008 MASP, while the number of grass tie-down spaces across system facilities has decreased by 12%, the capacity of aircraft parking at system facilities has increased by 11% for T-Hangar spaces, 48% for conventional hangar buildings, and 16% for paved tie-down spaces.

The increase in aircraft parking is in part attributed to 3 facilities that did not have data in the 2008 MASP that have provided aircraft parking capacity data in this MASP update. These facilities include Carroll County Regional Airport/Jack B. Poage Field (DMW), Davis Airport (W50), and Pier 7 Heliport (4MD). Additionally, over the past decade, some facilities may have implemented projects to pave their grass tie-down spaces which may have led to the increase in paved tie-down spaces and decrease in grass tie-down spaces.

As of October 2021, Maryland's systemwide aircraft parking capacity consists of 1,369 T-Hangar spaces, 169 conventional hangar buildings, 968 paved tie-down spaces, and 542 grass tie-down spaces.

1.4.7 Airport Services

Table 1-7 presents the services provided at the airport either by the airport sponsor or an FBO and compares this to services offered at system facilities identified in the 2008 MASP. The services are listed and defined below. It should be noted that 3 facilities did not provide data on airport services in the 2008 MASP: Carroll County Regional Airport/Jack B. Poage Field (DMW), Davis Airport (W50), and Pier 7 Heliport (4MD). Data on airport services provided at these facilities has been collected and is presented in this MASP update.

- **General Aviation (GA) Terminal or FBO with Terminal**: A terminal building provides essential services for passengers and pilots, as well as a facility for the transfer of passengers and flight crews to and from the aircraft. GA terminals may be operated by the airport or an FBO.

  Of the 34 aviation facilities, 28 airports have a terminal or an FBO with terminal.

- **Air Taxi/Charter**: Air Taxi/Charter service indicates whether the airport has an on-demand commercial air service operator, certified by Federal Aviation Regulation (FAR) Part 135, based on the field.

  As of October 2021, a total of 13 system facilities offer air taxi/charter services, a net increase of 1 facility compared to the 2008 MASP. Potomac Airfield (VKX) now offers air taxi/charter service.

  The following 2 facilities no longer offer air taxi/charter services:
  - Claremont Airport (58M)
  - St. Mary's County Regional Airport (2W6)

  There is no data reported in the 2008 MASP for Pier 7 Heliport (4MD) or Carroll County Regional Airport/Jack B. Poage Field (DMW); these facilities now offer air taxis/charter service.

- **Scheduled Air Service**: Scheduled Air Service is defined as any scheduled service provided by an air carrier operating pursuant to authority issued by the US Department of Transportation and under FAR Parts 121, 129 or 135.

  Of the 34 aviation facilities, 3 airports offer Scheduled Air Service.

- **US Customs**: US Customs indicates whether the US Customs services are available so that flights originating from outside the US can clear Customs upon arrival.

  Baltimore/Washington International Thurgood Marshall Airport (BWI) offers US customs services. Since the 2008 MASP, 1 additional airport, Martin State Airport (MTN) offers on-demand customs services for international arrivals.

- **Crop Dusting**: Crop Dusting indicates whether the airport supports crop dusting operations. A positive indication does not mean that the crop dusting operator is based at the airport, only that crop dusting operations are conducted at the airport.

  As of October 2021, 4 facilities offer crop dusting services. The total number of facilities that offer crop dusting services remains unchanged from the 2008 MASP. Since the 2008 MASP, Ocean City Municipal Airport (OXB) offers crop dusting services, while Crisfield-Somerset County Airport (W41) no longer does.

- **Aircraft Repair**: Aircraft Repair indicates whether airframe and/or powerplant repair services are available at the airport.

  As of October 2021, 21 facilities offer aircraft repair services, which remains unchanged from the 2008 MASP. Since the 2008 MASP, the following 2 facilities offer aircraft repair services:
  - Davis Airport (W50)
  - Garrett County Airport (2G4)

  The following 3 facilities no longer offer aircraft repair services:
  - Bennett Field (1N5)
  - Greater Cumberland Regional Airport (CBE)
  - Martin State Airport (MTN)

  In the 2008 MASP, Washington Executive/Hyde Field (W32) had aircraft repair but is no longer part of the MDOT MAA airport system. There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now offers aircraft repair services.

- **Avionics Repair**: Avionics Repair indicates whether radio, navigation instrument, and other electronic gear repairs are available at the airport.

  As of October 2021, 12 airports offer avionics repair services, a net increase of 3 facilities compared to the 2008 MASP. Since the 2008 MASP, the following 5 additional facilities offer avionics repair services:
  - Bay Bridge Airport (W29)
  - Claremont Airport (58M)
  - Harford County Airport (0W3)
  - Montgomery County Airpark (GAI)
  - Potomac Airfield (VKX)

  The following 3 facilities no longer offer avionics repair services:
  - Martin State Airport (MTN)
  - Ocean City Municipal Airport (OXB)
  - Salisbury – Ocean City/Wicomico Regional Airport (SBY)

  There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now offers avionics repair services.

- **Avionics Sales**: Avionics Sales indicates whether radios, navigation instruments, and other electronic gear are available for purchase at the airport.

  As of October 2021, 10 facilities offer avionics for purchase, a net increase of 2 facilities compared to the 2008 MASP. Since the 2008 MASP, the following 5 additional facilities sell avionics:
  - Bay Bridge Airport (W29)
  - Harford County Airport (0W3)
  - Maryland Airport (2W5)
  - Montgomery County Airpark (GAI)
  - Potomac Airfield (VKX)

  The following 4 airports no longer offer avionics for purchase:
  - Baltimore/Washington International Thurgood Marshall Airport (BWI)
  - Freeway Airport (W00)
  - Martin State Airport (MTN)
  - Salisbury – Ocean City/Wicomico Regional Airport (SBY)

  There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now sells avionics.

- **Aircraft Sales**: Aircraft Sales indicates whether a business engaged in aircraft sales is based on the field. It does not include aircraft that are sold privately.

  As of October 2021, 11 facilities sell aircraft, a net decrease of 2 facilities compared to the 2008 MASP. Since the 2008 MASP, the following 2 additional facilities offer aircraft sales:
  - Harford County Airport (0W3)
  - Massey Aerodrome (MD1)

  The following 5 facilities no longer offer avionics sales:
  - Baltimore/Washington International Thurgood Marshall Airport (BWI)
  - Freeway Airport (W00)
  - Martin State Airport (MTN)
  - Salisbury – Ocean/Wicomico Regional Airport (SBY)
  - St. Mary's County Regional Airport (2W6)

There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now offers aircraft sales.

- **Covered Overnight Secured Aircraft:** Covered Overnight Secured Aircraft indicates whether sheltered space is available to store transient aircraft.

  As of October 2021, 14 airports offer covered overnight secured aircraft storage, which remains unchanged from the 2008 MASP. Since the 2008 MASP, the following 6 additional facilities offer covered overnight secured aircraft storage.
  - Bay Bridge Airport (W29)
  - Fallston Airport (W42)
  - Fredrick Municipal Airport (FDK)
  - Garrett County Airport (2G4)
  - Harford County Airport (0W3)
  - Maryland Airport (2W5)

  Additionally, it should be noted that Signature Flight Support at Baltimore/Washington International Thurgood Marshall Airport (BWI) offers overnight hangar storage on a space available basis.

  The following 6 facilities no longer offer covered overnight secured aircraft storage:
  - Baltimore/Washington International Thurgood Marshall Airport (BWI)
  - Bennett Field (1N5)
  - Easton/Newnam Field Airport (ESN)
  - Gooden Airpark (RJD)
  - Lee Airport (ANP)
  - Potomac Airfield (VKX)
  - St. Mary's County Regional Airport (2W6)

  In the 2008 MASP, Washington Executive/Hyde Field (W32) had covered overnight secured aircraft storage but is no longer part of the MDOT MAA airport system.

  There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now offers covered overnight secured aircraft storage.

- **Oxygen:** Oxygen indicates whether oxygen, either in bulk or for individual use, is available for purchase at the airport.

  As of October 2021, 8 airports offer oxygen for purchase, which remains unchanged from the 2008 MASP. Since the 2008 MASP, the following 2 facilities offer oxygen for purchase:
  - Easton/Newnam Field Airport (ESN)
  - Ocean City Municipal Airport (OXB)

  The following 3 facilities no longer offer oxygen for purchase:
  - Martin State Airport (MTN)
  - Salisbury – Ocean City/Wicomico Regional Airport (SBY)
  - St. Mary's County Regional Airport (2W6)

  There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now offers oxygen for purchase.

- **Deicing:** Deicing indicates whether aircraft deicing services are available.

  As of October 2021, 7 airports offer deicing services, a net decrease of 1 facility compared to the 2008 MASP. Since the 2008 MASP, the following 2 additional facilities offer deicing services:
  - Harford County Airport (0W3)
  - Montgomery County Airpark (GAI)

The following 3 facilities no longer offer deicing services:
- Claremont Airport (58M)
- College Park Airport (CGS)
- Greater Cumberland Regional Airport (CBE)

- **Snow Removal:** Snow Removal indicates whether the airport's primary runway is plowed following a snowstorm.

  As of October 2021, 19 airports offer snow removal services, a net increase of 2 facilities compared to the 2008 MASP. Since the 2008 MASP, the following 4 additional facilities offer snow removal services:
  - Crisfield-Somerset County Airport (W41)
  - Harford County Airport (0W3)
  - Ocean City Municipal Airport (OXB)
  - Tipton Airport (FME)

  The following 5 airports no longer offer snow removal services:
  - Claremont Airport (58M)
  - Clearview Airpark (2W2)
  - Freeway Airport (W00)
  - Lee Airport (ANP)
  - Maryland Airport (2W5)

  In the 2008 MASP, Washington Executive/Hyde Field (W32) had snow removal services but is no longer part of the MDOT MAA airport system.

  There is no data reported in the 2008 MASP for Davis Airport (W50), Carroll County Regional Airport/Jack B. Poage Field (DMW), or Pier 7 Heliport (4MD); these facilities now offer snow removal service.

- **Aircraft Rental:** Aircraft Rental indicates whether a business engaged in renting aircraft to pilots is based on the field.

  As of October 2021, 18 airports offer aircraft rental services, a net decrease of 2 facilities compared to the 2008 MASP. Since the 2008 MASP, the following 4 facilities no longer aircraft rental services:
  - Baltimore/Washington International Thurgood Marshall Airport (BWI)
  - Cambridge-Dorchester Regional Airport (CGE)
  - Fallston Airport (W42)
  - Garrett County Airport (2G4)

  In the 2008 MASP, Washington Executive/Hyde Field (W32) had aircraft rental services but is no longer part of the MDOT MAA airport system.

  There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW) or Pier 7 Heliport (4MD); these facilities now offer aircraft rental services.

- **Flight Instruction:** Flight instruction indicates whether a flight instruction business is based on the field. It does not include flight training given to pilots in their own aircraft.

  As of October 2021, 21 airports offer flight instruction services a net decrease of 2 facilities compared to the 2008 MASP. Since the 2008 MASP, the following additional facility offers flight instruction:
  - College Park Airport (CGS)

  The following 3 airports no longer offer flight instruction:
  - Baltimore/Washington International Thurgood Marshall Airport (BWI)[7]
  - Crisfield-Somerset County Airport (W41)

[7] It should be noted that a select number of independent flight instructors operate at Baltimore/Washington International Thurgood Marshall Airport.

- Garrett County Airport (2G4)

In the 2008 MASP, Washington Executive/Hyde Field (W32) had flight instruction but is no longer part of the MDOT MAA airport system.

There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now offers flight instruction.

- **Car Rental:** Car rental indicates whether airport patrons have access to a rental car. In some cases, the rental car company may not be based on the airport, but has made arrangements to bring a car to the airport or pick up the renter at the airport.

  As of October 2021, 17 airports offer car rental services. This is a net decrease of 1 from the 2008 MASP. However, since the 2008 MASP, the following 3 additional facilities offer car rental services:
  - Cambridge-Dorchester Regional Airport (CGE)
  - Harford County Airport (0W3)
  - Potomac Airfield (VKX)

  The following 4 facilities no longer offer car rental service:
  - Freeway Airport (W00)
  - Greater Cumberland Regional Airport (CBE)
  - Lee Airport (ANP)
  - St. Mary's County Regional Airport (2W6)

  There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW); this facility now offers car rental services.

- **Courtesy Car:** Courtesy Car indicates whether a car is made available, without charge, to transient pilots while they are at the airport.

  As of October 2021, 11 airports offer courtesy car services. This remains unchanged from the 2008 MASP. Since the 2008 MASP, the following 3 additional facilities offer courtesy car services:
  - Cambridge-Dorchester Regional Airport (CGE)
  - Montgomery County Airport (GAI)
  - Potomac Airfield (VKX)

  The following 5 facilities no longer offer courtesy car services:
  - Crisfield-Somerset County Airport (W41)
  - Freeway Airport (W00)
  - Martin State Airport (MTN)
  - Massey Aerodrome (MD1)
  - St. Mary's County Regional Airport (2W6)

  There is no data reported in the 2008 MASP for Carroll County Regional Airport/Jack B. Poage Field (DMW) or Pier 7 Heliport (4MD); these facilities now offer aircraft rental services.

1.4.8 Security Facilities

Table 1-8 presents the presence of security facilities at each airport, including a security fence surrounding the entire airport property, and an airport perimeter monitoring system. More than half of system airports (18 airports) have an airport property-wide security fence, while 9 airports have an airport perimeter monitoring system.

1.4.9 General Aviation Activity

Table 1-9 presents 2019 data on based aircraft and general aviation operations for each system facility.

- **Total Based Aircraft:** The total number of based aircraft is the number of aircraft permanently based at an airport, either in a hangar, tie-down or apron, and consist of single-engine, multi-engine, jets, helicopters, as well as other types of aircraft (including gliders, gyrocopters, and unmanned aircraft systems).
- **Total General Aviation Operations:** The total number of general aviation operations is the number of air taxi, local and itinerant general aviation, and military operations at the airport.

Since the 2008 MASP, the total number of based aircraft at system airports has decreased by 16%, or 456 aircraft; the total number of general aviation operations has also decreased by 23%, or 277,243 operations. One airport, Potomac Airfield (VKX), did not provide general aviation operations data in the 2008 MASP.

Data from 2019 shows that systemwide, Maryland airports have 2,382 based aircraft and 927,880 general aviation operations.

1.4.10 Airport Planning Studies

Table 1-10 presents information on each airport's latest airport master plan and airport layout plan. If available, the year the planning study was published is provided. Airports with an asterisk (*) are those where the latest Airport Layout Plan (ALP) update was through a "Pen and Ink" change.

- **Airport Master Plan:** Of the 34 system airports, 17 airports have conducted an airport master plan and 7 airports indicated that no airport master plan has been conducted; 10 airports are unknown.
- **ALP:** Of the 34 system airports, 21 airports have an FAA-approved ALP and 13 airports indicated that no ALP has been prepared; 1 airport is unknown.

1.5 Summary

This chapter outlines the inventory process, presents the data collected from airport questionnaires, and provides a comparison of facility changes in the Maryland airport system from the 2008 MASP to October 2021. The data collected throughout the inventory process will serve as the foundation for the evaluation of the performance of individual system airports and the Maryland airport system as a whole.

TABLE 1-2: AIRPORT OWNERSHIP AND ROLE CLASSIFICATION OF SYSTEM AIRPORTS

Airport Name	Airport ID	Airport Ownership	Maryland Airport Category	FAA NPIAS Category	FAA ASSET Role
Baltimore/Washington International Thurgood Marshall Airport	BWI	Public	Air Carrier	Primary Commercial	Not Applicable
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Public	Air Carrier	Primary Commercial	Not Applicable
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Public	Air Carrier	Primary Commercial	Not Applicable
Carroll County Regional Airport/Jack B. Poage Field	DMW	Public	Reliever	Reliever	Regional
Frederick Municipal Airport	FDK	Public	Reliever	Reliever	Regional
Martin State Airport	MTN	Public	Reliever	Reliever	National
Maryland Airport	2W5	Private	Reliever	Reliever	Unclassified
Montgomery County Airpark	GAI	Public	Reliever	Reliever	Regional
Tipton Airport	FME	Public	Reliever	Reliever	Local
Bay Bridge Airport	W29	Public	General	General Aviation	Local
Cambridge-Dorchester Regional Airport	CGE	Public	General	General Aviation	Regional
College Park Airport	CGS	Public	General	General Aviation	Local
Crisfield-Somerset County Airport	W41	Public	General	General Aviation	Unclassified
Easton/Newnam Field Airport	ESN	Public	General	General Aviation	National
Garrett County Airport	2G4	Public	General	General Aviation	Local
Greater Cumberland Regional Airport	CBE	Public	General	General Aviation	Local
Ocean City Municipal Airport	OXB	Public	General	General Aviation	Local
St. Mary's County Regional Airport	2W6	Public	General	General Aviation	Regional
Claremont Airport	58M	Private	General	Non-NPIAS	Not Applicable
Freeway Airport	W00	Private	General	Non-NPIAS	Not Applicable
Gooden Airpark	RJD	Private	General	Non-NPIAS	Not Applicable
Harford County Airport	0W3	Private	General	Non-NPIAS	Not Applicable
Lee Airport	ANP	Private	General	Non-NPIAS	Not Applicable
Potomac Airfield	VKX	Private	General	Non-NPIAS	Not Applicable
Bennett Airport	1N5	Private	Local	Non-NPIAS	Not Applicable
Clearview Airpark	2W2	Private	Local	Non-NPIAS	Not Applicable
Davis Airport	W50	Private	Local	Non-NPIAS	Not Applicable
Essex Skypark	W48	Public	Local	Non-NPIAS	Not Applicable
Fallston Airport	W42	Private	Local	Non-NPIAS	Not Applicable
Kentmorr Airpark	3W3	Private	Local	Non-NPIAS	Not Applicable
Massey Aerodrome	MD1	Private	Local	Non-NPIAS	Not Applicable
Mexico Farms Airport	1W3	Private	Local	Non-NPIAS	Not Applicable
Havre de Grace Seaplane Base	M06	Private	Special	Non-NPIAS	Not Applicable
Pier 7 Heliport	4MD	Private	Special	Non-NPIAS	Not Applicable

Note: The FAA ASSET role was not provided in the 2008 MASP.

Source: 2021-2025 FAA NPIAS; 2012 FAA General Aviation Airports: A National Asset (ASSET 1); 2014 FAA ASSET 2: In-Depth Review of 497 Unclassified Airports.

TABLE 1-3: RUNWAY AND TAXIWAY FACILITIES AT SYSTEM AIRPORTS

Airport Name	Airport ID	ARC	Number of Runways	Runway Designation*	Runway Length*	Runway Width*	Runway Lighting Type*	ALS*	REILs*	Taxiway System*	VGSI*	Approach Capability*
Baltimore/Washington International Thurgood Marshall Airport	BWI	D-V	3	10/28	10,502	150	HIRL	ALSF-2/ MALSR	None/ None	Partial Parallel	PAPI/ PAPI	Precision
Hagerstown Regional Airport/Richard A. Henson Field	HGR	C-III	2	9/27	7,000	150	HIRL	None/ MALSR	Available/ None	Full Parallel	PAPI/ PAPI	Precision
Salisbury-Ocean City/Wicomico Regional Airport	SBY	C-III	2	14/32	6,400	100	HIRL	None/ MALSR	Available/ None	Full Parallel	PAPI/ PAPI	Precision
Carroll County Regional Airport/Jack B. Poage Field	DMW	C-II	1	16/34	5,100	100	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
Frederick Municipal Airport	FDK	C-II	2	5/23	5,219	100	HIRL	None/ ODALS	Available/ Available	Full Parallel	PAPI/ PAPI	Precision
Martin State Airport	MTN	D-III	1	15/33	6,996	180	HIRL	None/ None	Available/ Available	Full Parallel	PVASI/ PVASI	Precision
Maryland Airport	2W5	B-II	1	2/20	3,740	75	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ None	Non-Precision
Montgomery County Airpark	GAI	B-II	1	14/32	4,202	75	MIRL	None/ None	Available/ Available	Full Parallel	VASI/ PAPI	Non-Precision
Tipton Airport	FME	B-II	1	10/28	3,000	75	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
Bay Bridge Airport	W29	B-I Small Aircraft	1	11/29	2,713	60	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
Cambridge-Dorchester Regional Airport	CGE	B-II	1	16/34	4,477	75	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
College Park Airport	CGS	B-I	1	15/33	2,980	60	MIRL	None/ None	None/ Nw	Full Parallel	None/ None	Non-Precision
Crisfield-Somerset County Airport	W41	B-I Small Aircraft	2	14/32	2,397	75	MIRL	None/ None	Available/ Available	Turnaround	PAPI/ PAPI	Non-Precision
Easton/Newnam Field Airport	ESN	D-II	2	4/22	5,500	100	HIRL	None/ None	None/ Available	Full Parallel	PAPI/ PAPI	Precision
Garrett County Airport	2G4	B-II	1	9/27	5,000	75	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
Greater Cumberland Regional Airport	CBE	C-III	2	5/23	5,047	150	HIRL	None/ None	None/ Available	Partial Parallel	None/ PAPI	Non-Precision
Ocean City Municipal Airport	OXB	B-II	2	14/32	4,074	75	MIRL	None/ None	None/ None	Partial Parallel	VASI/ VASI	Non-Precision
St. Mary's County Regional Airport	2W6	B-II	1	11/29	4,150	75	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
Claremont Airport	58M	B-I	1	13/31	2,989	70	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
Freeway Airport	W00	B-I	1	18/36	2,430	40	MIRL	None/ None	None/ None	Full Parallel	PAPI/ PAPI	Non-Precision

TABLE 1-3: RUNWAY AND TAXIWAY FACILITIES AT SYSTEM AIRPORTS (CONT.)

Airport Name	Airport ID	ARC	Number of Runways	Runway Designation*	Runway Length*	Runway Width*	Runway Lighting Type*	ALS*	REILs*	Taxiway System*	VGSI*	Approach Capability*
Gooden Airpark	RJD	B-II	1	12/30	3,214	70	LIRL	None/ None	Available/ Available	Full Parallel	VASI/ VASI	Non-Precision
Harford County Airport	0W3	B-II	2	1/19	2,856	75	MIRL	None/ None	Available/ Available	Full Parallel	PAPI/ PAPI	Non-Precision
Lee Airport	ANP	B-I	1	12/30	2,500	50	LIRL	None/ None	None/ None	Full Parallel	PAPI/ PAPI	Non-Precision
Potomac Airfield	VKX	A-II	1	6/24	2,665	40	MIRL	None/ None	None/ None	Full Parallel	PAPI/ PAPI	Non-Precision
Bennett Airport	1N5	B-I	2	17/35	3,171	95	LIRL	None/ None	None/ None	Turnaround	VASI/ VASI	Visual
Clearview Airpark	2W2	B-I	1	14/32	1,840	30	LIRL-Non Standard	None/ None	Available/ Available	Partial Parallel	APAP/ APAP	Non-Precision
Davis Airport	W50	B-II Small Aircraft	1	8/26	2,000	50	None	None/ None	None/ None	Full Parallel	None/ None	Visual
Essex Skypark	W48	A-I	2	16/34	2,084	30	MIRL	None/ None	Available/ Available	Turnaround	PAPI/ PAPI	Visual
Fallston Airport	W42	B-I	1	4/22	2,200	50	None	None/ None	Available/ None	Turnaround	None/ None	Visual
Kentmorr Airpark	3W3	A-I Small Aircraft	1	10/28	2,400	75	None	None/ None	None/ None	Full Parallel	None/ None	Visual
Massey Aerodrome	MD1	B-I	1	2/20	3,000	100	None	None/ None	None/ None	Turnaround	None/ None	Visual
Mexico Farms Airport	1W3	B-I	1	9/27	2,120	190	None	None/ None	None/ None	None	None/ None	Visual
Havre de Grace Seaplane Base	M06	Unknown	2	E/W	8,000	200	None	None/ None	None/ None	None	None/ None	Visual
Pier 7 Heliport	4MD	Unknown	1	H1/H1	50	50	Perimeter (Helipad)	None/ None	None/ None	None	None/ None	Visual

Note: (*) Indicates the facility item is for the airport's primary runway. ALS, REILs, and VGSI data is presented by runway end. Runway end-specific data is differentiated by a (/).
ARC, Number of Runways, Runway Designation, ALS, REILs, and VGSI data was not provided in the 2008 MASP.
Source: Airport questionnaires.

TABLE 1-4: AIRFIELD SUPPORT FACILITIES AT SYSTEM AIRPORTS

Airport Name	Airport ID	Weather Reporting	ATCT	ATC Communications	Rotating Beacon	Segmented Circle	Wind Indicator
Baltimore/Washington International Thurgood Marshall Airport	BWI	ASOS	✓	✓	✓	✓	✓ (L)
Hagerstown Regional Airport/Richard A. Henson Field	HGR	ASOS	✓	✓	✓		✓ (L)
Salisbury-Ocean City/Wicomico Regional Airport	SBY	ASOS	✓	✓	✓		✓ (L)
Carroll County Regional Airport/Jack B. Poage Field	DMW	AWOS		✓	✓	✓	✓ (L)
Frederick Municipal Airport	FDK	AWOS	✓	✓	✓	✓	✓ (L)
Martin State Airport	MTN	AWOS	✓	✓	✓		✓ (L)
Maryland Airport	2W5				✓		✓ (L)
Montgomery County Airpark	GAI	AWOS		✓	✓	✓	✓ (L)
Tipton Airport	FME	AWOS			✓	✓	✓ (L)
Bay Bridge Airport	W29	AWOS			✓		✓ (L)
Cambridge-Dorchester Regional Airport	CGE	AWOS			✓	✓	✓ (L)
College Park Airport	CGS	AWOS			✓	✓	✓ (L)
Crisfield-Somerset County Airport	W41				✓		✓ (L)
Easton/Newnam Field Airport	ESN	AWOS	✓	✓	✓	✓	✓ (L)
Garrett County Airport	2G4	AWOS			✓	✓	✓ (L)
Greater Cumberland Regional Airport	CBE	AWOS			✓	✓	✓ (L)
Ocean City Municipal Airport	OXB	ASOS		✓	✓	✓	✓ (L)
St. Mary's County Regional Airport	2W6	AWOS		✓	✓	✓	✓ (L)
Claremont Airport	58M				✓		✓ (L)
Freeway Airport	W00				✓	✓	✓ (L)
Gooden Airpark	RJD				✓		✓ (L)
Harford County Airport	0W3				✓		✓ (L)
Lee Airport	ANP	AWOS			✓		✓ (L)
Potomac Airfield	VKX	AWOS			✓	✓	✓ (L)
Bennett Airport	1N5				✓		✓ (L)
Clearview Airpark	2W2				✓		✓ (L)
Davis Airport	W50						✓
Essex Skypark	W48				✓		✓ (L)
Fallston Airport	W42						✓
Kentmorr Airpark	3W3						✓ (L)
Massey Aerodrome	MD1						✓
Mexico Farms Airport	1W3						✓ (L)
Havre de Grace Seaplane Base	M06						✓
Pier 7 Heliport	4MD				✓		✓ (L)

Note: (✓) Indicates the facility is available at the airport. Blank indicates the facility is not available.
Source: Airport questionnaires.

TABLE 1-5: FUEL FACILITIES AT SYSTEM AIRPORTS

Airport Name	Airport ID	AvGas	Jet A	24-Hour Fueling
Baltimore/Washington International Thurgood Marshall Airport	BWI	✓	✓	✓
Hagerstown Regional Airport/Richard A. Henson Field	HGR	✓	✓	✓
Salisbury-Ocean City/Wicomico Regional Airport	SBY	✓	✓	✓
Carroll County Regional Airport/Jack B. Poage Field	DMW	✓	✓	✓
Frederick Municipal Airport	FDK	✓	✓	✓
Martin State Airport	MTN	✓	✓	✓
Maryland Airport	2W5	✓	✓	
Montgomery County Airpark	GAI	✓	✓	✓
Tipton Airport	FME	✓	✓	✓
Bay Bridge Airport	W29	✓		✓
Cambridge-Dorchester Regional Airport	CGE	✓	✓	✓
College Park Airport	CGS	✓	✓	
Crisfield-Somerset County Airport	W41	✓		✓
Easton/Newnam Field Airport	ESN	✓	✓	✓
Garrett County Airport	2G4	✓	✓	✓
Greater Cumberland Regional Airport	CBE	✓	✓	✓
Ocean City Municipal Airport	OXB	✓	✓	✓
St. Mary's County Regional Airport	2W6	✓	✓	✓
Claremont Airport	58M	✓		✓
Freeway Airport	W00	✓		
Gooden Airpark	RJD			
Harford County Airport	0W3	✓	✓	✓
Lee Airport	ANP	✓		
Potomac Airfield	VKX	✓		
Bennett Airport	1N5			
Clearview Airpark	2W2	✓		✓
Davis Airport	W50	✓		✓
Essex Skypark	W48			
Fallston Airport	W42	✓		✓
Kentmorr Airpark	3W3			
Massey Aerodrome	MD1			
Mexico Farms Airport	1W3			
Havre de Grace Seaplane Base	M06			
Pier 7 Heliport	4MD		✓	✓

Note: (✓) Indicates the service is available at the airport. Blank indicates the facility is not available.
Source: Airport questionnaires.

TABLE 1-6: AIRCRAFT PARKING FACILITIES AT SYSTEM AIRPORTS

Airport Name	Airport ID	T-Hangar (# of Spaces)	Conventional Hangar (# of Buildings)	Paved Tie-Downs (# of Spaces)	Grass Tie-Downs (# of Spaces)
Baltimore/Washington International Thurgood Marshall Airport	BWI	30	5	22	0
Hagerstown Regional Airport/Richard A. Henson Field	HGR	150	20	44	10
Salisbury-Ocean City/Wicomico Regional Airport	SBY	42	8	17	0
Carroll County Regional Airport/Jack B. Poage Field	DMW	82	8	56	0
Frederick Municipal Airport	FDK	102	3	75	30
Martin State Airport	MTN	180	18	14	0
Maryland Airport	2W5	24	7	20	62
Montgomery County Airpark	GAI	70	8	120	20
Tipton Airport	FME	22	4	121	0
Bay Bridge Airport	W29	57	2	53	25
Cambridge-Dorchester Regional Airport	CGE	32	3	26	0
College Park Airport	CGS	0	1	28	40
Crisfield-Somerset County Airport	W41	0	0	18	0
Easton/Newnam Field Airport	ESN	90	14	77	0
Garrett County Airport	2G4	24	8	28	0
Greater Cumberland Regional Airport	CBE	41	3	20	0
Ocean City Municipal Airport	OXB	60	8	57	0
St. Mary's County Regional Airport	2W6	122	10	74	4
Claremont Airport	58M	30	3	25	2
Freeway Airport	W00	0	0	55	50
Gooden Airpark	RJD	12	1	0	4
Harford County Airport	0W3	48	5	20	10
Lee Airport	ANP	40	2	15	65
Potomac Airfield	VKX	32	1	6	150
Bennett Airport	1N5	6	0	0	8
Clearview Airpark	2W2	8	1	10	14
Davis Airport	W50	0	1	5	20
Essex Skypark	W48	30	6	0	12
Fallston Airport	W42	25	5	0	5
Kentmorr Airpark	3W3	0	0	0	0
Massey Aerodrome	MD1	10	2	0	10
Mexico Farms Airport	1W3	0	11	0	1
Havre de Grace Seaplane Base	M06	0	0	0	0
Pier 7 Heliport	4MD	0	1	6	0

Source: Airport questionnaires.

TABLE 1-7: SERVICES AT SYSTEM AIRPORTS

Airport Name	Airport ID	GA or FBO Terminal	Air Taxi/Charter	Scheduled Air Service	US. Customs	Crop Dusting	Aircraft Repair	Avionics Repair	Avionics Sales	Aircraft Sales	Covered Overnight Secured Aircraft	Oxygen	Deicing	Snow Removal	Aircraft Rental	Flight Instruction	Car Rental	Courtesy Car
Baltimore/Washington International Thurgood Marshall Airport	BWI	✓	✓	✓	✓		✓	✓			✓	✓	✓	✓			✓	✓
Hagerstown Regional Airport/Richard A. Henson Field	HGR	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Salisbury-Ocean City/Wicomico Regional Airport	SBY	✓	✓	✓			✓				✓		✓	✓	✓	✓	✓	✓
Carroll County Regional Airport/Jack B. Poage Field	DMW	✓	✓				✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Frederick Municipal Airport	FDK	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Martin State Airport	MTN	✓	✓		✓						✓		✓	✓	✓	✓	✓	
Maryland Airport	2W5	✓					✓	✓	✓		✓				✓	✓	✓	
Montgomery County Airpark	GAI	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tipton Airport	FME	✓	✓				✓							✓	✓	✓	✓	
Bay Bridge Airport	W29	✓					✓	✓	✓	✓	✓			✓	✓	✓	✓	
Cambridge-Dorchester Regional Airport	CGE	✓				✓	✓			✓						✓	✓	✓
College Park Airport	CGS	✓												✓		✓	✓	
Crisfield-Somerset County Airport	W41													✓				
Easton/Newnam Field Airport	ESN	✓	✓				✓	✓	✓	✓		✓		✓	✓	✓	✓	✓
Garrett County Airport	2G4	✓					✓				✓			✓			✓	
Greater Cumberland Regional Airport	CBE	✓									✓	✓		✓		✓		✓
Ocean City Municipal Airport	OXB	✓	✓			✓	✓			✓	✓	✓		✓	✓	✓	✓	
St. Mary's County Regional Airport	2W6	✓					✓	✓	✓					✓	✓	✓		
Claremont Airport	58M	✓					✓	✓		✓					✓	✓		✓
Freeway Airport	W00	✓					✓								✓	✓		
Gooden Airpark	RJD					✓	✓											
Harford County Airport	0W3	✓					✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Lee Airport	ANP		✓				✓								✓	✓		
Potomac Airfield	VKX	✓	✓				✓	✓	✓						✓	✓	✓	✓
Bennett Airport	1N5					✓												
Clearview Airpark	2W2	✓																
Davis Airport	W50	✓					✓							✓				
Essex Skypark	W48	✓																
Fallston Airport	W42	✓									✓					✓		
Kentmorr Airpark	3W3																	
Massey Aerodrome	MD1	✓								✓								
Mexico Farms Airport	1W3																	
Havre de Grace Seaplane Base	M06	✓																
Pier 7 Heliport	4MD	✓	✓											✓	✓			✓

Notes: (✓) Indicates the service is available at the airport. Blank indicates the facility is not available.
GA or FBO Terminal and Scheduled Air Service data was not provided in the 2008 MASP.
Source: Airport questionnaires.

TABLE 1-8: SECURITY FACILITIES AT SYSTEM AIRPORTS

Airport Name	Airport ID	Airport Property Security Fence	Airport Perimeter Monitoring System
Baltimore/Washington International Thurgood Marshall Airport	BWI	✓	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	✓	✓
Salisbury-Ocean City/Wicomico Regional Airport	SBY	✓	
Carroll County Regional Airport/Jack B. Poage Field	DMW	✓	
Frederick Municipal Airport	FDK		
Martin State Airport	MTN	✓	
Maryland Airport	2W5		
Montgomery County Airpark	GAI	✓	
Tipton Airport	FME	✓	
Bay Bridge Airport	W29	✓	
Cambridge-Dorchester Regional Airport	CGE	✓	
College Park Airport	CGS	✓	✓
Crisfield-Somerset County Airport	W41	✓	✓
Easton/Newnam Field Airport	ESN	✓	
Garrett County Airport	2G4	✓	✓
Greater Cumberland Regional Airport	CBE		
Ocean City Municipal Airport	OXB	✓	
St. Mary's County Regional Airport	2W6	✓	✓
Claremont Airport	58M		
Freeway Airport	W00		
Gooden Airpark	RJD		
Harford County Airport	0W3		
Lee Airport	ANP	✓	
Potomac Airfield	VKX		
Bennett Airport	1N5		
Clearview Airpark	2W2		
Davis Airport	W50		✓
Essex Skypark	W48		
Fallston Airport	W42	✓	✓
Kentmorr Airpark	3W3		✓
Massey Aerodrome	MD1		
Mexico Farms Airport	1W3		
Havre de Grace Seaplane Base	M06		
Pier 7 Heliport	4MD	✓	✓

Notes: (✓) Indicates the service is available at the airport. Blank indicates the facility is not available.
Airport Property Security Fence and Airport Perimeter Monitoring Fence data was not provided in 2008 MASP.
Source: Airport questionnaires.

TABLE 1-9: GENERAL AVIATION ACTIVITY AT SYSTEM AIRPORTS

Airport Name	Airport ID	Total Based Aircraft (# of Aircraft)	Total General Aviation Operations (# of Operations)
Baltimore/Washington International Thurgood Marshall Airport	BWI	47	13,286
Hagerstown Regional Airport/Richard A. Henson Field	HGR	141	42,320
Salisbury-Ocean City/Wicomico Regional Airport	SBY	119	36,758
Carroll County Regional Airport/Jack B. Poage Field	DMW	110	55,724
Frederick Municipal Airport	FDK	168	90,843
Martin State Airport	MTN	255	84,222
Maryland Airport	2W5	51	22,000
Montgomery County Airpark	GAI	135	47,253
Tipton Airport	FME	115	37,773
Bay Bridge Airport	W29	88	35,168
Cambridge-Dorchester Regional Airport	CGE	38	23,713
College Park Airport	CGS	38	3,164
Crisfield-Somerset County Airport	W41	4	1,961
Easton/Newnam Field Airport	ESN	222	68,453
Garrett County Airport	2G4	32	15,500
Greater Cumberland Regional Airport	CBE	55	14,300
Ocean City Municipal Airport	OXB	63	38,306
St. Mary's County Regional Airport	2W6	186	32,650
Claremont Airport	58M	49	7,689
Freeway Airport	W00	77	32,100
Gooden Airpark	RJD	13	11,900
Harford County Airport	0W3	50	29,840
Lee Airport	ANP	72	11,646
Potomac Airfield	VKX	94	12,029
Bennett Airport	1N5	8	2,137
Clearview Airpark	2W2	28	8,050
Davis Airport	W50	22	5,100
Essex Skypark	W48	34	5,592
Fallston Airport	W42	20	5,957
Kentmorr Airpark	3W3	0	1,010
Massey Aerodrome	MD1	35	5,150
Mexico Farms Airport	1W3	14	1,261
Havre de Grace Seaplane Base	M06	0	30
Pier 7 Heliport	4MD	4	4,650

Source: 2019 MDOT MAA Inspection Data.

TABLE 1-10: PLANNING STUDIES CONDUCTED AT SYSTEM AIRPORTS

Airport Name	Airport ID	Latest Airport Master Plan (Year)	Latest Airport Layout Plan (Year)
Baltimore/Washington International Thurgood Marshall Airport	BWI	2012	2019*
Hagerstown Regional Airport/Richard A. Henson Field	HGR	None available	2019
Salisbury-Ocean City/Wicomico Regional Airport	SBY	2020	1993
Carroll County Regional Airport/Jack B. Poage Field	DMW	2015	2015
Frederick Municipal Airport	FDK	2008	2008
Martin State Airport	MTN	2011*	2020*
Maryland Airport	2W5	1999	2021*
Montgomery County Airpark	GAI	2002	2013*
Tipton Airport	FME	2010	2016*
Bay Bridge Airport	W29	1989	2021*
Cambridge-Dorchester Regional Airport	CGE	1990	2015
College Park Airport	CGS	None available	2012*
Crisfield-Somerset County Airport	W41	1995	2020*
Easton/Newnam Field Airport	ESN	2005	2020*
Garrett County Airport	2G4	2016*	2016
Greater Cumberland Regional Airport	CBE	2020*	2020
Ocean City Municipal Airport	OXB	2012	2020*
St. Mary's County Regional Airport	2W6	2002	2012
Claremont Airport	58M	2010	2009
Freeway Airport	W00	None available	Unknown
Gooden Airpark	RJD	None available	None available
Harford County Airport	0W3	None available	2021
Lee Airport	ANP	None available	None available
Potomac Airfield	VKX	None available	None available
Bennett Airport	1N5	None available	None available
Clearview Airpark	2W2	None available	None available
Davis Airport	W50	None available	Before 2017
Essex Skypark	W48	None available	None available
Fallston Airport	W42	None available	None available
Kentmorr Airpark	3W3	None available	None available
Massey Aerodrome	MD1	None available	None available
Mexico Farms Airport	1W3	None available	None available
Havre de Grace Seaplane Base	M06	None available	None available
Pier 7 Heliport	4MD	None available	None available

Notes: (*) Indicates the date provided is for the latest Pen & Ink Change to the ALP.
Master Plan and ALP data was not provided in 2008 MASP.
Source: Airport questionnaires.

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CHAPTER 2

Aviation Trends and Airport Demand Forecasts

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND AVIATION ADMINISTRATION

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2 AVIATION TRENDS AND AIRPORT DEMAND FORECASTS

2.1 Introduction

Historical and future trends in the aviation industry influence forecasts of future activity. An analysis of trends in general aviation, including insights on industry supply, demand, and technological advancements, are provided herein to give demand forecasts context. General aviation forecasts are provided for 34 Maryland airports and commercial operation forecasts are provided for 3 commercial service airports.

The review and development of aviation demand forecasts is a key component of state aviation system planning. These forecasts are used to assess the airport system's sufficiency in terms of annual operational capacity and to provide insight into where changes in a system may be appropriate in the study's planning horizon. The 2023 MASP examines aviation demand forecasts for the 34 airports within the MDOT MAA airport system over a 20-year planning horizon. The base year for 2023 MASP aviation demand forecasts is 2019, and forecasts for airport operations, based aircraft, and aircraft fleet mix are provided for 2024, 2029, and 2039.

2.2 Aviation Industry Trends

As part of assessing a system of airports, it is necessary to evaluate trends that may influence the sustainability of the system. This section reviews the following trends:

- Socioeconomic Trends
  - Population
  - Income
  - Unemployment
- General Aviation Trends
  - General Aviation Manufacturing: Shipments & Billings
  - Fleet Mix
  - Fuel Prices
  - Pilot Population
- Technological Trends
  - Aircraft Design
  - Aviation Fuel
  - Electrification

Socioeconomic and technological trends have implications for both general and commercial aviation. A separate trend section specific to general aviation is included, as these operations occur at all 34 system airports covered in this chapter.

2.2.1 Socioeconomic Trends

Future aviation activity is linked with future economic performance. Macroeconomic factors, such as wealth and employment status, play a role in aviation changes over time. To better understand how the macroeconomy can impact aviation in Maryland, a review of economic trends is provided. These trends include population levels and growth, output as measured by gross domestic product (GDP) and employment levels. The socioeconomic environment of Maryland is briefly described in the section below to give context to subsequent aviation industry trends.

Data for this section was collected from the US Census Bureau, Bureau of Economic Analysis (BEA), and Bureau of Labor Statistics (BLS). Data used include quantitative data and qualitative reports and studies.

Civil aviation supports the Maryland state economy through economic output by attracting business and tourism, supporting local economic development, and helping retain jobs that otherwise might be located elsewhere. MDOT MAA published the *Economic Impact of Public Use Airports in Maryland* in December 2018, which identified the

following total combined annual impacts for 34 Maryland airports[1], excluding Baltimore/Washington International Thurgood Marshall Airport (BWI):

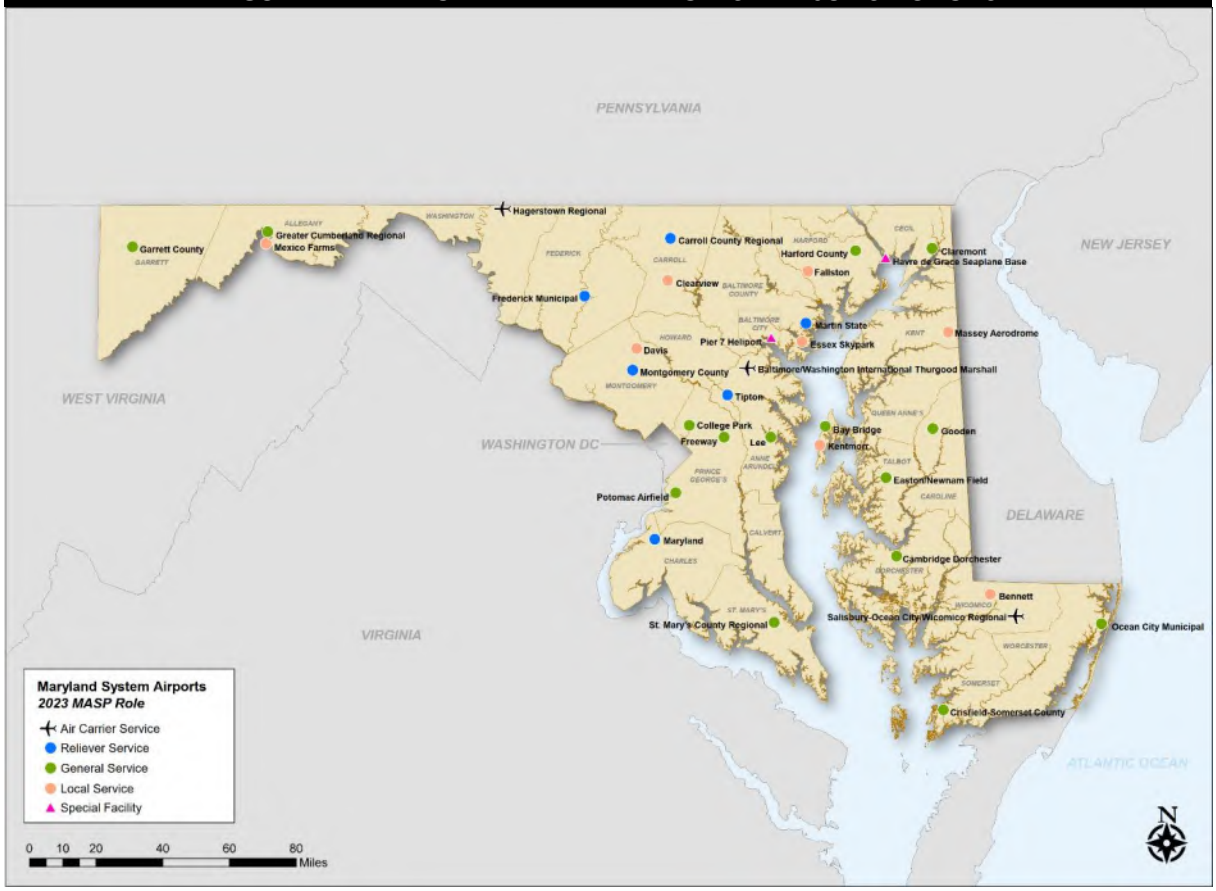
- **Total Jobs:** 9,929
- **Personal Income:** $582.8 million
- **Business Revenue:** $867.1 million
- **Local Purchases:** $271.7 million
- **State and Local Taxes:** $131.4 million

Separately, a 2015 estimate of economic impact from Baltimore/Washington International Thurgood Marshall Airport (BWI) alone produced the following impacts:

- **Total Jobs:** 97,737
- **Personal Income:** $3.8 billion
- **Business Revenue:** $7 billion
- **Local Purchases:** $1.6 billion
- **State and Local Taxes:** $536 million

Since 2000, Maryland has represented approximately 2% of US population. Population growth trends at the state level generally mirrors national growth with a slight lag. **Figure 2-1** illustrates the 24 main jurisdictions in Maryland, which are comprised of 23 counties and Baltimore City, 3 jurisdictions experienced population decreases between 2000 and 2019 (Allegany County, Baltimore City, and Garrett County), while 11 jurisdictions outpaced national population growth trends (Anne Arundel County, Calvert County, Cecil County, Charles County, Frederick County, Harford County, Howard County, Montgomery County, Queen Anne's County, St. Mary's County, and Wicomico County). All else equal, Maryland's population growth should not be a hindrance to general aviation industry performance.

FIGURE 2-1: MAP OF MARYLAND AIRPORTS AND JURISDICTIONS



Source: AECOM 2022.

[1] The statistics from *The Economic Impact of Public Use Airports in Maryland* includes data from Washington Hyde/Executive Field (W32) which closed in 2022 and is no longer part of the MDOT MAA airport system.

Table 2-1 depicts population trends between 2000 and 2019 across all Maryland counties and Baltimore City, compared against national trends. Compound Annual Growth Rate (CAGR) is provided and represents an annualized growth rate between a starting and ending value.

TABLE 2-1: POPULATION LEVELS

Geographic Area	2000	2010	2019	CAGR 2000-2019	CAGR 2010-2019
United States	281,421,906	308,745,538	328,239,523	0.8%	0.3%
Maryland	5,296,486	5,773,552	6,045,680	0.7%	0.2%
Allegany County	74,930	75,087	70,416	-0.3%	-0.3%
Anne Arundel County	489,656	537,656	579,234	0.9%	0.4%
Baltimore City	651,154	620,961	593,490	-0.5%	-0.2%
Baltimore County	754,292	805,029	827,370	0.5%	0.1%
Calvert County	74,563	88,737	92,525	1.1%	0.2%
Caroline County	29,772	33,066	33,406	0.6%	0.1%
Carroll County	150,897	167,134	168,447	0.6%	0.0%
Cecil County	85,951	101,108	102,855	0.9%	0.1%
Charles County	120,546	146,551	163,257	1.6%	0.6%
Dorchester County	30,674	32,618	31,929	0.2%	-0.1%
Frederick County	195,277	233,385	259,547	1.5%	0.6%
Garrett County	29,846	30,097	29,014	-0.1%	-0.2%
Harford County	218,590	244,826	255,441	0.8%	0.2%
Howard County	247,842	287,085	325,690	1.4%	0.7%
Kent County	19,197	20,197	19,422	0.1%	-0.2%
Montgomery County	873,341	971,777	1,050,688	1.0%	0.4%
Prince George's County	801,515	863,420	909,327	0.7%	0.3%
Queen Anne's County	40,563	47,798	50,381	1.1%	0.3%
Somerset County	24,747	26,470	25,616	0.2%	-0.2%
St. Mary's County	86,211	105,151	113,510	1.5%	0.4%
Talbot County	33,812	37,782	37,181	0.5%	-0.1%
Washington County	131,923	147,430	151,049	0.7%	0.1%
Wicomico County	84,644	98,733	103,609	1.1%	0.3%
Worcester County	46,543	51,454	52,276	0.6%	0.1%

Source: United States Census Bureau (2000 Decennial Census, 2010 Decennial Census, 2019 Annual Estimate of Resident Population)

Similar to population growth trends, Maryland's long-term GDP growth rate since 2000 closely mirrored national trends. In nominal terms, every Maryland County has experienced economic growth since 2001. Fourteen of Maryland's jurisdictions experienced faster GDP growth than the US average (Anne Arundel County, Baltimore City, Calvert County, Caroline County, Cecil County, Frederick County, Garrett County, Harford County, Howard County, Queen Anne's County, Somerset County, St. Mary's County, Wicomico County, and Worcester County). If the gap between GDP growth in Maryland and the US continues to widen, it could adversely affect general aviation growth that would occur with average to above-average GDP growth. **Table 2-2** depicts GDP trends between 2001 and 2019 for all Maryland counties to the US average. CAGR is provided and represents a smoothed annual growth rate between a starting and ending value.

Unemployment in Maryland has generally been lower than the US average; however, since 2010, the gap between Maryland and the US average has narrowed (driven by national decreases in unemployment). As of 2019, there were 11 Maryland jurisdictions with unemployment rates less than the US average (Anne Arundel County, Baltimore City, Calvert County, Caroline County, Carroll County, Frederick County, Garrett County, Howard County, Prince George's County, St. Mary's County, and Washington County). If Maryland's unemployment rate remains lower than the US average, with all other conditions held constant, this would be considered a positive indicator to outpace national growth.

Table 2-3 depicts annual unemployment averages in Maryland counties from 2000 to 2019 compared to the US average:

TABLE 2-2: NOMINAL GROSS DOMESTIC PRODUCT (GDP) IN MILLIONS OF US DOLLARS

Geographic Area	2001	2010	2019	CAGR 2001-2019	CAGR 2010-2019
United States	$10,581,900	$15,049,000	$21,372,600	4.0%	4.0%
Maryland	$205,567	$316,317	$426,747	4.1%	3.4%
Allegany County	$2,055	$2,795	$3,389	2.8%	2.2%
Anne Arundel County	$20,602	$36,041	$51,933	5.3%	4.1%
Baltimore City	$30,541	$39,850	$54,159	3.2%	3.5%
Baltimore County	$30,537	$43,937	$59,077	3.7%	3.3%
Calvert County	$1,908	$3,982	$4,886	5.4%	2.3%
Caroline County	$543	$892	$1,443	5.6%	5.5%
Carroll County	$3,060	$5,012	$6,935	4.6%	3.7%
Cecil County	$1,799	$3,284	$5,309	6.2%	5.5%
Charles County	$2,894	$4,952	$5,952	4.1%	2.1%
Dorchester County	$831	$1,250	$1,415	3.0%	1.4%
Frederick County	$6,061	$10,571	$14,287	4.9%	3.4%
Garrett County	$672	$1,064	$1,479	4.5%	3.7%
Harford County	$5,501	$9,722	$13,822	5.3%	4.0%
Howard County	$11,793	$19,473	$27,493	4.8%	3.9%
Kent County	$566	$888	$1,092	3.7%	2.3%
Montgomery County	$47,257	$73,350	$95,585	4.0%	3.0%
Prince George's County	$25,239	$37,355	$48,596	3.7%	3.0%
Queen Anne's County	$890	$1,397	$2,068	4.8%	4.5%
Somerset County	$473	$718	$966	4.0%	3.3%
St. Mary's County	$2,962	$5,716	$7,722	5.5%	3.4%
Talbot County	$1,224	$1,805	$2,273	3.5%	2.6%
Washington County	$4,017	$5,883	$8,002	3.9%	3.5%
Wicomico County	$2,527	$4,097	$5,547	4.5%	3.4%
Worcester County	$1,613	$2,282	$3,317	4.1%	4.2%

Source: Bureau of Economic Analysis, 2021.

TABLE 2-3: UNEMPLOYMENT RATE

Geographic Area	2000	2010	2019
United States	4.0%	9.6%	3.7%
Maryland	3.5%	7.8%	3.5%
Allegany County	5.9%	9.5%	5.1%
Anne Arundel County	3.0%	7.1%	3.0%
Baltimore City	5.9%	11.4%	5.0%
Baltimore County	3.7%	8.4%	3.6%
Calvert County	3.0%	7.1%	3.1%
Caroline County	3.6%	9.5%	3.5%
Carroll County	2.9%	7.0%	2.8%
Cecil County	3.5%	9.7%	3.9%
Charles County	2.9%	7.1%	3.5%
Dorchester County	5.1%	11.6%	4.5%
Frederick County	2.7%	7.1%	3.1%
Garrett County	5.1%	9.1%	4.3%
Harford County	3.2%	8.0%	3.2%
Howard County	2.5%	5.8%	2.7%
Kent County	3.8%	9.1%	3.9%
Montgomery County	2.6%	5.8%	2.9%
Prince George's County	3.7%	7.7%	3.7%
Queen Anne's County	3.0%	7.5%	3.0%
St. Mary's County	3.2%	6.7%	3.3%
Somerset County	6.2%	12.1%	6.0%
Talbot County	3.3%	8.2%	3.4%
Washington County	3.6%	9.8%	3.8%
Wicomico County	4.1%	9.9%	4.6%
Worcester County	6.1%	13.7%	7.2%

Source: Bureau of Labor Statistics, 2021.

2.2.2 General Aviation Trends

Trends related to general aviation can influence future growth of aircraft production and operations. Specifically, this section reviews general aviation manufacturing, fleet mix (i.e. the types of aircraft that are expected to increase in popularity nationally), fuel price, and pilot population trends.

Sources of information on general aviation trends include the Federal Aviation Administration (FAA), General Aviation Manufacturers Association (GAMA), and Energy Information Administration (EIA).

General Aviation Shipments and Billings: General aviation shipments and billing trends were examined at the global and national levels. A contributing factor to the national and global trends is the 2008 economic recession, which resulted in a decline in general aviation activities between 2008 and 2012. Although the US economy has recovered from the recession, overall post-recession trends depict a steady decline in general aviation activity. Worldwide aircraft shipments, defined as the delivery of a manufactured general aviation aircraft to its end user, peaked prior to the 2008 recession and have not recovered to these levels. Further drops occurred in 2020 likely linked with the emergence of the global COVID-19 pandemic. Although manufacturers estimate that demand for general aviation aircraft remains strong, disruptions to supply chains and disjointed barriers and lockdown on transportation across countries contributed to decreases in activity. Aggregate general aviation billings, or revenues associated with shipments, increased long-term from the 2000 baseline level; however, the peak reached in 2008 has not been surpassed as of 2021.

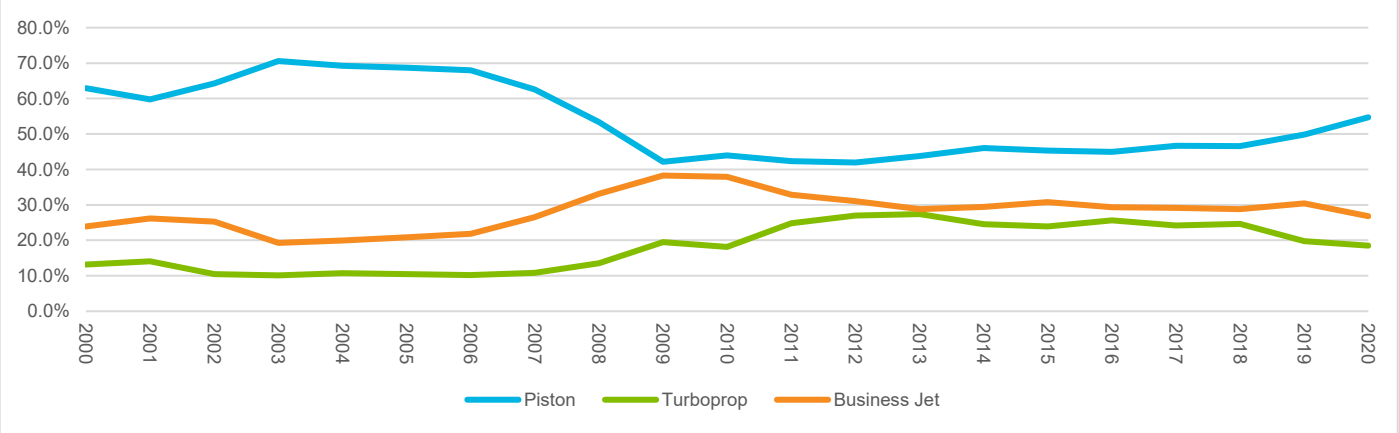
TABLE 2-4: WORLDWIDE GENERAL AVIATION SHIPMENTS AND BILLINGS

Year	Total GA Shipments	Total General Aviation Billings ($USD, Millions)
2000	3,147	$13,496
2001	2,998	$13,868
2002	2,677	$11,778
2003	2,686	$9,998
2004	2,962	$12,093
2005	3,590	$15,156
2006	4,054	$18,815
2007	4,277	$21,837
2008	3,974	$24,846
2009	2,283	$19,474
2010	2,024	$19,715
2011	2,120	$19,042
2012	2,164	$18,895
2013	2,353	$23,450
2014	2,454	$24,499
2015	2,331	$24,129
2016	2,267	$21,059
2017	2,325	$20,201
2018	2,441	$20,564
2019	2,658	$23,515
2020	2,399	$20,029
CAGR 2000-2019	-0.9%	3.0%
CAGR 2010-2019	3.0%	2.0%

Source: GAMA, 2021.

Figure 2-2 depicts the percent of units shipped between 2000 and 2020 by aircraft type and year. Worldwide shipment trends are not consistent across general aviation aircraft types; for example, prior to 2008, over 50% of shipments were piston aircraft. The data suggests that market share has drifted in favor of business jets and turboprops since the recession. If the trend continues, turboprops can be expected to make up a larger share of production moving forward than they were pre-2008 recession.

FIGURE 2-2: WORLDWIDE GENERAL AVIATION AIRCRAFT SHIPMENTS BY TYPE - PERCENT OF TOTAL BY TYPE AND YEAR



Source: GAMA, 2021.

When US manufacturing is evaluated in comparison to global production trends, decreases from the 2008 recession are more pronounced. The US general aviation shipments between 2000 and 2020 peaked in 2007 at 3,279 units. After 2008, shipments never reached higher than 55% of the previous peak.

Table 2-5 shows total shipments and net billings from US general aviation production between 2000 and 2020.

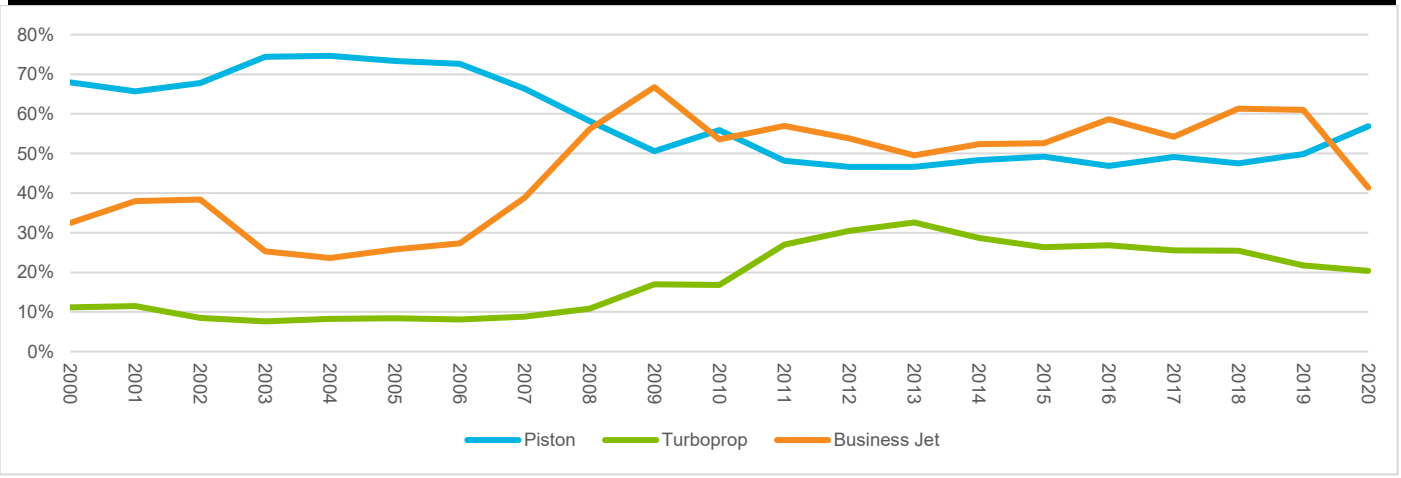
TABLE 2-5: US GENERAL AVIATION SHIPMENTS AND NET BILLINGS (IN MILLIONS OF USD)

Year	Total GA Shipments	Total GA Billings ($USD, Millions)
2000	2,816	$8,558
2001	2,631	$8,641
2002	2,207	$7,719
2003	2,137	$6,434
2004	2,355	$6,816
2005	2,857	$8,667
2006	3,147	$10,367
2007	3,279	$11,941
2008	3,079	$13,348
2009	1,585	$9,082
2010	1,334	$7,875
2011	1,465	$8,266
2012	1,518	$8,017
2013	1,617	$11,069
2014	1,631	$11,688
2015	1,592	$11,982
2016	1,531	$11,560
2017	1,599	$10,641
2018	1,746	$11,598
2019	1,771	$13,972
2020	1,555	$13,972
CAGR 2000-2019	-2.4%	2.6%
CAGR 2010-2019	3.2%	6.5%

Source: GAMA, 2021.

Additionally, the general aviation production in the US is distributed differently than global production. Business jet production in the US has accounted for over 50% of shipments (by quantity) in 11 of 12 years after 2008. In contrast, business jets have only represented a maximum of 38% of global production for the entire 2000 to 2020 period.

FIGURE 2-3: US GENERAL AVIATION AIRCRAFT SHIPMENTS BY TYPE - PERCENT OF TOTAL BY TYPE AND YEAR



Source: GAMA, 2021

Fleet Mix Trends: Fleet mix trends were reviewed at the national level. The total general aviation fleet within the US experienced a sharp decline between 2010 and 2013 decreasing by 3.6% on a compound annual basis over the period and is likely a result of the 2008 recession. After the active general aviation fleet bottomed out at 199,927 in 2013, the total active fleet experienced a compounding annual increase of 0.4% between 2013 and 2020. The overall decrease between 2010 and 2020 was led by a decrease in piston aircraft, both single-engine piston and multi-engine general aviation piston aircraft. The FAA suggests that this declining trend in general aviation piston aircraft is expected to continue through the 2030s while all other general aviation categories are expected to grow, as shown in **Table 2-6**.

TABLE 2-6: FAA AEROSPACE FORECASTS – FLEET POPULATION

Year	Piston	Turbo Prop	Turbo Jet	Rotorcraft	Experimental*	Light Sport Aircraft**	Other	GA Fleet
Historical								
2010	155,419	9,369	11,484	10,102	24,784	6,528	5,684	223,370
2011(E)	152,597	9,523	11,650	10,082	24,275	6,645	5,681	220,453
2012	143,160	10,304	11,793	10,055	26,715	2,001	5,006	209,034
2013	137,655	9,619	11,637	9,765	24,918	2,056	4,277	199,927
2014	139,182	9,777	12,362	9,966	26,191	2,231	4,699	204,408
2015	141,141	9,712	13,440	10,506	27,922	2,369	4,941	210,031
2016	142,638	9,779	13,751	10,577	27,585	2,478	4,986	211,794
2017	142,916	9,949	14,217	10,511	26,921	2,551	4,692	211,757
2018	143,040	9,925	14,596	9,989	27,531	2,554	4,114	211,749
2019	141,396	10,242	14,888	10,198	27,449	2,675	4,133	210,981
2020(E)	140,315	10,205	15,245	10,155	24,455	2,145	2,460	204,980
Forecast								
2021	139,065	10,170	15,620	10,215	25,250	2,465	3,085	205,870
2022	137,725	10,155	16,020	10,320	26,150	2,715	3,505	206,590
2023	136,370	10,130	16,440	10,440	26,675	2,985	3,870	206,910
2024	135,060	10,125	16,870	10,560	27,210	3,225	4,090	207,140
2025	133,795	10,140	17,315	10,685	27,710	3,385	4,125	207,155
2026	132,565	10,165	17,770	10,815	28,075	3,525	4,160	207,075
2027	131,365	10,195	18,230	10,960	28,445	3,670	4,165	207,030
2028	130,180	10,225	18,690	11,110	28,860	3,800	4,175	207,040
2029	128,995	10,275	19,150	11,260	29,225	3,930	4,180	207,015
2030	127,845	10,335	19,605	11,420	29,595	4,050	4,190	207,040
2040	117,705	11,215	23,975	13,195	32,765	5,295	4,245	208,395
2041	116,905	11,385	24,395	13,390	33,050	5,415	4,250	208,790

TABLE 2-6: FAA AEROSPACE FORECASTS – FLEET POPULATION (CONT.)

Year	Piston	Turbo Prop	Turbo Jet	Rotorcraft	Experimental*	Light Sport Aircraft**	Other	GA Fleet
Compound Annual Growth Rate								
2010-2020	-1.0%	0.9%	2.9%	0.1%	-0.1%	-10.5%	-8.0%	-0.9%
2020-2021	-0.9%	-0.3%	2.5%	0.6%	3.3%	14.9%	25.4%	0.4%
2021-2031	-0.9%	0.2%	2.5%	1.3%	1.7%	5.4%	3.1%	0.1%
2021-2041	-0.9%	0.6%	2.3%	1.4%	1.4%	4.%	1.6%	0.1%

Notes: (*) Experimental aircraft is an aircraft issued an experimental operating light-sport category aircraft airworthiness certificate. Experimental light-sport aircraft applies to those aircraft for which the certificate is issued regardless of the purpose within § 21.191(i), Operating light-sport aircraft.
(**) Light sport aircraft is a category of simple, very basic, small, lightweight, low-performance aircraft. It is an aircraft other than a helicopter or powered-lift.
(E) Indicates values are estimated for the year.
Sources: 2001-2010, 2012-2018, FAA General Aviation and Air Taxi Activity (and Avionics) Surveys.

Fuel Price Trends: Fuel price trends were reviewed at the national level. Across the US, general aviation activity has been decreasing since 2000. Wholesale and retail prices for jet fuel have trended in the opposite direction. The differential in growth between aviation operations and fuel prices is a relatively new trend. For example, between 1990 and 2000, general aviation operations increased at a CAGR of 1.2%, while wholesale and retail jet fuel prices increased at CAGRs of 1.3% and 1.6% respectively. Between 2000 and 2019, general aviation operations decreased at a CAGR of (1.2%), but wholesale and retail jet fuel prices increased at a 4.2% CAGR, as shown in **Table 2-7.**

TABLE 2-7: COMPARISON OF COMPOUND ANNUAL GROWTH RATES – US JET FUEL PRICE AND GA OPERATIONS

Compound Annual Growth Rate Comparison in the United States		
Variable	**CAGR 1990-2000**	**CAGR 2000-2019**
Wholesale Jet Fuel Price	1.3%	4.2%
Retail Jet Fuel Price	1.6%	4.2%
GA Operations	1.2%	-1.2%

Source: EIA, FAA TAF, 2021.

Pilot Population: Pilot population trends were reviewed at the national level. As of 2020, there was an estimated pilot population within the US greater than 469,000; however, since 2010, the overall pilot population has experienced a modest decline in lieu of significant increases in the student pilot classification. As noted in **Table 2-8** there is no longer an expiration date associated with an individual's student pilot certificate and, therefore, student population forecasts are not included in the FAA Aerospace Forecast series.

The total number of private pilots and commercial pilots has declined between 2010 and 2020, experiencing compound annual decreases of 2.3% and 1.7% respectively, as presented in **Table 2-8**. The FAA suggests that declines in both pilot populations are expected to continue throughout the forecast period. Contrary to trends observed within the private and commercial pilot populations, the number of air transport pilots has been the only category to increase. This trend is suggested to continue long-term by the FAA. While the "Other" pilot category has experienced modest year over year decreases in total population, the FAA has indicated that the sport pilot population has experienced a compound annual increase of 6.1% between 2010 and 2020, a trend that is expected to continue through the forecast period when the total population of pilots within this category is expected to peak at 11,600. The 2010 sport pilot population was reported at 3,682.

TABLE 2-8: US GENERAL AVIATION PILOT POPULATION FORECASTS

Year	Recreational	Sport Pilot	Private	Commercial	Airline Transport	Rotor Craft Only	Glider Only	Total Less Student Pilots	Instrument Rated Pilots
Historical									
2010	212	3,682	202,020	123,705	142,198	15,377	21,275	508,469	318,001
2011	227	4,066	194,441	120,865	142,511	15,220	21,141	498,471	314,122
2012	218	4,493	188,001	116,400	145,590	15,126	20,802	490,630	311,952
2013	238	4,824	180,214	108,206	149,824	15,114	20,381	478,801	307,120

TABLE 2-8: US GENERAL AVIATION PILOT POPULATION FORECASTS (CONT.)

Year	Recreational	Sport Pilot	Private	Commercial	Airline Transport	Rotor Craft Only	Glider Only	Total Less Student Pilots	Instrument Rated Pilots
2014	220	5,157	174,883	104,322	152,933	15,511	19,927	472,953	306,066
2015	190	5,482	170,718	101,164	154,730	15,566	19,460	467,310	304,329
2016	175	5,889	162,313	96,081	157,894	15,518	17,991	455,861	302,572
2017	153	6,097	162,455	98,161	159,825	15,355	18,139	460,185	306,652
2018	144	6,246	163,695	99,880	162,145	15,033	18,370	465,513	311,017
2019	127	6,467	161,105	100,863	164,947	14,248	19,143	466,900	314,168
2020(E)	105	6,643	160,860	103,879	164,193	13,629	19,753	469,062	316,651
Forecast									
2021	100	6,805	160,750	103,900	166,400	13,350	20,300	471,605	317,000
2022	90	6,970	161,350	103,850	168,300	13,400	20,750	474,710	318,100
2023	85	7,145	161,600	103,900	169,200	13,550	21,100	476,580	319,400
2024	85	7,330	161,500	103,950	170,100	13,750	21,400	478,115	320,700
2025	85	7,515	161,150	103,950	171,000	13,950	21,600	479,250	322,100
2026	85	7,710	160,550	103,900	172,000	14,200	21,800	480,245	323,500
2027	80	7,915	159,800	103,850	173,100	14,450	22,000	481,195	325,000
2028	80	8,135	158,900	103,750	174,300	14,700	22,150	482,015	326,400
2029	75	8,365	157,950	103,700	175,500	14,950	22,250	482,790	327,800
2030	75	8,605	156,950	103,600	176,700	15,200	22,400	483,530	329,200
2040	50	11,375	147,650	102,550	190,300	17,700	22,900	492,525	342,500
2041	50	11,615	147,200	102,500	191,600	17,950	22,900	493,815	343,800
Compound Annual Growth Rate									
2010-2020	-6.8%	6.1%	-2.3%	-1.7%	1.4%	-1.2%	-0.7%	-0.8%	0.0%
2020-2021	-4.8%	2.4%	-0.1%	0.0%	1.3%	-2.0%	2.8%	0.5%	0.1%
2021-2031	-3.5%	2.7%	-0.3%	0.0%	0.7%	1.5%	1.0%	0.3%	0.4%
2021-2041	-3.4%	2.7%	-0.4%	-0.1%	0.7%	1.5%	0.6%	0.2%	0.4%

Note: (E) Indicates values are estimated for the year.
Source: FAA United States Civil Airmen Statistics; FAA Aerospace Forecast 2021.

2.2.3 Technological Trends

The aviation industry is expected to undergo significant technological innovation over the next 30 years. To assess the impact of technological trends on the aviation industry, a literature review was conducted of technological trends expected to impact the aviation industry. Trends related to aircraft designs, fuel, and electrification are reviewed. Resources from the International Air Transport Association (IATA), Airplane Academy, and Royal Dutch Shell were used to obtain objective facts and trend insights related to technological trends.

Aircraft Types and Design: Since 2008, there has been a fundamental shift in the types of aircraft used for general aviation activities. While the shift from piston aircraft to rotorcrafts and jet engine aircrafts started before the recession, the trends accelerated after this point. Subsequently in 2009, key stakeholders of the aviation industry committed to climate action goals including the following:

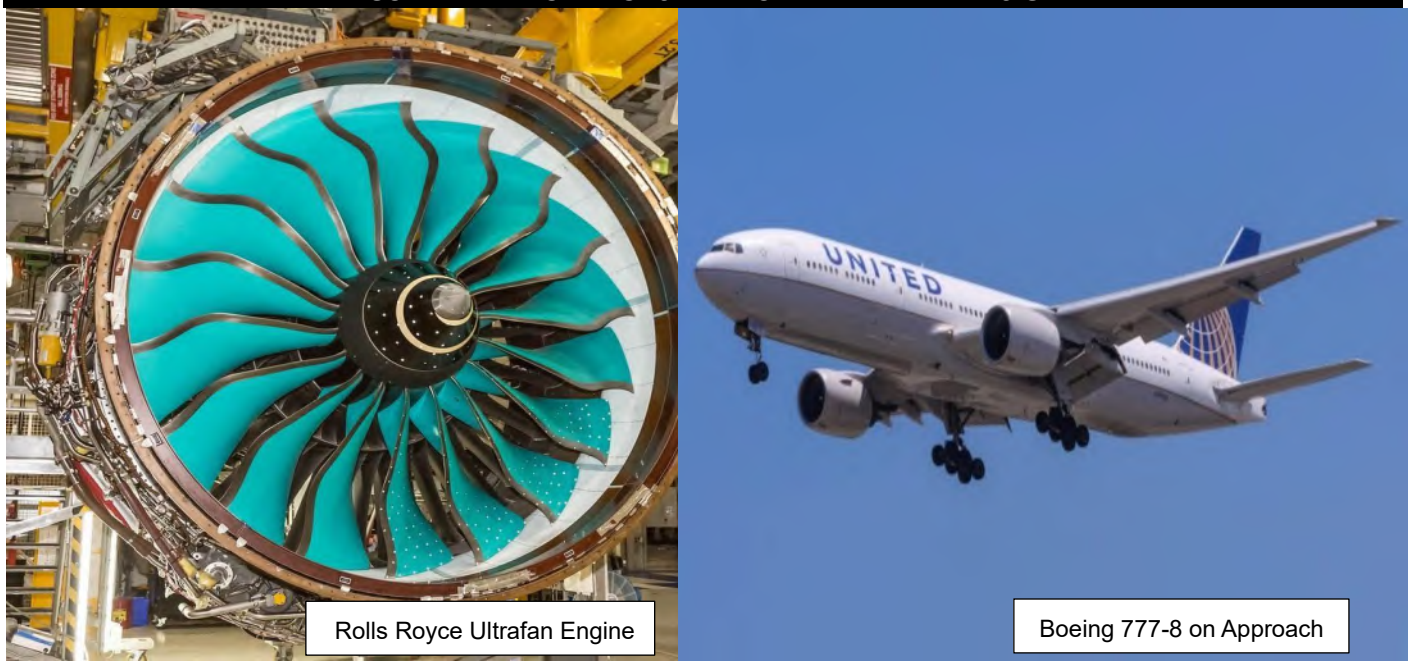
- Improving fuel efficiency by 1.5% per annum between 2009 and 2020;
- Reaching net carbon neutral growth from 2020; and,
- Reducing global net aviation carbon emissions by 50% by the year 2050 relative to 2005.

To help meet these goals, improvements in the design, efficiency, and functionality of aircraft are being pursued. Specifically, there are 2 types of innovations to aircraft that the IATA is promoting – evolutionary innovations and revolutionary innovations.

Evolutionary innovations are expected to be prevalent through the 2020s. These innovations would improve existing technology (e.g. machines that use tube-wing configurations with jet-fuel powered turbofan engines) and assist in reducing emissions in the near-term. Examples of evolutionary innovations include:

- **Imminent Aircraft:** New aircraft models are expected to come online, and each new model that improves an existing generation is expected to yield efficiency increases. For example, the Boeing 777-8 was estimated to be approximately 4% more efficient than preceding generations.
- **Natural Laminar Flow (NLF):** Natural laminar flow is a technology that increases speed and fuel efficiency by creating smooth airflow around the wings of aircraft. Aircraft manufactures are testing new aircraft wing design to achieve laminar flow. From the test flight results, the fuel saving potential of NLF for an 800-nautical mile flight would be around 4.6%.
- **Ultrafan Engine:** Ultrafan engines are a further development of the Advance Engine by Rolls Royce, with an expected minimum 25% improvement in fuel burn and CO_2 emissions relative to the existing high bypass turbofan engine.

FIGURE 2-4: INNOVATIONS IN AIRCRAFT TYPE AND DESIGN



Source: Aviation Week; United Airlines.

Revolutionary innovations, in contrast, are expected to take longer to develop, but could be continued well past 2050 and continue to provide new efficiency improvements. Revolutionary innovations involve entirely new aircraft designs that do not directly replace an existing aircraft generation. Examples of these innovations include:

- **Strut braced wing designs:** These utilize a structural wing support to allow for larger wing spans without increasing structural weight. By increasing the span, the drag is reduced and therefore less thrust is needed, which allows installing smaller and lighter engines.
- **Open rotor engine:** This is a hybrid between a propeller and a turbofan engine, characterized by 2 counter-rotating, unshrouded fans. It allows a reduction of fuel burn and CO_2 emissions of typically 30% compared to conventional turbofan engines, such as the CFM56.
- **Propulsive fuselage concept:** This allows the whole fuselage to act as a propulsive thrust. The most straightforward way to implement this concept is by full annular boundary layer ingestion. Analytical studies have shown that these improvements are capable of reducing the aircraft fuel burn by as much as 8.5% compared to aircraft operating today.

Innovations in aircraft design and typology have the potential to influence the entire aviation supply chain (e.g. sources of fuel, location).

General Aviation Fuel: To supplement aircraft efficiency from new aircraft designs, there is also active research on improvements to and new sources of aviation fuel. After the global COVID-19 pandemic began in early 2020, aviation gasoline usage in the US decreased to approximately 20% of 2019 usage levels. As of August 2021, US aviation gasoline

consumption had recovered to 40% of 2019 consumption levels. As aviation gasoline usage continues to increase, discussions surrounding aviation gasoline innovation are warranted.

As of 2021, there are 2 primary types of aviation gasoline: Avgas 100LL and Jet A-1 fuel. Avgas is used for piston engines while Jet A-1 is used for turbine engines. Since 2008, piston engine aircraft have represented smaller shares of aircraft used in the US If this trend were to continue, it would suggest increasing consumption of Jet A-1 fuel for general aviation aircraft and reduced demand for Avgas 100LL over time.

For general aviation specifically, use of Avgas is of particular interest. Avgas contains Tetra Ethyl Lead (TEL), a chemical compound that is required to prevent detonation in piston aircraft engines and catastrophic failure in flight. Alternatives to TEL that are being researched include:

- **Alternative octane rating solutions:** Innovations that aim to reduce or eliminate the use of lead in fuel are being developed and brought to market. Some of these innovations include products like 82 Lean Octane Mixture, GAMI's 100 Octane Unleaded, and other products under development. These alternate octane solutions must consider balancing the safety challenges associated with lower octane ratings as well as approval and engineering changes needed to accommodate higher octane unleaded fuel. Supply chains must also be established for new octane solutions. These considerations factor into the complexity of switching from traditional avgas to unleaded solutions as alternative solutions continue to develop for cleaner fuel.
- **Diesel engine technology:** These engines use Jet A-1 fuel instead of Avgas and can be retrofitted to light aircraft. The engines return up to 30% improved fuel economy.

The aviation industry expects that over time leaded Avgas fuel will be phased out; however, it will continue to be used until stable alternatives are available.

Sustainable Aviation Fuels: In addition to traditional avgas solutions, biomass aviation fuels are being researched as an alternate power source for aviation. Biomass based aviation fuels, or Sustainable Aviation Fuels (SAFs) involve using renewable resources, such as corn grain or algae, to create aviation fuel that mimics the performance of traditional aviation fuel while producing a lower carbon footprint during production. Multiple benefits have been identified by the US Department of Energy, including:

- Increased farm revenues through creation of new commodity markets, which can benefit rural economics.
- Environmental benefits such as improved water quality and erosion control through the cultivation of biomass crops.
- Improved aircraft performance through the use of fewer aromatic components in SAFs.

Stakeholders in SAFs, including biomass refineries, aircraft manufacturers, and regulators are collaborating on research and development initiatives to bring these alternative solutions to market. Potential sources of SAFs that are being researched include:

- **SAF from wet waste:** SAF from wet waste uses carbon energy stored in food and animal waste, converting it to a carbon negative fuel. Research is being conducted at the National Renewable Energy Lab.
- **Biomass-based polycyclic alkane-based SAF:** Biomass-based polycyclic alkane-based SAF uses ultraviolet light and catalysts. Biomass crops like corn are converted to SAFs and yield 12% more energy than traditional fuel. Research being conducted at Los Alamos National Laboratory.
- **Carbon rich waste gas-based SAF:** A carbon rich waste gas-based SAF captures waste carbon monoxide from industrial processes and converting this gas to ethanol. Research being conducted by Pacific Northwest National Laboratory.

Electrification: To help the aviation industry reach carbon neutral status by 2050 (a goal developed by aviation stakeholders in 2009 through IATA), conversions from gas powered engines to electric powered engines have been considered. As of 2021, electricity production itself is not carbon neutral; however, generation-related emissions are expected to decrease in the future as alternative energy sources are adopted and energy production efficiency is increased. Infrastructure that is needed to support electrification, such as charging stations and battery storage, may eventually need to be accommodated by aviation systems as electrification is adopted.

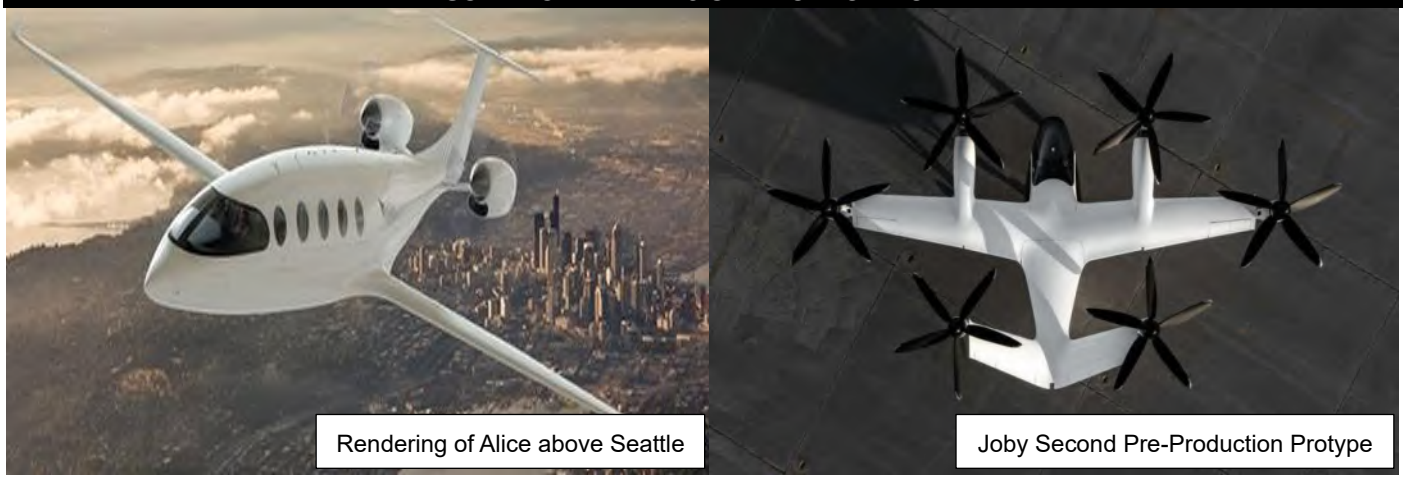
Electric motors do not produce any emissions and, therefore, could be an important innovation towards achieving carbon neutrality. Multiple start-ups have developed vehicles that could transport passengers from one place to another inside and between cities without producing any emissions. Early tests in 2016 produced aircraft that could accommodate 2 passengers and fly 16 miles at 43 miles per hour. More recent designs involve testing fully Electric Vertical Take-Off and Landing (eVTOL) aircraft that can accommodate up to 2 people and fly up to 186 miles in 1 hour. An unmanned eVTOL prototype has already had its first flight in 2017, a larger 5-seater version flew for the first time in May 2019. A manned eVTOL prototype will be used later for certification flights.

Further down the line, battery powered aircraft could achieve the greatest amount of CO_2 reduction. Some companies are currently working on the design and development of battery-powered aircraft; these are, however, likely to need more time until entry into service than comparable hybrid-electric aircraft. Several companies aim to provide zero-emissions short-haul flights with battery-powered aircraft. Companies, such as Airbus, have indicated potential roll-outs for these new aircraft capable of seating multiple hundred passengers for the mid-2030s.

Currently, multiple commercial service electric aircraft are operational. One example is Eviation's Alice aircraft, which functions as a fully electric aircraft. Eviation provides commercial service offerings using Alice for executive, commuter, and cargo use cases. Alice has a maximum flight distance of 400 nautical miles and can seat up to 9 passengers in its commuter configuration.

There are multiple firms innovating in the electric aircraft space, including Joby Aviation, Dufour Aerospace, Savback, Wisk, and SkyDrive. Several of these firms have aircraft prototypes that are undergoing FAA review for commercialization. For example, Joby Aviation plans to launch its electric, commercial aviation aircraft operations in 2024, and has received FAA Special Airworthiness Certification and US Airforce Airworthiness Approval on 2 pre-production prototypes between 2021 and 2022. Joby intends to launch their commercial ridesharing service in 2024 using an all-electric, zero emission aircraft.

FIGURE 2-5: EXAMPLES OF ELECTRIC AIRCRAFT



Source: Eviation; Joby Aviation.

Research and development in the aviation industry are trending towards a more efficient, safer, and sustainable future. While these aviation technologies are new, these advancements have the potential to shape both the commercial and general aviation industries. As innovations continue to develop, technological impacts on Maryland's airport system should be explored in airport planning.

2.3 Forecasts of Aviation Demand

Aviation demand forecasts were evaluated for the 34 system airports to assess annual operational capacity and to provide insight into where changes in the system may be appropriate. The aviation demand forecast process for the 2023 MASP used 3 sources of information, as outlined in **Table 2-9**:

- FAA-approved forecasts, which were included in Environmental Assessments (EA), airport master plans, or ALP;

- FAA's 2020 TAF; and,
- 2019 MDOT MAA Inspection Data.

Forecasts were completed for based aircraft and aviation operations (commercial and general aviation). Based aircraft are defined as aircraft that are operational and airworthy, and typically based at the airport for the majority of the year. Aviation operations are defined as airborne movement of aircraft at controlled or uncontrolled airport terminals. For FAA-approved forecasts, individual airports provided forecasts from different years. For consistency, MDOT MAA's inspection data was used for the 2019 baseline year and based aircraft and operations growth rates were obtained from each individual forecast. Forecasts were completed for all FAA TAF categories of operations and based aircraft. For based aircraft and operation types, MDOT MAA's 2019 Inspection Data was used to obtain a 2019 type breakdown, and total average growth rates are applied to each category.

If an airport's forecast was approved by the FAA during the COVID-19 pandemic, any project coming out of this 2023 MASP is subject to additional verification and analysis when it is ready to move forward.

For based aircraft, FAA TAF categories include:

- Single engine
- Jet
- Multi engine
- Helicopter
- Other

For airport operations, FAA TAF categories include:

- Itinerant air carrier
- Itinerant air taxi
- Itinerant General Aviation (GA)
- Itinerant military
- Local GA
- Local military

TABLE 2-9: DATA SOURCES FOR AVIATION DEMAND FORECASTS

MDOT MAA Role	Airport Name	Airport ID	Source for Forecast Data
Air Carrier	Baltimore/Washington International Thurgood Marshall Airport	BWI	2020 FAA TAF
	Hagerstown Regional Airport/Richard A. Henson Field	HGR	2020 FAA TAF
	Salisbury-Ocean City/Wicomico Regional Airport	SBY	FAA-Approved Forecast (2018 Master Plan)
Reliever	Carroll County Regional Airport/Jack B. Poage Field	DMW	FAA-Approved Forecast (2015 Master Plan)
	Frederick Municipal Airport	FDK	FAA-Approved Forecast (2008 Master Plan)
	Martin State Airport	MTN	2020 FAA TAF
	Maryland Airport	2W5	2020 FAA TAF
	Montgomery County Airpark	GAI	2020 FAA TAF
	Tipton Airport	FME	FAA-Approved Forecast (2010 Master Plan)
General	Bay Bridge Airport	W29	2020 FAA TAF
	Cambridge-Dorchester Regional Airport	CGE	2020 FAA TAF
	College Park Airport	CGS	2019 MDOT MAA Inspection Data
	Crisfield-Somerset County Airport	W41	2020 FAA TAF
	Easton/Newnam Field Airport	ESN	FAA-Approved Forecast (2015 RW Extension EA)
	Garrett County Airport	2G4	FAA-Approved Forecast (2016 ALP Narrative)
	Greater Cumberland Regional Airport	CBE	FAA-Approved Forecast (2020 ALP Narrative)
	Ocean City Municipal Airport	OXB	FAA-Approved Forecast (2012 Master Plan)
	St. Mary's County Regional Airport	2W6	FAA-Approved Forecast (2006 EA)
	Claremont Airport	58M	2019 MDOT MAA Inspection Data
	Freeway Airport	W00	2019 MDOT MAA Inspection Data
	Gooden Airpark	RJD	2019 MDOT MAA Inspection Data

TABLE 2-9: DATA SOURCES FOR AVIATION DEMAND FORECASTS (CONT.)

MDOT MAA Role	Airport Name	Airport ID	Source for Forecast Data
	Harford County Airport	0W3	2019 MDOT MAA Inspection Data
	Lee Airport	ANP	2019 MDOT MAA Inspection Data
	Potomac Airfield	VKX	2019 MDOT MAA Inspection Data
Local	Bennett Airport	1N5	2019 MDOT MAA Inspection Data
	Clearview Airpark	2W2	2019 MDOT MAA Inspection Data
	Davis Airport	W50	2019 MDOT MAA Inspection Data
	Essex Skypark	W48	2019 MDOT MAA Inspection Data
	Fallston Airport	W42	2019 MDOT MAA Inspection Data
	Kentmorr Airpark	3W3	2019 MDOT MAA Inspection Data
	Massey Aerodrome	MD1	2019 MDOT MAA Inspection Data
	Mexico Farms Airport	1W3	2019 MDOT MAA Inspection Data
Special	Havre de Grace Seaplane Base	M06	2019 MDOT MAA Inspection Data
	Pier 7 Heliport	4MD	2019 MDOT MAA Inspection Data

Demand forecasts are provided by airport in **Table 2-10** for commercial operations, **Table 2-11** for general aviation operations, and **Table 2-12** for based aircraft.

For the forecasts in the 2023 MASP, itinerant air carrier and itinerant air taxi operations are categorized as commercial operations at MDOT MAA's Air Carrier airports, including BWI, Hagerstown Regional Airport/Richard A. Henson Field (HGR), and Salisbury-Ocean City/Wicomico Regional Airport (SBY). For all other airports categorized as Reliever, General, Local, and Special in MDOT MAA's airport system, itinerant air carrier and itinerant air taxi operations are included under the general aviation forecast section. Between 2024 and 2039, commercial operations in Maryland are expected to increase at an annualized rate of 2.2%.

TABLE 2-10: COMMERCIAL OPERATIONS FORECAST

Airport ID	Airport Name	2019	2024	2029	2039	CAGR 2024 – 2029	CAGR 2024 – 2039
BWI	Baltimore/Washington International Thurgood Marshall Airport	253,283	234,407	281,032	329,833	3.7%	2.3%
HGR	Hagerstown Regional Airport/Richard A. Henson Field	4,791	4,623	4,713	4,790	0.4%	0.2%
SBY	Salisbury-Ocean City/Wicomico Regional Airport	12,980	13,327	13,538	13,896	0.3%	0.3%
Total Commercial Operations		**271,054**	**252,357**	**299,283**	**348,518**	**3.5%**	**2.2%**

Source: AECOM estimates using sources identified in Table 2-9.

General aviation operations in Maryland are also expected to increase long-term, albeit at a slower annualized rate than commercial operations. Between 2024 and 2039, general aviation operations in Maryland are forecasted to increase at a rate of 1.0%.

TABLE 2-11: GENERAL AVIATION OPERATIONS FORECAST

MDOT MAA Role	Airport ID	Airport Name	2019	2024	2029	2039	CAGR 2024 – 2029	CAGR 2024-2039
Air Carrier	BWI	Baltimore/Washington International Thurgood Marshall Airport	13,286	12,296	14,742	17,301	3.7%	2.3%
	HGR	Hagerstown Regional Airport/Richard A. Henson Field	42,320	40,834	41,627	42,310	0.4%	0.2%
	SBY	Salisbury-Ocean City/Wicomico Regional Airport	36,758	37,741	38,338	39,351	0.3%	0.3%

TABLE 2-11: GENERAL AVIATION OPERATIONS FORECAST (CONT.)

MDOT MAA Role	Airport ID	Airport Name	2019	2024	2029	2039	CAGR 2024 – 2029	CAGR 2024-2039
Reliever	DMW	Carroll County Regional Airport/Jack B. Poage Field	56,224	60,263	64,692	74,550	1.4%	1.4%
	FDK	Frederick Municipal Airport	94,901	100,663	105,650	117,617	1.0%	1.0%
	MTN	Martin State Airport	86,911	88,841	91,178	96,015	0.5%	0.5%
	2W5	Maryland Airport	22,050	22,050	22,050	22,050	0.0%	0.0%
	GAI	Montgomery County Airpark	48,000	48,000	48,000	48,000	0.0%	0.0%
	FME	Tipton Airport	37,911	43,275	49,398	64,367	2.7%	2.7%
General	W29	Bay Bridge Airport	35,280	35,280	35,280	35,280	0.0%	0.0%
	CGE	Cambridge-Dorchester Regional Airport	23,713	23,713	23,713	23,713	0.0%	0.0%
	CGS	College Park Airport	3,231	3,231	3,231	3,231	0.0%	0.0%
	W41	Crisfield-Somerset County Airport	1,961	1,961	1,961	1,961	0.0%	0.0%
	ESN	Easton/Newnam Field Airport	71,410	72,231	73,063	74,756	0.2%	0.2%
	2G4	Garrett County Airport	15,825	19,396	23,822	35,902	4.2%	4.2%
	CBE	Greater Cumberland Regional Airport	14,300	18,870	24,900	43,357	5.7%	5.7%
	OXB	Ocean City Municipal Airport	38,606	42,681	47,185	57,671	2.0%	2.0%
	2W6	St. Mary's County Regional Airport	33,588	35,661	37,863	42,682	1.2%	1.2%
	58M	Claremont Airport	7,730	7,730	7,730	7,730	0.0%	0.0%
	W00	Freeway Airport	32,115	32,115	32,115	32,115	0.0%	0.0%
	RJD	Gooden Airpark	11,900	11,900	11,900	11,900	0.0%	0.0%
	0W3	Harford County Airport	29,840	29,840	29,840	29,840	0.0%	0.0%
	ANP	Lee Airport	11,646	11,646	11,646	11,646	0.0%	0.0%
	VKX	Potomac Airfield	12,054	12,054	12,054	12,054	0.0%	0.0%
Local	1N5	Bennett Airport	2,137	2,137	2,137	2,137	0.0%	0.0%
	2W2	Clearview Airpark	8,050	8,050	8,050	8,050	0.0%	0.0%
	W50	Davis Airport	5,100	5,100	5,100	5,100	0.0%	0.0%
	W48	Essex Skypark	5,592	5,592	5,592	5,592	0.0%	0.0%
	W42	Fallston Airport	5,957	5,957	5,957	5,957	0.0%	0.0%
	3W3	Kentmorr Airpark	1,010	1,010	1,010	1,010	0.0%	0.0%
	MD1	Massey Aerodrome	5,150	5,150	5,150	5,150	0.0%	0.0%
	1W3	Mexico Farms Airport	1,261	1,261	1,261	1,261	0.0%	0.0%
Special	M06	Havre de Grace Seaplane Base	30	30	30	30	0.0%	0.0%
	4MD	Pier 7 Heliport	4,650	4,650	4,650	4,650	0.0%	0.0%
Total General Aviation Operations			820,497	851,209	890,915	984,336	0.9%	1.0%

Source: AECOM estimates using sources identified in Table 2-9.

General aviation based aircraft are expected to increase in Maryland at an annualized rate of 0.7% between 2024 and 2039. This rate of growth is slower than the rate of growth for general aviation operations, implying an increase in the number of operations per aircraft over time.

TABLE 2-12: BASED AIRCRAFT FORECAST

MDOT MAA Role	Airport ID	Airport Name	2019	2024	2029	2039	CAGR 2024 – 2029	CAGR 2024-2039
Air Carrier	BWI	Baltimore/Washington International Thurgood Marshall Airport	47	55	65	85	3.4%	2.9%
	HGR	Hagerstown Regional Airport/Richard A. Henson Field	141	149	157	173	1.1%	1.0%
	SBY	Salisbury-Ocean City/Wicomico Regional Airport	119	122	125	133	0.5%	0.6%

TABLE 2-12: BASED AIRCRAFT FORECAST (CONT.)

MDOT MAA Role	Airport ID	Airport Name	2019	2024	2029	2039	CAGR 2024 – 2029	CAGR 2024-2039
Reliever	DMW	Carroll County Regional Airport/Jack B. Poage Field	110	118	127	146	1.4%	1.4%
	FDK	Frederick Municipal Airport	168	178	187	208	1.0%	1.0%
	MTN	Martin State Airport	255	271	287	320	1.2%	1.1%
	2W5	Maryland Airport	51	51	51	51	0.0%	0.0%
	GAI	Montgomery County Airpark	135	135	135	135	0.0%	0.0%
	FME	Tipton Airport	115	131	150	195	2.7%	2.7%
General	W29	Bay Bridge Airport	88	88	88	88	0.0%	0.0%
	CGE	Cambridge-Dorchester Regional Airport	38	38	38	38	0.0%	0.0%
	CGS	College Park Airport	38	38	38	38	0.0%	0.0%
	W41	Crisfield-Somerset County Airport	4	4	4	4	0.0%	0.0%
	ESN	Easton/Newnam Field Airport	222	250	244	231	-0.5%	-0.5%
	2G4	Garrett County Airport	32	39	48	72	4.1%	4.1%
	CBE	Greater Cumberland Regional Airport	55	56	58	61	0.5%	0.5%
	OXB	Ocean City Municipal Airport	63	63	63	63	0.0%	0.0%
	2W6	St. Mary's County Regional Airport	186	197	209	236	1.2%	1.2%
	58M	Claremont Airport	49	49	49	49	0.0%	0.0%
	W00	Freeway Airport	77	77	77	77	0.0%	0.0%
	RJD	Gooden Airpark	13	13	13	13	0.0%	0.0%
	0W3	Harford County Airport	50	50	50	50	0.0%	0.0%
	ANP	Lee Airport	72	72	72	72	0.0%	0.0%
	VKX	Potomac Airfield	94	94	94	94	0.0%	0.0%
Local	1N5	Bennett Airport	8	8	8	8	0.0%	0.0%
	2W2	Clearview Airpark	28	28	28	28	0.0%	0.0%
	W50	Davis Airport	22	22	22	22	0.0%	0.0%
	W48	Essex Skypark	34	34	34	34	0.0%	0.0%
	W42	Fallston Airport	20	20	20	20	0.0%	0.0%
	3W3	Kentmorr Airpark	0	0	0	0	N/A	N/A
	MD1	Massey Aerodrome	35	35	35	35	0.0%	0.0%
	1W3	Mexico Farms Airport	14	14	14	14	0.0%	0.0%
Special	M06	Havre de Grace Seaplane Base	0	0	0	0	N/A	N/A
	4MD	Pier 7 Heliport	4	4	4	4	0.0%	0.0%
Total General Aviation Based Aircraft			2,387	2,504	2,594	2,797	0.7%	0.7%

Source: AECOM estimates using sources identified in Table 2-9.

For detailed operations and based aircraft forecasts for each airport by type of operation and type of aircraft, respectively, see **Table 2-13**, located at the end of the chapter.

2.4 Summary

The trends presented in this chapter provide an overview of socioeconomic, general aviation, and technological trends. The trends provide context for aviation demand forecasts presented for the 34 system airports for 5, 10, and 20-year horizons in the 2023 MASP.

The forecasts indicate that commercial service operations will grow more quickly in the coming decades than general aviation operations, though both types of operations are expected to increase through 2039. General aviation based aircraft are expected to grow at a slower rate than general aviation operations. Innovations that lower barriers to entry (e.g. cost, difficulty in accessing or obtaining flight training) and improve the sustainability of general aviation aircraft may change preferences for aircraft, such as the shift from piston aircraft to experimental and business jet aircraft. Additionally, new types of aircraft may emerge and capture market share from traditional aircraft as revolutionary innovations come online.

Key takeaways from the aviation demand forecasts are summarized below:

- **Commercial service operations:** For commercial service operations, forecasts suggest that growth will continue and mirror general economic trends. Historically, GDP levels and commercial aviation operations are positively correlated with each other. Provided Maryland continues to maintain lower than average unemployment rates, commercial operation growth could remain at or slightly below parity with US average.
- **General aviation operations:** General aviation operations are expected to increase at a slower rate than commercial service operations. This is consistent with the US average, wherein general aviation activity, while increasing over time, has grown at slower rates than commercial activity. Trends in general aviation pilot population have generally decreased since the early 2000s, and this decrease is expected to slow and eventually reverse. New technology that makes general aviation more accessible, environmentally sustainable, and cost effective could help general aviation grow faster than recent growth over time.
- **General aviation based aircraft:** General aviation based aircraft counts are expected to increase at a slower rate than general aviation operations in Maryland, implying that the number of operations per aircraft will increase. Since the early 2000s, there has been a shift in the type of aircraft used for general aviation, with traditional piston aircraft losing market share to jet aircraft and other aircraft forms (e.g. light sport aircraft, experimental, and rotorcraft). Similarly to general aviation operations, technological innovations could impact the character of based aircraft that are produced in the near future, though forecasts suggest that aggregate demand for general aviation will increase in the coming decades. Technological trends related to aircraft design and electrification present opportunities for new capital improvements at airports. These infrastructure improvements could support increases in aviation operations and shifting aircraft preferences.

While growth rates vary by airport, aggregate forecasts suggest that the state system will need to accommodate more based aircraft and operations in 2039 than are currently supported.

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY

Airport Name	Airport ID	Category	2019	2024	2029	2039
Baltimore/Washington International Thurgood Marshall Airport	BWI	**Based Aircraft Forecast**				
		Single Engine	16	19	22	29
		Jet Engine	25	29	35	45
		Multi Engine	5	6	7	9
		Helicopter	1	1	1	2
		Other	0	0	0	0
		Total	47	55	65	85
		Airport Operations Forecast				
		Itinerant Air Carrier	221,775	205,247	246,072	288,802
		Itinerant Air Taxi	31,508	29,160	34,960	41,031
		Total Commercial Operations	253,283	234,407	281,032	329,833
		Itinerant GA	12,327	11,408	13,678	16,053
		Itinerant Military	959	888	1,064	1,249
		Local GA	0	0	0	0
		Local Military	0	0	0	0
		Total GA Operations	13,286	12,296	14,742	17,301
		Total Operations	266,569	246,703	295,774	347,134
Hagerstown Regional Airport/Richard A. Henson Field	HGR	**Based Aircraft Forecast**				
		Single Engine	114	121	127	140
		Jet Engine	6	6	7	7
		Multi Engine	17	18	19	21
		Helicopter	4	4	4	5
		Other	0	0	0	0
		Total	141	149	157	173

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Hagerstown Regional Airport/Richard A. Henson Field (Cont.)	HGR (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	306	295	301	306
		Itinerant Air Taxi	4,485	4,328	4,412	4,484
		Total Commercial Operations	4,791	4,623	4,713	4,790
		Itinerant GA	20,468	19,749	20,133	20,463
		Itinerant Military	8,021	7,739	7,890	8,019
		Local GA	13,831	13,345	13,605	13,828
		Local Military	0	0	0	0
		Total GA Operations	42,320	40,834	41,627	42,310
		Total Operations	47,111	45,457	46,340	47,100
Salisbury-Ocean City/ Wicomico Regional Airport	SBY	**Based Aircraft Forecast**				
		Single Engine	49	50	51	55
		Jet Engine	3	3	3	3
		Multi Engine	64	65	67	71
		Helicopter	3	3	3	3
		Other	0	0	0	0
		Total	119	122	125	133
		Airport Operations Forecast				
		Itinerant Air Carrier	6,275	6,443	6,545	6,718
		Itinerant Air Taxi	6,705	6,884	6,993	7,178
		Total Commercial Operations	12,980	13,327	13,538	13,896
		Itinerant GA	11,155	11,453	11,635	11,942
		Itinerant Military	14,043	14,418	14,647	15,034
		Local GA	11,560	11,869	12,057	12,375
		Local Military	0	0	0	0
		Total GA Operations	36,758	37,741	38,338	39,351
		Total Operations	49,738	51,068	51,876	53,247
Carroll County Regional Airport/Jack B. Poage Field	DMW	**Based Aircraft Forecast**				
		Single Engine	89	95	102	118
		Jet Engine	4	4	5	5
		Multi Engine	13	14	15	17
		Helicopter	4	4	5	5
		Other	0	0	0	0
		Total	110	118	127	146
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	500	536	575	663
		Total Commercial Operations	500	536	575	663
		Itinerant GA	18,544	19,876	21,337	24,588
		Itinerant Military	90	96	104	119
		Local GA	37,090	39,755	42,676	49,179
		Local Military	0	0	0	0
		Total GA Operations	55,724	59,727	64,117	73,887
		Total Operations	56,224	60,263	64,692	74,550
Frederick Municipal Airport	FDK	**Based Aircraft Forecast**				
		Single Engine	138	146	154	171
		Jet Engine	4	4	4	5
		Multi Engine	14	15	16	17
		Helicopter	12	13	13	15
		Other	0	0	0	0
		Total	168	178	187	208

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Frederick Municipal Airport (Cont.)	FDK (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	4,058	4,304	4,518	5,029
		Total Commercial Operations	4,058	4,304	4,518	5,029
		Itinerant GA	38,177	40,495	42,501	47,315
		Itinerant Military	1,399	1,484	1,557	1,734
		Local GA	51,267	54,380	57,074	63,539
		Local Military	0	0	0	0
		Total GA Operations	90,843	96,358	101,133	112,588
		Total Operations	94,901	100,663	105,650	117,617
Martin State Airport	MTN	**Based Aircraft Forecast**				
		Single Engine	160	170	180	201
		Jet Engine	25	27	28	31
		Multi Engine	21	22	24	26
		Helicopter	28	30	32	35
		Other	21	22	24	26
		Total	255	271	287	320
		Airport Operations Forecast				
		Itinerant Air Carrier	6	6	6	7
		Itinerant Air Taxi	2,683	2,743	2,815	2,964
		Total Commercial Operations	2,689	2,749	2,821	2,971
		Itinerant GA	45,559	46,571	47,796	50,331
		Itinerant Military	3,361	3,436	3,526	3,713
		Local GA	35,302	36,086	37,035	39,000
		Local Military	0	0	0	0
		Total GA Operations	84,222	86,093	88,357	93,044
		Total Operations	86,911	88,841	91,178	96,015
Maryland Airport	2W5	**Based Aircraft Forecast**				
		Single Engine	50	50	50	50
		Jet Engine	0	0	0	0
		Multi Engine	1	1	1	1
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	51	51	51	51
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	50	50	50	50
		Total Commercial Operations	50	50	50	50
		Itinerant GA	1,500	1,500	1,500	1,500
		Itinerant Military	500	500	500	500
		Local GA	20,000	20,000	20,000	20,000
		Local Military	0	0	0	0
		Total GA Operations	22,000	22,000	22,000	22,000
		Total Operations	22,050	22,050	22,050	22,050
Montgomery County Airpark	GAI	**Based Aircraft Forecast**				
		Single Engine	122	122	122	122
		Jet Engine	1	1	1	1
		Multi Engine	11	11	11	11
		Helicopter	1	1	1	1
		Other	0	0	0	0
		Total	135	135	135	135

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Montgomery County Airpark (Cont.)	GAI (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	747	747	747	747
		Total Commercial Operations	747	747	747	747
		Itinerant GA	1,356	1,356	1,356	1,356
		Itinerant Military	32	32	32	32
		Local GA	45,865	45,865	45,865	45,865
		Local Military	0	0	0	0
		Total GA Operations	47,253	47,253	47,253	47,253
		Total Operations	48,000	48,000	48,000	48,000
Tipton Airport	FME	**Based Aircraft Forecast**				
		Single Engine	93	106	121	158
		Jet Engine	0	0	0	0
		Multi Engine	7	8	9	12
		Helicopter	15	17	20	25
		Other	0	0	0	0
		Total	115	131	150	195
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	138	158	180	234
		Total Commercial Operations	138	158	180	234
		Itinerant GA	789	901	1,028	1,340
		Itinerant Military	49	56	64	83
		Local GA	36,935	42,161	48,127	62,710
		Local Military	0	0	0	0
		Total GA Operations	37,773	43,118	49,219	64,133
		Total Operations	37,911	43,275	49,398	64,367
Bay Bridge Airport	W29	**Based Aircraft Forecast**				
		Single Engine	79	79	79	79
		Jet Engine	0	0	0	0
		Multi Engine	6	6	6	6
		Helicopter	3	3	3	3
		Other	0	0	0	0
		Total	88	88	88	88
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	112	112	112	112
		Total Commercial Operations	112	112	112	112
		Itinerant GA	12,768	12,768	12,768	12,768
		Itinerant Military	0	0	0	0
		Local GA	22,400	22,400	22,400	22,400
		Local Military	0	0	0	0
		Total GA Operations	35,168	35,168	35,168	35,168
		Total Operations	35,280	35,280	35,280	35,280
Cambridge-Dorchester Regional Airport	CGE	**Based Aircraft Forecast**				
		Single Engine	35	35	35	35
		Jet Engine	1	1	1	1
		Multi Engine	2	2	2	2
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	38	38	38	38

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Cambridge-Dorchester Regional Airport (Cont.)	CGE (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	11,514	11,514	11,514	11,514
		Itinerant Military	530	530	530	530
		Local GA	11,669	11,669	11,669	11,669
		Local Military	0	0	0	0
		Total GA Operations	23,713	23,713	23,713	23,713
		Total Operations	23,713	23,713	23,713	23,713
College Park Airport	CGS	**Based Aircraft Forecast**				
		Single Engine	34	34	34	34
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	4	4	4	4
		Other	0	0	0	0
		Total	38	38	38	38
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	67	67	67	67
		Total Commercial Operations	67	67	67	67
		Itinerant GA	839	839	839	839
		Itinerant Military	60	60	60	60
		Local GA	2,265	2,265	2,265	2,265
		Local Military	0	0	0	0
		Total GA Operations	3,164	3,164	3,164	3,164
		Total Operations	3,231	3,231	3,231	3,231
Crisfield-Somerset County Airport	W41	**Based Aircraft Forecast**				
		Single Engine	4	4	4	4
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	4	4	4	4
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	1,157	1,157	1,157	1,157
		Itinerant Military	0	0	0	0
		Local GA	804	804	804	804
		Local Military	0	0	0	0
		Total GA Operations	1,961	1,961	1,961	1,961
		Total Operations	1,961	1,961	1,961	1,961
Easton/Newnam Field Airport	ESN	**Based Aircraft Forecast**				
		Single Engine	168	190	185	175
		Jet Engine	27	30	30	28
		Multi Engine	22	25	24	23
		Helicopter	2	2	2	2
		Other	3	3	3	3
		Total	222	250	244	231

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Easton/Newnam Field Airport (Cont.)	ESN (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	2,957	2,991	3,025	3,096
		Total Commercial Operations	2,957	2,991	3,025	3,096
		Itinerant GA	20,837	21,077	21,319	21,813
		Itinerant Military	14,274	14,438	14,604	14,943
		Local GA	33,342	33,725	34,114	34,904
		Local Military	0	0	0	0
		Total GA Operations	68,453	69,240	70,038	71,661
		Total Operations	71,410	72,231	73,063	74,756
Garrett County Airport	2G4	**Based Aircraft Forecast**				
		Single Engine	25	31	38	56
		Jet Engine	0	0	0	0
		Multi Engine	4	5	6	9
		Helicopter	3	4	5	7
		Other	0	0	0	0
		Total	32	39	48	72
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	325	398	489	737
		Total Commercial Operations	325	398	489	737
		Itinerant GA	6,750	8,273	10,161	15,314
		Itinerant Military	250	306	376	567
		Local GA	8,500	10,418	12,795	19,284
		Local Military	0	0	0	0
		Total GA Operations	15,500	18,997	23,332	35,165
		Total Operations	15,825	19,396	23,822	35,902
Greater Cumberland Regional Airport	CBE	**Based Aircraft Forecast**				
		Single Engine	46	47	48	51
		Jet Engine	0	0	0	0
		Multi Engine	3	3	3	3
		Helicopter	1	1	1	1
		Other	5	5	5	6
		Total	55	56	58	61
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	2,500	3,299	4,353	7,580
		Itinerant Military	300	396	522	910
		Local GA	11,500	15,175	20,024	34,868
		Local Military	0	0	0	0
		Total GA Operations	14,300	18,870	24,900	43,357
		Total Operations	14,300	18,870	24,900	43,357
Ocean City Municipal Airport	OXB	**Based Aircraft Forecast**				
		Single Engine	53	53	53	53
		Jet Engine	0	0	0	0
		Multi Engine	7	7	7	7
		Helicopter	3	3	3	3
		Other	0	0	0	0
		Total	63	63	63	63

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Ocean City Municipal Airport (Cont.)	OXB (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	300	332	367	448
		Total Commercial Operations	300	332	367	448
		Itinerant GA	30,006	33,173	36,674	44,824
		Itinerant Military	500	553	611	747
		Local GA	7,800	8,623	9,533	11,652
		Local Military	0	0	0	0
		Total GA Operations	38,306	42,349	46,818	57,223
		Total Operations	38,606	42,681	47,185	57,671
St. Mary's County Regional Airport	2W6	**Based Aircraft Forecast**				
		Single Engine	160	170	180	203
		Jet Engine	3	3	3	4
		Multi Engine	11	12	12	14
		Helicopter	5	5	6	6
		Other	7	7	8	9
		Total	186	197	209	236
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	938	996	1,057	1,192
		Total Commercial Operations	938	996	1,057	1,192
		Itinerant GA	12,988	13,790	14,641	16,504
		Itinerant Military	180	191	203	229
		Local GA	19,482	20,685	21,962	24,757
		Local Military	0	0	0	0
		Total GA Operations	32,650	34,666	36,805	41,490
		Total Operations	33,588	35,661	37,863	42,682
Claremont Airport	58M	**Based Aircraft Forecast**				
		Single Engine	44	44	44	44
		Jet Engine	0	0	0	0
		Multi Engine	5	5	5	5
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	49	49	49	49
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	41	41	41	41
		Total Commercial Operations	41	41	41	41
		Itinerant GA	1,038	1,038	1,038	1,038
		Itinerant Military	41	41	41	41
		Local GA	6,610	6,610	6,610	6,610
		Local Military	0	0	0	0
		Total GA Operations	7,689	7,689	7,689	7,689
		Total Operations	7,730	7,730	7,730	7,730
Freeway Airport	W00	**Based Aircraft Forecast**				
		Single Engine	74	74	74	74
		Jet Engine	0	0	0	0
		Multi Engine	2	2	2	2
		Helicopter	0	0	0	0
		Other	1	1	1	1
		Total	77	77	77	77

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Freeway Airport (Cont.)	W00 (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	15	15	15	15
		Total Commercial Operations	15	15	15	15
		Itinerant GA	1,000	1,000	1,000	1,000
		Itinerant Military	100	100	100	100
		Local GA	31,000	31,000	31,000	31,000
		Local Military	0	0	0	0
		Total GA Operations	32,100	32,100	32,100	32,100
		Total Operations	32,115	32,115	32,115	32,115
Gooden Airpark	RJD	**Based Aircraft Forecast**				
		Single Engine	13	13	13	13
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	13	13	13	13
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	1,900	1,900	1,900	1,900
		Itinerant Military	0	0	0	0
		Local GA	10,000	10,000	10,000	10,000
		Local Military	0	0	0	0
		Total GA Operations	11,900	11,900	11,900	11,900
		Total Operations	11,900	11,900	11,900	11,900
Harford County Airport	0W3	**Based Aircraft Forecast**				
		Single Engine	45	45	45	45
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	5	5	5	5
		Total	50	50	50	50
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	4,416	4,416	4,416	4,416
		Itinerant Military	175	175	175	175
		Local GA	25,249	25,249	25,249	25,249
		Local Military	0	0	0	0
		Total GA Operations	29,840	29,840	29,840	29,840
		Total Operations	29,840	29,840	29,840	29,840
Lee Airport	ANP	**Based Aircraft Forecast**				
		Single Engine	70	70	70	70
		Jet Engine	0	0	0	0
		Multi Engine	2	2	2	2
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	72	72	72	72

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Lee Airport (Cont.)	ANP (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	1,500	1,500	1,500	1,500
		Itinerant Military	375	375	375	375
		Local GA	9,771	9,771	9,771	9,771
		Local Military	0	0	0	0
		Total GA Operations	11,646	11,646	11,646	11,646
		Total Operations	11,646	11,646	11,646	11,646
Potomac Airfield	VKX	**Based Aircraft Forecast**				
		Single Engine	91	91	91	91
		Jet Engine	0	0	0	0
		Multi Engine	3	3	3	3
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	94	94	94	94
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	25	25	25	25
		Total Commercial Operations	25	25	25	25
		Itinerant GA	1,999	1,999	1,999	1,999
		Itinerant Military	30	30	30	30
		Local GA	10,000	10,000	10,000	10,000
		Local Military	0	0	0	0
		Total GA Operations	12,029	12,029	12,029	12,029
		Total Operations	12,054	12,054	12,054	12,054
Bennett Airport	1N5	**Based Aircraft Forecast**				
		Single Engine	5	5	5	5
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	3	3	3	3
		Total	8	8	8	8
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	300	300	300	300
		Itinerant Military	0	0	0	0
		Local GA	1,837	1,837	1,837	1,837
		Local Military	0	0	0	0
		Total GA Operations	2,137	2,137	2,137	2,137
		Total Operations	2,137	2,137	2,137	2,137
Clearview Airpark	2W2	**Based Aircraft Forecast**				
		Single Engine	28	28	28	28
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	28	28	28	28

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Clearview Airpark (Cont.)	2W2 (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	900	900	900	900
		Itinerant Military	0	0	0	0
		Local GA	7,150	7,150	7,150	7,150
		Local Military	0	0	0	0
		Total GA Operations	8,050	8,050	8,050	8,050
		Total Operations	8,050	8,050	8,050	8,050
Davis Airport	W50	**Based Aircraft Forecast**				
		Single Engine	22	22	22	22
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	22	22	22	22
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	100	100	100	100
		Itinerant Military	0	0	0	0
		Local GA	5,000	5,000	5,000	5,000
		Local Military	0	0	0	0
		Total GA Operations	5,100	5,100	5,100	5,100
		Total Operations	5,100	5,100	5,100	5,100
Essex Skypark	W48	**Based Aircraft Forecast**				
		Single Engine	30	30	30	30
		Jet Engine	0	0	0	0
		Multi Engine	2	2	2	2
		Helicopter	1	1	1	1
		Other	1	1	1	1
		Total	34	34	34	34
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	592	592	592	592
		Itinerant Military	0	0	0	0
		Local GA	5,000	5,000	5,000	5,000
		Local Military	0	0	0	0
		Total GA Operations	5,592	5,592	5,592	5,592
		Total Operations	5,592	5,592	5,592	5,592
Fallston Airport	W42	**Based Aircraft Forecast**				
		Single Engine	20	20	20	20
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	20	20	20	20

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Fallston Airport (Cont.)	W42 (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	1,575	1,575	1,575	1,575
		Itinerant Military	100	100	100	100
		Local GA	4,282	4,282	4,282	4,282
		Local Military	0	0	0	0
		Total GA Operations	5,957	5,957	5,957	5,957
		Total Operations	5,957	5,957	5,957	5,957
Kentmorr Airpark	3W3	**Based Aircraft Forecast**				
		Single Engine	0	0	0	0
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	0	0	0	0
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	600	600	600	600
		Itinerant Military	60	60	60	60
		Local GA	350	350	350	350
		Local Military	0	0	0	0
		Total GA Operations	1,010	1,010	1,010	1,010
		Total Operations	1,010	1,010	1,010	1,010
Massey Aerodrome	MD1	**Based Aircraft Forecast**				
		Single Engine	24	24	24	24
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	11	11	11	11
		Total	35	35	35	35
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	1,200	1,200	1,200	1,200
		Itinerant Military	350	350	350	350
		Local GA	3,600	3,600	3,600	3,600
		Local Military	0	0	0	0
		Total GA Operations	5,150	5,150	5,150	5,150
		Total Operations	5,150	5,150	5,150	5,150
Mexico Farms Airport	1W3	**Based Aircraft Forecast**				
		Single Engine	8	8	8	8
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	6	6	6	6
		Total	14	14	14	14

TABLE 2-13: DETAILED OPERATIONS AND FLEET MIX FORECASTS BY TAF CATEGORY (CONT.)

Airport Name	Airport ID	Category	2019	2024	2029	2039
Mexico Farms Airport (Cont.)	1W3 (Cont.)	**Airport Operations Forecast**				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	436	436	436	436
		Itinerant Military	0	0	0	0
		Local GA	825	825	825	825
		Local Military	0	0	0	0
		Total GA Operations	1,261	1,261	1,261	1,261
		Total Operations	1,261	1,261	1,261	1,261
Havre de Grace Seaplane Base	M06	**Based Aircraft Forecast**				
		Single Engine	0	0	0	0
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	0	0	0	0
		Other	0	0	0	0
		Total	0	0	0	0
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	30	30	30	30
		Itinerant Military	0	0	0	0
		Local GA	0	0	0	0
		Local Military	0	0	0	0
		Total GA Operations	30	30	30	30
		Total Operations	30	30	30	30
Pier 7 Heliport	4MD	**Based Aircraft Forecast**				
		Single Engine	0	0	0	0
		Jet Engine	0	0	0	0
		Multi Engine	0	0	0	0
		Helicopter	4	4	4	4
		Other	0	0	0	0
		Total	4	4	4	4
		Airport Operations Forecast				
		Itinerant Air Carrier	0	0	0	0
		Itinerant Air Taxi	0	0	0	0
		Total Commercial Operations	0	0	0	0
		Itinerant GA	4,000	4,000	4,000	4,000
		Itinerant Military	0	0	0	0
		Local GA	650	650	650	650
		Local Military	0	0	0	0
		Total GA Operations	4,650	4,650	4,650	4,650
		Total Operations	4,650	4,650	4,650	4,650

Source: AECOM estimates using sources identified in Table 2-9.

CHAPTER 3

Facility Requirements Analysis

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND AVIATION ADMINISTRATION

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3 FACILITY REQUIREMENTS ANALYSIS

3.1 Introduction

The 2023 MASP establishes facility, service, and equipment objectives for MDOT MAA's system to measure how each airport best fulfills its assigned role in the Maryland state airport system. This chapter analyzes these objectives that apply to airports in each of the five MDOT MAA airport role categories: Air Carrier Airports, Reliever Airports, General Airports, Local Airports, and Special Facilities. Facility, service, and equipment objectives are intended to help MDOT MAA identify adequacies and deficiencies based on the objectives established for its airport system and serve as the foundation for final systemwide and airport-specific improvement recommendations.

3.2 Current Airport System Roles and Facility Objectives

There are 34 public-use aviation facilities included in the MDOT MAA airport system comprising 32 airports, 1 heliport, and 1 seaplane base. Of the 34 MDOT MAA aviation facilities, there are 3 Air Carrier Airports, 6 Reliever Airports, 15 General Airports, 8 Local Airports, and 2 Special Facilities.

Table 3-1 identifies each airport's name, identifier code, associated city, MDOT MAA airport role, and FAA's NPIAS and ASSET roles. **Chapter 1 Inventory and Data Collection** defines the MDOT MAA airport roles utilized in the 2023 MASP (carried forward from the 2008 MASP) and provides more information on the FAA's NPIAS and ASSET roles. The 2023 MASP focuses on MDOT MAA airport roles; the FAA NPIAS and ASSET roles are provided to review funding eligibility and project cost analysis in subsequent chapters.

TABLE 3-1: OVERVIEW OF EXISTING AIRPORT SYSTEM ROLES

MDOT MAA Role	Airport Name	Associated City	Airport ID	FAA NPIAS Role	FAA ASSET Role
Air Carrier	Baltimore/Washington International Thurgood Marshall Airport	Baltimore	BWI	Primary Commercial	Not Applicable
	Hagerstown Regional Airport/Richard A. Henson Field	Hagerstown	HGR	Primary Commercial	Not Applicable
	Salisbury-Ocean City/Wicomico Regional Airport	Salisbury	SBY	Primary Commercial	Not Applicable
Reliever	Carroll County Regional Airport/Jack B. Poage Field	Westminster	DMW	Reliever	Regional
	Frederick Municipal Airport	Frederick	FDK	Reliever	Regional
	Martin State Airport	Baltimore	MTN	Reliever	National
	Maryland Airport	Indian Head	2W5	Reliever	Unclassified
	Montgomery County Airpark	Gaithersburg	GAI	Reliever	Regional
	Tipton Airport	Odenton	FME	Reliever	Local
General	Bay Bridge Airport	Stevensville	W29	General Aviation	Local
	Cambridge-Dorchester Regional Airport	Cambridge	CGE	General Aviation	Regional
	Claremont Airport	Elkton	58M	Non-NPIAS	Not Applicable
	College Park Airport	College Park	CGS	General Aviation	Local
	Crisfield-Somerset County Airport	Crisfield	W41	General Aviation	Unclassified
	Easton/Newnam Field Airport	Easton	ESN	General Aviation	National
	Freeway Airport	Bowie	W00	Non-NPIAS	Not Applicable
	Garrett County Airport	Oakland	2G4	General Aviation	Local
	Gooden Airpark	Ridgely	RJD	Non-NPIAS	Not Applicable
	Greater Cumberland Regional Airport	Cumberland	CBE	General Aviation	Local
	Harford County Airport	Churchville	0W3	Non-NPIAS	Not Applicable

TABLE 3-1: OVERVIEW OF EXISTING AIRPORT SYSTEM ROLES (CONT.)

MDOT MAA Role	Airport Name	Associated City	Airport ID	FAA NPIAS Role	FAA ASSET Role
General (Cont.)	Lee Airport	Annapolis	ANP	Non-NPIAS	Not Applicable
	Ocean City Municipal Airport	Ocean City	OXB	General Aviation	Local
	Potomac Airfield	Friendly	VKX	Non-NPIAS	Not Applicable
	St. Mary's County Regional Airport	Leonardtown	2W6	General Aviation	Regional
Local	Bennett Airport	Salisbury	1N5	Non-NPIAS	Not Applicable
	Clearview Airpark	Westminster	2W2	Non-NPIAS	Not Applicable
	Davis Airport	Laytonsville	W50	Non-NPIAS	Not Applicable
	Essex Skypark	Baltimore	W48	Non-NPIAS	Not Applicable
	Fallston Airport	Fallston	W42	Non-NPIAS	Not Applicable
	Kentmorr Airpark	Stevensville	3W3	Non-NPIAS	Not Applicable
	Massey Aerodrome	Massey	MD1	Non-NPIAS	Not Applicable
	Mexico Farms Airport	Cumberland	1W3	Non-NPIAS	Not Applicable
Special	Havre de Grace Seaplane Base	Havre De Grace	M06	Non-NPIAS	Not Applicable
	Pier 7 Heliport	Baltimore	4MD	Non-NPIAS	Not Applicable

Air Carrier, Reliever, General, and Local classifications, as defined by MDOT MAA, have an associated set of facility, service, and equipment objectives. There are no facility objectives set for Special Facilities due to the unique nature of the type of aircraft accommodated. For Special Facilities, it is recommended that they preserve their existing facilities. The objectives identified in **Table 3-2** were established in the 2008 MASP except for the following, which were added for evaluation in this 2023 MASP:

- 24-hour fueling services, either through a self-service fueling system or prior arrangements made with the FBO
- Regular updates to airport master plans
- Regular updates to ALP

Table 3-2 identifies each MDOT MAA airport role with the associated objectives for airside/navigational aid facilities, airport services, aircraft storage facilities, safety and security infrastructure, and planning studies. Facility, service, and equipment objectives established in this 2023 MASP reflect the minimum level of development that is considered desirable at each airport and are intended to guide airport development. Airport master planning efforts may recommend improvements in addition to or different from those identified through this system plan. Additionally, it is possible that airport-specific conditions may justify development that exceeds an airport's objectives identified in this 2023 MASP.

Each of the facilities evaluated in the subsequent sections contain the following:

- The objectives for each airport role
- A summary of the percentage of airports meeting each objective
- A list of airports that do not meet its airport role objective

TABLE 3-2: AIRPORT FACILITY OBJECTIVES BY AIRPORT ROLE

Facility Item	Local	General	Reliever	Air Carrier
Airside and Navigational Aids				
Airport Reference Code	A-I Small	B-I	C-II	C-III
Primary Runway Length	2,000 feet	3,500 feet	5,000 feet	5,500 feet
Taxiway System	Turnarounds	Partial Parallel	Full Parallel	Full Parallel
Approach Capability	Visual	Non-precision	Precision(6)	Precision(6)
Airport Traffic Control Tower	Not an objective	Not an objective	Available(1)	Available
Airport Traffic Control Communications	Not an objective	Not an objective	Available	Available
Runway Lighting	LIRL	MIRL	HIRL	HIRL
Rotating Beacon	Available(2)	Available	Available	Available
Lighted Wind Cone	Available	Available	Available	Available
Runway End Identifier Lighting	Available	Available	Available	Available(3)
Visual Glide Slope Indicator	Available	Available	Available	Available
Weather Reporting	Not an objective	Available	Available	Available
Airport Services				
General Aviation/Fixed-based Operator Terminal	Not an objective	Available	Available	Available
Aviation Gasoline (AvGas)	100LL Available	100LL Available	100LL Available	100LL Available
Jet A	Not an objective	Not an objective	Available	Available
24-Hour Fueling(4)	Available	Available	Available	Available
Aircraft Storage				
Paved Aircraft Parking	Not an objective	Available	Available	Available
Hangars	Available	Available	Available	Available
Covered Overnight Secure Storage(5)	Not an objective	Not an objective	Available	Available
Operational Safety and Security				
Airport Property Fence	Available	Available	Available	Available
Snow Removal	Not an objective	Available	Available	Available
Airport Planning Studies				
Airport Master Plan(4)	Every 10 Years	Every 10 Years	Every 10 Years	Every 5 Years
Airport Layout Plan(4)	Every 10 Years	Every 10 Years	Every 10 Years	Every 5 Years

Notes: (1) The objective only applies to airports with 120,000 annual operations or more.
(2) The objective only applies to airports with paved runways.
(3) The objective only applies to airports without an approach lighting system.
(4) Objectives added for evaluation in the 2023 MASP.
(5) Includes availability of dedicated and undedicated covered overnight secure storage spaces.
(6) Area Navigation (RNAV) instrument approach procedures with Localizer Performance with Vertical Guidance (LPV) are not considered a precision approach by the FAA and in the 2023 MASP.

3.3 Airside and Navigational Aids

Airside facilities are essential to airport operations, and navigational aids connect the aircraft, pilots, airport operations staff to allow for safe and secure aircraft operations. The following airside and navigational aid facility objectives are established for each airport role:

- Airport Reference Code
- Primary Runway Length
- Taxiway System
- Approach Capability
- Airport Traffic Control Tower
- Airport Traffic Control Communications
- Runway Lighting
- Rotating Beacon
- Lighted Wind Cone
- Runway End Identifier Lighting

- Visual Glide Slope Indicator
- Weather Reporting

3.3.1 Airport Reference Code

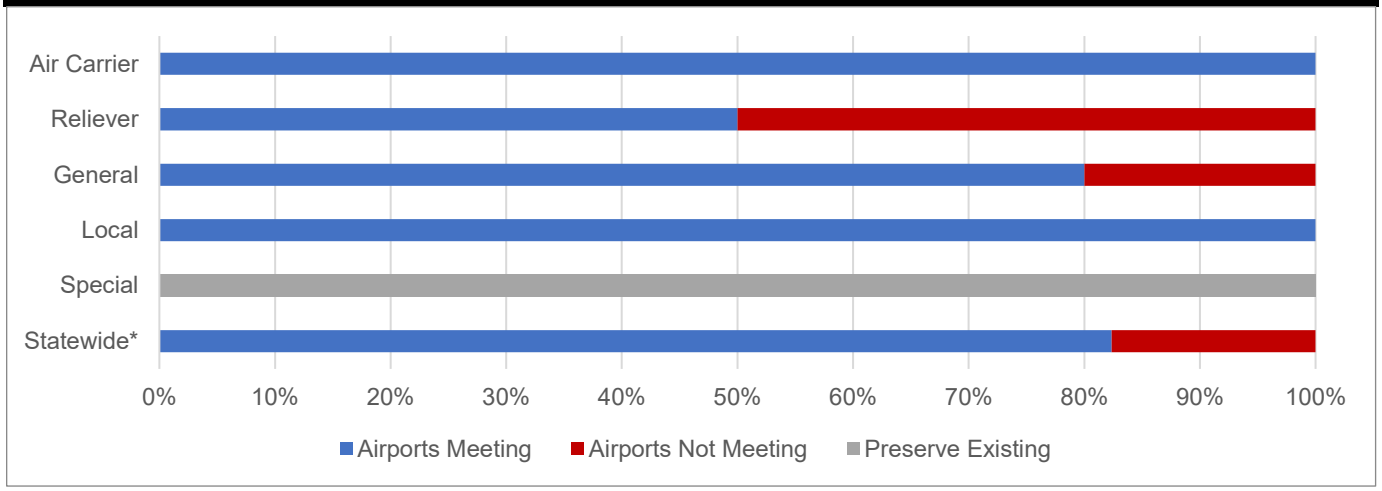
The Airport Reference Code (ARC) drives the FAA design standards that should be met at airports. Each airport's ARC is determined based on the critical aircraft utilizing the airport. The critical aircraft is the most demanding aircraft's wingspan and approach speed that operates at the airport on a regular basis (minimum of 500 operations per year). Typically, the airport's critical aircraft and associated ARC are established during the development of an airport master plan or ALP. The published ARC governs the various airfield design standards that should be met to ensure safe aircraft operations.

The 2008 MASP set an ARC objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: C-III
- Reliever: C-II
- General: B-I
- Local: A-I Small

As shown in **Figure 3-1**, 82% of MDOT MAA system airports meet or exceed their applicable ARC objective.

FIGURE 3-1: AIRPORT REFERENCE CODE OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the ARC objective for their system role. The Reliever role has the largest number of deficiencies with 3 airports (or 50%) not meeting their applicable ARC objective. The ARC is unknown for the Special Facilities [Pier 7 Heliport (4MD) and Havre de Grace Seaplane Base (M06)]; however, it is recommended that they continue to accommodate helicopters and seaplanes, respectively.

Reliever	General
Maryland Airport (2W5)	Bay Bridge Airport (W29)
Montgomery County Airpark (GAI)	Crisfield-Somerset County Airport (W41)
Tipton Airport (FME)	Potomac Airfield (VKX)

3.3.2 Primary Runway Length

Runways are key facilities at airports, as runway lengths enable airports to fulfill their designated role in the state airport system and accommodate a variety of aircraft, ranging from single-engine aircraft to jets. The ARC determines

the runway length that is required for aircraft to operate; larger aircraft require longer runways, while shorter runways accommodate smaller aircraft. The airport's role in the state airport system is a factor in what types of aircraft utilize the airport. For example, Reliever airports are intended to accommodate business and corporate jets, which typically need a runway length of at least 5,000 feet and drive the MDOT MAA airport role requirements listed below.

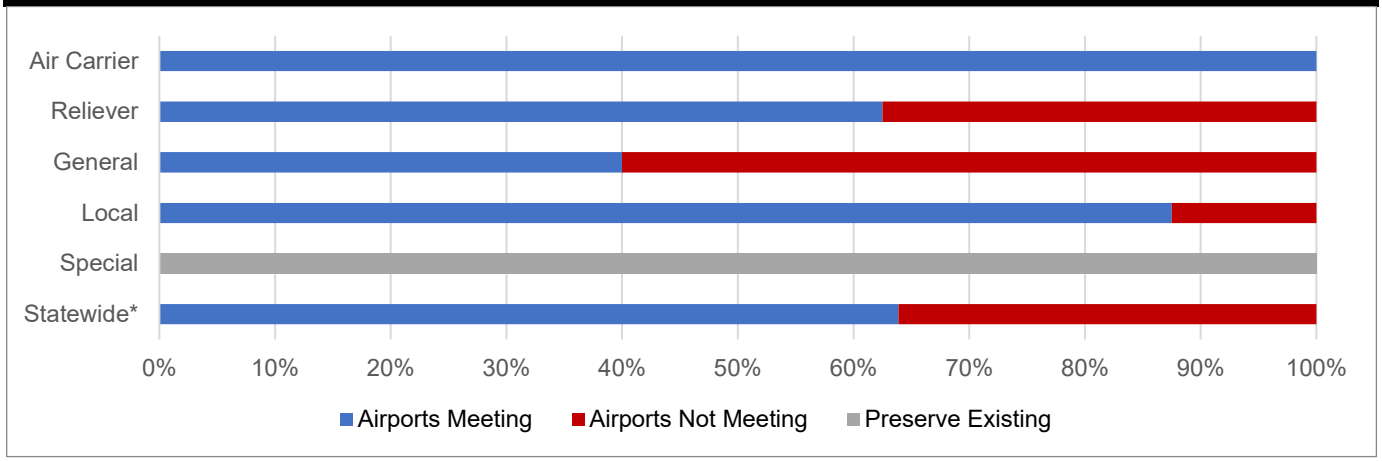
An airport's runway length requirements are best identified through the master planning process, as lengths are determined by the critical aircraft operating at each airport. The primary runway objectives in this 2023 MASP are considered the minimum desirable length at each airport, based on the airport's assigned system role. It is possible that some airports, based on local need and justification, will exceed their runway length objectives.

The 2008 MASP set a primary runway length objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: 5,500 feet
- Reliever: 5,000 feet
- General: 3,500 feet
- Local: 2,000 feet

As shown in **Figure 3-2**, 60% of MDOT MAA system airports meet or exceed their applicable primary runway length objective.

FIGURE 3-2: PRIMARY RUNWAY LENGTH OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the runway length objective for their system role. The General role has the largest number of deficiencies with 9 airports (or 60%) not meeting their applicable runway length objective.

Reliever	General	Local
Maryland Airport (2W5)	Bay Bridge Airport (W29)	Clearview Airpark (2W2)
Montgomery County Airpark (GAI)	College Park Airport (CGS)	
Tipton Airport (FME)	Crisfield-Somerset County Airport (W41)	
	Claremont Airport (58M)	
	Freeway Airport (W00)	
	Gooden Airpark (RJD)	
	Harford County Airport (0W3)	
	Lee Airport (ANP)	
	Potomac Airfield (VKX)	

3.3.3 Taxiway System

The taxiway system on an airfield provides safe and efficient movement of aircraft to and from the runway and the terminal area, as well as the aircraft hangars. Taxiway connectors allow for aircraft to exit the runway safely and

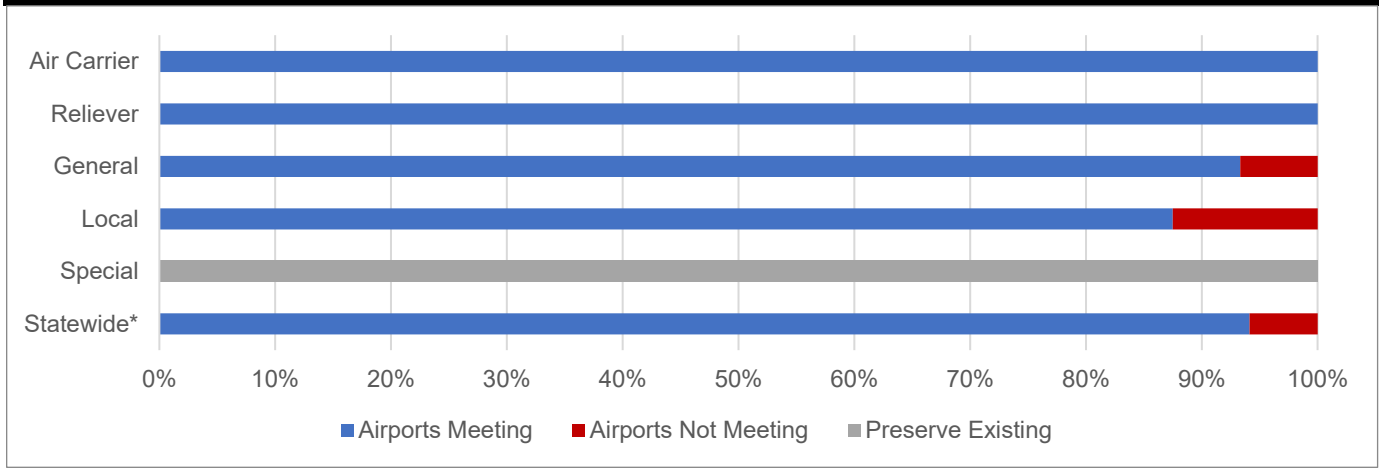
efficiently after landing and allow for smooth airfield operations. The three types of taxiways are: full parallel, partial parallel, and turnaround taxiways. The full parallel taxiway is parallel to the primary runway and spans the whole length of the runway, whereas the partial parallel taxiway only covers a portion of the runway. Turnarounds are taxiway systems located at the ends of runways that allow the aircraft to reverse direction and other off-runway procedures. At airports with more complex runway and taxiway layouts, there are instances when an alternative taxiway system type is more suitable for operational safety and efficiency.

The 2008 MASP set an ARC objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Full Parallel
- Reliever: Full Parallel
- General: Partial Parallel
- Local: Turnarounds

The taxiways evaluated as part of this objective are for the taxiway that serves the airport's primary runway. As shown in **Figure 3-3,** 94% of MDOT MAA system airports meet or exceed their applicable taxiway system objective.

FIGURE 3-3: TAXIWAY SYSTEM OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the taxiway system objective for their system role. The General and Local roles are the only airport roles with deficiencies, where each airport role has 1 airport not meeting its applicable taxiway system objective; 6% of General and 13% of Local airports do not meet their objectives.

General	Local
Crisfield-Somerset County Airport (W41)	Mexico Farms Airport (1W3)

The primary runway at Baltimore/Washington International Thurgood Marshall Airport (BWI) does not have a full parallel taxiway due to the taxiway design needed when a runway has an intersecting runway. Therefore, in this analysis, BWI is considered as meeting its taxiway system objective.

3.3.4 Approach Capability

Approach capabilities at airports are critical to provide safer and more efficient aircraft operations from runways. An airport's approach capability is determined by the types of navigational aids available at the airport and to a pilot and aircraft.

Approach capabilities are categorized as precision, non-precision, and visual approaches. A precision approach requires an instrument landing system that uses ground-based navigation aids or satellite-generated navigation data to enable both lateral and vertical navigation in the cockpit. An instrument approach system that only provides lateral

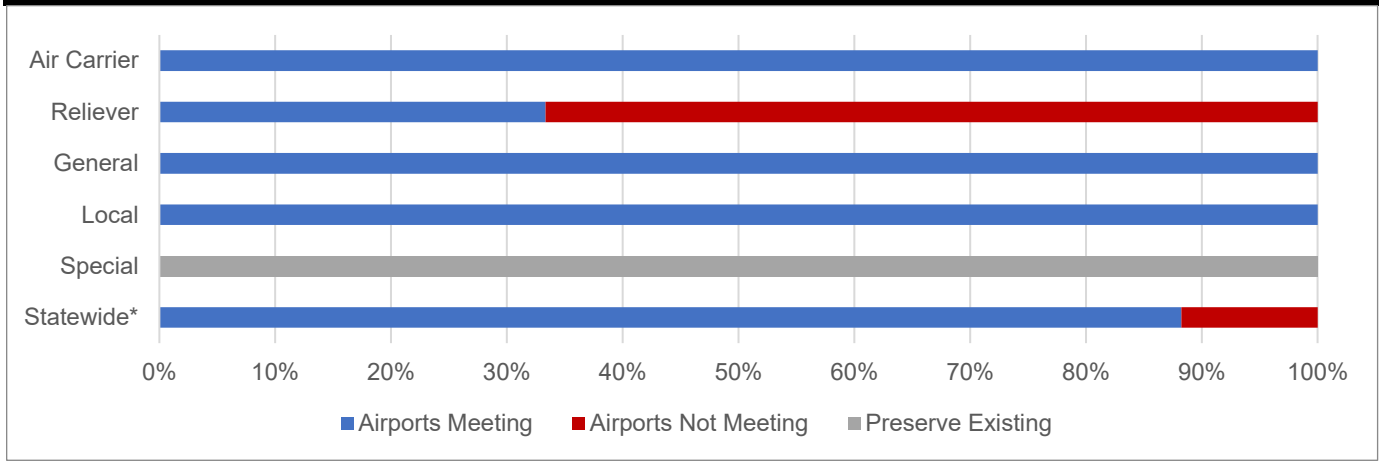
or vertical navigation is known as a non-precision approach. A visual approach is a non-instrument approach in which the pilot relies on visual referencing to avoid clouds while flying.

The 2008 MASP set an approach capability objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Precision
- Reliever: Precision
- General: Non-precision
- Local: Visual

As shown in **Figure 3-4**, 88% of MDOT MAA system airports meet or exceed their applicable approach capability objective.

FIGURE 3-4: APPROACH CAPABILITY OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The Reliever role is the only airport role with any airports that do not meet their applicable approach capability objective with 4 airports (or 67%) not meeting their objectives.

Reliever
Carroll County Regional Airport/Jack B. Poage Field (DMW)
Maryland Airport (2W5)
Montgomery County Airpark (GAI)
Tipton Airport (FME)

3.3.5 Airport Traffic Control Tower

An ATCT manages and coordinates aircraft takeoffs, landings, ground traffic, and aircraft in flight near the airport and allows for safe and secure airspace and airport operations. An ATCT is typically present at busier commercial service airports rather than at smaller general aviation airports, due to the need to control for the volume of aircraft operations.

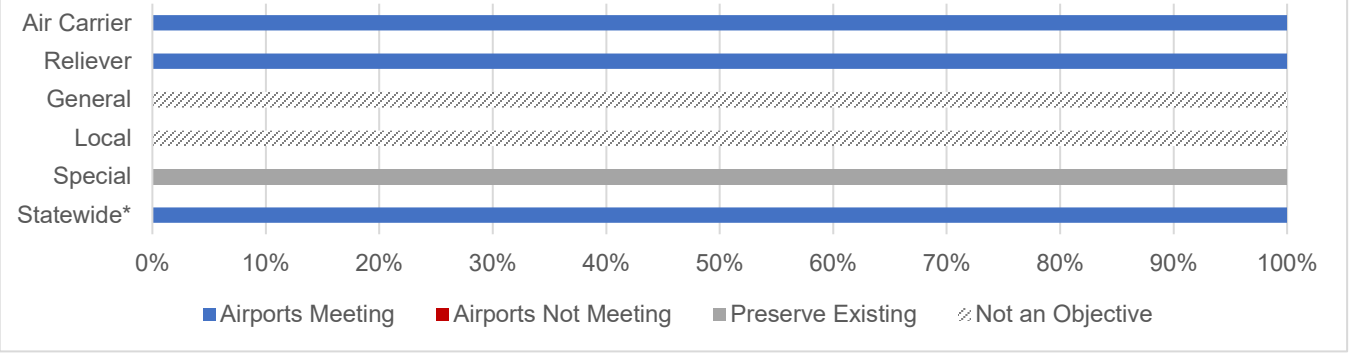
The 2008 MASP set an ATCT objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available, only for airports with at least 120,000 annual operations
- General: Not an objective
- Local: Not an objective

For Reliever airports with less than 120,000 annual operations, the airport was considered meeting its ATCT objective. It is noted here that none of the airports have greater than 120,000 annual operations; therefore, all Reliever airports are shown to meet their applicable ATCT objectives. Two Reliever airports, Martin State (MTN) and Frederick Municipal (FDK) have ATCTs.

As shown in **Figure 3-5**, all airports meet their applicable ATCT objective.

FIGURE 3-5: AIRPORT TRAFFIC CONTROL TOWER OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

3.3.6 Air Traffic Control Communications

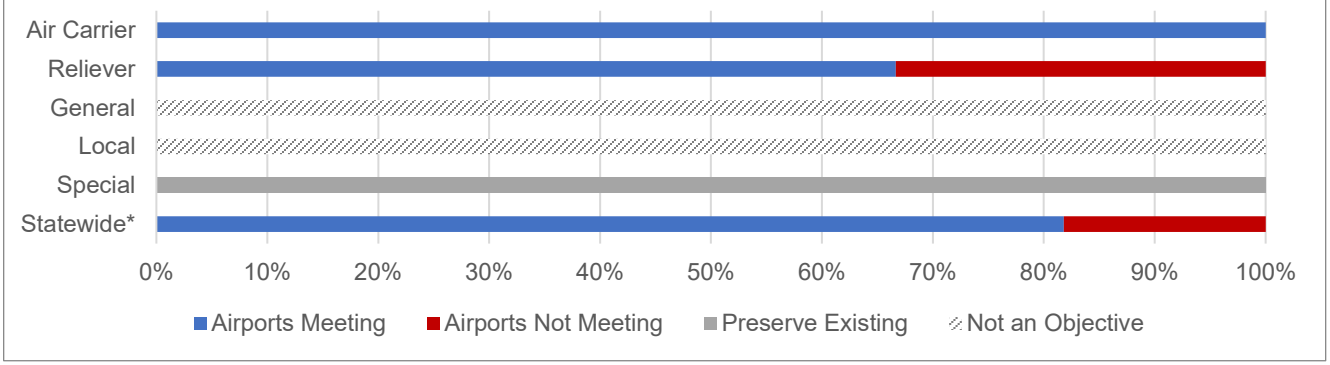
When flying on an Instrument Flight Rules (IFR) flight plan, the ability to communicate with Air Traffic Control (ATC) through Very High Frequency (VHF) radio while remaining on the ground considerably expedites flight operations, especially in places where mobile phone service is limited. ATC communications are conducted via the airport's ATCT facility or, a remote or ground communication outlet (RCO or GCO) that enables dedicated VHF communications on the ground; if an airport has any of these, it is considered to have ATC communications available.

The 2008 MASP set an ATC communications objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Not an objective
- Local: Not an objective

As shown in **Figure 3-6**, 73% of MDOT MAA system airports meet or exceed their applicable ATC communications objective.

FIGURE 3-6: AIR TRAFFIC CONTROL COMMUNICATIONS OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.

Source: Airport questionnaires.

The Reliever role is the only airport role that does not meet their applicable ATC communications objective with 2 airports (or 33%) not meeting their objectives.

Reliever
Maryland Airport (2W5)
Tipton Airport (FME)

3.3.7 Runway Lighting

Runway lighting provides pilots additional direction when navigating the runway and allows for nighttime operations, improving safety during such operations. The lighting systems differ according to the intensity or brightness they can produce.

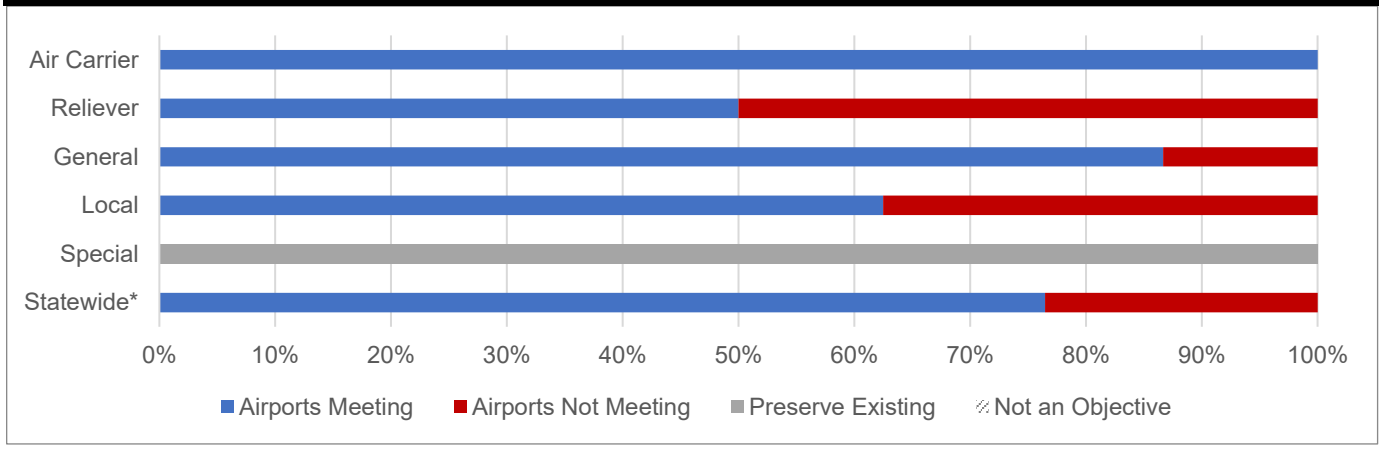
High Intensity Runway Lights (HIRL), Medium Intensity Runway Lights (MIRL), and Low Intensity Runway Lights (LIRL) are the three types of lighting systems that are placed along the edge of the runway. Typically, the runway lights are white except on precision approach runways where a combination of white and yellow lights are used. Additionally, the lights on either runway end emit red light toward the runway to indicate the end of a runway for departing aircraft and green light outward from the runway end to indicate the threshold for landing aircraft. Busier airports are recommended to be equipped with HIRL to allow for nighttime operations and low-visibility operations. Other system airports are recommended to be equipped with MIRL and LIRL.

The 2008 MASP set a runway lighting objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: HIRL
- Reliever: HIRL
- General: MIRL
- Local: LIRL, for airports with a paved runway

As shown in **Figure 3-7**, 76% of MDOT MAA system airports meet or exceed their applicable runway lighting objective.

FIGURE 3-7: RUNWAY LIGHTING OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

The airports below do not meet the runway lighting objective for their system role. The Reliever and Local roles each have 3 airports not meeting their applicable runway lighting objective, 50% of Reliever, 13% of General, and 38% of Local airports do not meet their objective.

Reliever	General	Local
Carroll County Regional Airport/Jack B. Poage Field (DMW)	Gooden Airpark (RJD)	Clearview Airpark (2W2)
Maryland Airport (2W5)	Lee Airport (ANP)	Davis Airport (W50)
Montgomery County Airpark (GAI)		Fallston Airport (W42)

3.3.8 Rotating Beacon

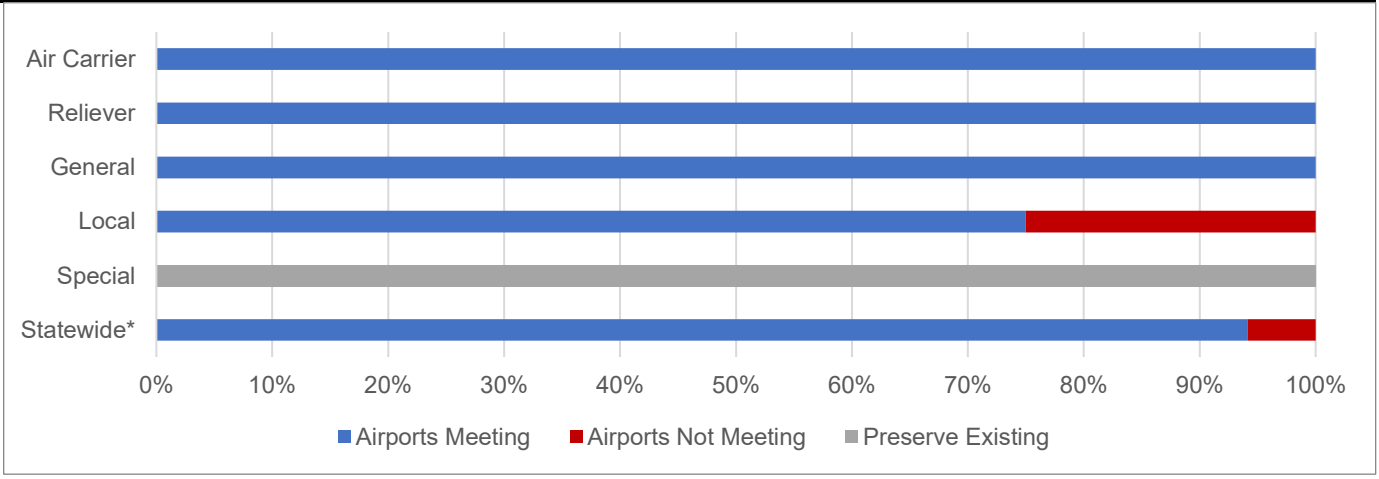
The location and type of facility is identified by rotating beacons. Rotating beacons are visual aids that consist of a rotating light that flashes in a specific pattern. The color(s) of the lights on the rotating beacon assists the pilot to determine whether the facility is a lighted airport, seaplane base, or heliport. On approach or when wayfinding, rotating beacons also assist pilots in locating the airport at night or in low-visibility conditions.

The 2008 MASP set a rotating beacon objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Available
- Local: Available, for airports with a paved runway

As shown in **Figure 3-8**, 94% of MDOT MAA system airports meet or exceed their applicable rotating beacon objective.

FIGURE 3-8: ROTATING BEACON OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

The airports below do not meet the rotating beacon objective for their system role. The Local role is the only airport role with any airports not meeting their applicable rotating beacon objective; the 2 airports (or 25%) not meeting their applicable rotating beacon objective are listed below.

Local
Davis Airport (W50)
Fallston Airport (W42)

3.3.9 Lighted Wind Cone

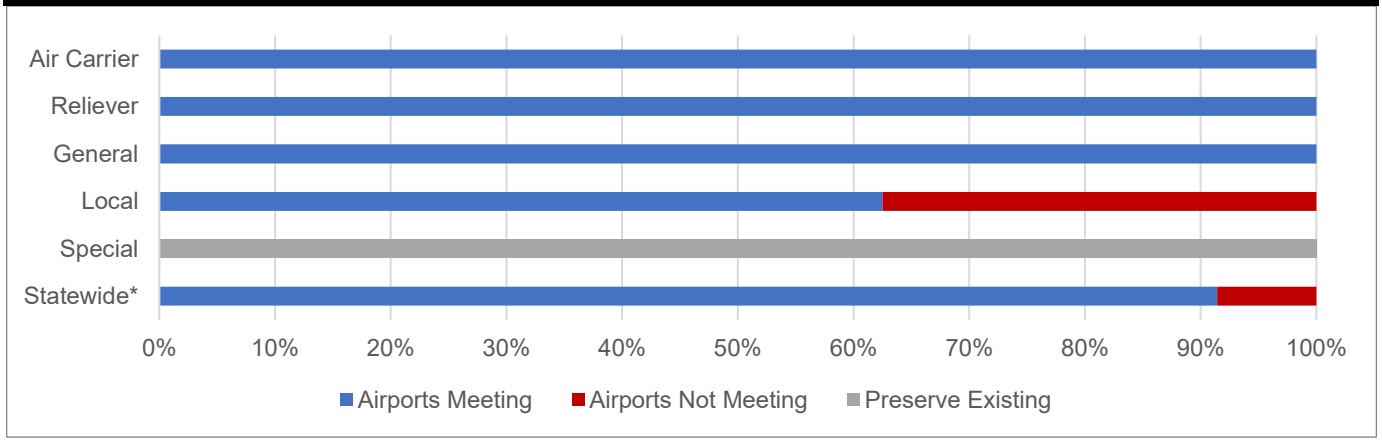
Wind cones are free-rotating hollow fabric shapes positioned at airfields and are recommended to be lighted so they may be used at night or low-visibility conditions. Pilots may use wind cones to get vital wind direction and velocity information for landing and takeoff.

The 2008 MASP set a lighted wind cone objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Available
- Local: Available

As shown in **Figure 3-9**, 91% of MDOT MAA system airports meet or exceed their applicable lighted wind cone objective.

FIGURE 3-9: LIGHTED WIND CONE OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the lighted wind cone objective for their system role. The Local role is the only airport role with any airports not meeting their applicable lighted wind cone objective with 3 airports (or 38%) not meeting their objective.

Local
Davis Airport (W50)
Fallston Airport (W42)
Massey Aerodrome (MD1)

3.3.10 Runway End Identifier Lighting

Runway End Identifier Lights (REILs) assist pilots in recognizing the approach ends of the runway, particularly when landing. The REILs, which comprise of two synchronized flashing lights that are either unidirectional or omnidirectional, are placed on each corner of the runway-landing threshold. REILs are especially effective for identifying a runway in low-visibility conditions, in urban areas where there may be other types of lighting near the airfield, and when a runway lacks contrast with its surrounding terrain.

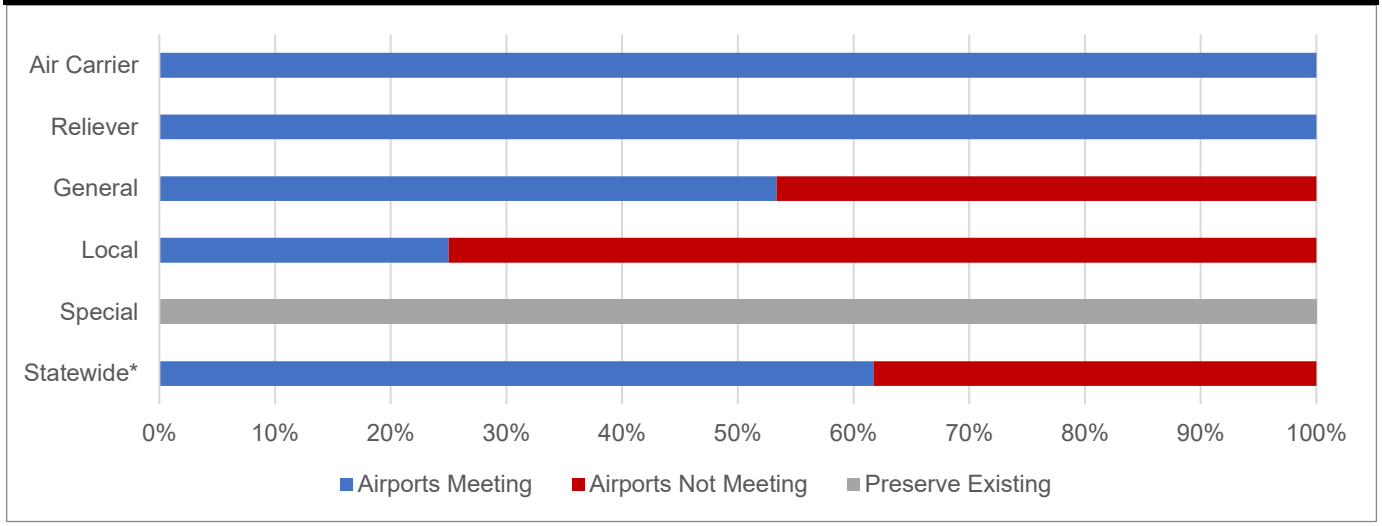
The 2008 MASP set REILs objective for each airport role; these objectives have been carried forward to the 2023 MASP. In this 2023 MASP, the objective for Air Carrier Airports has been modified; Air Carrier Airports that have an Approach Lighting System (ALS) are considered to meet their REILs objective.

The following REILs objectives apply to MDOT MAA airport roles:

- Air Carrier: Available on each end of the primary runway, only applies if ALS is not present
- Reliever: Available on each end of the primary runway
- General: Available on each end of the primary runway
- Local: Available on each end of the primary runway

As shown in **Figure 3-10**, 62% of MDOT MAA system airports meet or exceed their applicable REILs objective.

FIGURE 3-10: RUNWAY END IDENTIFIER LIGHTING OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.

Source: Airport questionnaires.

The airports below do not meet the REILs objective for their system role. The General role has the largest number of airports with deficiencies with 7 airports (or 47%) not meeting their applicable REILs objective.

General	Local
College Park Airport (CGS)	Bennett Airport (1N5)
Easton/Newnam Field Airport (ESN)	Davis Airport (W50)
Greater Cumberland Regional Airport (CBE)	Fallston Airport (W42)
Ocean City Municipal Airport (OXB)	Kentmorr Airpark (3W3)
Freeway Airport (W00)	Massey Aerodrome (MD1)
Lee Airport (ANP)	Mexico Farms Airport (1W3)
Potomac Airfield (VKX)	

3.3.11 Visual Glide Slope Indicator

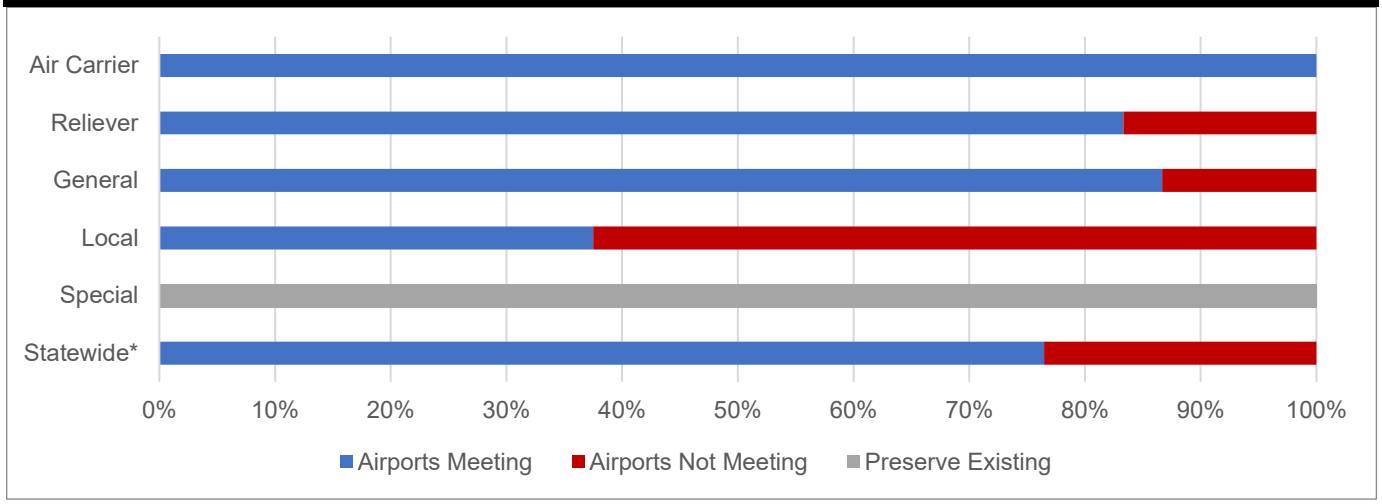
Visual Glide Slope Indicator (VGSIs) are lighting systems that aid pilots in aligning their aircraft with the accurate and safe glide path during approach while landing at an airport. Precision Approach Path Indicators (PAPIs), Visual Approach Slope Indicators (VASIs), and Pulsating/Steady Burning Visual Approach Slope Indicators (PVASIs) are all examples of VGSIs. The angle of the approach glide path is indicated by angled red and white lights in various patterns. Tri-color systems indicate three different colors; red if the aircraft is below the glide path, amber if above, and green if on the glide path. These systems provide pilots a visual aid when landing on a runway and assist pilots to adjust the approach angle accordingly.

The 2008 MASP set a VGSI objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available on each end of the primary runway
- Reliever: Available on each end of the primary runway
- General: Available on each end of the primary runway
- Local: Available on each end of the primary runway

As shown in **Figure 3-11,** 76% of MDOT MAA system airports meet or exceed their applicable VGSI objective.

FIGURE 3-11: VISUAL GLIDE SLOPE INDICATOR OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the VGSI objective for their system role. The Local role has the largest number of deficiencies with 5 airports (or 63%) not meeting their applicable VGSI objective.

Reliever	General	Local
Maryland Airport (2W5)	College Park Airport (CGS) Greater Cumberland Regional Airport (CBE)	Davis Airport (W50) Fallston Airport (W42) Kentmorr Airpark (3W3) Massey Aerodrome (MD1) Mexico Farms Airport (1W3)

3.3.12 Weather Reporting

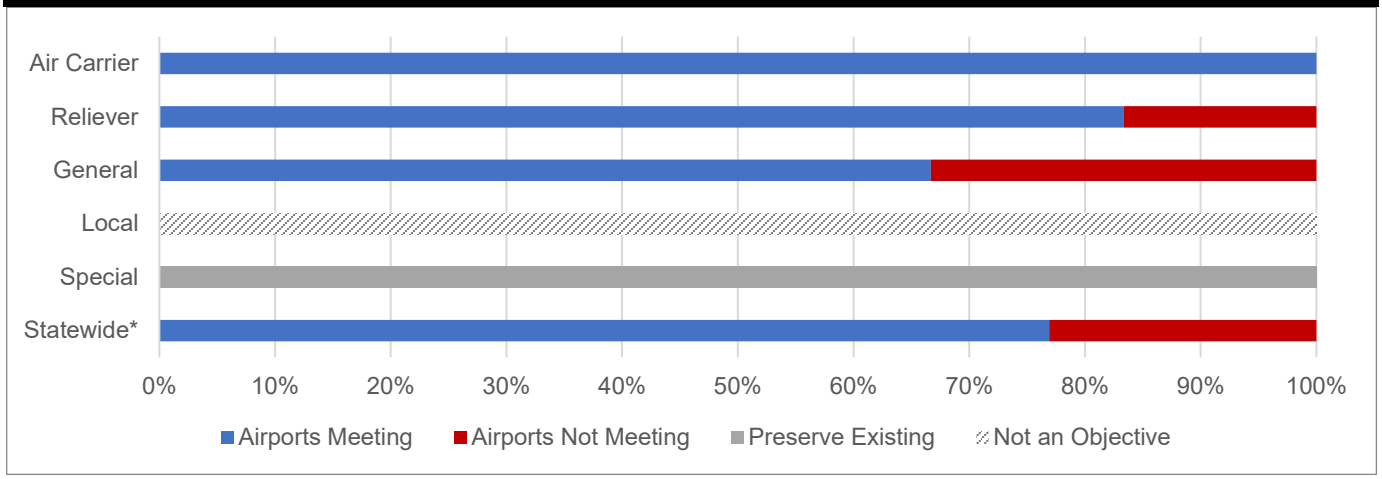
Weather reporting systems are recommended because it is beneficial to the pilot to know the real-time weather conditions at an airfield for flight planning. Automated Weather Observing System (AWOS) and Automated Surface Observing System (ASOS) are the two most common types of weather reporting systems. At a minimum, an AWOS reports altimeter setting, and more advanced systems can report additional information. An ASOS provides more information than an AWOS, such as precipitation identification and intensity. In Maryland, it is important for most airports to have at least basic weather reporting capabilities available for pilots.

The 2008 MASP set a weather reporting objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Available
- Local: Not an objective

As shown in **Figure 3-12**, 77% of MDOT MAA system airports meet or exceed their applicable weather reporting objective.

FIGURE 3-12: WEATHER REPORTING OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

The airports below do not meet the weather reporting objective for their system role. The General role has the largest number of deficiencies with 5 airports (or 33%) not meeting their applicable weather reporting objective.

Reliever	General
Maryland Airport (2W5)	Crisfield-Somerset County Airport (W41) Claremont Airport (58M) Freeway Airport (W00) Gooden Airpark (RJD) Harford County Airport (0W3)

3.4 Airport Services

Airport services are important to ensure airport users, pilots, and aircraft have the facilities needed while using and operating at an airport. The following airport service objectives are established for each airport role:

- General Aviation/Fixed-Based Operator (FBO) Terminal
- Aircraft Fueling

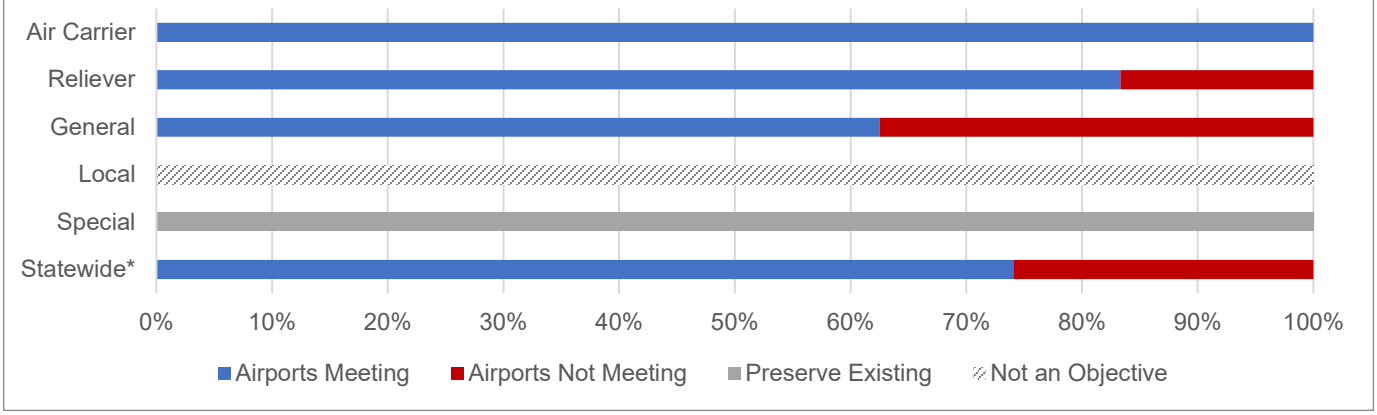
3.4.1 General Aviation/Fixed-Based Operator Terminal

The 2008 MASP set a general aviation/FBO terminal objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Available
- Local: Not an objective

As shown in **Figure 3-13**, 88% of MDOT MAA system airports meet or exceed their applicable general aviation/FBO terminal objective.

FIGURE 3-13: GENERAL AVIATION/FIXED-BASED OPERATOR TERMINAL OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

The airports below do not meet the general aviation/FBO terminal objective for their system role. The General role is the only airport role with any airports not meeting their applicable general aviation/FBO terminal objective with 3 airports (or 20%) not meeting their objectives.

General
Crisfield-Somerset County Airport (W41)
Gooden Airpark (RJD)
Lee Airport (ANP)

3.4.2 Aircraft Fueling

Having a state airport system equipped with aircraft fueling is essential to ensure pilots have the resources to fuel aircraft. Two types of aircraft fuel are essential for state airport systems: Jet fuel (Jet A) and 100 octane low-lead aviation gasoline (Avgas). Turbine-powered aircraft run on Jet A fuel. Most piston engine aircraft in the general aviation community run on 100LL Avgas.

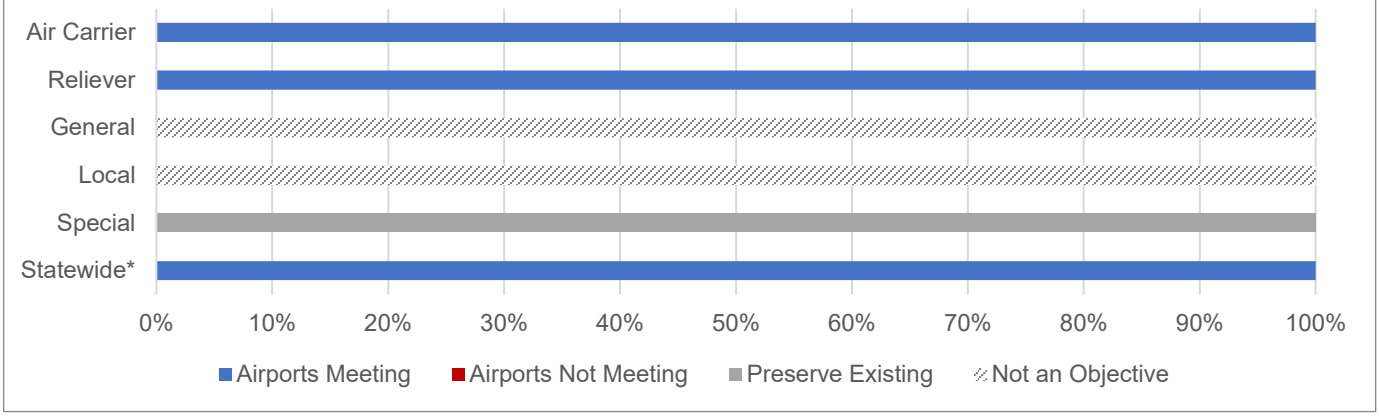
In addition to the availability of a variety of fuel types, access to airports that offer 24-hour fueling is important particularly to those pilots that fly outside of regular business hours. Access to 24-hour fueling is defined as being accessible at any time of day, either through self-service fueling or previous arrangements made with the airport or the FBO.

The 2008 MASP set Jet A and Avgas fueling objectives for each airport role; these objectives have been carried forward to the 2023 MASP. This 2023 MASP added the 24-hour fueling objective for evaluation. The following aircraft fueling objectives apply to MDOT MAA airport roles:

- Air Carrier: Jet A, 100LL, 24-hour
- Reliever: Jet A, 100LL, 24-hour
- General: 100LL, 24-hour
- Local: 100LL, 24-hour

As shown in **Figure 3-14**, all applicable MDOT MAA system airports meet or exceed their applicable Jet A aircraft fueling objective.

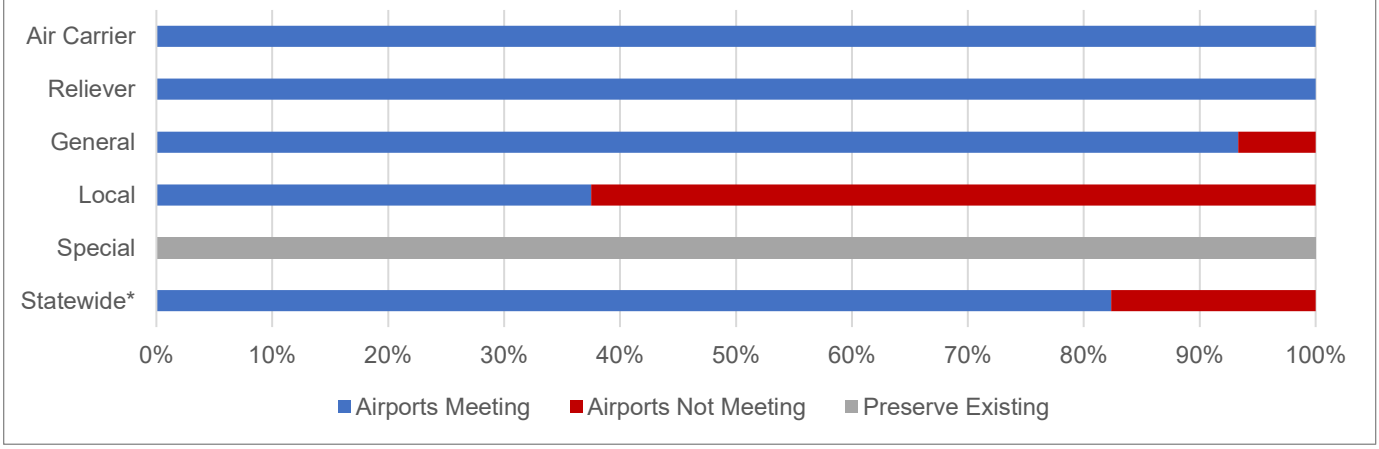
FIGURE 3-14: JET A AIRCRAFT FUELING OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

As shown in **Figure 3-15**, 82% of MDOT MAA system airports meet or exceed their applicable aviation gasoline aircraft fueling objective.

FIGURE 3-15: AVIATION GASOLINE AIRCRAFT FUELING OBJECTIVE



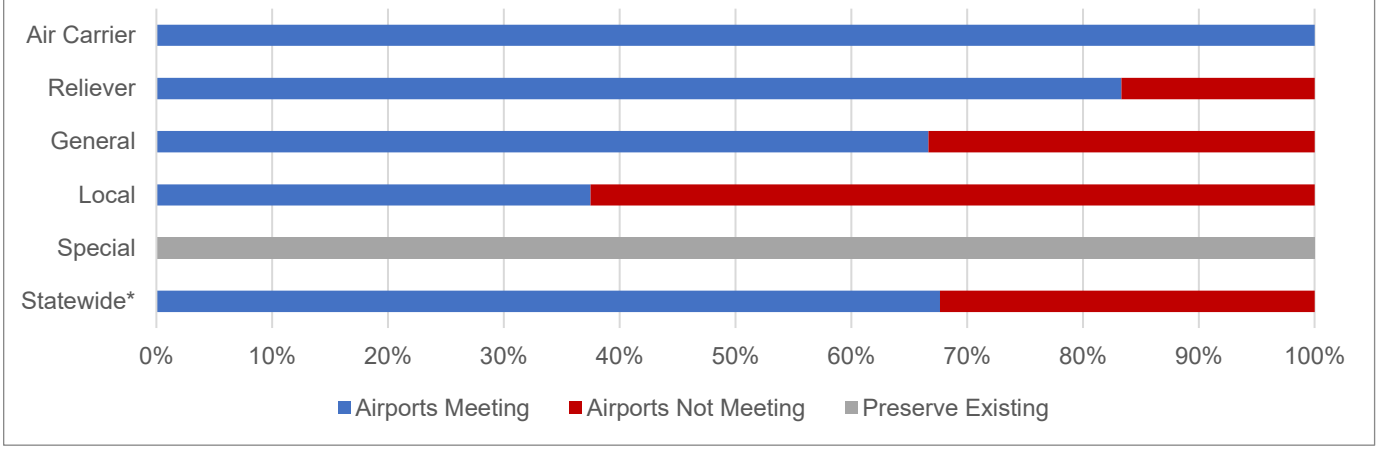
Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the aviation gasoline aircraft fueling objective for their system role. The Local role has the largest number of deficiencies with 5 airports (or 63%) not meeting their applicable aviation gasoline aircraft fueling objective.

General	Local
Gooden Airpark (RJD)	Bennett Airport (1N5) Essex Skypark (W48) Kentmorr Airpark (3W3) Massey Aerodrome (MD1) Mexico Farms Airport (1W3)

As shown in **Figure 3-16**, 68% of MDOT MAA system airports meet or exceed the 24-hour aircraft fueling objective.

FIGURE 3-16: 24-HOUR AIRCRAFT FUELING OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the 24-hour aircraft fueling objective for their system role. The Local and General roles have the largest number of deficiencies, where each airport role has 5 airports not meeting their applicable 24-hour aircraft fueling objective; 33% of General and 63% of Local airports do not meet their objectives.

Reliever	General	Local
Maryland Airport (2W5)	College Park Airport (CGS)	Bennett Airport (1N5)
	Freeway Airport (W00)	Essex Skypark (W48)
	Gooden Airpark (RJD)	Kentmorr Airpark (3W3)
	Lee Airport (ANP)	Massey Aerodrome (MD1)
	Potomac Airfield (VKX)	Mexico Farms Airport (1W3)

3.5 Aircraft Storage

Aircraft storage is essential to ensure based and transient aircraft have dedicated parking spaces. The following aircraft storage objectives are established for each airport role:

- Paved Aircraft Parking
- Hangars
- Covered Overnight Secure Storage

3.5.1 Paved Aircraft Parking

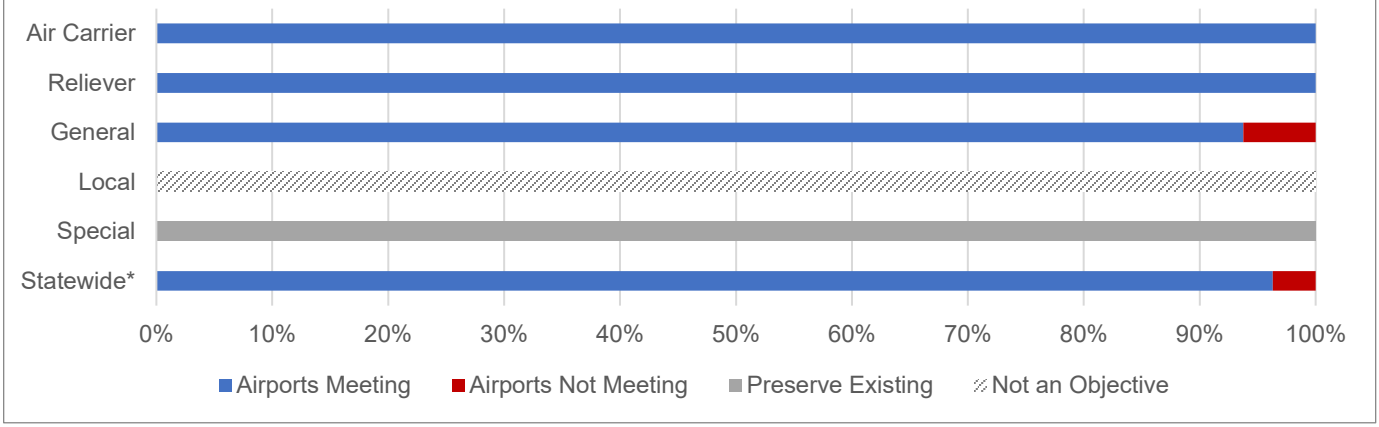
While at the airport, based and transient aircraft require a parking space. Aircraft parking on grass is sufficient at some airports, while paved aircraft parking is required at others, particularly those handling turbine-powered aircraft. In Maryland, it is recommended that most airports provide paved aircraft parking spaces.

The 2008 MASP set a paved aircraft parking objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Available
- Local: Not an objective

As shown in **Figure 3-17**, 96% of MDOT MAA system airports meet or exceed their applicable paved aircraft parking objective.

FIGURE 3-17: PAVED AIRCRAFT PARKING OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

One General airport does not meet its paved aircraft parking objective, resulting in 7% of General role airports not meeting their objectives.

General
Gooden Airpark (RJD)

3.5.2 Hangars

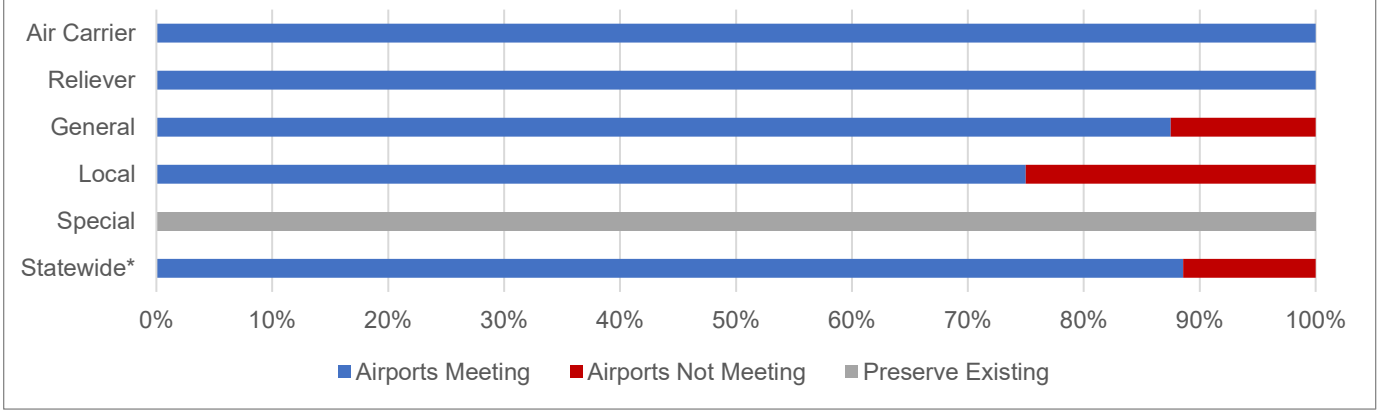
A hangar is another form of enclosed aircraft storage that provides parking while also protecting aircraft from inclement weather conditions. There are two common types of hangars: T-Hangars and conventional hangars.

The 2008 MASP set a hangar objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Available
- Local: Available

As shown in **Figure 3-18**, 88% of MDOT MAA system airports meet or exceed their applicable paved aircraft parking objective.

FIGURE 3-18: HANGAR OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the hangar objective for their system role. The airport roles with deficiencies occur in the General and Local airport category, where each airport role has 2 airports not meeting their hangar objectives; equivalent to 13% of General and 25% of Local service airports.

General	Local
Crisfield-Somerset County Airport (W41) Freeway Airport (W00)	Bennett Airport (1N5) Kentmorr Airpark (3W3)

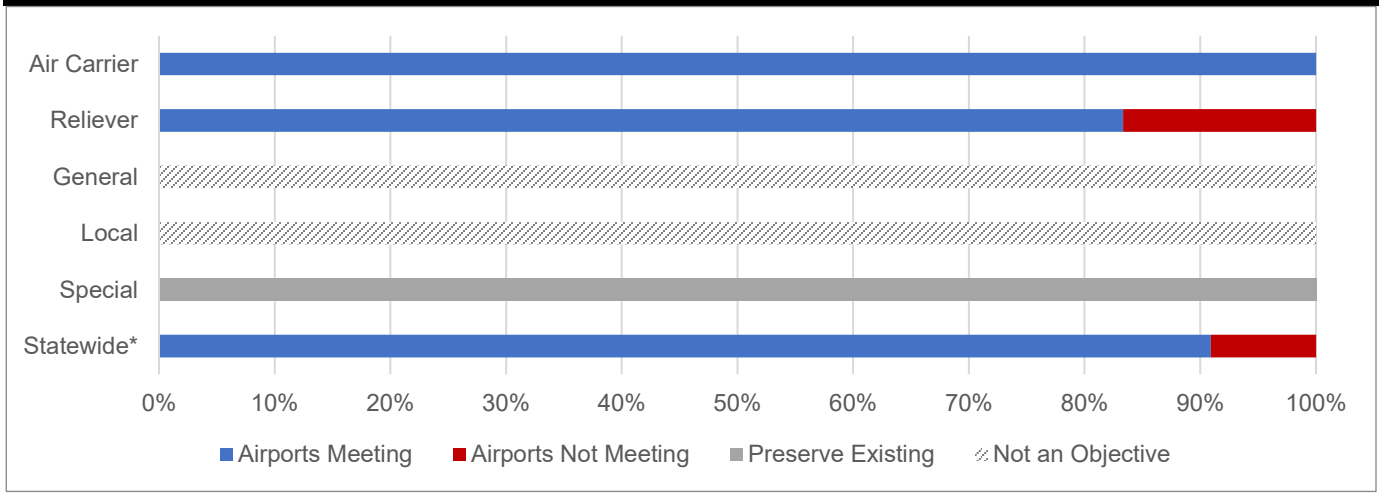
3.5.3 Covered Overnight Secure Storage

Covered overnight secured storage is another form of aircraft storage that provides a secure location for aircraft. This objective considers the availability of both dedicated and undedicated overnight aircraft storage availability at certain airport role categories. The 2008 MASP set a covered overnight secure storage objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Not an objective
- Local: Not an objective

As shown in **Figure 3-19**, 91% of MDOT MAA system airports meet or exceed their applicable covered overnight secure storage objective.

FIGURE 3-19: COVERED OVERNIGHT SECURE STORAGE OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

One airport below does not meet the paved aircraft parking objective for the Reliever role resulting in 17% of Reliever service airport not meeting their objectives.

Reliever
Tipton Airport (FME)

3.6 Operational Safety and Security

Operational safety and security are a major concern for airports. Minimum facility objectives are established for the following operational safety and security facilities:

- Airport Property Fence
- Snow Removal

3.6.1 Airport Property Fence

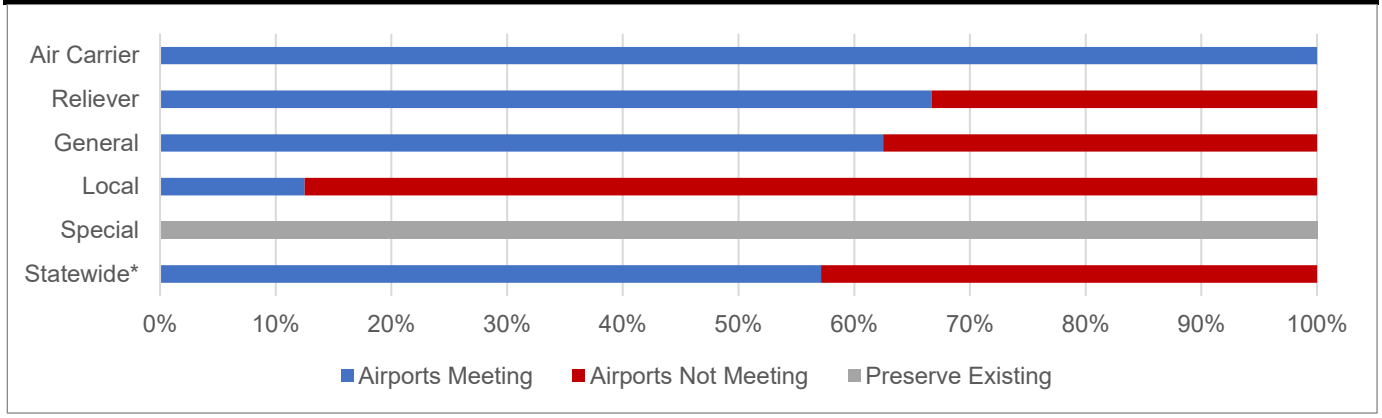
Having an enclosed airport property fence provides safety and security for all airport users and aircraft; not only does a property fence ensure security and separation from surrounding public areas, but it also protects the airport and its operations from wildlife.

The 2008 MASP set an airport property fence objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available
- Reliever: Available
- General: Available
- Local: Available

As shown in **Figure 3-20**, 56% of MDOT MAA system airports meet or exceed their applicable airport property fence objective.

FIGURE 3-20: AIRPORT PROPERTY FENCE OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the airport property fence objective for their system role. The airport roles with the largest number of deficiencies occur in the General and Local airport roles, with the General role having 6 airports, and the Local role having 7 not meeting their airport property fence objectives; 38% of General and 88% of Local service airports do not meet their applicable objectives.

Reliever	General	Local
Frederick Municipal Airport (FDK) Maryland Airport (2W5)	Greater Cumberland Regional Airport (CBE) Claremont Airport (58M) Freeway Airport (W00) Gooden Airpark (RJD) Harford County Airport (0W3) Potomac Airfield (VKX)	Bennett Airport (1N5) Clearview Airpark (2W2) Davis Airport (W50) Essex Skypark (W48) Kentmorr Airpark (3W3) Massey Aerodrome (MD1) Mexico Farms Airport (1W3)

3.6.2 Snow Removal

The ability to clear snow from the airfield is critical for airport use in the winter, which is important for airports in Maryland. Following a snowstorm, the availability of snow removal equipment determines if an airport's runway and taxiways can be plowed to ensure aircraft can operate safely.

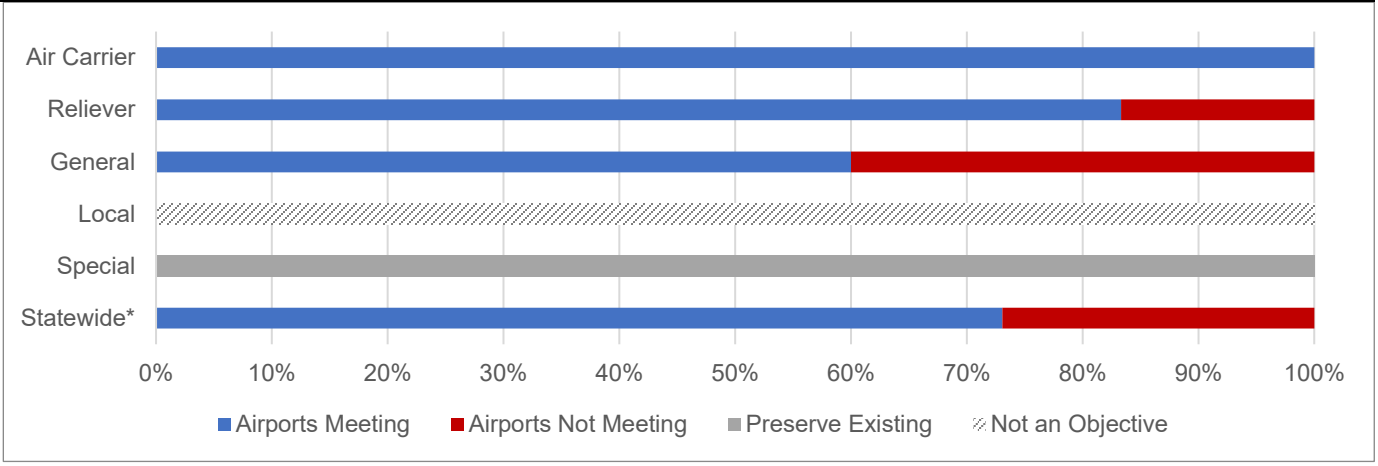
The 2008 MASP set a snow removal objective for each airport role; these objectives have been carried forward to the 2023 MASP and include the following:

- Air Carrier: Available

- Reliever: Available
- General: Available
- Local: Not an objective

As shown in **Figure 3-21**, 73% of MDOT MAA system airports meet or exceed their applicable snow removal objective.

FIGURE 3-21: SNOW REMOVAL OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective; additionally, only airports with an objective set are included in the statewide total.
Source: Airport questionnaires.

The airports below do not meet the snow removal objective for their system role. The General role has the largest number of deficiencies with 6 airports (or 40%) not meeting their applicable snow removal objective.

Reliever	General
Maryland Airport (2W5)	Cambridge-Dorchester Regional Airport (CGE) Claremont Airport (58M) Freeway Airport (W00) Gooden Airpark (RJD) Lee Airport (ANP) Potomac Airfield (VKX)

3.7 Airport Planning Studies

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify a recommended development plan. Airport planning documents should be updated regularly, or as increased demand necessitates; as conditions at an airport or community change; or as changes in federal planning and design standards warrant. Minimum facility objectives are established for the following airport planning studies:

- Airport Master Plan
- Airport Layout Plan

3.7.1 Airport Master Plan

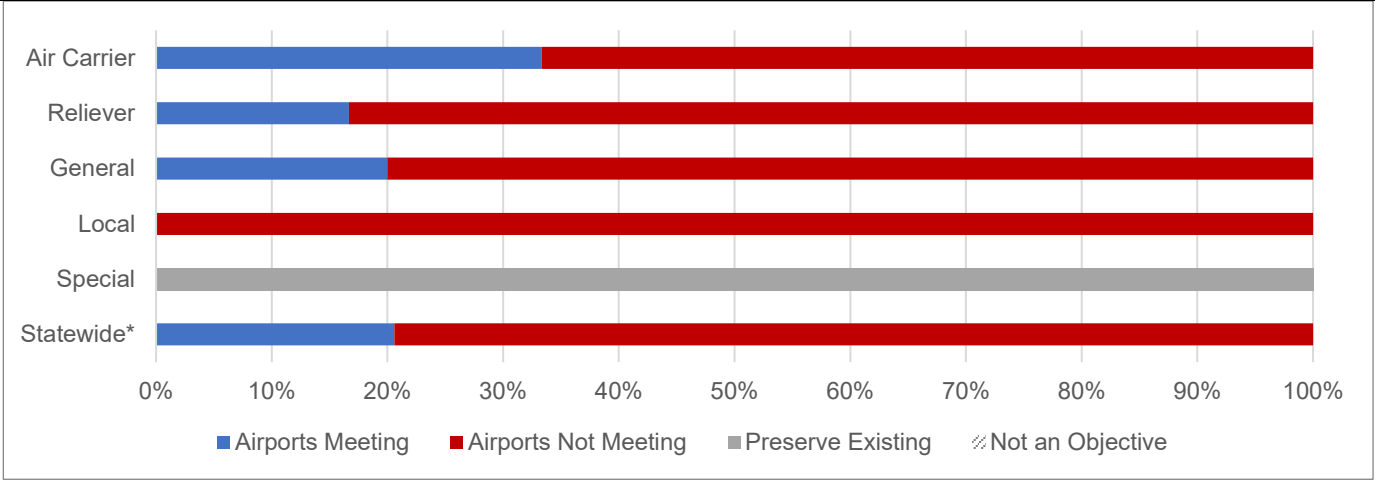
An airport master plan serves as the airport's roadmap for short- medium-, and long-term development. Airport master plans identify opportunities and justify needs for development at airports and assist airports to prioritize airport development projects. Some airports may require Master Plan updates more frequently than others. As a recommendation, this objective was set at a higher frequency for the Air Carrier role than the Reliever, General and Local roles. However, it is understood that these frequencies may vary, and being driven by qualitative changing needs, therefore some update frequencies may be extended or shortened based on individual airport needs.

The 2023 MASP added the airport master plan objective for evaluation. The following airport master plan objectives apply to MDOT MAA airport roles:

- Air Carrier: Every 5 Years
- Reliever: Every 10 Years
- General: Every 10 Years
- Local: Every 10 Years

As shown in **Figure 3-22**, only 21% of MDOT MAA system airports meet or exceed their applicable airport master plan objective.

FIGURE 3-22: AIRPORT MASTER PLAN OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires.

The airports below do not meet the airport master plan objective for their system role. The General role has the largest number of deficiencies with 12 airports (or 80%) not meeting their applicable airport master plan objective.

Air Carrier	General
Baltimore/Washington International Thurgood Marshall Airport (BWI) Hagerstown Regional Airport/Richard A. Henson Field (HGR)	Bay Bridge Airport (W29) Cambridge-Dorchester Regional Airport (CGE) College Park Airport (CGS) Crisfield-Somerset County Airport (W41) Easton/Newnam Field Airport (ESN) St. Mary's County Regional Airport (2W6) Claremont Airport (58M) Freeway Airport (W00) Gooden Airpark (RJD) Harford County Airport (0W3) Lee Airport (ANP) Potomac Airfield (VKX)

Reliever	Local
Frederick Municipal Airport (FDK)	Bennett Airport (1N5)
Martin State Airport (MTN)	Clearview Airpark (2W2)
Maryland Airport (2W5)	Davis Airport (W50)
Montgomery County Airpark (GAI)	Essex Skypark (W48)
Tipton Airport (FME)	Fallston Airport (W42)
	Kentmorr Airpark (3W3)
	Massey Aerodrome (MD1)
	Mexico Farms Airport (1W3)

3.7.2 Airport Layout Plan

The existing and planned airport facilities are shown in an ALP. Typically, an airport master plan is conducted concurrently with an ALP; however, there are instances where an airport submits a "pen-and-ink" change to the ALP.

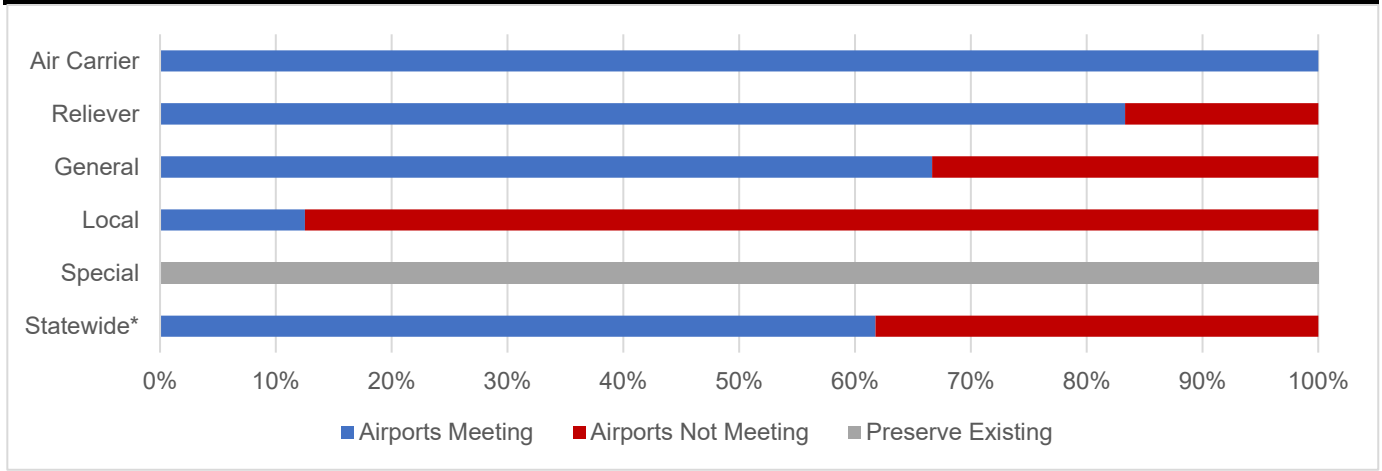
ALPs are critical planning tools that lay out airport facilities in the context of critical airspace and land use regulations. For NPIAS airports to be eligible for federal funding, a project must appear on an FAA-approved ALP. Although it is not a requirement for airports to have an updated airport master plan or ALP to be eligible for state funding, airports are strongly encouraged to engage in such planning activities as recommended by their facility, service, and equipment objectives. Some airports may require ALP updates more frequently than others. As a recommendation, this objective was set at a higher frequency for the Air Carrier role than the Reliever, General and Local roles. However, as mentioned for the Master Plan update frequencies, it is understood that ALP updates may vary, and being driven by qualitative changing needs. In some cases, Pen and Ink updates may be sufficient on an existing ALP to document the update.

The 2023 MASP added the ALP objective for evaluation. The following recommended ALP objectives apply to MDOT MAA airport roles:

- Air Carrier: Every 5 Years
- Reliever: Every 10 Years
- General: Every 10 Years
- Local: Every 10 Years

As shown in **Figure 3-23**, 62% of MDOT MAA system airports meet or exceed their applicable airport layout plan objective.

FIGURE 3-23: AIRPORT LAYOUT PLAN OBJECTIVE



Note: (*) The statewide percentage of airports meeting the objective assumes that Special Facilities (which should "preserve existing") meet the objective.
Source: Airport questionnaires

The airports below do not meet the ALP objective for their system role. The Local role has the largest number of deficiencies with 7 airports (or 88%) not meeting their applicable ALP objective. It is unknown when Freeway Airport's last ALP was published; therefore, it is indicated below as not meeting the objective.

Reliever	General	Local
Frederick Municipal Airport (FDK)	Claremont Airport (58M) Freeway Airport (W00) Gooden Airpark (RJD) Lee Airport (ANP) Potomac Airfield (VKX)	Bennett Airport (1N5) Clearview Airpark (2W2) Essex Skypark (W48) Fallston Airport (W42) Kentmorr Airpark (3W3) Massey Aerodrome (MD1) Mexico Farms Airport (1W3)

3.8 Summary

This chapter evaluates MDOT MAA system airports' meeting their associated role's objectives from the facility, service, and equipment standpoint. **Table 3-3** through **Table 3-25** provided in subsequent pages detail the facility, service, and equipment objective evaluation above summarized by objective in individual tables. The analysis in this chapter will inform the gap analysis, which will identify airport-specific deficiencies, and serve as the basis for developing recommendations for Maryland's state airport system.

TABLE 3-3: PRIMARY RUNWAY LENGTH OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Primary Runway Designation	Primary Runway Length	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	10/28	10,502′	Meets Objective	Improve Taxiway System
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	9/27	7,000′	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	14/32	6,400′	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	16/34	5,100′	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	5/23	5,219′	Meets Objective	
Martin State Airport	MTN	Reliever	15/33	6,996′	Meets Objective	
Maryland Airport	2W5	Reliever	2/20	3,740′	Does Not Meet Objective	Extend Primary Runway Length by 1,260′
Montgomery County Airpark	GAI	Reliever	14/32	4,202′	Does Not Meet Objective	Extend Primary Runway Length by 798′
Tipton Airport	FME	Reliever	10/28	3,000′	Does Not Meet Objective	Extend Primary Runway Length by 2,000′
Bay Bridge Airport	W29	General	11/29	2,713′	Does Not Meet Objective	Extend Primary Runway Length by 787′
Cambridge-Dorchester Regional Airport	CGE	General	16/34	4,477′	Meets Objective	
Claremont Airport	58M	General	13/31	2,989′	Does Not Meet Objective	Extend Primary Runway Length by 511′
College Park Airport	CGS	General	15/33	2,980′	Does Not Meet Objective	Extend Primary Runway Length by 520′
Crisfield-Somerset County Airport	W41	General	14/32	2,397′	Does Not Meet Objective	Extend Primary Runway Length by 1,103′
Easton/Newnam Field Airport	ESN	General	4/22	5,500′	Meets Objective	
Freeway Airport	W00	General	18/36	2,430′	Does Not Meet Objective	Extend Primary Runway Length by 1,070′
Garrett County Airport	2G4	General	9/27	5,000′	Meets Objective	
Gooden Airpark	RJD	General	12/30	3,214′	Does Not Meet Objective	Extend Primary Runway Length by 286′
Greater Cumberland Regional Airport	CBE	General	5/23	5,047′	Meets Objective	
Harford County Airport	0W3	General	1/19	2,856′	Does Not Meet Objective	Extend Primary Runway Length by 644′
Lee Airport	ANP	General	12/30	2,500′	Does Not Meet Objective	Extend Primary Runway Length by 1,000′
Ocean City Municipal Airport	OXB	General	14/32	4,074′	Meets Objective	
Potomac Airfield	VKX	General	6/24	2,665′	Does Not Meet Objective	Extend Primary Runway Length by 835′
St. Mary's County Regional Airport	2W6	General	11/29	4,150′	Meets Objective	
Bennett Airport	1N5	Local	17/35	3,171′	Meets Objective	
Clearview Airpark	2W2	Local	14/32	1,840′	Does Not Meet Objective	Extend Primary Runway Length by 160′
Davis Airport	W50	Local	8/26	2,000′	Meets Objective	
Essex Skypark	W48	Local	16/34	2,084′	Meets Objective	
Fallston Airport	W42	Local	4/22	2,200′	Meets Objective	
Kentmorr Airpark	3W3	Local	10/28	2,400′	Meets Objective	
Massey Aerodrome	MD1	Local	2/20	3,000′	Meets Objective	
Mexico Farms Airport	1W3	Local	9/27	2,120′	Meets Objective	
Havre de Grace Seaplane Base	M06	Special	E/W	8,000′	Preserve Existing	
Pier 7 Heliport	4MD	Special	H1/H1	50′	Preserve Existing	

Source: Airport questionnaires. 2021-2025 FAA NPIAS; 2012 FAA General Aviation Airports: A National Asset (ASSET 1); 2014 FAA ASSET 2: In-Depth Review of 497 Unclassified Airports.

TABLE 3-4: AIRPORT REFERENCE CODE OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Airport Reference Code	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	D-V	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	C-III	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	C-III	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	C-II	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	C-II	Meets Objective	
Martin State Airport	MTN	Reliever	D-III	Meets Objective	
Maryland Airport	2W5	Reliever	B-II	Does Not Meet Objective	Improve ARC
Montgomery County Airpark	GAI	Reliever	B-II	Does Not Meet Objective	Improve ARC
Tipton Airport	FME	Reliever	B-II	Does Not Meet Objective	Improve ARC
Bay Bridge Airport	W29	General	B-I Small	Does Not Meet Objective	Improve ARC
Cambridge-Dorchester Regional Airport	CGE	General	B-II	Meets Objective	
Claremont Airport	58M	General	B-I	Meets Objective	
College Park Airport	CGS	General	B-I	Meets Objective	
Crisfield-Somerset County Airport	W41	General	B-I Small	Does Not Meet Objective	Improve ARC
Easton/Newnam Field Airport	ESN	General	D-II	Meets Objective	
Freeway Airport	W00	General	B-I	Meets Objective	
Garrett County Airport	2G4	General	B-II	Meets Objective	
Gooden Airpark	RJD	General	B-II	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	C-III	Meets Objective	
Harford County Airport	0W3	General	B-II	Meets Objective	
Lee Airport	ANP	General	B-I	Meets Objective	
Ocean City Municipal Airport	OXB	General	B-II	Meets Objective	
Potomac Airfield	VKX	General	A-II	Does Not Meet Objective	Improve ARC
St. Mary's County Regional Airport	2W6	General	B-II	Meets Objective	
Bennett Airport	1N5	Local	B-I	Meets Objective	
Clearview Airpark	2W2	Local	B-I	Meets Objective	
Davis Airport	W50	Local	B-II Small	Meets Objective	
Essex Skypark	W48	Local	A-I	Meets Objective	
Fallston Airport	W42	Local	B-I	Meets Objective	
Kentmorr Airpark	3W3	Local	A-I Small	Meets Objective	
Massey Aerodrome	MD1	Local	B-I	Meets Objective	
Mexico Farms Airport	1W3	Local	B-I	Meets Objective	
Havre de Grace Seaplane Base	M06	Special	Unknown	Preserve Existing	
Pier 7 Heliport	4MD	Special	Unknown	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-5: TAXIWAY SYSTEM OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Primary Runway Designation	Taxiway System	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	10/28	Partial Parallel	Meets Objective*	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	9/27	Full Parallel	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	14/32	Full Parallel	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	16/34	Full Parallel	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	5/23	Full Parallel	Meets Objective	
Martin State Airport	MTN	Reliever	15/33	Full Parallel	Meets Objective	
Maryland Airport	2W5	Reliever	2/20	Full Parallel	Meets Objective	
Montgomery County Airpark	GAI	Reliever	14/32	Full Parallel	Meets Objective	
Tipton Airport	FME	Reliever	10/28	Full Parallel	Meets Objective	
Bay Bridge Airport	W29	General	11/29	Full Parallel	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	16/34	Full Parallel	Meets Objective	
Claremont Airport	58M	General	13/31	Full Parallel	Meets Objective	
College Park Airport	CGS	General	15/33	Full Parallel	Meets Objective	
Crisfield-Somerset County Airport	W41	General	14/32	Turnaround	Does Not Meet Objective	Improve Taxiway System
Easton/Newnam Field Airport	ESN	General	4/22	Full Parallel	Meets Objective	
Freeway Airport	W00	General	18/36	Full Parallel	Meets Objective	
Garrett County Airport	2G4	General	9/27	Full Parallel	Meets Objective	
Gooden Airpark	RJD	General	12/30	Full Parallel	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	5/23	Partial Parallel	Meets Objective	
Harford County Airport	0W3	General	1/19	Full Parallel	Meets Objective	
Lee Airport	ANP	General	12/30	Full Parallel	Meets Objective	
Ocean City Municipal Airport	OXB	General	14/32	Partial Parallel	Meets Objective	
Potomac Airfield	VKX	General	6/24	Full Parallel	Meets Objective	
St. Mary's County Regional Airport	2W6	General	11/29	Full Parallel	Meets Objective	
Bennett Airport	1N5	Local	17/35	Turnaround	Meets Objective	
Clearview Airpark	2W2	Local	14/32	Partial Parallel	Meets Objective	
Davis Airport	W50	Local	8/26	Full Parallel	Meets Objective	
Essex Skypark	W48	Local	16/34	Turnaround	Meets Objective	
Fallston Airport	W42	Local	4/22	Turnaround	Meets Objective	
Kentmorr Airpark	3W3	Local	10/28	Full Parallel	Meets Objective	
Massey Aerodrome	MD1	Local	2/20	Turnaround	Meets Objective	
Mexico Farms Airport	1W3	Local	9/27	None	Does Not Meet Objective	Improve Taxiway System
Havre de Grace Seaplane Base	M06	Special	E/W	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	H1/H1	None	Preserve Existing	Improve Taxiway System

Note: (*) Due to the intersecting runways at BWI, a full parallel taxiway is not feasible for the primary runway; since the primary runway is fully accessible using the taxiway system, BWI is considered as meeting the taxiway system objective.

Source: Airport questionnaires.

TABLE 3-6: APPROACH CAPABILITY OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Approach Capability	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Precision	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Precision	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Precision	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Non-Precision	Does Not Meet Objective	Improve Approach Capability
Frederick Municipal Airport	FDK	Reliever	Precision	Meets Objective	
Martin State Airport	MTN	Reliever	Precision	Meets Objective	
Maryland Airport	2W5	Reliever	Non-Precision	Does Not Meet Objective	Improve Approach Capability
Montgomery County Airpark	GAI	Reliever	Non-Precision	Does Not Meet Objective	Improve Approach Capability
Tipton Airport	FME	Reliever	Non-Precision	Does Not Meet Objective	Improve Approach Capability
Bay Bridge Airport	W29	General	Precision	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Non-Precision	Meets Objective	
Claremont Airport	58M	General	Non-Precision	Meets Objective	
College Park Airport	CGS	General	Non-Precision	Meets Objective	
Crisfield-Somerset County Airport	W41	General	Non-Precision	Meets Objective	
Easton/Newnam Field Airport	ESN	General	Precision	Meets Objective	
Freeway Airport	W00	General	Non-Precision	Meets Objective	
Garrett County Airport	2G4	General	Non-Precision	Meets Objective	
Gooden Airpark	RJD	General	Non-Precision	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	Non-Precision	Meets Objective	
Harford County Airport	0W3	General	Non-Precision	Meets Objective	
Lee Airport	ANP	General	Non-Precision	Meets Objective	
Ocean City Municipal Airport	OXB	General	Non-Precision	Meets Objective	
Potomac Airfield	VKX	General	Non-Precision	Meets Objective	
St. Mary's County Regional Airport	2W6	General	Non-Precision	Meets Objective	
Bennett Airport	1N5	Local	Visual	Meets Objective	
Clearview Airpark	2W2	Local	Non-Precision	Meets Objective	
Davis Airport	W50	Local	Visual	Meets Objective	
Essex Skypark	W48	Local	Visual	Meets Objective	
Fallston Airport	W42	Local	Visual	Meets Objective	
Kentmorr Airpark	3W3	Local	Visual	Meets Objective	
Massey Aerodrome	MD1	Local	Visual	Meets Objective	
Mexico Farms Airport	1W3	Local	Visual	Meets Objective	
Havre de Grace Seaplane Base	M06	Special	Visual	Preserve Existing	
Pier 7 Heliport	4MD	Special	Visual	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-7: AIRPORT TRAFFIC CONTROL TOWER OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Airport Traffic Control Tower	2019 Annual Operations	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	266,569	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	35,280	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	2,137	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	None	7,730	Not an Objective	
Frederick Municipal Airport	FDK	Reliever	Available	5,100	Not an Objective	
Martin State Airport	MTN	Reliever	Available	5,957	Not an Objective	
Maryland Airport	2W5	Reliever	None	94,901	Not an Objective	
Montgomery County Airpark	GAI	Reliever	None	32,115	Not an Objective	
Tipton Airport	FME	Reliever	None	14,300	Not an Objective	
Bay Bridge Airport	W29	General	None	23,713	Not an Objective	
Cambridge-Dorchester Regional Airport	CGE	General	None	56,224	Not an Objective	
Claremont Airport	58M	General	None	30	Not an Objective	
College Park Airport	CGS	General	None	8,050	Not an Objective	
Crisfield-Somerset County Airport	W41	General	None	3,231	Not an Objective	
Easton/Newnam Field Airport	ESN	General	Available	1,961	Not an Objective	
Freeway Airport	W00	General	None	5,150	Not an Objective	
Garrett County Airport	2G4	General	None	71,410	Not an Objective	
Gooden Airpark	RJD	General	None	1,261	Not an Objective	
Greater Cumberland Regional Airport	CBE	General	None	5,592	Not an Objective	
Harford County Airport	0W3	General	None	48,000	Not an Objective	
Lee Airport	ANP	General	None	12,054	Not an Objective	
Ocean City Municipal Airport	OXB	General	None	15,825	Not an Objective	
Potomac Airfield	VKX	General	None	5,774	Not an Objective	
St. Mary's County Regional Airport	2W6	General	None	11,900	Not an Objective	
Bennett Airport	1N5	Local	None	29,840	Not an Objective	
Clearview Airpark	2W2	Local	None	1,010	Not an Objective	
Davis Airport	W50	Local	None	11,646	Not an Objective	
Essex Skypark	W48	Local	None	86,911	Not an Objective	
Fallston Airport	W42	Local	None	22,050	Not an Objective	
Kentmorr Airpark	3W3	Local	None	4,650	Not an Objective	
Massey Aerodrome	MD1	Local	None	49,738	Not an Objective	
Mexico Farms Airport	1W3	Local	None	33,588	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	38,606	Preserve Existing	
Pier 7 Heliport	4MD	Special	None	37,911	Preserve Existing	

Source: Airport questionnaires. 2019 MDOT MAA Inspection Data.

TABLE 3-8: AIR TRAFFIC CONTROL COMMUNICATIONS OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Air Traffic Control Communications	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	None	Does Not Meet Objective	Improve ATC Communications
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	None	Does Not Meet Objective	Improve ATC Communications
Bay Bridge Airport	W29	General	None	Not an Objective	
Cambridge-Dorchester Regional Airport	CGE	General	None	Not an Objective	
Claremont Airport	58M	General	None	Not an Objective	
College Park Airport	CGS	General	None	Not an Objective	
Crisfield-Somerset County Airport	W41	General	None	Not an Objective	
Easton/Newnam Field Airport	ESN	General	Available	Not an Objective	
Freeway Airport	W00	General	None	Not an Objective	
Garrett County Airport	2G4	General	None	Not an Objective	
Gooden Airpark	RJD	General	None	Not an Objective	
Greater Cumberland Regional Airport	CBE	General	None	Not an Objective	
Harford County Airport	0W3	General	None	Not an Objective	
Lee Airport	ANP	General	None	Not an Objective	
Ocean City Municipal Airport	OXB	General	Available	Not an Objective	
Potomac Airfield	VKX	General	None	Not an Objective	
St. Mary's County Regional Airport	2W6	General	Available	Not an Objective	
Bennett Airport	1N5	Local	None	Not an Objective	
Clearview Airpark	2W2	Local	None	Not an Objective	
Davis Airport	W50	Local	None	Not an Objective	
Essex Skypark	W48	Local	None	Not an Objective	
Fallston Airport	W42	Local	None	Not an Objective	
Kentmorr Airpark	3W3	Local	None	Not an Objective	
Massey Aerodrome	MD1	Local	None	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	None	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-9: RUNWAY LIGHTING OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Runway Lighting	Runway Surface Type	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	HIRL	Asphalt	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	HIRL	Asphalt	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	HIRL	Asphalt	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	MIRL	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Frederick Municipal Airport	FDK	Reliever	HIRL	Asphalt	Meets Objective	
Martin State Airport	MTN	Reliever	HIRL	Asphalt	Meets Objective	
Maryland Airport	2W5	Reliever	MIRL	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Montgomery County Airpark	GAI	Reliever	MIRL	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Tipton Airport	FME	Reliever	MIRL	Asphalt	Meets Objective	
Bay Bridge Airport	W29	General	MIRL	Asphalt	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	MIRL	Asphalt	Meets Objective	
Claremont Airport	58M	General	MIRL	Asphalt	Meets Objective	
College Park Airport	CGS	General	MIRL	Asphalt	Meets Objective	
Crisfield-Somerset County Airport	W41	General	MIRL	Asphalt	Meets Objective	
Easton/Newnam Field Airport	ESN	General	HIRL	Asphalt	Meets Objective	
Freeway Airport	W00	General	MIRL	Asphalt	Meets Objective	
Garrett County Airport	2G4	General	MIRL	Asphalt	Meets Objective	
Gooden Airpark	RJD	General	LIRL	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Greater Cumberland Regional Airport	CBE	General	HIRL	Asphalt	Meets Objective	
Harford County Airport	0W3	General	MIRL	Asphalt	Meets Objective	
Lee Airport	ANP	General	LIRL	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Ocean City Municipal Airport	OXB	General	MIRL	Asphalt	Meets Objective	
Potomac Airfield	VKX	General	MIRL	Asphalt	Meets Objective	
St. Mary's County Regional Airport	2W6	General	MIRL	Asphalt	Meets Objective	
Bennett Airport	1N5	Local	LIRL	Turf	Not an Objective	
Clearview Airpark	2W2	Local	LIRL-Non Standard	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Davis Airport	W50	Local	None	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Essex Skypark	W48	Local	MIRL	Asphalt	Meets Objective	
Fallston Airport	W42	Local	None	Asphalt	Does Not Meet Objective	Improve Runway Lighting Type
Kentmorr Airpark	3W3	Local	None	Turf	Not an Objective	
Massey Aerodrome	MD1	Local	None	Turf	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Turf	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	Water	Preserve Existing	
Pier 7 Heliport	4MD	Special	Perimeter (Helipad)	Concrete	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-10: ROTATING BEACON OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Rotating Beacon	Runway Surface Type	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Asphalt	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Asphalt	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Asphalt	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Asphalt	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Asphalt	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Asphalt	Meets Objective	
Maryland Airport	2W5	Reliever	Available	Asphalt	Meets Objective	
Montgomery County Airpark	GAI	Reliever	Available	Asphalt	Meets Objective	
Tipton Airport	FME	Reliever	Available	Asphalt	Meets Objective	
Bay Bridge Airport	W29	General	Available	Asphalt	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Available	Asphalt	Meets Objective	
Claremont Airport	58M	General	Available	Asphalt	Meets Objective	
College Park Airport	CGS	General	Available	Asphalt	Meets Objective	
Crisfield-Somerset County Airport	W41	General	Available	Asphalt	Meets Objective	
Easton/Newnam Field Airport	ESN	General	Available	Asphalt	Meets Objective	
Freeway Airport	W00	General	Available	Asphalt	Meets Objective	
Garrett County Airport	2G4	General	Available	Asphalt	Meets Objective	
Gooden Airpark	RJD	General	Available	Asphalt	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	Available	Asphalt	Meets Objective	
Harford County Airport	0W3	General	Available	Asphalt	Meets Objective	
Lee Airport	ANP	General	Available	Asphalt	Meets Objective	
Ocean City Municipal Airport	OXB	General	Available	Asphalt	Meets Objective	
Potomac Airfield	VKX	General	Available	Asphalt	Meets Objective	
St. Mary's County Regional Airport	2W6	General	Available	Asphalt	Meets Objective	
Bennett Airport	1N5	Local	Available	Turf	Not an Objective	
Clearview Airpark	2W2	Local	Available	Asphalt	Meets Objective	
Davis Airport	W50	Local	None	Asphalt	Does Not Meet Objective	Install Rotating Beacon
Essex Skypark	W48	Local	Available	Asphalt	Meets Objective	
Fallston Airport	W42	Local	None	Asphalt	Does Not Meet Objective	Install Rotating Beacon
Kentmorr Airpark	3W3	Local	None	Turf	Not an Objective	
Massey Aerodrome	MD1	Local	None	Turf	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Turf	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	Water	Preserve Existing	
Pier 7 Heliport	4MD	Special	Available	Concrete	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-11: LIGHTED WIND CONE OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Air Traffic Control Communications	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available (Lighted)	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available (Lighted)	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available (Lighted)	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available (Lighted)	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available (Lighted)	Meets Objective	
Martin State Airport	MTN	Reliever	Available (Lighted)	Meets Objective	
Maryland Airport	2W5	Reliever	Available (Lighted)	Meets Objective	
Montgomery County Airpark	GAI	Reliever	Available (Lighted)	Meets Objective	
Tipton Airport	FME	Reliever	Available (Lighted)	Meets Objective	
Bay Bridge Airport	W29	General	Available (Lighted)	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Available (Lighted)	Meets Objective	
Claremont Airport	58M	General	Available (Lighted)	Meets Objective	
College Park Airport	CGS	General	Available (Lighted)	Meets Objective	
Crisfield-Somerset County Airport	W41	General	Available (Lighted)	Meets Objective	
Easton/Newnam Field Airport	ESN	General	Available (Lighted)	Meets Objective	
Freeway Airport	W00	General	Available (Lighted)	Meets Objective	
Garrett County Airport	2G4	General	Available (Lighted)	Meets Objective	
Gooden Airpark	RJD	General	Available (Lighted)	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	Available (Lighted)	Meets Objective	
Harford County Airport	0W3	General	Available (Lighted)	Meets Objective	
Lee Airport	ANP	General	Available (Lighted)	Meets Objective	
Ocean City Municipal Airport	OXB	General	Available (Lighted)	Meets Objective	
Potomac Airfield	VKX	General	Available (Lighted)	Meets Objective	
St. Mary's County Regional Airport	2W6	General	Available (Lighted)	Meets Objective	
Bennett Airport	1N5	Local	Available (Lighted)	Meets Objective	
Clearview Airpark	2W2	Local	Available (Lighted)	Meets Objective	
Davis Airport	W50	Local	Available (Not Lighted)	Does Not Meet Objective	Install Lighting to Wind Cone
Essex Skypark	W48	Local	Available (Lighted)	Meets Objective	
Fallston Airport	W42	Local	Available (Not Lighted)	Does Not Meet Objective	Install Lighting to Wind Cone
Kentmorr Airpark	3W3	Local	Available (Lighted)	Meets Objective	
Massey Aerodrome	MD1	Local	Available (Not Lighted)	Does Not Meet Objective	Install Lighting to Wind Cone
Mexico Farms Airport	1W3	Local	Available (Lighted)	Meets Objective	
Havre de Grace Seaplane Base	M06	Special	Available (Not Lighted)	Preserve Existing	
Pier 7 Heliport	4MD	Special	Available (Lighted)	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-12: RUNWAY END IDENTIFIER LIGHTING OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Primary Runway Designation	Runway End Identifier Lighting	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	10/28	None/None	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	9/27	Available/None	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	14/32	Available/None	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	16/34	Available/Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	5/23	Available/Available	Meets Objective	
Martin State Airport	MTN	Reliever	15/33	Available/Available	Meets Objective	
Maryland Airport	2W5	Reliever	2/20	Available/Available	Meets Objective	
Montgomery County Airpark	GAI	Reliever	14/32	Available/Available	Meets Objective	
Tipton Airport	FME	Reliever	10/28	Available/Available	Meets Objective	
Bay Bridge Airport	W29	General	11/29	Available/Available	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	16/34	Available/Available	Meets Objective	
Claremont Airport	58M	General	13/31	Available/Available	Meets Objective	
College Park Airport	CGS	General	15/33	None/None	Does Not Meet Objective	Install REILs to Runway 15/33
Crisfield-Somerset County Airport	W41	General	14/32	Available/Available	Meets Objective	
Easton/Newnam Field Airport	ESN	General	4/22	None/Available	Does Not Meet Objective	Install REILs to Runway 4 End
Freeway Airport	W00	General	18/36	None/None	Does Not Meet Objective	Install REILs to Runway 18/36
Garrett County Airport	2G4	General	9/27	Available/Available	Meets Objective	
Gooden Airpark	RJD	General	12/30	Available/Available	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	5/23	None/Available	Does Not Meet Objective	Install REILs to Runway 5 End
Harford County Airport	0W3	General	1/19	Available/Available	Meets Objective	
Lee Airport	ANP	General	12/30	None/None	Does Not Meet Objective	Install REILs to Runway 12/30
Ocean City Municipal Airport	OXB	General	14/32	None/None	Does Not Meet Objective	Install REILs to Runway 14/32
Potomac Airfield	VKX	General	6/24	None/None	Does Not Meet Objective	Install REILs to Runway 6/24
St. Mary's County Regional Airport	2W6	General	11/29	Available/Available	Meets Objective	
Bennett Airport	1N5	Local	17/35	None/None	Does Not Meet Objective	Install REILs to Runway 17/35
Clearview Airpark	2W2	Local	14/32	Available/Available	Meets Objective	
Davis Airport	W50	Local	8/26	None/None	Does Not Meet Objective	Install REILs to Runway 8/26
Essex Skypark	W48	Local	16/34	Available/Available	Meets Objective	
Fallston Airport	W42	Local	4/22	Available/None	Does Not Meet Objective	Install REILs to Runway 22 End
Kentmorr Airpark	3W3	Local	10/28	None/None	Does Not Meet Objective	Install REILs to Runway 10/28
Massey Aerodrome	MD1	Local	2/20	None/None	Does Not Meet Objective	Install REILs to Runway 2/20
Mexico Farms Airport	1W3	Local	9/27	None/None	Does Not Meet Objective	Install REILs to Runway 9/27
Havre de Grace Seaplane Base	M06	Special	E/W	None/None	Preserve Existing	
Pier 7 Heliport	4MD	Special	H1/H1	None/None	Preserve Existing	Install REILs to Runway 10/28

Source: Airport questionnaires.

TABLE 3-13: VISUAL GLIDE SLOPE INDICATOR OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Primary Runway Designation	Visual Glide Slope Indicator	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	10/28	PAPI/PAPI	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	9/27	PAPI/PAPI	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	14/32	PAPI/PAPI	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	16/34	PAPI/PAPI	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	5/23	PAPI/PAPI	Meets Objective	
Martin State Airport	MTN	Reliever	15/33	PVASI/PVASI	Meets Objective	
Maryland Airport	2W5	Reliever	2/20	PAPI/None	Does Not Meet Objective	Install VGSI to Runway 20 End
Montgomery County Airpark	GAI	Reliever	14/32	VASI/PAPI	Meets Objective	
Tipton Airport	FME	Reliever	10/28	PAPI/PAPI	Meets Objective	
Bay Bridge Airport	W29	General	11/29	PAPI/PAPI	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	16/34	PAPI/PAPI	Meets Objective	
Claremont Airport	58M	General	13/31	PAPI/PAPI	Meets Objective	
College Park Airport	CGS	General	15/33	None/None	Does Not Meet Objective	Install VGSI to Runway 15/33
Crisfield-Somerset County Airport	W41	General	14/32	PAPI/PAPI	Meets Objective	
Easton/Newnam Field Airport	ESN	General	4/22	PAPI/PAPI	Meets Objective	
Freeway Airport	W00	General	18/36	PAPI/PAPI	Meets Objective	
Garrett County Airport	2G4	General	9/27	PAPI/PAPI	Meets Objective	
Gooden Airpark	RJD	General	12/30	VASI/VASI	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	5/23	None/PAPI	Does Not Meet Objective	Install VGSI to Runway 5 End
Harford County Airport	0W3	General	1/19	PAPI/PAPI	Meets Objective	
Lee Airport	ANP	General	12/30	PAPI/PAPI	Meets Objective	
Ocean City Municipal Airport	OXB	General	14/32	VASI/VASI	Meets Objective	
Potomac Airfield	VKX	General	6/24	PAPI/PAPI	Meets Objective	
St. Mary's County Regional Airport	2W6	General	11/29	PAPI/PAPI	Meets Objective	
Bennett Airport	1N5	Local	17/35	VASI/VASI	Meets Objective	
Clearview Airpark	2W2	Local	14/32	APAP/APAP	Meets Objective	
Davis Airport	W50	Local	8/26	None/None	Does Not Meet Objective	Install VGSI to Runway 8/26
Essex Skypark	W48	Local	16/34	PAPI/PAPI	Meets Objective	
Fallston Airport	W42	Local	4/22	None/None	Does Not Meet Objective	Install VGSI to Runway 4/22
Kentmorr Airpark	3W3	Local	10/28	None/None	Does Not Meet Objective	Install VGSI to Runway 10/28
Massey Aerodrome	MD1	Local	2/20	None/None	Does Not Meet Objective	Install VGSI to Runway 2/20
Mexico Farms Airport	1W3	Local	9/27	None/None	Does Not Meet Objective	Install VGSI to Runway 9/27
Havre de Grace Seaplane Base	M06	Special	E/W	None/None	Preserve Existing	
Pier 7 Heliport	4MD	Special	H1/H1	None/None	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-14: WEATHER REPORTING OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Weather Reporting System	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	ASOS	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	ASOS	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	ASOS	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	AWOS	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	AWOS	Meets Objective	
Martin State Airport	MTN	Reliever	AWOS	Meets Objective	
Maryland Airport	2W5	Reliever	None	Does Not Meet Objective	Install Weather Reporting System
Montgomery County Airpark	GAI	Reliever	AWOS	Meets Objective	
Tipton Airport	FME	Reliever	AWOS	Meets Objective	
Bay Bridge Airport	W29	General	AWOS	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	AWOS	Meets Objective	
Claremont Airport	58M	General	None	Does Not Meet Objective	Install Weather Reporting System
College Park Airport	CGS	General	AWOS	Meets Objective	
Crisfield-Somerset County Airport	W41	General	None	Does Not Meet Objective	Install Weather Reporting System
Easton/Newnam Field Airport	ESN	General	AWOS	Meets Objective	
Freeway Airport	W00	General	None	Does Not Meet Objective	Install Weather Reporting System
Garrett County Airport	2G4	General	AWOS	Meets Objective	
Gooden Airpark	RJD	General	None	Does Not Meet Objective	Install Weather Reporting System
Greater Cumberland Regional Airport	CBE	General	AWOS	Meets Objective	
Harford County Airport	0W3	General	None	Does Not Meet Objective	Install Weather Reporting System
Lee Airport	ANP	General	AWOS	Meets Objective	
Ocean City Municipal Airport	OXB	General	ASOS	Meets Objective	
Potomac Airfield	VKX	General	AWOS	Meets Objective	
St. Mary's County Regional Airport	2W6	General	AWOS	Meets Objective	
Bennett Airport	1N5	Local	None	Not an Objective	
Clearview Airpark	2W2	Local	None	Not an Objective	
Davis Airport	W50	Local	None	Not an Objective	
Essex Skypark	W48	Local	None	Not an Objective	
Fallston Airport	W42	Local	None	Not an Objective	
Kentmorr Airpark	3W3	Local	None	Not an Objective	
Massey Aerodrome	MD1	Local	None	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	None	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-15: GENERAL AVIATION/FIXED-BASED OPERATOR TERMINAL OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	GA Terminal or Fixed-Based Operator with Terminal	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	Available	Meets Objective	
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	Available	Meets Objective	
Bay Bridge Airport	W29	General	Available	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Available	Meets Objective	
Claremont Airport	58M	General	Available	Meets Objective	
College Park Airport	CGS	General	Available	Meets Objective	
Crisfield-Somerset County Airport	W41	General	None	Does Not Meet Objective	Construct GA/FBO Terminal
Easton/Newnam Field Airport	ESN	General	Available	Meets Objective	
Freeway Airport	W00	General	Available	Meets Objective	
Garrett County Airport	2G4	General	Available	Meets Objective	
Gooden Airpark	RJD	General	None	Does Not Meet Objective	Construct GA/FBO Terminal
Greater Cumberland Regional Airport	CBE	General	Available	Meets Objective	
Harford County Airport	0W3	General	Available	Meets Objective	
Lee Airport	ANP	General	None	Does Not Meet Objective	Construct GA/FBO Terminal
Ocean City Municipal Airport	OXB	General	Available	Meets Objective	
Potomac Airfield	VKX	General	Available	Meets Objective	
St. Mary's County Regional Airport	2W6	General	Available	Meets Objective	
Bennett Airport	1N5	Local	None	Not an Objective	
Clearview Airpark	2W2	Local	Available	Not an Objective	
Davis Airport	W50	Local	Available	Not an Objective	
Essex Skypark	W48	Local	Available	Not an Objective	
Fallston Airport	W42	Local	Available	Not an Objective	
Kentmorr Airpark	3W3	Local	None	Not an Objective	
Massey Aerodrome	MD1	Local	Available	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	Available	Preserve Existing	
Pier 7 Heliport	4MD	Special	Available	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-16: JET A AIRCRAFT FUELING OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Jet A	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	Available	Meets Objective	
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	Available	Meets Objective	
Bay Bridge Airport	W29	General	None	Not an Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Available	Not an Objective	
Claremont Airport	58M	General	None	Not an Objective	
College Park Airport	CGS	General	Available	Not an Objective	
Crisfield-Somerset County Airport	W41	General	None	Not an Objective	
Easton/Newnam Field Airport	ESN	General	Available	Not an Objective	
Freeway Airport	W00	General	None	Not an Objective	
Garrett County Airport	2G4	General	Available	Not an Objective	
Gooden Airpark	RJD	General	None	Not an Objective	
Greater Cumberland Regional Airport	CBE	General	Available	Not an Objective	
Harford County Airport	0W3	General	Available	Not an Objective	
Lee Airport	ANP	General	None	Not an Objective	
Ocean City Municipal Airport	OXB	General	Available	Not an Objective	
Potomac Airfield	VKX	General	None	Not an Objective	
St. Mary's County Regional Airport	2W6	General	Available	Not an Objective	
Bennett Airport	1N5	Local	None	Not an Objective	
Clearview Airpark	2W2	Local	None	Not an Objective	
Davis Airport	W50	Local	None	Not an Objective	
Essex Skypark	W48	Local	None	Not an Objective	
Fallston Airport	W42	Local	None	Not an Objective	
Kentmorr Airpark	3W3	Local	None	Not an Objective	
Massey Aerodrome	MD1	Local	None	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	Available	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-17: AVIATION GASOLINE AIRCRAFT FUELING OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Aviation Gasoline	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	Available	Meets Objective	
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	Available	Meets Objective	
Bay Bridge Airport	W29	General	Available	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Available	Meets Objective	
Claremont Airport	58M	General	Available	Meets Objective	
College Park Airport	CGS	General	Available	Meets Objective	
Crisfield-Somerset County Airport	W41	General	Available	Meets Objective	
Easton/Newnam Field Airport	ESN	General	Available	Meets Objective	
Freeway Airport	W00	General	Available	Meets Objective	
Garrett County Airport	2G4	General	Available	Meets Objective	
Gooden Airpark	RJD	General	None	Does Not Meet Objective	Provide Aviation Gasoline
Greater Cumberland Regional Airport	CBE	General	Available	Meets Objective	
Harford County Airport	0W3	General	Available	Meets Objective	
Lee Airport	ANP	General	Available	Meets Objective	
Ocean City Municipal Airport	OXB	General	Available	Meets Objective	
Potomac Airfield	VKX	General	Available	Meets Objective	
St. Mary's County Regional Airport	2W6	General	Available	Meets Objective	
Bennett Airport	1N5	Local	None	Does Not Meet Objective	Provide Aviation Gasoline
Clearview Airpark	2W2	Local	Available	Meets Objective	
Davis Airport	W50	Local	Available	Meets Objective	
Essex Skypark	W48	Local	None	Does Not Meet Objective	Provide Aviation Gasoline
Fallston Airport	W42	Local	Available	Meets Objective	
Kentmorr Airpark	3W3	Local	None	Does Not Meet Objective	Provide Aviation Gasoline
Massey Aerodrome	MD1	Local	None	Does Not Meet Objective	Provide Aviation Gasoline
Mexico Farms Airport	1W3	Local	None	Does Not Meet Objective	Provide Aviation Gasoline
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	None	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-18: 24-HOUR AIRCRAFT FUELING OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	24-Hour Fueling	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	None	Does Not Meet Objective	Provide 24-Hour Fueling
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	Available	Meets Objective	
Bay Bridge Airport	W29	General	Available	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Available	Meets Objective	
Claremont Airport	58M	General	Available	Meets Objective	
College Park Airport	CGS	General	None	Does Not Meet Objective	Provide 24-Hour Fueling
Crisfield-Somerset County Airport	W41	General	Available	Meets Objective	
Easton/Newnam Field Airport	ESN	General	Available	Meets Objective	
Freeway Airport	W00	General	None	Does Not Meet Objective	Provide 24-Hour Fueling
Garrett County Airport	2G4	General	Available	Meets Objective	
Gooden Airpark	RJD	General	None	Does Not Meet Objective	Provide 24-Hour Fueling
Greater Cumberland Regional Airport	CBE	General	Available	Meets Objective	
Harford County Airport	0W3	General	Available	Meets Objective	
Lee Airport	ANP	General	None	Does Not Meet Objective	Provide 24-Hour Fueling
Ocean City Municipal Airport	OXB	General	Available	Meets Objective	
Potomac Airfield	VKX	General	None	Does Not Meet Objective	Provide 24-Hour Fueling
St. Mary's County Regional Airport	2W6	General	Available	Meets Objective	
Bennett Airport	1N5	Local	None	Does Not Meet Objective	Provide 24-Hour Fueling
Clearview Airpark	2W2	Local	Available	Meets Objective	
Davis Airport	W50	Local	Available	Meets Objective	
Essex Skypark	W48	Local	None	Does Not Meet Objective	Provide 24-Hour Fueling
Fallston Airport	W42	Local	Available	Meets Objective	
Kentmorr Airpark	3W3	Local	None	Does Not Meet Objective	Provide 24-Hour Fueling
Massey Aerodrome	MD1	Local	None	Does Not Meet Objective	Provide 24-Hour Fueling
Mexico Farms Airport	1W3	Local	None	Does Not Meet Objective	Provide 24-Hour Fueling
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	Available	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-19: PAVED AIRCRAFT PARKING OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Paved Tie-downs (#)	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	22	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	44	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	17	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	56	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	75	Meets Objective	
Martin State Airport	MTN	Reliever	14	Meets Objective	
Maryland Airport	2W5	Reliever	20	Meets Objective	
Montgomery County Airpark	GAI	Reliever	120	Meets Objective	
Tipton Airport	FME	Reliever	121	Meets Objective	
Bay Bridge Airport	W29	General	53	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	26	Meets Objective	
Claremont Airport	58M	General	25	Meets Objective	
College Park Airport	CGS	General	28	Meets Objective	
Crisfield-Somerset County Airport	W41	General	18	Meets Objective	
Easton/Newnam Field Airport	ESN	General	77	Meets Objective	
Freeway Airport	W00	General	55	Meets Objective	
Garrett County Airport	2G4	General	28	Meets Objective	
Gooden Airpark	RJD	General	0	Does Not Meet Objective	Add Paved Aircraft Parking
Greater Cumberland Regional Airport	CBE	General	20	Meets Objective	
Harford County Airport	0W3	General	20	Meets Objective	
Lee Airport	ANP	General	15	Meets Objective	
Ocean City Municipal Airport	OXB	General	57	Meets Objective	
Potomac Airfield	VKX	General	6	Meets Objective	
St. Mary's County Regional Airport	2W6	General	74	Meets Objective	
Bennett Airport	1N5	Local	0	Not an Objective	
Clearview Airpark	2W2	Local	10	Not an Objective	
Davis Airport	W50	Local	5	Not an Objective	
Essex Skypark	W48	Local	0	Not an Objective	
Fallston Airport	W42	Local	0	Not an Objective	
Kentmorr Airpark	3W3	Local	0	Not an Objective	
Massey Aerodrome	MD1	Local	0	Not an Objective	
Mexico Farms Airport	1W3	Local	0	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	0	Preserve Existing	
Pier 7 Heliport	4MD	Special	6	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-20: HANGAR OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	T-Hangar (#)	Conventional Hangar (#)	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	30	5	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	150	20	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	42	8	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	82	8	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	102	3	Meets Objective	
Martin State Airport	MTN	Reliever	180	18	Meets Objective	
Maryland Airport	2W5	Reliever	24	7	Meets Objective	
Montgomery County Airpark	GAI	Reliever	70	8	Meets Objective	
Tipton Airport	FME	Reliever	22	4	Meets Objective	
Bay Bridge Airport	W29	General	57	2	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	32	3	Meets Objective	
Claremont Airport	58M	General	30	3	Meets Objective	
College Park Airport	CGS	General	0	1	Meets Objective	
Crisfield-Somerset County Airport	W41	General	0	0	Does Not Meet Objective	Add T-Hangars or Conventional Hangars
Easton/Newnam Field Airport	ESN	General	90	14	Meets Objective	
Freeway Airport	W00	General	0	0	Does Not Meet Objective	Add T-Hangars or Conventional Hangars
Garrett County Airport	2G4	General	24	8	Meets Objective	
Gooden Airpark	RJD	General	12	1	Meets Objective	
Greater Cumberland Regional Airport	CBE	General	41	3	Meets Objective	
Harford County Airport	0W3	General	48	5	Meets Objective	
Lee Airport	ANP	General	40	2	Meets Objective	
Ocean City Municipal Airport	OXB	General	60	8	Meets Objective	
Potomac Airfield	VKX	General	32	1	Meets Objective	
St. Mary's County Regional Airport	2W6	General	122	10	Meets Objective	
Bennett Airport	1N5	Local	6	0	Does Not Meet Objective	Add T-Hangars or Conventional Hangars
Clearview Airpark	2W2	Local	8	1	Meets Objective	
Davis Airport	W50	Local	0	1	Meets Objective	
Essex Skypark	W48	Local	30	6	Meets Objective	
Fallston Airport	W42	Local	25	5	Meets Objective	
Kentmorr Airpark	3W3	Local	0	0	Does Not Meet Objective	Add T-Hangars or Conventional Hangars
Massey Aerodrome	MD1	Local	10	2	Meets Objective	
Mexico Farms Airport	1W3	Local	0	11	Meets Objective	
Havre de Grace Seaplane Base	M06	Special	0	0	Preserve Existing	
Pier 7 Heliport	4MD	Special	0	1	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-21: COVERED OVERNIGHT SECURE STORAGE OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Covered Overnight Secure Storage	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	Available	Meets Objective	
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	None	Does Not Meet Objective	Provide Covered Overnight Secure Storage
Bay Bridge Airport	W29	General	Available	Not an Objective	
Cambridge-Dorchester Regional Airport	CGE	General	None	Not an Objective	
Claremont Airport	58M	General	None	Not an Objective	
College Park Airport	CGS	General	None	Not an Objective	
Crisfield-Somerset County Airport	W41	General	None	Not an Objective	
Easton/Newnam Field Airport	ESN	General	None	Not an Objective	
Freeway Airport	W00	General	None	Not an Objective	
Garrett County Airport	2G4	General	Available	Not an Objective	
Gooden Airpark	RJD	General	None	Not an Objective	
Greater Cumberland Regional Airport	CBE	General	Available	Not an Objective	
Harford County Airport	0W3	General	Available	Not an Objective	
Lee Airport	ANP	General	None	Not an Objective	
Ocean City Municipal Airport	OXB	General	Available	Not an Objective	
Potomac Airfield	VKX	General	None	Not an Objective	
St. Mary's County Regional Airport	2W6	General	None	Not an Objective	
Bennett Airport	1N5	Local	None	Not an Objective	
Clearview Airpark	2W2	Local	None	Not an Objective	
Davis Airport	W50	Local	None	Not an Objective	
Essex Skypark	W48	Local	None	Not an Objective	
Fallston Airport	W42	Local	Available	Not an Objective	
Kentmorr Airpark	3W3	Local	None	Not an Objective	
Massey Aerodrome	MD1	Local	None	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	None	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-22: AIRPORT PROPERTY FENCE OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Airport Property Fence	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	None	Does Not Meet Objective	Install Airport Property Fence
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	None	Does Not Meet Objective	Install Airport Property Fence
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	Available	Meets Objective	
Bay Bridge Airport	W29	General	Available	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	Available	Meets Objective	
Claremont Airport	58M	General	None	Does Not Meet Objective	Install Airport Property Fence
College Park Airport	CGS	General	Available	Meets Objective	
Crisfield-Somerset County Airport	W41	General	Available	Meets Objective	
Easton/Newnam Field Airport	ESN	General	Available	Meets Objective	
Freeway Airport	W00	General	None	Does Not Meet Objective	Install Airport Property Fence
Garrett County Airport	2G4	General	Available	Meets Objective	
Gooden Airpark	RJD	General	None	Does Not Meet Objective	Install Airport Property Fence
Greater Cumberland Regional Airport	CBE	General	None	Does Not Meet Objective	Install Airport Property Fence
Harford County Airport	0W3	General	None	Does Not Meet Objective	Install Airport Property Fence
Lee Airport	ANP	General	Available	Meets Objective	
Ocean City Municipal Airport	OXB	General	Available	Meets Objective	
Potomac Airfield	VKX	General	None	Does Not Meet Objective	Install Airport Property Fence
St. Mary's County Regional Airport	2W6	General	Available	Meets Objective	
Bennett Airport	1N5	Local	None	Does Not Meet Objective	Install Airport Property Fence
Clearview Airpark	2W2	Local	None	Does Not Meet Objective	Install Airport Property Fence
Davis Airport	W50	Local	None	Does Not Meet Objective	Install Airport Property Fence
Essex Skypark	W48	Local	None	Does Not Meet Objective	Install Airport Property Fence
Fallston Airport	W42	Local	Available	Meets Objective	
Kentmorr Airpark	3W3	Local	None	Does Not Meet Objective	Install Airport Property Fence
Massey Aerodrome	MD1	Local	None	Does Not Meet Objective	Install Airport Property Fence
Mexico Farms Airport	1W3	Local	None	Does Not Meet Objective	Install Airport Property Fence
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	Available	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-23: SNOW REMOVAL OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Snow Removal	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	Available	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	Available	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	Available	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	Available	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	Available	Meets Objective	
Martin State Airport	MTN	Reliever	Available	Meets Objective	
Maryland Airport	2W5	Reliever	None	Does Not Meet Objective	Provide Snow Removal
Montgomery County Airpark	GAI	Reliever	Available	Meets Objective	
Tipton Airport	FME	Reliever	Available	Meets Objective	
Bay Bridge Airport	W29	General	Available	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	None	Does Not Meet Objective	Provide Snow Removal
Claremont Airport	58M	General	None	Does Not Meet Objective	Provide Snow Removal
College Park Airport	CGS	General	Available	Meets Objective	
Crisfield-Somerset County Airport	W41	General	Available	Meets Objective	
Easton/Newnam Field Airport	ESN	General	Available	Meets Objective	
Freeway Airport	W00	General	None	Does Not Meet Objective	Provide Snow Removal
Garrett County Airport	2G4	General	Available	Meets Objective	
Gooden Airpark	RJD	General	None	Does Not Meet Objective	Provide Snow Removal
Greater Cumberland Regional Airport	CBE	General	Available	Meets Objective	
Harford County Airport	0W3	General	Available	Meets Objective	
Lee Airport	ANP	General	None	Does Not Meet Objective	Provide Snow Removal
Ocean City Municipal Airport	OXB	General	Available	Meets Objective	
Potomac Airfield	VKX	General	None	Does Not Meet Objective	Provide Snow Removal
St. Mary's County Regional Airport	2W6	General	Available	Meets Objective	
Bennett Airport	1N5	Local	None	Not an Objective	
Clearview Airpark	2W2	Local	None	Not an Objective	
Davis Airport	W50	Local	Available	Not an Objective	
Essex Skypark	W48	Local	None	Not an Objective	
Fallston Airport	W42	Local	None	Not an Objective	
Kentmorr Airpark	3W3	Local	None	Not an Objective	
Massey Aerodrome	MD1	Local	None	Not an Objective	
Mexico Farms Airport	1W3	Local	None	Not an Objective	
Havre de Grace Seaplane Base	M06	Special	None	Preserve Existing	
Pier 7 Heliport	4MD	Special	Available	Preserve Existing	

Source: Airport questionnaires.

TABLE 3-24: AIRPORT MASTER PLAN OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Airport Master Plan (Year)	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	2012	Does Not Meet Objective	Perform Airport Master Plan
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	None available	Does Not Meet Objective	Perform Airport Master Plan
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	2020	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	2015	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	2008	Does Not Meet Objective	Perform Airport Master Plan
Martin State Airport	MTN	Reliever	2011*	Does Not Meet Objective	Perform Airport Master Plan
Maryland Airport	2W5	Reliever	1999	Does Not Meet Objective	Perform Airport Master Plan
Montgomery County Airpark	GAI	Reliever	2002	Does Not Meet Objective	Perform Airport Master Plan
Tipton Airport	FME	Reliever	2010	Does Not Meet Objective	Perform Airport Master Plan
Bay Bridge Airport	W29	General	1989	Does Not Meet Objective	Perform Airport Master Plan
Cambridge-Dorchester Regional Airport	CGE	General	1990	Does Not Meet Objective	Perform Airport Master Plan
Claremont Airport	58M	General	2010	Does Not Meet Objective	Perform Airport Master Plan
College Park Airport	CGS	General	None available	Does Not Meet Objective	Perform Airport Master Plan
Crisfield-Somerset County Airport	W41	General	1995	Does Not Meet Objective	Perform Airport Master Plan
Easton/Newnam Field Airport	ESN	General	2005	Does Not Meet Objective	Perform Airport Master Plan
Freeway Airport	W00	General	None available	Does Not Meet Objective	Perform Airport Master Plan
Garrett County Airport	2G4	General	2016*	Meets Objective	
Gooden Airpark	RJD	General	None available	Does Not Meet Objective	Perform Airport Master Plan
Greater Cumberland Regional Airport	CBE	General	2020*	Meets Objective	
Harford County Airport	0W3	General	None available	Does Not Meet Objective	Perform Airport Master Plan
Lee Airport	ANP	General	None available	Does Not Meet Objective	Perform Airport Master Plan
Ocean City Municipal Airport	OXB	General	2012	Meets Objective	
Potomac Airfield	VKX	General	None available	Does Not Meet Objective	Perform Airport Master Plan
St. Mary's County Regional Airport	2W6	General	2002	Does Not Meet Objective	Perform Airport Master Plan
Bennett Airport	1N5	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Clearview Airpark	2W2	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Davis Airport	W50	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Essex Skypark	W48	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Fallston Airport	W42	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Kentmorr Airpark	3W3	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Massey Aerodrome	MD1	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Mexico Farms Airport	1W3	Local	None available	Does Not Meet Objective	Perform Airport Master Plan
Havre de Grace Seaplane Base	M06	Special	None available	Preserve Existing	
Pier 7 Heliport	4MD	Special	None available	Preserve Existing	

Note: (*) Indicates that the airport's ALP Narrative served as the airport master plan.
Source: Airport questionnaires.

TABLE 3-25: AIRPORT LAYOUT PLAN OBJECTIVE

Airport Name	Airport ID	MDOT MAA Role	Airport Layout Plan (Year)	Objective	Improvement
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier	2019*	Meets Objective	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier	2019	Meets Objective	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier	2019*	Meets Objective	
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever	2015	Meets Objective	
Frederick Municipal Airport	FDK	Reliever	2008	Does Not Meet Objective	Perform Airport Layout Plan
Martin State Airport	MTN	Reliever	2020*	Meets Objective	
Maryland Airport	2W5	Reliever	2021*	Meets Objective	
Montgomery County Airpark	GAI	Reliever	2013*	Meets Objective	
Tipton Airport	FME	Reliever	2016*	Meets Objective	
Bay Bridge Airport	W29	General	2021*	Meets Objective	
Cambridge-Dorchester Regional Airport	CGE	General	2015	Meets Objective	
Claremont Airport	58M	General	2009	Does Not Meet Objective	Perform Airport Layout Plan
College Park Airport	CGS	General	2012*	Meets Objective	
Crisfield-Somerset County Airport	W41	General	2020*	Meets Objective	
Easton/Newnam Field Airport	ESN	General	2020*	Meets Objective	
Freeway Airport	W00	General	Unknown	Does Not Meet Objective	Perform Airport Layout Plan
Garrett County Airport	2G4	General	2016	Meets Objective	
Gooden Airpark	RJD	General	None available	Does Not Meet Objective	Perform Airport Layout Plan
Greater Cumberland Regional Airport	CBE	General	2020	Meets Objective	
Harford County Airport	0W3	General	2021	Meets Objective	
Lee Airport	ANP	General	None available	Does Not Meet Objective	Perform Airport Layout Plan
Ocean City Municipal Airport	OXB	General	2021*	Meets Objective	
Potomac Airfield	VKX	General	None available	Does Not Meet Objective	Perform Airport Layout Plan
St. Mary's County Regional Airport	2W6	General	2012	Meets Objective	
Bennett Airport	1N5	Local	None available	Does Not Meet Objective	Perform Airport Layout Plan
Clearview Airpark	2W2	Local	None available	Does Not Meet Objective	Perform Airport Layout Plan
Davis Airport	W50	Local	Before 2017	Meets Objective	
Essex Skypark	W48	Local	None available	Does Not Meet Objective	Perform Airport Layout Plan
Fallston Airport	W42	Local	None available	Does Not Meet Objective	Perform Airport Layout Plan
Kentmorr Airpark	3W3	Local	None available	Does Not Meet Objective	Perform Airport Layout Plan
Massey Aerodrome	MD1	Local	None available	Does Not Meet Objective	Perform Airport Layout Plan
Mexico Farms Airport	1W3	Local	None available	Does Not Meet Objective	Perform Airport Layout Plan
Havre de Grace Seaplane Base	M06	Special	None available	Preserve Existing	
Pier 7 Heliport	4MD	Special	None available	Preserve Existing	

Note: (*) Indicates the date provided is for the latest Pen & Ink Change to the ALP.
Source: Airport questionnaires

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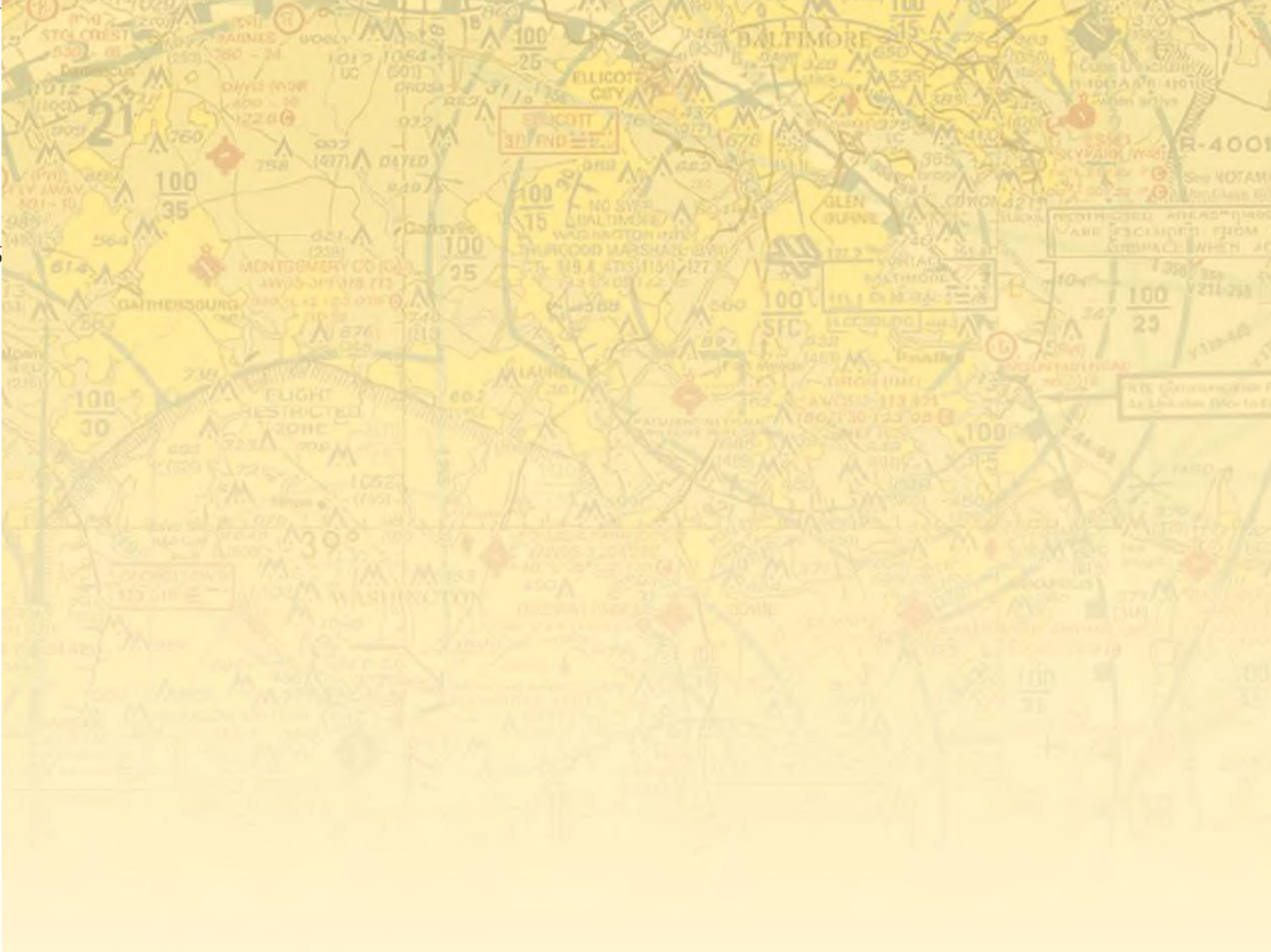

CHAPTER 4

Gap Analysis

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND AVIATION ADMINISTRATION

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4 GAP ANALYSIS

4.1 Introduction

Chapter 3 Facility Requirements Analysis examined how each of the airports within the Maryland state airport system performed according to their applicable facility, service, and equipment objectives. Facility, service, and equipment objectives established in this 2023 MASP reflect the minimum level of development that is considered desirable at each airport. These objectives are shown in **Table 3-2**; while the objectives are not requirements, they are intended to guide airport development.

This chapter identifies the airport's deficiencies in meeting the role-related facility, service, and equipment objectives established at the onset of this study and will guide final systemwide and airport-specific cost estimates and recommendations. Improvements are identified for each airport classified in the 5 MDOT MAA airport role categories: Air Carrier Airports, Reliever Airports, General Airports, Local Airports, and Special Facilities.

4.2 Summary of Facility Requirements Analysis

Below is a listing of the top 5 facility, service, and equipment objectives met and not met by the system airports, including the percentage of applicable airports meeting each objective. Of the 23 objectives, Jet A and ATCT are met by 100% of all applicable system airports.[1]

The top 5 objectives met by the system airports are:

- Paved aircraft parking (96%)
- Rotating beacon (94%)
- Approach capability (88%)
- Taxiway system (94%)
- Lighted wind cone (91%)

The top 5 objectives not met by the system airports are:

- Master Plan (21%)
- Airport property fence (56%)
- Runway length (62%)
- Airport Layout Plan (ALP) (62%)
- Runway End Identifier Lights (REILs) (62%)

Maryland system airports are most deficient in meeting their applicable Master Plan objectives with only 17% of the airports having an updated document or any Master Plan in place. While these objectives are introduced in the 2023 MASP with newly suggested intervals for Master Plan updates, the intent of the suggested 5- and 10-year intervals for Air Carrier and general aviation airports (including the Reliever, General, and Local roles), respectively are meant as check-in dates. The Master Plan objective is not a requirement and is intended to guide airports to undertake master planning studies as needs arise at the airport. Each airport should communicate with MDOT MAA and FAA, as applicable, when any airport changes may require a Master Plan update prior to applying for grant funding.

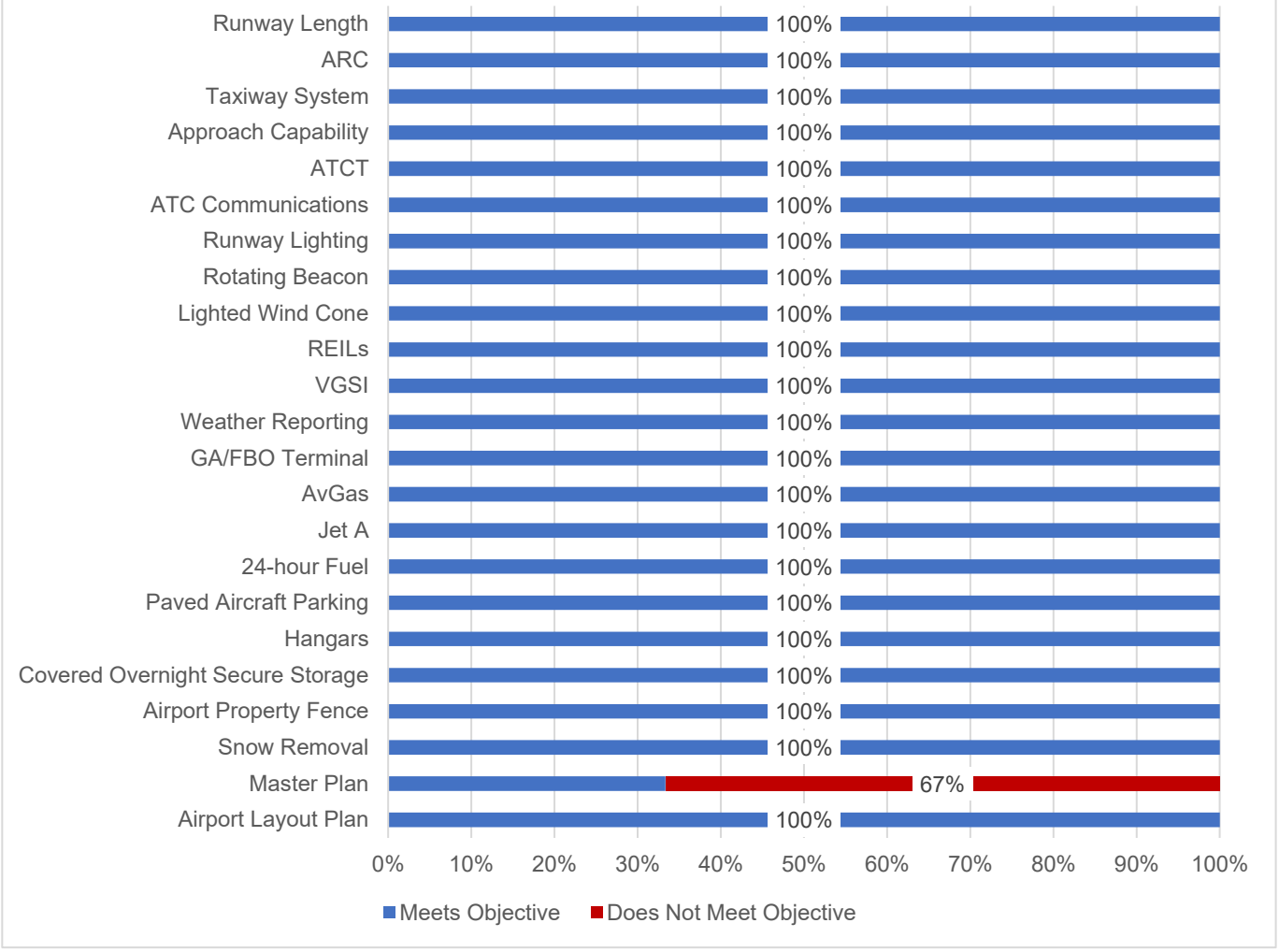
Further, each airport should review airport development needs identified through facility requirements and gap analysis findings. For airports listed in the 2021-2025 NPIAS to be eligible for federal funding, a project must appear on an FAA approved ALP. Although it is not a requirement for airports to have an updated airport Master Plan or ALP to be eligible for state funding, airports are strongly encouraged to engage in such planning activities as recommended by their facility, service, and equipment objectives.

[1] See **Table 3-2** in **Chapter 3 Facility Requirements Analysis** for a listing of airport facility objectives by airport role. Jet A and ATCT objectives are not facility objectives for General and Local Airports. The ATCT objective applies to Reliever Airports with 120,000 annual operations or more; In this 2023 MASP Interim Update, no Reliever Airport meets this criterion and therefore the ATCT objective was considered met.

4.3 Air Carrier Airports

Overall, Air Carrier Airports currently fulfill all applicable facility objectives aside from their Master Plan objectives (see **Figure 4-1**).

FIGURE 4-1: PERCENTAGE SUMMARY OF AIR CARRIER FACILITY OBJECTIVES



Source: Airport questionnaires.

Table 4-1 identifies each of the Air Carrier Airports included in MDOT MAA's system and the number of facility objectives that are met, not met, or are not an objective.

TABLE 4-1: SUMMARY OF AIR CARRIER FACILITY OBJECTIVES

MDOT MAA Role	Airport Name	Airport ID	Objectives Met (#)	Objectives Not Met (#)	Not an Objective (#)
Air Carrier	Baltimore/Washington International Thurgood Marshall Airport	BWI	22	1	0
	Hagerstown Regional Airport/Richard A. Henson Field	HGR	22	1	0
	Salisbury-Ocean City/Wicomico Regional Airport	SBY	23	0	0

Source: Airport questionnaires.

4.3.1 Baltimore/Washington International Thurgood Marshall Airport (BWI)

Of the 23 facility, service, and equipment objectives applicable to BWI, 22 are met and 1 is not met. For BWI to meet all its applicable objectives, the airport should:

- Perform Master Plan and process through formal FAA review

4.3.2 Hagerstown Regional Airport/Richard A. Henson Field (HGR)

Of the 23 facility, service, and equipment objectives applicable to HGR, 22 are met and 1 is not met. For HGR to meet all its applicable objectives, the airport should:

- Perform Master Plan

4.3.3 Salisbury-Ocean City/Wicomico Regional Airport (SBY)

Of the 23 facility, service, and equipment objectives applicable to SBY, all 23 are met. SBY meets all its applicable facility objectives.

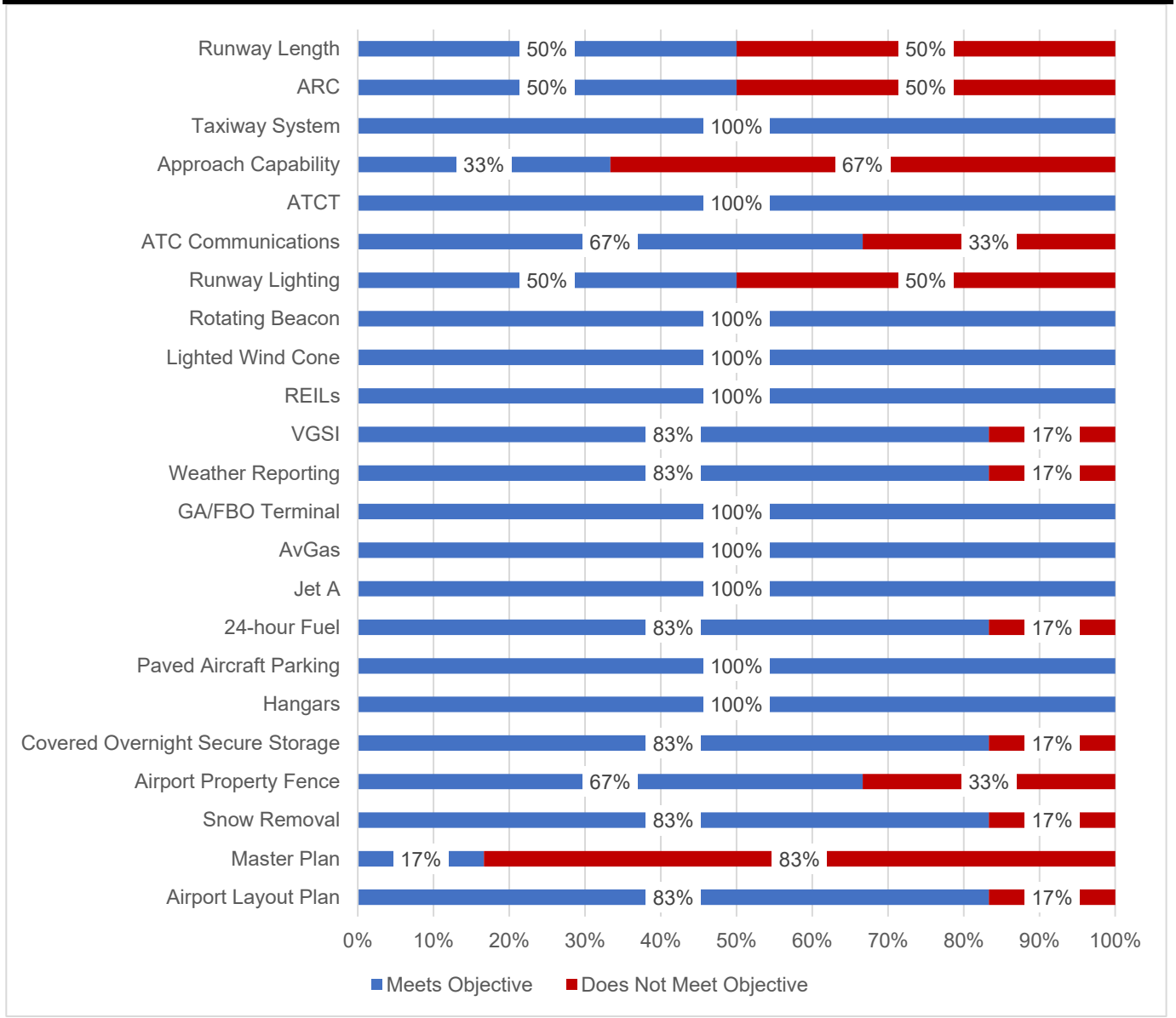
4.4 Reliever Airports

Reliever Airports currently fulfill a considerable number of their applicable facility objectives. Of the 23 objectives, 10 are met by 100% of the Reliever Airports. All applicable objectives are listed below in the order from most to least met.

- Hangars (100%)
- Paved aircraft parking (100%)
- Jet A (100%)
- AvGas (100%)
- General Aviation (GA)/Fixed Based Operator (FBO) terminal (100%)
- REILs (100%)
- Lighted wind cone (100%)
- Rotating beacon (100%)
- ATCT (100%)
- Taxiway system (100%)
- Snow removal (83%)
- ALP (83%)
- Covered overnight secure storage (83%)
- 24-hour fuel (83%)
- Weather reporting (83%)
- Visual Glide Slope Indicator (VGSI) (83%)
- Airport property fence (67%)
- Air Traffic Control (ATC) communications (67%)
- Runway lighting (50%)
- Airport Reference Code (ARC) (50%)
- Primary runway length (50%)
- Approach capability (33%)
- Master Plan (17%)

A summary of how Reliever Airports meet their applicable facility objectives is depicted in **Figure 4-2**.

FIGURE 4-2: PERCENTAGE SUMMARY OF RELIEVER FACILITY OBJECTIVES



Source: Airport questionnaires.

Table 4-2 identifies each of the Reliever airports included in MDOT MAA's system and the number of facility objectives that are met, not met, or are not an objective.

TABLE 4-2: SUMMARY OF RELIEVER FACILITY OBJECTIVES

MDOT MAA Role	Airport Name	Airport ID	Objectives Met (#)	Objectives Not Met (#)	Not an Objective (#)
Reliever	Carroll County Regional Airport/Jack B. Poage Field	DMW	21	2	0
	Frederick Municipal Airport	FDK	20	3	0
	Martin State Airport	MTN	22	1	0
	Maryland Airport	2W5	12	11	0
	Montgomery County Airpark	GAI	18	5	0
	Tipton Airport	FME	17	6	0

Source: Airport questionnaires.

4.4.1 Carroll County Regional Airport/Jack B. Poage Field (DMW)

Of the 23 facility, service, and equipment objectives applicable to DMW, 21 are met, and 2 are not met. For DMW to meet all its applicable objectives, the airport should:

- Improve runway lighting type to High Intensity Runway Lights (HIRL)
- Improve LPV approach by lowering visibility minimum to ¾ statute mile

4.4.2 Frederick Municipal Airport (FDK)

Of the 23 facility, service, and equipment objectives applicable to FDK, 20 are met, and 3 are not met. For FDK to meet all its applicable objectives, the airport should:

- Install airport property fence
- Perform Master Plan
- Perform ALP

4.4.3 Martin State Airport (MTN)

Of the 23 facility, service, and equipment objectives applicable to MTN, 22 are met, and 1 is not met. For MTN to meet all its applicable objectives, the airport should:

- Perform Master Plan

4.4.4 Maryland Airport (2W5)

Of the 23 facility, service, and equipment objectives applicable to 2W5, 12 are met, and 11 are not met. For 2W5 to meet all its applicable objectives, the airport should:

- Extend primary runway length by 1,260 feet
- Improve ARC to C-II
- Improve approach capability to precision approach
- Improve ATC communications
- Improve runway lighting type to HIRL
- Install VGSI to Runway 20 End
- Install weather reporting system
- Provide 24-hour fueling
- Install airport property fence
- Provide snow removal
- Perform Master Plan

4.4.5 Montgomery County Airpark (GAI)

Of the 23 facility, service, and equipment objectives applicable to GAI, 18 are met, and 5 are not met. For GAI to meet all its applicable objectives, the airport should:

- Extend primary runway length by 798 feet
- Improve ARC to C-II
- Improve approach capability to precision approach
- Improve runway lighting type to HIRL
- Perform Master Plan

4.4.6 Tipton Airport (FME)

Of the 23 facility, service, and equipment objectives applicable to FME, 17 are met, and 6 are not met. For FME to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 2,000 feet
- Improve ARC to C-II
- Improve approach capability
- Improve ATC communications
- Provide covered overnight secure storage
- Perform Master Plan

4.5 General Airports

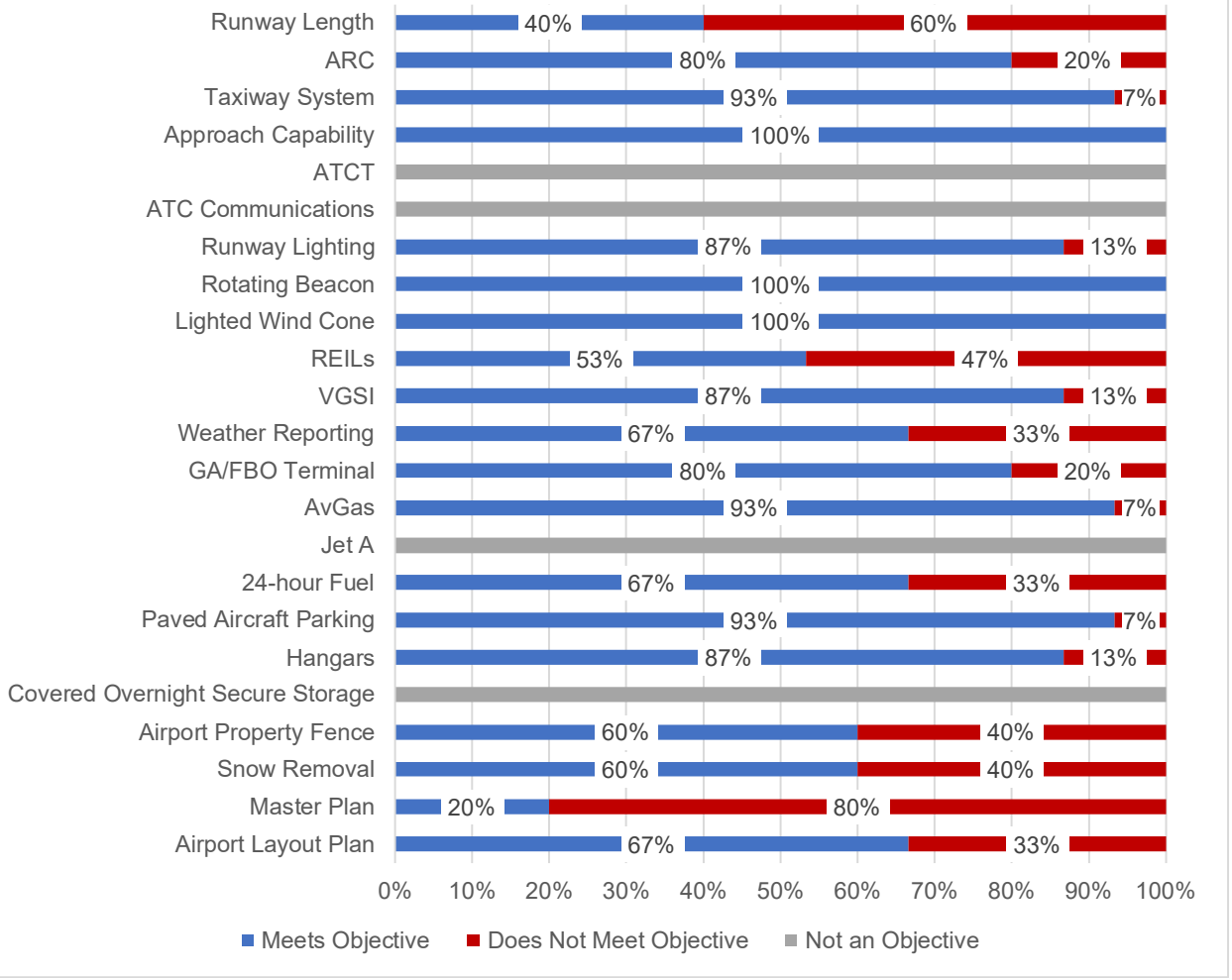
General Airports currently fulfill a portion of their facility objectives. Covered overnight secure storage, Jet A, ATC communications, and ATCT are not considered objectives for General Airports.

Of the 23 objectives, 3 objectives are met by 100% of the General Airports, including lighted wind cone, rotating beacon, and approach capability. All applicable objectives are listed below in the order from most to least met.

- Lighted wind cone (100%)
- Rotating beacon (100%)
- Approach capability (100%)
- Taxiway system (93%)
- AvGas (93%)
- Paved aircraft parking (93%)
- Hangars (87%)
- VGSI requirements (87%)
- ARC (80%)
- Runway lighting (87%)
- GA/FBO terminal (80%)
- 24-hour fuel (67%)
- ALP (67%)
- Snow removal (60%)
- Airport property fence (60%)
- Weather reporting (67%)
- REILs (53%)
- Runway length (40%)
- Master Plan (20%)

A summary of how General Airports meet their applicable facility objectives is depicted in **Figure 4-3**.

FIGURE 4-3: PERCENTAGE SUMMARY OF GENERAL FACILITY OBJECTIVES



Source: Airport questionnaires.

Table 4-3 identifies each of the General Airports included in MDOT MAA's system and the number of facility objectives that are met, not met, or are not an objective.

TABLE 4-3: SUMMARY OF GENERAL FACILITY OBJECTIVES

MDOT MAA Role	Airport Name	Airport ID	Objectives Met (#)	Objectives Not Met (#)	Not an Objective (#)
General	Bay Bridge Airport	W29	16	3	4
	Cambridge-Dorchester Regional Airport	CGE	17	2	4
	Claremont Airport	58M	13	6	4
	College Park Airport	CGS	14	5	4
	Crisfield-Somerset County Airport	W41	12	7	4
	Easton/Newnam Field Airport	ESN	17	2	4
	Freeway Airport	W00	10	9	4
	Garrett County Airport	2G4	19	0	4
	Gooden Airpark	RJD	8	11	4
	Greater Cumberland Regional Airport	CBE	16	3	4
	Harford County Airport	0W3	15	4	4
	Lee Airport	ANP	11	8	4
	Ocean City Municipal Airport	OXB	18	1	4
	Potomac Airfield	VKX	11	8	4
	St. Mary's County Regional Airport	2W6	18	1	4

Source: Airport questionnaires.

4.5.1 Bay Bridge Airport (W29)

Of the 23 facility, service, and equipment objectives applicable to W29, 16 are met, 3 are not met and 4 are not objectives. For W29 to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 787 feet
- Improve ARC to B-I
- Perform Master Plan

4.5.2 Cambridge-Dorchester Regional Airport (CGE)

Of the 23 facility, service, and equipment objectives applicable to CGE, 17 are met, 2 are not met and 4 are not objectives. For CGE to meet all its applicable objectives, the airport should:

- Provide snow removal
- Perform Master Plan

4.5.3 Claremont Airport (58M)

Of the 23 facility, service, and equipment objectives applicable to 58M, 13 are met, 6 are not met and 4 are not objectives. For 58M to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 511 feet
- Install weather reporting system
- Install airport property fence
- Provide snow removal
- Perform Master Plan
- Perform ALP

4.5.4 College Park Airport (CGS)

Of the 23 facility, service, and equipment objectives applicable to CGS, 14 are met, 5 are not met and 4 are not objectives. For CGS to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 520 feet
- Add REILs to Runway 15/33
- Install VGSI to Runway 15/33
- Provide 24-Hour fueling
- Perform Master Plan

4.5.5 Crisfield-Somerset County Airport (W41)

Of the 23 facility, service, and equipment objectives applicable to W41, 12 are met, 7 are not met and 4 are not objectives. For W41 to meet all its applicable objectives, the airport should:

- Extend primary runway length by 1,103 feet
- Improve ARC to B-I
- Improve taxiway system to a partial parallel taxiway
- Install weather reporting system
- Construct GA/FBO terminal
- Add T-hangar or conventional hangars
- Perform Master Plan

4.5.6 Easton/Newnam Field Airport (ESN)

Of the 23 facility, service, and equipment objectives applicable to ESN, 17 are met, 2 are not met and 4 are not objectives. For ESN to meet all its applicable objectives, the airport should:

- Add REILs to Runway 4 End
- Perform Master Plan

4.5.7 Freeway Airport (W00)

Of the 23 facility, service, and equipment objectives applicable to W00, 10 are met, 9 are not met and 4 are not objectives. For W00 to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 1,070 feet
- Add REILs to Runway 18/36
- Install weather reporting system
- Provide 24-hour fueling
- Add T-hangars or conventional hangars
- Install airport property fence
- Provide snow removal
- Perform Master Plan
- Perform ALP

4.5.8 Garrett County Airport (2G4)

Of the 23 facility, service, and equipment objectives applicable to 2G4, 19 are met, and 4 are not objectives. 2G4 meets all its applicable facility objectives.

4.5.9 Gooden Airpark (RJD)

Of the 23 facility, service, and equipment objectives applicable to RJD, 8 are met, 11 are not met and 4 are not objectives. For RJD to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 286 feet
- Improve runway lighting type to Medium Intensity Runway Lights (MIRL)
- Install weather reporting system
- Construct GA/FBO terminal
- Provide AvGas
- Provide 24-hour fueling
- Add paved aircraft parking
- Install airport property fence
- Provide snow removal
- Perform Master Plan
- Perform ALP

4.5.10 Greater Cumberland Regional Airport (CBE)

Of the 23 facility, service, and equipment objectives applicable to CBE, 16 are met, 3 are not met and 4 are not objectives. For CBE to meet all its applicable objectives, the airport should:

- Add REILs to Runway 5 End
- Install VGSI to Runway 5 End
- Install airport property fence

4.5.11 Harford County Airport (0W3)

Of the 23 facility, service, and equipment objectives applicable to 0W3, 15 are met, 4 are not met and 4 are not objectives. For 0W3 to meet all its applicable objectives, the airport should:

- Extend primary runway length by 644 feet
- Install weather reporting system
- Install airport property fence
- Perform Master Plan

4.5.12 Lee Airport (ANP)

Of the 23 facility, service, and equipment objectives applicable to ANP, 11 are met, 8 are not met and 4 are not objectives. For ANP to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 1,000 feet
- Improve runway lighting type to MIRL
- Add REILs to Runway 12/30
- Construct GA/FBO terminal
- Provide 24-hour fueling
- Provide snow removal
- Perform Master Plan
- Perform ALP

4.5.13 Ocean City Municipal Airport (OXB)

Of the 23 facility, service, and equipment objectives applicable to OXB, 18 are met, 1 is not met and 4 are not objectives. For OXB to meet all its applicable objectives, the airport should:

- Add REILs to Runway 14/32

4.5.14 Potomac Airfield (VKX)

Of the 23 facility, service, and equipment objectives applicable to VKX, 11 are met, 8 are not met and 4 are not objectives. For VKX to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 835 feet
- Improve ARC to B-I
- Add REILs to Runway 6/24
- Provide 24-hour fueling
- Install airport property fence
- Provide snow removal
- Perform Master Plan
- Perform ALP

4.5.15 St. Mary's County Regional Airport (2W6)

Of the 23 facility, service, and equipment objectives applicable to 2W6, 18 are met, 1 is not met and 4 are not objectives. For 2W6 to meet all its applicable objectives, the airport should:

- Perform Master Plan

4.6 Local Airports

Of the 23 objectives, 2 objectives are met by 100% of all airports. All objectives applicable to Local Airports are listed below in the order from most to least met.

- Approach capability (100%)
- ARC (100%)
- Runway length (88%)
- Taxiway system (88%)
- Hangars (75%)
- Rotating beacon (50%)
- Lighted wind cone (63%)
- 24-hour fuel (38%)
- AvGas (38%)
- VGSI (38%)
- Runway lighting (26%)
- Airport property fence (13%)
- ALP (13%)
- Master Plan (0%)

A summary of how Local Airports meet their applicable facility objectives is depicted in **Figure 4-4.**

FIGURE 4-4: PERCENTAGE SUMMARY OF LOCAL FACILITY OBJECTIVES

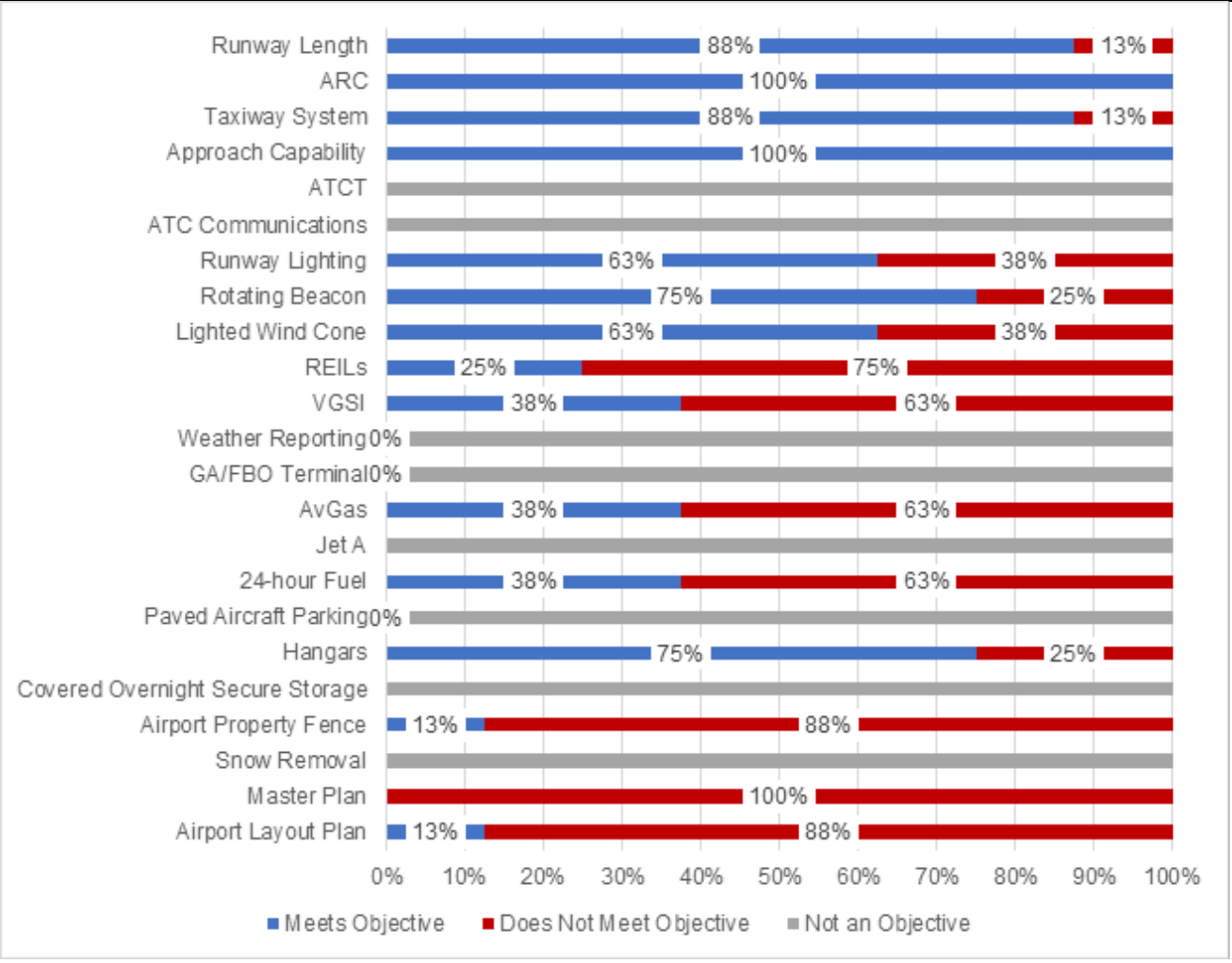


Table 4-4 identifies each of the Local Airports included in MDOT MAA's system and the number of facility objectives that are met, not met, or are not an objective.

TABLE 4-4: SUMMARY OF LOCAL FACILITY OBJECTIVES

MDOT MAA Role	Airport Name	Airport ID	Objectives Met (#)	Objectives Not Met (#)	Not an Objective (#)
Local	Bennett Airport	1N5	8	7	8
	Clearview Airpark	2W2	10	5	8
	Davis Airport	W50	8	7	8
	Essex Skypark	W48	10	5	8
	Fallston Airport	W42	8	7	8
	Kentmorr Airpark	3W3	7	8	8
	Massey Aerodrome	MD1	7	8	8
	Mexico Farms Airport	13W	7	8	8

Source: Airport questionnaires.

4.6.1 Bennett Airport (1N5)

Of the 23 facility, service, and equipment objectives applicable to 1N5, 8 are met, 7 are not met and 8 are not objectives. For 1N5 to meet all its applicable objectives, the airport should:

- Add REILs to Runway 17/35
- Provide AvGas
- Provide 24-hour fueling
- Add T-hangars or conventional hangars
- Install airport property fence
- Perform Master Plan
- Perform ALP

4.6.2 Clearview Airport (2W2)

Of the 23 facility, service, and equipment objectives applicable to 2W2, 10 are met, 5 are not met and 8 are not objectives. For 2W2 to meet all its applicable objectives, the airport should:

- Extend the primary runway length by 160 feet
- Improve runway lighting type to LIRL
- Install airport property fence
- Perform Master Plan
- Perform ALP

4.6.3 Davis Airport (W50)

Of the 23 facility, service, and equipment objectives applicable to W50, 8 are met, 7 are not met and 8 are not objectives. For W50 to meet all its applicable objectives, the airport should:

- Improve runway lighting type to LIRL
- Install rotating beacon
- Add lighting to the wind cone
- Add REILs to Runway 8/26
- Install VGSI to Runway 8/26
- Install airport property fence
- Perform Master Plan

4.6.4 Essex Skypark (W48)

Of the 23 facility, service, and equipment objectives applicable to W48, 10 are met, 5 are not met and 8 are not objectives. For W48 to meet all its applicable objectives, the airport should:

- Provide AvGas
- Provide 24-hour fueling
- Install airport property fence
- Perform Master Plan
- Perform ALP

4.6.5 Fallston Airport (W42)

Of the 23 facility, service, and equipment objectives applicable to W42, 8 are met, 7 are not met, and 8 are not objectives. For W42 to meet all its applicable objectives, the airport should:

- Improve runway lighting type to LIRL
- Install rotating beacon
- Add lighting to the wind cone
- Add REILs to Runway 22 End
- Install VGSI to Runway 4/22
- Perform Master Plan
- Perform ALP

4.6.6 Kentmorr Airpark (3W3)

Of the 23 facility, service, and equipment objectives applicable to 3W3, 7 are met, 8 are not met, and 8 are not objectives. For 3W3 to meet all its applicable objectives, the airport should:

- Add REILs to Runway 10/28
- Install VGSI to Runway 10/28
- Provide AvGas
- Provide 24-hour fueling
- Add T-hangars or conventional hangars
- Install airport property fence
- Perform Master Plan
- Perform ALP

4.6.7 Massey Aerodrome (MD1)

Of the 23 facility, service, and equipment objectives applicable to MD1, 7 are met, 8 are not met, and 8 are not objectives. For MDI to meet all its applicable objectives, the airport should:

- Add lighting to the wind cone
- Add REILs to Runway 2/20
- Install VGSI to Runway 2/20
- Provide AvGas
- Provide 24-hour fueling
- Install airport property fence
- Perform Master Plan
- Perform ALP

4.6.8 Mexico Farms Airport (1W3)

Of the 23 facility, service, and equipment objectives applicable to MD1, 7 are met, 8 are not met, and 8 are not objectives. For 1W3 to meet all its applicable objectives, the airport should:

- Improve taxiway system with turnarounds
- Add REILs to Runway 9/27
- Install VGSI to Runway 9/27

- Provide AvGas
- Provide 24-hour fueling
- Install airport property fence
- Perform Master Plan
- Perform ALP

4.7 Special Facilities

Due to the unique nature of Special Facilities in the Maryland airport system, the facility objectives that apply to the other service roles do not apply to the Special Facilities. For Havre de Grace Seaplane Base (M06) and Pier 7 Heliport (4MD), it is recommended that they preserve existing conditions.

4.8 Summary

This chapter evaluates MDOT MAA system airports meeting their associated facility, service, and equipment objectives. **Figure 4-5** provides an overall summary of facility, service, and equipment objectives not met by each airport and for each set plan objective. The analysis in this chapter identifies airport-specific deficiencies and serves as the basis for developing the cost analysis and recommendations for Maryland's state airport system.

A summary of the total number of airports not meeting their applicable facility objectives is depicted in **Table 4-5**.

FIGURE 4-5: AIRPORTS NOT MEETING FUNCTION STATEWIDE

Airport Name	Airport ID	Airport Role	Runway Length	ARC	Taxiway System	Approach Capability	ATCT	ATC Communications	Runway Lighting	Rotating Beacon	Lighted Wind Cone	REILs	VGSI	Weather Reporting	GA/FBO Terminal	AvGas	Jet A	24-hour Fuel	Paved Aircraft Parking	Hangars	Covered Overnight Secure Storage	Airport Property Fence	Snow Removal	Master Plan	Airport Layout Plan
Baltimore/Washington International Thurgood Marshall Airport	BWI	Air Carrier																						■	
Hagerstown Regional Airport/Richard A. Henson Field	HGR	Air Carrier																						■	
Salisbury-Ocean City/Wicomico Regional Airport	SBY	Air Carrier																							
Carroll County Regional Airport/Jack B. Poage Field	DMW	Reliever				■			■																
Frederick Municipal Airport	FDK	Reliever																				■		■	■
Martin State Airport	MTN	Reliever																						■	
Maryland Airport	2W5	Reliever	■	■		■		■	■				■	■				■				■	■	■	
Montgomery County Airpark	GAI	Reliever	■	■		■			■															■	
Tipton Airport	FME	Reliever	■	■		■		■													■			■	
Bay Bridge Airport	W29	General	■	■																				■	
Cambridge-Dorchester Regional Airport	CGE	General																					■	■	
Claremont Airport	58M	General	■											■								■	■	■	■
College Park Airport	CGS	General	■									■	■					■						■	
Crisfield-Somerset County Airport	W41	General	■	■	■									■	■					■				■	
Easton/Newnam Field Airport	ESN	General										■												■	
Freeway Airport	W00	General	■									■		■				■		■		■	■	■	■
Garrett County Airport	2G4	General																							
Gooden Airpark	RJD	General	■						■					■	■	■		■	■			■	■	■	■
Greater Cumberland Regional Airport	CBE	General										■	■									■			
Harford County Airport	0W3	General	■											■								■		■	
Lee Airport	ANP	General	■						■			■			■			■					■	■	■
Ocean City Municipal Airport	OXB	General										■													
Potomac Airfield	VKX	General	■	■								■						■				■	■	■	■
St. Mary's County Regional Airport	2W6	General																						■	
Bennett Airport	1N5	Local										■				■		■		■		■		■	■
Clearview Airpark	2W2	Local	■						■													■		■	■
Davis Airport	W50	Local							■	■	■	■	■									■		■	
Essex Skypark	W48	Local										■	■			■		■				■		■	■
Fallston Airport	W42	Local							■	■	■	■	■											■	■
Kentmorr Airpark	3W3	Local										■	■			■		■		■		■		■	■
Massey Aerodrome	MD1	Local									■	■	■			■		■				■		■	■
Mexico Farms Airport	1W3	Local			■							■	■			■		■				■		■	■
Havre de Grace Seaplane Base	M06	Special																							
Pier 7 Heliport	4MD	Special																							

■ Does Not Meet Objective

Source: Airport questionnaires.

TABLE 4-5: SUMMARY OF AIRPORT ROLES AND FACILITY OBJECTIVES

MDOT MAA Role	Airport Name	Airport ID	Objectives Met (#)	Objectives Not Met (#)	Not an Objective (#)
Air Carrier	Baltimore/Washington International Thurgood Marshall Airport	BWI	22	1	0
	Hagerstown Regional Airport/Richard A. Henson Field	HGR	22	1	0
	Salisbury-Ocean City/Wicomico Regional Airport	SBY	23	0	0
Reliever	Carroll County Regional Airport/Jack B. Poage Field	DMW	21	2	0
	Frederick Municipal Airport	FDK	20	3	0
	Martin State Airport	MTN	22	1	0
	Maryland Airport	2W5	12	11	0
	Montgomery County Airpark	GAI	19	4	0
	Tipton Airport	FME	17	6	0
General	Bay Bridge Airport	W29	16	3	4
	Cambridge-Dorchester Regional Airport	CGE	17	2	4
	Claremont Airport	58M	13	6	4
	College Park Airport	CGS	14	5	4
	Crisfield-Somerset County Airport	W41	12	7	4
	Easton/Newnam Field Airport	ESN	17	2	4
	Freeway Airport	W00	10	9	4
	Garrett County Airport	2G4	19	0	4
	Gooden Airpark	RJD	8	11	4
	Greater Cumberland Regional Airport	CBE	16	3	4
	Harford County Airport	0W3	15	4	4
	Lee Airport	ANP	11	8	4
	Ocean City Municipal Airport	OXB	18	1	4
	Potomac Airfield	VKX	11	8	4
	St. Mary's County Regional Airport	2W6	18	1	4
Local	Bennett Airport	1N5	8	7	8
	Clearview Airpark	2W2	10	5	8
	Davis Airport	W50	8	7	8
	Essex Skypark	W48	10	5	8
	Fallston Airport	W42	8	7	8
	Kentmorr Airpark	3W3	7	8	8
	Massey Aerodrome	MD1	7	8	8
	Mexico Farms Airport	1W3	7	8	8
Special	Havre de Grace Seaplane Base	M06	Preserve existing		
	Pier 7 Heliport	4MD	Preserve existing		

Source: Airport questionnaires.

CHAPTER 5

System Implementation Plan and Cost Analysis

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND AVIATION ADMINISTRATION

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5 SYSTEM IMPLEMENTATION PLAN AND COST ANALYSIS

5.1 Introduction

The system implementation plan and project cost analysis provide guidance to the Maryland airports and MDOT MAA on projects to undertake over a 20-year planning horizon and an estimate of the cost for each project

Chapter 4 Gap Analysis identified projects for each of the airports within the Maryland state airport system according to their applicable facility, service, and equipment objectives. Facility, service, and equipment objectives established in this 2023 MASP reflect the minimum level of development that is considered desirable at each airport. While the objectives are not requirements, they are set for each airport role to guide airport development recommendations and the 2023 MASP implementation plan.

This chapter provides high-level cost estimates for all projects identified in the 2023 MASP and sets forth the implementation plan for MDOT MAA in the short- (1-5 years), mid- (6-10 years), and long-terms (11-20 years). MDOT MAA priorities drive the recommended timing of projects in the implementation plan. Where available, airports' 2022 Airport Capital Improvement Programs (ACIPs) were reviewed and projects that are already shown on airports' ACIPs are incorporated into the implementation plan.

5.2 Assumptions and Methodology

Utilizing the results of the facility, service, and equipment needs analysis in **Chapter 4 Gap Analysis**, unit costs were developed for each project type and applied to each airport's development needs, where data was available and quantifiable, in order to estimate a total project cost for airports in each role.

A detailed project cost analysis was performed for the 2023 MASP implementation plan. Existing conditions at airports were reviewed and quantities were estimated based on AECOM-generated Computer-Aided Design (CAD) files, airport layout plans, and aerial photography, as available.

Unit prices for each project were developed based on previously bid projects, experience at similar-sized airports, and RSMeans data for the Maryland region applied to costs outlined in FAA Advisory Circular 150/5370-10H, Standard Specifications for Construction of Airports, and MDOT State Highway Administration's 2022 Standard and Supplemental Specifications for Construction and Materials.

All costs provided in this chapter are estimated costs in current (2022) dollars. The costs estimated for each project type have not been escalated to account for inflation beyond the year 2022 due to the volatility of raw material costs in the industry. With the exception of Master Plan and ALP cost estimates, each of the project costs include a 10% contingency for design and 20% contingency for construction. Planning and environmental costs can vary significantly by airport, and therefore are not included in the cost estimates.

Table 5-1 presents the types of costs that were assumed for each project. Property acquisition costs are included in the project cost analysis and utilized land values from Maryland Department of Assessments and Taxation's Real Property Data Search.

TABLE 5-1: PROJECT COST ASSUMPTIONS

Project Type	Project Cost Assumptions[6]
Airport Reference Code	Includes control over runway safety areas and airfield geometry improvements
Primary Runway Length	Includes removal or relocation of existing runway facilities and new installation and sitework
Taxiway System	Includes new installation and sitework
Approach Capability	Includes equipment needed to provide a CAT I 1800 Runway Visual Range Approach Operations
Airport Traffic Control Tower[1]	No projects identified in 2023 MASP
Airport Traffic Control Communications	Includes installation of electrical infrastructure
Runway Lighting[2]	Includes removals, new installation of lighting system, electrical, and sitework
Rotating Beacon	Includes a new rotating beacon, including site work and installation of electrical infrastructure
Lighted Wind Cone	Includes a new lighted wind cone, including site work and installation of electrical infrastructure
Runway End Identifier Lighting[3]	Includes a new lighting system, including electrical installation and sitework
Visual Glide Slope Indicator	Includes installation of 2-box PAPI, removals as needed, electrical installation and sitework
Weather Reporting	Includes installation of AWOS III/PT, including electrical installation and sitework
General Aviation/Fixed-based Operator Terminal	Includes 10,000 square foot building with drainage, electric installation, and sitework
Aviation Gasoline (AvGas)	Includes tanks, sitework, and installation of access road
Jet A	No projects identified in 2023 MASP
24-Hour Fueling[4]	Includes card reader system and electrical installation, including lighting
Paved Aircraft Parking	Includes tie-down anchors, stormwater management, sitework, and pavement
Hangars	Includes a steel structure, including earthwork, stormwater management, and foundation construction costs
Covered Overnight Secure Storage[5]	Includes an 80-foot by 80-foot box hangar with roof, including drainage, earthwork, and utility costs
Airport Property Fence	Includes a 10-foot chain link fence and gate
Snow Removal	Includes equipment sized based on airport
Airport Master Plan[4]	Includes cost of developing study
Airport Layout Plan[4]	Includes cost of developing study

Notes: (1) The objective only applies to airports with 120,000 annual operations or more.
(2) The objective only applies to airports with paved runways.
(3) The objective only applies to airports without an approach lighting system.
(4) Objectives added for evaluation in the 2023 MASP.
(5) Includes availability of dedicated and undedicated covered overnight secure storage spaces.
(6) There may be additional airport-specific conditions that were included in the project costs.

5.3 MDOT MAA Priorities

The consideration of state airport system development priorities in system plans allows for agencies to determine how to fund certain projects over the system plan's 20-year planning horizon. MDOT MAA priorities guide funding decisions and allow for the projects included in the 2023 MASP to be distributed over the 20-year period.

Based on discussions with MDOT MAA, short-, mid-, and long-term implementation periods were established for the projects recommended in the 2023 MASP. MDOT MAA priorities for the 2023 MASP are described in further detail below and are consistent with priorities from the 2008 MASP.

- **Short-term (1-5 years):** Safety and security of each airport is the highest priority for MDOT MAA. In addition, adherence with FAA standards and development of airport planning documents are also included as short-term priorities. Up-to-date airport planning documents allow for airports to make informed decisions when undertaking airport development projects. Projects including airport perimeter fence installation, provision of

snow removal equipment, approach capability improvements, Airport Reference Code (ARC) updates, airport master plan updates, and ALP updates are included in the short-term.

- **Mid-term (6-10 years):** MDOT MAA prioritizes airside development in the mid-term, including primary runway length extensions, taxiway system improvements, ATC communications, weather equipment, lighted wind cones, VGSI, REIL, and runway lighting improvements. In addition, provision of 24-hour fueling, AvGas, paved aircraft parking, hangar space, GA/FBO terminals and covered overnight secure storage are projects included in the mid-term.
- **Long-term (11-20 years):** Projects identified in the 2008 MASP to improve geographic coverage continue to be included in MDOT MAA's long-term priority, including airport reference code and approach capability improvements, primary runway length extensions, and runway lighting type improvements. These projects for Reliever and General airports are intended to be reviewed continuously for feasibility as needs and conditions change at each of the airports.

The implementation plan reflects MDOT MAA priorities described above. In some cases, an airport may have the proposed project already listed on its 2022 Airport Capital Improvement Program (ACIP). In these cases, the project's timeline in the ACIP is presented.

5.4 Project Cost Analysis by Airport

The 2023 MASP implementation plan consists of unconstrained project costs and project timeframes for each airport and is presented in the subsequent sections. The project cost analysis for each airport consists of an overview of projects completed from the 2008 MASP implementation plan, a review of available planning documents, such as master plans, ALPs, and ACIPs, and costs and durations for projects identified in this 2023 MASP.

Projects in the implementation plan are recommended for the short (1-5 years), mid (6-10), and long-term (11-20) periods based on MDOT MAA priorities. Where available, if a project identified for an airport was shown on its 2022 ACIP, the cost and timeframe on the ACIP was utilized.

The 2008 MASP identified projects for airports to undertake to improve geographic coverage of the Maryland airport system. These projects that were identified for Reliever and General airports to improve geographic coverage in the 2008 MASP were carried forward and continue to be recommendations in this 2023 MASP. Projects that are included to improve geographic coverage recommend facility, service, and/or equipment improvements that exceed the airport's applicable facility, service, and equipment objectives. These projects are included as long-term priorities.

As introduced in **Chapter 3 Facility Requirements**, 3 objectives were newly added in the 2023 MASP: 24-hour fueling, Master Plan, and ALP. The newly suggested intervals for Master Plan and ALP are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport. MDOT MAA prioritizes airports performing planning studies in the short-term (1-5 years) and the newly added Master Plan objective identifies 27 airports that do not meet the objective, and since state and federal funding levels are limited, airports should consider Master Plan updates on as needed basis.

Each airport should review airport development needs identified through the facility requirements and gap analysis findings in prior chapters of the 2023 MASP. It is possible that the facility, service, and equipment objectives set forth for an airport in the 2023 MASP differs from the FAA's requirements for safety and security design standards at individual airports. In such cases, the airport should refer to its planning studies or update its planning studies if conditions have changed and new needs are identified at the airport.

For airports listed in the 2021-2025 NPIAS to be eligible for federal funding, a project must appear on an FAA approved ALP. Although it is not a requirement for airports to have an updated airport Master Plan or ALP to be eligible for state funding, airports are strongly encouraged to engage in such planning activities as recommended by their facility, service, and equipment objectives. **Chapter 6 Recommended System** provides more information on state and federal funding sources.

Due to the unique nature of Special Facilities in the Maryland airport system, the facility objectives that apply to the other service roles do not apply to the Special Facilities. For Havre de Grace Seaplane Base (M06) and Pier 7 Heliport (4MD), it is recommended that they preserve existing conditions.

5.4.1 Baltimore/Washington International Thurgood Marshall Airport (BWI)

The last 2008 MASP did not identify any projects for BWI to undertake. The 2023 MASP recommends BWI to perform a Master Plan study to meet its Air Carrier facility, service, and equipment objectives.

It is reiterated that the 2023 MASP includes newly suggested intervals for Master Plan updates, the intent of the suggested 5-year interval for Air Carrier Airports are meant as check-in dates to guide airports to undertake master planning studies as needs arise at the airport.

TABLE 5-2: BWI PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Master Plan	$1,500,000		
Total	**$1,500,000**	**$-**	**$-**

5.4.2 Hagerstown Regional Airport/Richard A. Henson Field (HGR)

The last 2008 MASP did not identify any projects for HGR to undertake. The 2023 MASP recommends HGR perform a Master Plan study to meet its Air Carrier facility, service, and equipment objectives.

It is reiterated that the 2023 MASP includes newly suggested intervals for Master Plan updates, the intent of the suggested 5-year interval for Air Carrier Airports are meant as check-in dates to guide airports to undertake master planning studies as needs arise at the airport.

TABLE 5-3: HGR PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Master Plan	$1,500,000		
Total	**$1,500,000**	**$-**	**$-**

5.4.3 Salisbury-Ocean City/Wicomico Regional Airport (SBY)

The last 2008 MASP did not identify any projects for SBY to undertake. In the 2023 MASP, SBY meets all of the Air Carrier facility, service, and equipment objectives.

5.4.4 Carroll County Regional Airport/Jack B. Poage Field (DMW)

The last 2008 MASP identified 5 projects for DMW to undertake. Of the 5 projects, 3 were completed (providing snow removal, installing a rotating beacon, and providing covered overnight secure storage), and 2 remain as projects recommended in this 2023 MASP.

- Improve runway lighting type to HIRL
- Improve LPV approach by lowering visibility minimum to ¾ statute mile

The airport's 2022 ACIP, 2015 Master Plan, and 2015 ALP were reviewed. While the above projects are not included in DMW's planning documents, it is recommended that DMW upgrade its runway lighting system to HIRL to meet its Reliever facility, service, and equipment objectives.

TABLE 5-4: DMW PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Runway Lighting to HIRL		$1,068,000	
LPV Approach to ¾ Statute Mile	$1,440,000		
Total	**$1,440,000**	**$1,068,000**	**$-**

5.4.5 Frederick Municipal Airport (FDK)

The last 2008 MASP identified 3 projects for FDK to undertake. All 3 projects were completed (installing an ATCT, constructing a GA terminal/administration building, and providing covered overnight secure storage).

In addition, the 2023 MASP recommends FDK to undertake the following projects to meet its Reliever facility, service, and equipment objectives:

- Install airport property fence
- Perform airport master plan
- Perform airport layout plan

The airport's 2022 ACIP, 2008 Master Plan, and 2008 ALP were reviewed. Installing an airport property fence around the perimeter of the airport was not identified on the airport's ACIP, master plan, or ALP. In addition, FDK's Master Plan and ALP have not been updated in the last 10 years.

It is recommended that FDK update its Master Plan and ALP and install an airport property fence around the perimeter of the airport to meet its Reliever facility, service, and equipment objectives.

TABLE 5-5: FDK PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Airport Property Fence	$904,800		
Master Plan(1)		$600,000	
ALP	$250,000		
Total	**$1,154,800**	**$600,000**	**$-**

Note: (1) Project cost and timeframe is from ACIP.

5.4.6 Martin State Airport (MTN)

The last 2008 MASP identified 1 project for MTN to undertake – to provide an LPV approach with a visibility minimum of ¾ statute mile. Since then, MTN has provided precision approach capabilities through an instrument landing system (ILS) on Runway 15/33. While MTN has an ILS approach, the ILS approach is limited to a visibility minimum of 1 statute mile due to current conditions at the airport.[1] The project was included in the 2008 MASP to improve geographic coverage, therefore, it remains as a proposed project for MTN in the long-term for the 2023 MASP in the case that the Maryland airport system needs additional airports with LPV approach capabilities.

The 2023 MASP recommends MTN perform a master plan study to meet its Reliever facility, service, and equipment objectives. In addition, it is recommended MTN monitor its approach capability conditions to evaluate whether lowering its approach minimums will be feasible in the future.

[1] A project cost to lower approach minimums to ¾ statute mile at MTN is not provided, however, it is recommended that MTN explore possibilities to lower its approach minimums.

TABLE 5-6: MTN PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
LPV Approach to ¾ Statute Mile			No cost available
Master Plan	$750,000		
Total	**$750,000**	**$-**	**$-**

5.4.7 Maryland Airport (2W5)

The last 2008 MASP identified 13 projects for 2W5 to undertake. Of the 13 projects, 5 were completed (providing a full parallel taxiway, installing a rotating beacon, installing a lighted wind cone, constructing a GA terminal/administration building, and providing covered overnight secure storage) and 8 projects remain as recommended projects in the 2023 MASP:

- Extend primary runway length by 1,260 feet, to 5,000 feet*
- Improve ARC from B-II to C-II
- Improve approach capability to precision approach*
- Improve ATC communications
- Improve runway lighting type to HIRL
- Install VGSI to Runway 20 End*
- Install weather reporting system
- Install airport property fence*

In addition to these 8 projects above, the 2023 MASP recommends 3 more projects that 2W5 should undertake to meet its Reliever facility, service, and equipment objectives:

- Provide 24-hour fueling
- Provide snow removal
- Perform airport Master Plan

The airport's 2022 ACIP, 1999 Master Plan, and 2021 ALP Pen & Ink Change were reviewed. Of the 11 projects recommended in the 2023 MASP, 4 projects, indicated with an asterisk above (*), are shown on 2W5's Master Plan and ALP.

It is recommended that 2W5 implement the above 11 projects to meet its Reliever facility, service, and equipment objectives.

TABLE 5-7: 2W5 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 5,000'		$8,460,000	
ARC from B-II to C-II	$13,660,000		
Approach Capability to Precision Approach	$6,835,000		
ATC Communications		$134,640	
Runway Lighting Type to HIRL		$841,000	
VGSI to Runway 20 End		$327,000	
Weather Reporting System		$639,000	
Airport Property Fence	$1,350,000		
24-Hour Fueling(1)		$200,000	
Snow Removal	$720,000		
Master Plan	$750,000		
Total	**$23,315,000**	**$10,601,640**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.8 Montgomery County Airpark (GAI)

The last 2008 MASP identified 6 projects for GAI to undertake. Of the 6 projects 2 were completed (installing an ATCT and installing a rotating beacon) and 4 projects remain as recommended projects in the 2023 MASP.

- Extend primary runway length by 798 feet, to 5,000 feet
- Improve ARC from B-II to C-II
- Improve approach capability to precision approach
- Improve runway lighting type to HIRL*

In addition to these 4 projects above, the 2023 MASP recommends 1 additional project that GAI should undertake to meet its Reliever facility, service, and equipment objectives:

- Perform airport Master Plan

The airport's 2022 ACIP and 2013 ALP Pen & Ink Change were reviewed. Of the 4 projects recommended in the 2023 MASP, indicated with an asterisk above (*), are shown on GAI's Master Plan and ALP. Improving GAI's runway lighting type to HIRL is indicated on the ACIP, for years 2023-2024 with a cost of $850,000 and is incorporated in the implementation plan below. It is recommended that GAI update its Master Plan to identify its airport development needs, including the need for the above projects.

Implementing the above 5 projects will bring GAI to meet its Reliever facility, service, and equipment objectives.

TABLE 5-8: GAI PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
Primary Runway Length to 5,000'		$66,160,000	
ARC from B-II to C-II	$184,030,000		
Approach Capability to Precision Approach	$6,959,000		
Runway Lighting Type to HIRL(1)	$850,000		
Master Plan	$750,000		
Total	**$192,589,000**	**$66,160,000**	**$-**

Note: (1) Project cost and timeframe is from ACIP.

5.4.9 Tipton Airport (FME)

The last 2008 MASP identified 7 projects for FME to undertake. Of the 7 projects 3 were completed (providing snow removal, installing a rotating beacon, and providing HIRL) and 4 projects remain as recommended projects in the 2023 MASP.

- Extend the primary runway length by 2,000 feet, to 5,000 feet
- Improve ARC from B-II to C-II
- Improve approach capability to precision approach
- Provide covered overnight secure storage

In addition to these 4 projects above, the 2023 MASP recommends 2 more projects that FME should undertake to meet its Reliever facility, service, and equipment objectives:

- Improve ATC communications
- Perform airport Master Plan

The airport's 2022 ACIP, 2010 Master Plan, and 2016 ALP Pen & Ink Change were reviewed. Extending FME's primary runway, Runway 10/28, to 4,200 feet is listed on its ACIP for 2025, 2026, and 2027, with an estimated total cost of $10,294,442. The runway extension is also shown on the airport's Master Plan and ALP. In addition, FME has listed performing an airport master plan update on its ACIP for 2022, with an estimated total cost of $333,333.

Implementing the above 6 projects will bring FME to meet its Reliever facility, service, and equipment objectives.

TABLE 5-9: FME PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 5,000'(1)	$14,449,442		
ARC from B-II to C-II	$9,610,000		
Approach Capability to Precision Approach	$6,724,000		
Covered Overnight Secure Storage		$2,943,000	
ATC Communications		$108,960	
Master Plan(2)	$333,333		
Total	**$31,116,775**	**$3,051,960**	**$-**

Notes: (1)Project cost and timeframe is from ACIP. The project on the ACIP is to extend the runway to 4,200' for $10,294,442. An additional cost to extend the airport's runway from 4,200' to 5,000' was estimated and is included in the cost shown in the table.
(2) Project cost and timeframe is from ACIP.

5.4.10 Bay Bridge Airport (W29)

The last 2008 MASP identified 5 projects for W29 to undertake – 1 project to meet its applicable facility, service, and equipment objectives and 4 projects (extending the primary runway to 5,000 feet, upgrading ARC to C-II, providing a precision approach, and installing HIRL) to improve geographic coverage. Of the 5 projects 1 was completed (installing HIRL) and 4 projects remain as recommended projects in the 2023 MASP.

- Provide a precision approach – to improve geographic coverage
- Extend the primary runway length by 787 feet, to 3,500 feet
- Extend the primary runway length to from 3,500 feet to 5,000 feet – to improve geographic coverage
- Upgrade ARC from B-I to C-II[2] – to improve geographic coverage

In addition to the project above, the 2023 MASP recommends 2 more projects that W29 should undertake to meets its General facility, service, and equipment objectives:

- Improve ARC from B-I Small to B-I
- Perform airport Master Plan

The airport's 2022 ACIP, 1989 Master Plan, and the 2021 ALP Pen & Ink Change were reviewed. The 6 recommended projects above are not shown on W29's ACIP, Master Plan, or ALP.

It is recommended that W29 analyze the need for a runway extension and ARC upgrade in its next Master Plan and ALP update.

Implementing the above 6 projects will bring W29 to meet its General facility, service, and equipment objectives and improve geographic coverage for the system.

TABLE 5-10: W29 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Approach Capability to Precision Approach			$6,258,960
Primary Runway Length to 3,500'		$3,180,000	
ARC from B-I Small to B-I	$10,590,000		
Master Plan	$350,000		
Primary Runway Length from 3,500' to 5,000'			$6,480,000
ARC from B-I to C-II	No cost available		
Total	**$10,940,000**	**$3,180,000**	**$12,738,960**

[2] The project cost associated with upgrading W29's ARC from B-I to C-II is not provided, due to the extensive physical constraints that exist around the airport. It is recommended that the feasibility of the project be revisited in the next system plan update if the development constraints are mitigated.

5.4.11 Cambridge-Dorchester Regional Airport (CGE)

The last 2008 MASP identified 4 projects for CGE to undertake – 4 projects (extending primary runway to 5,000 feet, installing HIRL, provide a precision approach, upgrading ARC to C-II) were recommended to improve geographic coverage and 3 were completed since the 2008 MASP. One project remains as a recommended project in the 2023 MASP:

- Provide a precision approach

The 2023 MASP recommends 2 projects that CGE should undertake to meet its General facility, service, and equipment objectives:

- Provide snow removal
- Perform airport Master Plan

The airport's 2022 ACIP and 2015 ALP were reviewed and the 3 recommended projects above are not shown on CGE's ACIP or ALP.

Implementing the above 3 projects will bring CGE to meet its General facility, service, and equipment objectives.

TABLE 5-11: CGE PROJECT COSTS

	Project Costs		
Project Type	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
Approach Capability to Precision Approach			$6,543,480
Snow Removal	$360,000		
Master Plan	$350,000		
Total	**$710,000**	**$-**	**$6,543,480**

5.4.12 Claremont Airport (58M)

The last 2008 MASP identified 5 projects for 58M to undertake – 3 projects to meet its applicable facility, service, and equipment objectives and 2 projects (extending primary runway to 5,000 feet and providing a precision approach) to improve geographic coverage.

Of the 5 projects, 1 was completed (providing a precision approach) and 4 projects remain as recommended projects in the 2023 MASP.

- Extend the primary runway length by 511 feet, to 3,500 feet
- Extend the primary runway length from 3,500 feet to 5,000 feet – to improve geographic coverage
- Install weather reporting system
- Install airport property fence

In addition to these 3 projects above, the 2023 MASP recommends 3 additional projects that 58M should undertake to meets its General facility, service, and equipment objectives:

- Provide snow removal
- Perform airport Master Plan
- Perform airport layout plan

It is recommended that the airport undertake a Master Plan and ALP to assess the need for the above projects. Implementing the above 6 projects will bring CGE to meet its General facility, service, and equipment objectives and improve geographic coverage for the system.

TABLE 5-12: 58M PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500’		$3,340,000	
Weather Reporting System		$320,000	
Airport Property Fence	$556,000		
Snow Removal	$360,000		
Airport Master Plan	$350,000		
ALP	$175,000		
Primary Runway Length from 3,500’ to 5,000’			$6,350,000
Total	**$1,441,000**	**$3,660,000**	**$6,350,000**

5.4.13 College Park Airport (CGS)

The last 2008 MASP identified 2 projects for CGS to undertake to meet its applicable facility, service, and equipment objectives. Of the 2 projects, 1 was completed (construction a GA/FBO terminal) and 1 remains as a recommended project in the 2023 MASP.

- Extend the primary runway length by 520 feet, to 3,500 feet*

In addition to this project, the 2023 MASP recommends 4 more projects that CGS should undertake to meets its General facility, service, and equipment objectives:

- Add REILs to Runway 15/33*
- Install VGSI to Runway 15/33*
- Provide 24-Hour fueling
- Perform airport Master Plan

The airport’s 2022 ACIP and 2012 ALP Pen & Ink Change were reviewed; projects that are shown on the airport’s ACIP are indicated with an asterisk above (*). The airport’s ACIP shows installing REILs and VGSI to Runway 15/33 in State FY 2023 for $1,724,000. The runway extension project on CGS’ ALP shows a runway extension to 2,900 feet, while the objective is 3,500 feet.

It is recommended that the airport undertake a Master Plan to assess the need for the full runway extension. Implementing the above 5 projects will bring CGS to meet its General facility, service, and equipment objectives.

TABLE 5-13: CGS PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500’		$4,690,000	
REILs to Runway 15/33[(1)]	$1,724,000		
VGSI to Runway 15/33[(1)]			
24-Hour Fueling[(2)]		$200,000	
Master Plan	$350,000		
Total	**$2,074,000**	**$4,890,000**	**$-**

Notes: (1) Project cost and timeframe is from ACIP. The ACIP cost may include other improvements, in addition to installing REILs and VGSI for Runway 15/33.
(2) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.14 Crisfield-Somerset County Airport (W41)

The last 2008 MASP identified 6 projects for W41 to undertake to meets its applicable facility, service, and equipment objectives. Of the 6 projects, 2 were completed (installing airport property fence and providing snow removal) and 4 projects remain as recommended projects in the 2023 MASP.

- Extend primary runway length by 1,103 feet, to 3,500 feet*
- Improve taxiway system to a partial parallel taxiway*
- Install weather reporting system
- Construct GA/FBO terminal*

In addition to these 4 projects above, the 2023 MASP recommends 3 more projects that W41 should undertake to meets its General facility, service, and equipment objectives:

- Add T-hangar or conventional hangars*
- Improve ARC from B-I Small to B-I*
- Perform airport Master Plan

The airport's 2022 ACIP and 2020 ALP Pen & Ink Change were reviewed. The airport's ACIP shows T-hangar planning/environmental, design, construction, and construction administration/inspection over State FY 2023-2025 for $1,800,000. Additionally, the ACIP shows constructing a GA/FBO terminal in its "out years;" a cost estimate is to be determined.

Of the 7 projects recommended in the 2023 MASP, 5 projects, indicated with an asterisk above (*), are shown on W41's ALP.

It is recommended that W41 undertake a Master Plan to assess the need for the projects recommended in the 2023 MASP. Implementing the above 7 projects will bring W41 to meet its General facility, service, and equipment objectives.

TABLE 5-14: W41 PROJECT COSTS

	Project Costs		
Project Type	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
Primary Runway Length to 3,500'		$7,160,000	
Partial Parallel Taxiway		$1,740,000	
Weather Reporting System		$638,000	
GA/FBO Terminal		$8,076,720	
Hangar Space[(1)]		$1,800,000	
ARC from B-I Small to B-I	$2,772,000		
Master Plan	$350,000		
Total	**$3,122,000**	**$19,414,720**	**$-**

Note: (1) Project cost and timeframe is from ACIP.

5.4.15 Easton/Newnam Field Airport (ESN)

The last 2008 MASP identified 2 projects for ESN (providing an LPV approach with lower than ¾ mile visibility and improving runway lighting type to HIRL) to improve geographic coverage. The airport completed both projects that were identified in the 2008 MASP.

The 2023 MASP recommends 2 more projects that ESN should undertake to meet its General facility, service, and equipment objectives:

- Add REILs to Runway 4 end
- Perform airport Master Plan

Implementing the above 2 projects will bring ESN to meet its General facility, service, and equipment objectives.

TABLE 5-15: ESN PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
REILs to Runway 4 End		$251,000	
Master Plan	$350,000		
Total	**$350,000**	**$251,000**	**$-**

5.4.16 Freeway Airport (W00)

The last 2008 MASP identified 5 projects for W00 to undertake to meet its applicable facility, service, and equipment objectives. Of the 5 projects, 2 were completed (upgrading ARC to B-I and constructing a GA/FBO terminal) and 3 projects remain as recommended projects in the 2023 MASP.

- Extend the primary runway length by 1,070 feet, to 3,500 feet
- Install weather reporting system
- Install airport property fence

In addition to these 3 projects above, the 2023 MASP recommends 6 more projects that W00 should undertake to meets its General facility, service, and equipment objectives:

- Add REILs to Runway 18/36
- Provide 24-hour fueling
- Add T-hangars or conventional hangars
- Provide snow removal
- Perform airport Master Plan
- Perform an ALP

Implementing the above 9 projects will bring W00 to meet its General facility, service, and equipment objectives.

TABLE 5-16: W00 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500’		$13,450,000	
Weather Reporting System		$627,000	
Airport Property Fence	$427,000		
REILs to Runway 18/36		$263,000	
24-Hour Fueling(1)		$199,000	
Hangar Space		$204,000	
Snow Removal	$360,000		
Master Plan	$350,000		
ALP	$175,000		
Total	**$1,312,000**	**$14,743,000**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.17 Garrett County Airport (2G4)

The last 2008 MASP identified a total of 4 projects for 2G4 – 1 project to meet its applicable facility, service, and equipment objectives, and 3 projects (upgrading ARC to C-II, providing a precision approach, and installing HIRL) to improve geographic coverage. The airport completed 3 projects and has 1 project remaining: to provide a precision approach.

It is recommended that 2G4 provide a precision approach to improve geographic coverage for the system.

TABLE 5-17: 2G4 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Approach Capability to Precision Approach			$6,416,280
Total	**$-**	**$-**	**$6,416,280**

The 2023 MASP does not have any projects recommended for 2G4 to meet its General facility, service, and equipment objectives.

5.4.18 Gooden Airpark (RJD)

The last 2008 MASP identified a total of 9 projects for RJD – 7 projects to meet its applicable facility, service, and equipment objectives, and 2 projects (providing a precision approach and extending primary runway length to 5,000 feet) to improve geographic coverage. Of the 9 projects, 3 were completed (installing a rotating beacon, providing VGSI, and providing a precision approach) and 6 remain as recommended projects in the 2023 MASP.

- Extend the primary runway length by 286 feet, to 3,500 feet
- Extend the primary runway length from 3,500 feet to 5,000 feet – to improve geographic coverage
- Improve runway lighting type to MIRL
- Construct GA/FBO terminal
- Install airport property fence
- Provide snow removal

In addition to the projects above, the 2023 MASP recommends 6 more projects that RJD should undertake to meet its General facility, service, and equipment objectives.

- Provide AvGas
- Provide 24-hour fueling
- Add paved aircraft parking
- Install weather reporting system
- Perform airport Master Plan
- Perform an ALP

The airport's 2022 ACIP was reviewed. The 12 recommended projects above are not shown on RJD's ACIP. It is recommended that RJD undertake a Master Plan and ALP to assess the need for the projects recommended in the 2023 MASP.

It is recommended that RJD implement the above 12 projects to meet its General facility, service, and equipment objectives and improve geographic coverage for the system.

TABLE 5-18: RJD PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500'		$2,970,000	
Runway Lighting Type to MIRL		$687,000	
GA/FBO Terminal		$8,076,720	
Airport Property Fence	$637,200		
Snow Removal	$360,000		
AvGas		$359,000	
24-Hour Fueling(1)		$199,000	
Paved Aircraft Parking		$72,372	
Weather Reporting System		$627,000	
Master Plan	$350,000		
ALP	$175,000		
Primary Runway Length from 3,500' to 5,000'			$8,590,000
Total	**$1,522,200**	**$12,991,092**	**$8,590,000**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.19 Greater Cumberland Regional Airport (CBE)

The last 2008 MASP identified a total of 5 projects for CBE – 2 projects to meet its applicable facility, service, and equipment objectives, and 3 projects (providing a precision approach, lowering LPV approach visibility minimum to ¾ statute mile, and installing HIRL) to improve geographic coverage. Of the 5 projects, 3 were completed (providing snow removal, providing HIRL, and lowering LPV approach visibility minimum to ¾ statute mile) and 2 remain as recommended projects in the 2023 MASP.

- Provide a precision approach – to improve geographic coverage
- Install airport property fence

In addition to this project above, the 2023 MASP recommends 2 more projects that CBE should undertake to meet its General facility, service, and equipment objectives.

- Add REILs to Runway 5 End*
- Install VGSI to Runway 5 End*

The airport's 2022 ACIP and 2020 ALP were reviewed. Of the 3 projects recommended in the 2023 MASP, 2 projects, indicated with an asterisk above (*), are shown on CBE's ALP.

It is recommended that CBE implement the above 4 projects to meet its General facility, service, and equipment objectives and improve geographic coverage for the system.

TABLE 5-19: CBE PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
Approach Capability to Precision Approach			$6,437,400
Airport Property Fence	$1,330,000		
REILs to Runway 5 End		$189,000	
VGSI to Runway 5 End		$308,000	
Total	**$1,330,000**	**$497,000**	**$6,437,400**

5.4.20 Harford County Airport (0W3)

The last 2008 MASP identified a total of 12 projects for 0W3 – 10 projects to meets its applicable facility, service, and equipment objectives and 2 projects (extending primary runway length to 5,000 feet and providing a precision approach) to improve geographic coverage. Of the 12 projects, 8 were completed (upgrading ARC to B-I standards, providing a partial parallel taxiway, installing MIRL, providing a rotating beacon, constructing a GA/FBO terminal, providing paved aircraft parking, and providing a precision approach) and 4 remain as recommended projects in the 2023 MASP.

- Extend primary runway length by 644 feet, to 3,500 feet
- Extend primary runway length from 3,500 feet to 5,000 feet – to improve geographic coverage
- Install weather reporting system*
- Install airport property fence*

In addition to these 3 projects above, the 2023 MASP recommends 1 more project that 0W3 should undertake to meets its General facility, service, and equipment objectives:

- Perform airport Master Plan

The airport's 2022 ACIP and 2021 ALP were reviewed. Of the 5 projects recommended in the 2023 MASP, 2 projects, indicated with an asterisk above (*), are shown on 0W3's ALP.

It is recommended that 0W3 implement the above 5 projects to meet its General facility, service, and equipment objectives and improve geographic coverage for the system.

TABLE 5-20: 0W3 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500’		$4,280,000	
Weather Reporting System		$587,340	
Airport Property Fence	$943,000		
Master Plan	$350,000		
Primary Runway Length from 3,500’ to 5,000’			$7,460,000
Total	**$1,293,000**	**$4,867,340**	**$7,460,000**

5.4.21 Lee Airport (ANP)

The last 2008 MASP identified a total of 7 projects for ANP – 6 projects for ANP to undertake to meet its applicable facility, service, and equipment objectives and 1 project (providing a precision approach) for ANP to improve geographic coverage. Of the 7 projects, 4 were completed (providing a precision approach, upgrading ARC to B-I, installing a rotating beacon, and providing paved aircraft parking) and 3 projects remain as recommended projects in the 2023 MASP.

- Extend the primary runway length by 1,000 feet, to 3,500 feet
- Improve runway lighting type to MIRL
- Construct GA/FBO terminal

In addition to these 3 projects above, the 2023 MASP recommends 5 more projects that ANP should undertake to meets its General facility, service, and equipment objectives:

- Add REILs to Runway 12/30
- Provide 24-hour fueling
- Provide snow removal
- Perform airport Master Plan
- Perform an ALP

Implementing the above 8 projects will bring ANP to meet its General facility, service, and equipment objectives.

TABLE 5-21: ANP PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500’		$59,480,000	
Runway Lighting Type to MIRL		$562,000	
GA/FBO Terminal		$8,076,720	
REILs to Runway 12/30		$267,000	
24-Hour Fueling(1)		$199,000	
Snow Removal	$360,000		
Master Plan	$350,000		
ALP	$175,000		
Total	**$885,000**	**$68,584,720**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.22 Ocean City Municipal Airport (OXB)

The last 2008 MASP identified 2 projects for OXB to undertake to meet its applicable facility, service, and equipment objectives. Both projects were completed – installing an airport property fence and providing snow removal.

The 2023 MASP recommends 1 project for OXB to undertake to meet its General facility, service, and equipment objectives:

- Add REILs to Runway 14/32

Implementing the above project will bring OXB to meet its General facility, service, and equipment objectives.

TABLE 5-22: OXB PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
REILs to Runway 14/32		$272,000	
Total	**$-**	**$272,000**	**$-**

5.4.23 Potomac Airfield (VKX)

The last 2008 MASP identified 7 projects for VKX to undertake to meet its applicable facility, service, and equipment objectives. Of the 7 projects, 3 were completed (installing MIRL, providing a rotating beacon, and providing paved aircraft parking) and 4 projects remain as recommended projects in the 2023 MASP.

- Extend the primary runway length by 835 feet, to 3,500 feet
- Improve ARC from A-II to B-I
- Install airport property fence
- Provide snow removal

In addition to these 4 projects above, the 2023 MASP recommends 4 more projects that VKX should undertake to meets its General facility, service, and equipment objectives:

- Add REILs to Runway 6/24
- Provide 24-hour fueling
- Perform airport Master Plan
- Perform an ALP

Implementing the above 8 projects will bring VKX to meet its General facility, service, and equipment objectives.

TABLE 5-23: VKX PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500’		$4,380,000	
ARC from A-II to B-I		$8,740,000	
Airport Property Fence	$536,000		
Snow Removal	$360,000		
REILs to Runway 6/24		$263,000	
24-Hour Fueling(1)		$199,000	
Master Plan	$350,000		
ALP	$175,000		
Total	**$1,421,000**	**$13,582,000**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.24 St. Mary’s County Regional Airport (2W6)

The last 2008 MASP identified 4 projects for 2W6 to improve geographic coverage. Of the 4 projects, 1 was completed (installing HIRL). The 3 remaining projects from 2008 MASP are recommended in the 2023 MASP.

- Provide a precision approach – to improve geographic coverage
- Extend primary runway to 5,000 feet* – to improve geographic coverage

- Upgrade ARC from B-II to C-II[3] – to improve geographic coverage

The 2023 MASP recommends 1 project that 2W6 should undertake to meet its General facility, service, and equipment objectives:

- Perform airport Master Plan*

The airport's 2022 ACIP, 2002 Master Plan, and 2012 ALP were reviewed; projects that are shown on the airport's ACIP are indicated with an asterisk above (*).

Implementing the above 4 projects will bring 2W6 to meet its General facility, service, and equipment objectives and improve geographic coverage for the system.

TABLE 5-24: 2W6 PROJECT COSTS

	Project Costs		
Project Type	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
Approach Capability to Precision Approach			$6,295,320
Primary Runway Length to 5,000'(1)	$16,222,229		
ARC from B-II to C-II	No cost available		
Master Plan(2)	$350,000		
Total	**$16,572,229**	**$-**	**$6,295,320**

Notes: (1) Project cost and timeframe is from ACIP. The runway extension shown on the ACIP is to extend the runway to 5,350'.
(2) Project cost and timeframe is from ACIP.

5.4.25 Bennett Airport (1N5)

The last 2008 MASP identified 2 projects for 1N5 to undertake to meet its applicable facility, service, and equipment objectives. These 2 projects remain as recommended projects in the 2023 MASP.

- Provide AvGas
- Install airport property fence

In addition to these 2 projects above, the 2023 MASP recommends 5 more projects that 1N5 should undertake to meets its Local facility, service, and equipment objectives:

- Provide 24-hour fueling
- Add REILs to Runway 17/35
- Add T-hangars or conventional hangars
- Perform airport Master Plan
- Perform an ALP

Implementing the above 7 projects will bring 1N5 to meet its Local facility, service, and equipment objectives.

[3] A project cost is not provided for 2W6 to upgrade its ARC to C-II due to the extensive property acquisition that is required for the airport to meet C-II standards. It is recommended that the airport revisit the feasibility of upgrading its ARC as conditions change at the airport.

TABLE 5-25: 1N5 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
AvGas		$367,000	
Airport Property Fence	$768,000		
24-Hour Fueling(1)		$199,000	
REILs to Runway 17/35		$300,000	
Hangar Space		$181,800	
Master Plan	$300,000		
ALP	$175,000		
Total	**$1,243,000**	**$1,047,800**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.26 Clearview Airport (2W2)

The last 2008 MASP identified 5 projects for 2W2 to undertake to meet its applicable facility, service, and equipment objectives. Of the 5 projects, 2 were completed (installing an airport property fence and upgrading the ARC to A-I Small) and 3 projects remain as recommended projects in the 2023 MASP.

- Extend the primary runway length by 160 feet, to 2,000 feet
- Improve LIRL to standard
- Install airport property fence

In addition to these 3 projects above, the 2023 MASP recommends 2 more projects that 2W2 should undertake to meets its Local facility, service, and equipment objectives:

- Perform airport Master Plan
- Perform an ALP

Implementing the above 5 projects will bring W42 to meet its Local facility, service, and equipment objectives.

TABLE 5-26: 2W2 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Primary Runway Length to 3,500’		$1,204,000	
Make LIRL Runway Lighting Type Standard		$455,000	
Airport Property Fence	$408,000		
Master Plan	$300,000		
ALP	$175,000		
Total	**$883,000**	**$1,659,000**	**$-**

5.4.27 Davis Airport (W50)

The last 2008 MASP identified 5 projects for W50 to undertake to meet its applicable facility, service, and equipment objectives. Of the 5 projects, 1 was completed (providing AvGas) and 4 projects remain as recommended projects in the 2023 MASP.

- Improve runway lighting type to LIRL*
- Install rotating beacon
- Add lighting to the wind cone
- Install airport property fence

In addition to these 4 projects above, the 2023 MASP recommends 3 more projects that W50 should undertake to meet its Local facility, service, and equipment objectives:

- Add REILs to Runway 8/26
- Install VGSI to Runway 8/26
- Perform airport Master Plan

The airport's 2022 ACIP was reviewed, and the project to improve W50's runway lighting type to LIRL is included in the ACIP for 2025, indicated with an asterisk (*) above.

Implementing the above 7 projects will bring W50 to meet its Local facility, service, and equipment objectives.

TABLE 5-27: W50 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Runway Lighting Type to LIRL(1)	$110,000		
Rotating Beacon		$1,434,000	
Lighting to Wind Cone		$80,000	
REILs to Runway 8/26		$267,000	
VGSI to Runway 8/26		$414,000	
Airport Property Fence	$380,000		
Master Plan	$300,000		
Total	**$790,000**	**$2,195,000**	**$-**

Note: (1) Project cost and timeframe is from ACIP.

5.4.28 Essex Skypark (W48)

The last 2008 MASP identified 2 projects for W48 to undertake to meet its applicable facility, service, and equipment objectives. These 2 projects remain as recommended projects in the 2023 MASP.

- Provide AvGas
- Install airport property fence

In addition to these 2 projects above, the 2023 MASP recommends 3 more projects that W48 should undertake to meets its Local facility, service, and equipment objectives:

- Provide 24-hour fueling
- Perform airport Master Plan
- Perform an ALP

The airport's 2022 ACIP was reviewed. The projects above are not included in the airport's 2022 ACIP.

Implementing the above 5 projects will bring W48 to meet its Local facility, service, and equipment objectives.

TABLE 5-28: W48 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
AvGas		$359,000	
Airport Property Fence	$434,000		
24-Hour Fueling(1)		$199,000	
Master Plan	$300,000		
ALP	$175,000		
Total	**$909,000**	**$558,000**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.29 Fallston Airport (W42)

The last 2008 MASP identified 4 projects for W42 to undertake to meet its applicable facility, service, and equipment objectives. Of the 4 projects, 1 was completed (installing an airport property fence) and 3 projects remain as recommended projects in the 2023 MASP.

- Improve runway lighting type to LIRL
- Install rotating beacon
- Add lighting to the wind cone

In addition to these 3 projects above, the 2023 MASP recommends 4 more projects that W42 should undertake to meets its Local facility, service, and equipment objectives:

- Add REILs to Runway 22 End
- Install VGSI to Runway 4/22
- Perform airport Master Plan
- Perform an ALP

Implementing the above 7 projects will bring W42 to meet its Local facility, service, and equipment objectives.

TABLE 5-29: W42 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Runway Lighting Type to LIRL		$500,000	
Rotating Beacon		$1,434,000	
Lighted Wind Cone		$72,000	
REILs to Runway 22 End		$177,000	
VGSI to Runway 4/22		$436,000	
Master Plan	$300,000		
ALP	$175,000		
Total	**$475,000**	**$2,619,000**	**$-**

5.4.30 Kentmorr Airpark (3W3)

The last 2008 MASP identified 4 projects for 3W3 to undertake to meet its applicable facility, service, and equipment objectives. Of the 4 projects, 1 was completed (installing a lighted wind cone) and 3 projects remain as recommended projects in the 2023 MASP.

- Install VGSI to Runway 10/28
- Provide AvGas
- Install airport property fence

In addition to these 3 projects above, the 2023 MASP recommends 4 more projects that 3W3 should undertake to meets its Local facility, service, and equipment objectives:

- Add REILs to Runway 10/28
- Provide 24-hour fueling
- Add T-hangars or conventional hangars
- Perform airport Master Plan
- Perform an ALP

Implementing the above 8 projects will bring 3W3 to meet its Local facility, service, and equipment objectives.

TABLE 5-30: 3W3 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
VGSI to Runway 10/28		$423,000	
AvGas		$366,000	
Airport Property Fence	$349,000		
REILs to Runway 10/28		$272,000	
24-Hour Fueling(1)		$200,000	
Hangar Space		$177,300	
Master Plan	$300,000		
ALP	$175,000		
Total	**$824,000**	**$1,438,300**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.31 Massey Aerodrome (MD1)

The last 2008 MASP identified 4 projects for MD1 to undertake to meet its applicable facility, service, and equipment objectives. These 4 projects remain as recommended projects in the 2023 MASP.

- Add lighting to the wind cone
- Install VGSI to Runway 2/20
- Provide AvGas
- Install airport property fence

In addition to these 4 projects above, the 2023 MASP recommends 4 more projects that MD1 should undertake to meets its Local facility, service, and equipment objectives:

- Add REILs to Runway 2/20
- Provide 24-hour fueling
- Perform airport Master Plan
- Perform an ALP

Implementing the above 8 projects will bring MD1 to meet its Local facility, service, and equipment objectives.

TABLE 5-31: MD1 PROJECT COSTS

Project Type	Project Costs		
	Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Lighting to Wind Cone		$72,000	
VGSI to Runway 2/20		$402,000	
AvGas		$362,000	
Airport Property Fence	$696,000		
REILs to Runway 2/20		$278,000	
24-Hour Fueling(1)		$200,000	
Master Plan	$300,000		
ALP	$175,000		
Total	**$1,171,000**	**$1,314,000**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.4.32 Mexico Farms Airport (1W3)

The last 2008 MASP identified 2 projects for 1W3 to undertake to meet its applicable facility, service, and equipment objectives. These 2 projects remain as recommended projects in the 2023 MASP.

- Provide AvGas
- Install airport property fence

In addition to these 2 projects above, the 2023 MASP recommends 6 more projects that 1W3 should undertake to meets its Local facility, service, and equipment objectives:

- Improve taxiway system with turnarounds
- Provide 24-hour fueling
- Add REILs to Runway 9/27
- Install VGSI to Runway 9/27
- Perform airport Master Plan
- Perform an ALP

Implementing the above 8 projects will bring 1W3 to meet its Local facility, service, and equipment objectives.

TABLE 5-32: 1W3 PROJECT COSTS

	Project Costs		
Project Type	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
AvGas		$366,000	
Airport Property Fence	$664,000		
Turnaround Taxiway		$413,000	
24-Hour Fueling(1)		$200,000	
REILs to Runway 9/27		$300,000	
VGSI to Runway 9/27		$376,000	
Master Plan	$300,000		
ALP	$175,000		
Total	**$1,139,000**	**$1,655,000**	**$-**

Note: (1) Airport may choose to provide 24-hour fueling through prior arrangements with the airport or FBO, in lieu of installing a card reader system.

5.5 Summary of Project Cost Analysis

The total cost of the implementation plan proposed in the 2023 MASP is approximately **$603,780,016** over the 20-year planning horizon, with **$302,048,004** in the short-term (1-5 years), **$240,900,572** in the mid-term (6-10 years), and **$60,831,440** in the long-term (11-20 years). **Table 5-33** below presents the implementation plan and associated costs for each airport in the Maryland state airport system, and **Table 5-34** summarizes the implementation plan and associated costs by MDOT MAA role.

TABLE 5-33: 2023 MASP IMPLEMENTATION PLAN

MDOT MAA Role	Airport Name	Airport ID	Project Type	Project Costs		
				Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
Air Carrier	Baltimore/Washington International Thurgood Marshall Airport	BWI	Master Plan	$1,500,000		
	Hagerstown Regional Airport/Richard A. Henson Field	HGR	Master Plan	$1,500,000		
Reliever	Carroll County Regional Airport/Jack B. Poage Field	DMW	Runway Lighting to HIRL		$1,068,000	
			LPV Approach to ¾ Statute Mile	$1,440,000		
	Frederick Municipal Airport	FDK	Airport Property Fence	$904,800		
			Master Plan		$600,000	
			ALP	$250,000		
	Martin State Airport	MTN	LPV Approach to ¾ Statute Mile			No cost available
			Master Plan	$750,000		
	Maryland Airport	2W5	Primary Runway Length to 5,000’		$8,460,000	
			ARC from B-II to C-II	$13,660,000		
			Approach Capability to Precision Approach	$6,835,000		
			ATC Communications		$134,640	
			Runway Lighting Type to HIRL		$841,000	
			VGSI to Runway 20 End		$327,000	
			Weather Reporting System		$639,000	
			Airport Property Fence	$1,350,000		
			24-Hour Fueling		$200,000	
			Snow Removal	$720,000		
			Master Plan	$750,000		
	Montgomery County Airpark	GAI	Primary Runway Length to 5,000’		$66,160,000	
			ARC from B-II to C-II	$184,030,000		
			Approach Capability to Precision Approach	$6,959,000		
			Runway Lighting Type to HIRL	$850,000		
			Master Plan	$750,000		
	Tipton Airport	FME	Primary Runway Length to 5,000’	$14,449,442		
			ARC from B-II to C-II	$9,610,000		
			Approach Capability to Precision Approach	$6,724,000		
			Covered Overnight Secure Storage		$2,943,000	
			ATC Communications		$108,960	
			Master Plan	$333,333		

TABLE 5-33: 2023 MASP IMPLEMENTATION PLAN (CONT.)

				Project Costs		
MDOT MAA Role	**Airport Name**	**Airport ID**	**Project Type**	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
General	Bay Bridge Airport	W29	Approach Capability to Precision Approach			$6,258,960
			Primary Runway Length to 3,500’		$3,180,000	
			ARC from B-I Small to B-I	$10,590,000		
			Master Plan	$350,000		
			Primary Runway Length from 3,500’ to 5,000’			$6,480,000
			ARC from B-I to C-II			No cost available
	Cambridge-Dorchester Regional Airport	CGE	Approach Capability to Precision Approach			$6,543,480
			Snow Removal	$360,000		
			Master Plan	$350,000		
	Claremont Airport	58M	Primary Runway Length to 3,500’		$3,340,000	
			Weather Reporting System		$320,000	
			Airport Property Fence	$556,000		
			Snow Removal	$360,000		
			Airport Master Plan	$350,000		
			ALP	$175,000		
			Primary Runway Length from 3,500’ to 5,000’			$6,350,000
	College Park Airport	CGS	Primary Runway Length to 3,500’		$4,690,000	
			REILs to Runway 15/33			
			VGSI to Runway 15/33			
			24-Hour Fueling		$200,000	
			Master Plan	$350,000		
	Crisfield-Somerset County Airport	W41	Primary Runway Length to 3,500’		$7,160,000	
			Partial Parallel Taxiway		$1,740,000	
			Weather Reporting System		$638,000	
			GA/FBO Terminal		$8,076,720	
			Hangar Space		$1,800,000	
			ARC from B-I Small to B-I	$2,772,000		
			Master Plan	$350,000		
	Easton/Newnam Field Airport	ESN	REILs to Runway 4 End		$251,000	
			Master Plan	$350,000		
	Garrett County Airport	2G4	Approach Capability to Precision Approach			$6,416,280
	Freeway Airport	W00	Primary Runway Length to 3,500’		$13,450,000	
			Weather Reporting System		$627,000	
			Airport Property Fence	$427,000		
			REILs to Runway 18/36		$263,000	

TABLE 5-33: 2023 MASP IMPLEMENTATION PLAN (CONT.)

				Project Costs		
MDOT MAA Role	**Airport Name**	**Airport ID**	**Project Type**	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
General (Cont.)	Freeway Airport (Cont.)	W00 (Cont.)	24-Hour Fueling		$199,000	
			Hangar Space		$204,000	
			Snow Removal	$360,000		
			Master Plan	$350,000		
			ALP	$175,000		
	Gooden Airpark	RJD	Primary Runway Length to 3,500’		$2,970,000	
			Runway Lighting Type to MIRL		$687,000	
			GA/FBO Terminal		$8,076,720	
			Airport Property Fence	$637,200		
			Snow Removal	$360,000		
			AvGas		$359,000	
			24-Hour Fueling		$199,000	
			Paved Aircraft Parking		$72,372	
			Weather Reporting System		$627,000	
			Master Plan	$350,000		
			ALP	$175,000		
			Primary Runway Length from 3,500’ to 5,000’			$8,590,000
	Greater Cumberland Regional Airport	CBE	Approach Capability to Precision Approach			$6,437,400
			Airport Property Fence	$1,330,000		
			REILs to Runway 5 End		$189,000	
			VGSI to Runway 5 End		$308,000	
	Harford County Airport	0W3	Primary Runway Length to 3,500’		$4,280,000	
			Weather Reporting System		$587,340	
			Airport Property Fence	$943,000		
			Master Plan	$350,000		
			Primary Runway Length from 3,500’ to 5,000’			$7,460,000
	Lee Airport	ANP	Primary Runway Length to 3,500’		$59,480,000	
			Runway Lighting Type to MIRL		$562,000	
			GA/FBO Terminal		$8,076,720	
			REILs to Runway 12/30		$267,000	
			24-Hour Fueling		$199,000	
			Snow Removal	$360,000		
			Master Plan	$350,000		
			ALP	$175,000		
	Ocean City Municipal Airport	OXB	REILs to Runway 14/32		$272,000	

TABLE 5-33: 2023 MASP IMPLEMENTATION PLAN (CONT.)

MDOT MAA Role	Airport Name	Airport ID	Project Type	Project Costs		
				Short-Term (1-5 Years)	Mid-Term (6-10 Years)	Long-Term (11-20 Years)
General (Cont.)	Potomac Airfield	VKX	Primary Runway Length to 3,500’		$4,380,000	
			ARC from A-II to B-I		$8,740,000	
			Airport Property Fence	$536,000		
			Snow Removal	$360,000		
			REILs to Runway 6/24		$263,000	
			24-Hour Fueling		$199,000	
			Master Plan	$350,000		
			ALP	$175,000		
	St. Mary's County Regional Airport	2W6	Approach Capability to Precision Approach			$6,295,320
			Primary Runway Length to 5,000’	$16,222,229		
			ARC from B-II to C-II			No cost available
			Master Plan	$350,000		
Local	Bennett Airport	1N5	AvGas		$367,000	
			Airport Property Fence	$768,000		
			24-Hour Fueling		$199,000	
			REILs to Runway 17/35		$300,000	
			Hangar Space		$181,800	
			Master Plan	$300,000		
			ALP	$175,000		
	Clearview Airpark	2W2	Primary Runway Length to 3,500’		$1,204,000	
			Make LIRL Runway Lighting Type Standard		$455,000	
			Airport Property Fence	$408,000		
			Master Plan	$300,000		
			ALP	$175,000		
	Davis Airport	W50	Runway Lighting Type to LIRL	$110,000		
			Rotating Beacon		$1,434,000	
			Lighting to Wind Cone		$80,000	
			REILs to Runway 8/26		$267,000	
			VGSI to Runway 8/26		$414,000	
			Airport Property Fence	$380,000		
			Master Plan	$300,000		
	Essex Skypark	W48	AvGas		$359,000	
			Airport Property Fence	$434,000		
			24-Hour Fueling		$199,000	
			Master Plan	$300,000		

TABLE 5-33: 2023 MASP IMPLEMENTATION PLAN (CONT.)

				Project Costs		
MDOT MAA Role	**Airport Name**	**Airport ID**	**Project Type**	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
Local (Cont.)	Essex Skypark (Cont.)		ALP	$175,000		
	Fallston Airport	W42	Runway Lighting Type to LIRL		$500,000	
			Rotating Beacon		$1,434,000	
			Lighted Wind Cone		$72,000	
			REILs to Runway 22 End		$177,000	
			VGSI to Runway 4/22		$436,000	
			Master Plan	$300,000		
			ALP	$175,000		
	Kentmorr Airpark	3W3	VGSI to Runway 10/28		$423,000	
			AvGas		$366,000	
			Airport Property Fence	$349,000		
			REILs to Runway 10/28		$272,000	
			24-Hour Fueling		$200,000	
			Hangar Space		$177,300	
			Master Plan	$300,000		
			ALP	$175,000		
	Massey Aerodrome	MD1	Lighting to Wind Cone		$72,000	
			VGSI to Runway 2/20		$402,000	
			AvGas		$362,000	
			Airport Property Fence	$696,000		
			REILs to Runway 2/20		$278,000	
			24-Hour Fueling		$200,000	
			Master Plan	$300,000		
			ALP	$175,000		
	Mexico Farms Airport	1W3	AvGas		$366,000	
			Airport Property Fence	$664,000		
			Turnaround Taxiway		$413,000	
			24-Hour Fueling		$200,000	
			REILs to Runway 9/27		$300,000	
			VGSI to Runway 9/27		$376,000	
			Master Plan	$300,000		
			ALP	$175,000		
			Total	**$302,048,004**	**$240,900,572**	**$60,831,440**

TABLE 5-34: 2023 MASP IMPLEMENTATION PLAN BY AIRPORT ROLE

	Project Costs		
MDOT MAA Role	**Short-Term (1-5 Years)**	**Mid-Term (6-10 Years)**	**Long-Term (11-20 Years)**
Air Carrier	$3,000,000	$-	$-
Reliever	$250,365,575	$80,413,600	$-
General	$41,248,429	$146,932,872	$60,831,440
Local	$7,434,000	$12,486,100	$-
Total	**$302,048,004**	**$240,900,572**	**$60,831,440**

CHAPTER 6

Recommended System

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND AVIATION ADMINISTRATION

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6 RECOMMENDED PLAN

6.1 Introduction

Chapter 5 System Implementation and Cost Analysis estimated a total implementation cost of $669,373,000 is needed to realize the projects included in the implementation plan. Of the total implementation cost, approximately $267,251,000 (or 40%) accounts for anticipated land acquisition costs for certain projects that have been identified in the 2023 MASP.

The recommended plan provides guidance for airports on state and federal funding sources and environmental factors that should be considered when airports undertake any of the projects identified in the 2023 MASP. These projects may be funded through a combination of federal, state, and airport sponsor monies. It is reiterated that for eligible airports receiving federal funds, the airports must comply with the FAA AIP Handbook, and provide sufficient justification and master planning-level analysis to demonstrate project needs. State and federal funding sources, requirements, and processes are described in more detail in this chapter.

The recommended plan provides guidance for airports on state and federal funding sources and environmental factors that should be considered when airports undertake any of the projects identified in the 2023 MASP.

This chapter also provides key study findings for each airport, and includes each airport's recommendations to enable the airport to comply with its role-related facility, service, and equipment objectives. It is recommended that airports review the projects identified and undergo the appropriate next steps to realize these projects as needs arise. Projects to improve safety and security, and compliance with FAA standards continue to be MDOT MAA's highest priority.

6.2 Funding Sources

MDOT MAA offers a variety of funding mechanisms that either match Federal Aviation Administration (FAA) grants or are solely funded through the Statewide Aviation Grant Program.

6.2.1 Federal Funding Sources

Airports that are included in the FAA's NPIAS may be eligible to apply for AIP funding. For those NPIAS airports that are eligible for funding, a project must appear on an approved Airport Layout Plan (ALP). Project types eligible for grants typically include runway, taxiway and apron construction/rehabilitation, visual and navigational aids improvement, security enhancements, land acquisitions, among other types of projects that impact the safe and secure operations of an airport, and compliance with FAA standards. For more details on eligibility, refer to the FAA AIP Handbook (FAA Order 5100.38D).

The FAA has numerous policies, procedures, and requirements that must be met for the successful delivery of FAA-funded design and construction projects. Some of these requirements include, but are not limited to, the following:

- Consideration of FAA Advisory Circulars and FAA Orders that identify planning, design, and construction criteria and geometry requirements
- Concurrence with FAA Environmental Orders (5050.4B and 1050.1F) that specify environmental categories and criteria that must be considered to obtain federal-level environmental approvals and release of FAA grant funds
- Airport sponsor/engineer certification of engineering plans and specifications
- Airport tenant and user coordination and communication requirements regarding the project scope, sequence of construction phasing, and project schedule
- Preparation of a Construction Safety and Phasing Plan (CSPP) and review of the CSPP by various FAA Divisions, airport users, and tenants
- Airport sponsor compliance with FAA Grant Assurances
- Construction observation, material testing, material certification, payroll documentation, and certification

Airports are required to develop their Airport Capital Improvement Program (ACIP) and coordinate with the FAA and MDOT MAA to ensure all Federal application requirements are met, including but not limited to, environmental, airspace, and ALP requirements. Projects listed on an airport's ACIP must include a project description and provide sufficient justification through master planning-level analyses and include a cost estimate and recommendations for phasing, as applicable, for funding purposes.

6.2.2 State Funding Sources

MDOT MAA is responsible for fostering safe and efficient airport operations, economic viability, and environmental stewardship in aviation activity statewide. To support its pubic-use airport system, MDOT MAA's Statewide Aviation Grant Program provides airport development funding through 3 mechanisms which are described in more detail below.

FAA AIP-eligible Projects: MDOT MAA is structured to provide half of the local share of an AIP-eligible project. A typical breakdown of funding sources is 90% funded by the FAA, 5% funded by the Airport Sponsor, and 5% matched by MDOT MAA. For more information on eligibility requirements, project planning, application procedures, grant coordination, reimbursement procedures, and accounting and auditing, refer to MDOT MAA's Statewide Aviation Grant Program Guidance – AIP Eligible Projects, Guide for Grant Sponsors, revised February 2021 (or the latest available version).

Special Projects: MDOT MAA offers Special Grants to publicly-owned, public-use airports for airport projects that are either AIP-eligible, but not AIP funded, or non-AIP eligible projects. Projects that are non-revenue generating and considered reasonable for the improvement, development, and/or preservation of public-use areas on the airport are eligible for Special Grant funds. For more information on project planning, application procedures, grant coordination, reimbursement procedures, and accounting and auditing, refer to MDOT MAA's Statewide Aviation Grant Program Guidance – Special Projects, Guide for Grant Sponsors, revised February 2021 (or the latest available version).

Maryland Aid to Private Airports (MAPA) Projects: MDOT MAA offers financial assistance to privately-owned, public-use airports through the MAPA grant assistance program for projects that are not eligible for aid through other statewide aviation programs. Projects that are non-revenue generating and considered reasonable for the improvement, development, and/or preservation of public-use areas on the airport are eligible for this type of grant. For more information on project planning, eligibility requirements, property tax exemptions, grant obligations, application procedures, grant coordination, reimbursement procedures, and accounting and auditing, refer to MDOT MAA's Statewide Aviation Grant Program Guidance – Maryland Aid to Private Airports (MAPA) Projects, Guide for Grant Sponsors, revised February 2021 (or the latest available version).

6.3 Environmental Considerations

Understanding the presence of environmental and manmade features in and around Maryland's public-use facilities is important because of its potential to impact airport development as additional planning, feasibility, and permitting activities may be required. This preliminary analysis is intended to provide a broad overview of select environmental and manmade features present at each facility to inform future planning recommendations at the system level. The features were mainly identified using data from Maryland's GIS catalog MD iMAP. The analysis is presented in **Table 6-1**.

An overview of selected resources analyzed is provided below:

- Biological Resources includes fish, wildlife and protected habitat, and plants and forests.
- Water Resources includes wetlands, floodplains, and streams.
- Coastal Zone Critical Area is the area of at least 100 feet located directly adjacent to Maryland's tidal waters, tidal wetlands, and tributary streams.
- Historical and Cultural Resources includes resources listed in the National Register of Historical Places (NRHP), Maryland Inventory of Historic Properties (MIHP), and the Maryland Historic Trust Easements (MHT). The MHT includes significant architectural and archeological resources.
- Land Use includes roads and railroads located within ½ mile of system airports; local land use protections to indicate airports that have state or local land use protections in place to prohibit incompatible development;

and protected lands/easements to includes conservation lands, local and federal protected land, transfer and purchase of development rights, and easements.

All federal agencies, with limited exceptions, are required to comply with the National Environmental Policy Act (NEPA) of 1969 [42 United States Code (USC) 4321 et seq.] as well as any special purpose laws before a final decision is made on federal actions that could have environmental effects. Thus, before the FAA can issue a decision on approving a new or amended ALP, grant application for the Airport Improvement Program (AIP) or Passenger Facility Charge (PFC) funding, or other federal actions for airport development projects, an environmental analysis is required. Coordination is required with the FAA to determines the appropriate level of review, including a Categorical Exclusion (CATEX), Environmental Assessment (EA), and Environmental Impact Statement (EIS). The environmental documentation will be completed in accordance with NEPA; the Council on Environmental Quality (CEQ) implementing regulations; [40 Code of Federal Regulations (CFR) 1500-1508]; FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B: *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. Should a federal action not be triggered, and a federal agency is not involved in the decision making of the airport development project, local, state, and other federal special purpose laws may still apply.

While the information included herein is not designed to satisfy the requirements of NEPA and/or any local, state, and other federal special purpose laws, the intent of this section is to outline typical coordination that is required for each resource identified. The resources selected were ones that were available in Maryland's GIS database, MDiMAP and are not fully representative of the categories required for analysis in accordance with the FAA Orders referenced herein. Thus, this preliminary discussion of environmental considerations is not a replacement for national, state, and local environmental review.

TABLE 6-1: ENVIRONMENTAL FEATURES OVERVIEW

		Biological Resources			Water Resources			Other Resources					
Airport Name	**Airport ID**	**Fish**	**Wildlife/ Protected Habitat**	**Plants/ Forests**	**Wetlands**	**Floodplains**	**Tier II Streams**	**Coastal Zone Critical Area**	**Historical and Cultural Resources**	**Roads**	**Railroads**	**Local Land Use Protection**	**Protected Lands/ Easements**
Baltimore/Washington International Thurgood Marshall Airport**	BWI		✓	✓		✓	✓	✓		✓	✓	SO	✓
Hagerstown Regional Airport/Richard A. Henson Field*	HGR			✓		✓				✓		LO	
Salisbury-Ocean City/Wicomico Regional Airport*	SBY			✓		✓	✓	✓		✓		LO	✓
Bay Bridge Airport	W29	✓		✓	✓	✓	✓	✓		✓		LO	✓
Cambridge-Dorchester Regional Airport*	CGE		✓	✓		✓	✓			✓	✓	LO	
Carroll County Regional Airport/Jack B. Poage Field*	DMW			✓		✓	✓	✓		✓		LO	
College Park Airport	CGS			✓		✓	✓	✓		✓	✓	LO	
Crisfield-Somerset County Airport	W41	✓		✓	✓	✓	✓	✓		✓		LO	
Easton/Newnam Field Airport*	ESN		✓	✓		✓	✓	✓		✓		LO	✓
Frederick Municipal Airport*	FDK			✓		✓	✓	✓		✓		LO	✓
Garrett County Airport*	2G4			✓		✓	✓			✓		LO	✓
Greater Cumberland Regional Airport*	CBE			✓		✓	✓	✓		✓		PR	✓
Martin State Airport*	MTN	✓	✓	✓	✓	✓	✓	✓		✓		SO	
Maryland Airport	2W5		✓	✓		✓	✓			✓			

TABLE 6-1: ENVIRONMENTAL FEATURES OVERVIEW (CONT.)

		Biological Resources			Water Resources			Other Resources					
Airport Name	Airport ID	Fish	Wildlife/ Protected Habitat	Plants/ Forests	Wetlands	Floodplains	Tier II Streams	Coastal Zone Critical Area	Historical and Cultural Resources	Roads	Railroads	Local Land Use Protection	Protected Lands/ Easements
Montgomery County Airpark*	GAI			✓		✓	✓	✓		✓			✓
Ocean City Municipal Airport*	OXB	✓	✓	✓	✓	✓	✓	✓		✓		LO	✓
St. Mary's County Regional Airport*	2W6		✓	✓		✓	✓			✓		LO	✓
Tipton Airport	FME		✓	✓		✓	✓	✓		✓			✓
Bennett Airport*	1N5			✓			✓		✓	✓			✓
Claremont Airport	58M	✓	✓	✓	✓	✓	✓	✓		✓			
Clearview Airpark	2W2			✓		✓		✓		✓			
Davis Airport	W50			✓		✓	✓			✓			
Essex Skypark	W48	✓		✓	✓		✓	✓		✓			
Fallston Airport	W42			✓		✓	✓	✓		✓			
Freeway Airport	W00			✓		✓	✓			✓		LO	
Gooden Airpark*	RJD		✓	✓		✓	✓			✓			✓
Harford County Airport	0W3		✓	✓		✓	✓			✓			
Havre de Grace Seaplane Base	M06	✓	✓				✓	✓					
Kentmorr Airpark	3W3	✓		✓	✓	✓	✓	✓		✓			✓
Lee Airport	ANP	✓		✓	✓	✓	✓	✓		✓			
Massey Aerodrome	MD1	✓	✓	✓			✓			✓			✓
Mexico Farms Airport	1W3			✓		✓	✓	✓		✓			
Pier 7 Heliport	4MD	✓		✓	✓	✓	✓	✓		✓	✓		
Potomac Airfield	VKX			✓			✓	✓		✓		LO	

Notes: (✓) Indicates the feature is present within the analyzed area. Blank indicates that the feature is not present.
(*) Indicates a 1-mile radius was used for the analysis and (**) indicates a 2-mile radius was used; all other airports were analyzed using a ½-mile radius.
(SR) refers to State Regulation; (LO) refers to Local Ordinance; and (PR) refers to Permit Review.
Environmental and Manmade Features data was not provided in 2008 MASP.

Source: See Appendix B. Data Sources for Environmental and Manmade Features Analysis for full list of data sources.

6.3.1 Biological Resources

In accordance with FAA Order 1050.1F, biological resources include fish, wildlife, plants, and their respective habitats and are "…valued for their intrinsic, aesthetic, economic, and recreational qualities." Under Section 7(c) of the Endangered Species Act of 1973 (16 USC 1531 et seq.), federal agencies are required to consult with all Federal and state agencies regarding federally and state listed rare, threatened and/or endangered species in the proposed project areas.

Primary statutes, Executive Orders, or other guidance applicable, but not limited to, biological resources include:

- Bald and Golden Eagle Protection Act
- Endangered Species Act
- Fish and Wildlife Conservation Act

- Magnuson-Stevens Fishery Conservation and Management Act
- Marine Mammal Protection Act
- Migratory Bird Treaty Act
- Executive Order 13112, Invasive Species
- Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
- Executive Order 13751, Safeguarding the Nation from the Impacts of Invasive Species
- State and local statues including, but not limited to,
    - Nongame and Endangered Species Conservation Act
    - Forest Conservation Act and county/local Forest Conservation Programs
    - Chesapeake Bay Critical Area Act and county/local Critical Area Programs
    - County Ordinances applicable to agricultural land preservation, flood hazard areas, floodplain management, pesticide use and vegetation management

Consultation may be required with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) with respect to the Endangered Species Act. Federally-listed species, candidate species, or critical habitat may initially be identified using the USFWS Information for Planning and Conservation (IPaC) website or NMFS Office of Protected Resources website with applicable subsequent coordination with the USFWS and/or the NMFS if species are identified. To identify any known occurrences of stated listed protected species and their associated habitat, the Maryland Department of Natural Resources (MDNR) is to be consulted. MDNR resources include the Maryland's Environmental Resources and Land Information Network (MERLIN) and the Aquatic Resources Pre-Screening Tool. These online references present Sensitive Species Project Review Areas (SSPRA) within the state that identify the location of potential RTE habitat and species, as well as aquatic resource information.

Should an airport development project require a grading permit or sediment control permit on a unit of land 40,000 square feet or greater, a Forest Stand Delineation (FSD) and a Forest Conservation Plan (FCP) may be required for approval in accordance with the Annotated Code of Maryland Regulations (COMAR) Natural Resources Article, Title 8, Subtitle 16 and the COMAR Title 08, Subtitle 19, Forest Conservation, the Forest Conservation Act (FCA) of 1991. Consultation with the MDNR or local authority is recommended.

6.3.2 Water Resources

Water resources include Waters of the US, (both wetlands and surface waters), and floodplains, groundwater, and wild and scenic rivers.

6.3.2.1 Wetlands

The Clean Water Act (CWA) defines wetlands as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. These typically include swamps, marshes, bogs, and similar areas. Primary statutes, Executive Orders, or other guidance applicable, but not limited to, wetlands include:

- Clean Water Act Section 404 and Section 401 (Water Quality Certification)
- Fish and Wildlife Coordination Act
- Executive Order 11990, Protection of Wetlands
- DOT Order 5660.1A, Preservation of the Nation's Wetlands
- State Programmatic General Permit (MDSPGP) (federal and state regulatory standards)
- State and local statues including, but not limited to
    - Tidal Wetlands Act
    - Nontidal Wetlands Act
    - Areas of Critical State Concern, lead by the Maryland Department of Planning which may impose additional protections on wetlands
    - County planning stipulations establishing a Resource Protection Zone (RPZ) which includes protections on wetlands, wetland buffers, streams and floodplain

Consultation with those agencies with special interest in wetlands may be required, including, but not limited to, the USFWS, U.S. Army Corps of Engineers (USACE), and the Maryland Department of the Environment (MDE). The USFWS's National Wetlands Inventory (NWI) is an online tool that provides information on available wetland data. Should uncertainty exist if a wetland resource is present, a wetland delineation should be conducted.

6.3.2.2 Floodplains

Floodplains are lowland areas adjoining inland and coastal waters which are periodically inundated by flood waters, including areas on offshore islands susceptible to flooding. The 100-year flood is a metric commonly used to describe a flood having 1% change of occurring in any given year. Primary statutes, Executive Orders, or other guidance applicable, but not limited to, floodplains include:

- National Flood Insurance Act
- Executive Order 11988, Floodplain Management
- DOT Order 5650.2, Floodplain Management and Protection
- State and local statues including, but not limited to:
  - MDE's Model Floodplain Management Ordinance
  - Local floodplain management ordinances

The Federal Emergency Management Agency (FEMA)'s Flood Map Service (MSC) should be consulted to obtain a Flood Insurance Rate Map (FIRM) of the proposed project area. Should the proposed airport development action encroach upon a floodplain, early coordination with the FAA is necessary to determine if there would be a significant floodplain encroachment based on the intensity of the encroachment and it's impact on the floodplain's natural and beneficial values. Coordination with the USACE, MDE, and/or the county may be required and a site specific floodplain study conducted to evaluate the potential for increased flooding.

6.3.2.3 Surface Waters

Surface waters include streams, rivers, lakes, ponds, estuaries, and oceans. Primary statutes, Executive Orders, or other guidance applicable, but not limited to, surface waters, in addition to those noted for wetlands, include:

- Clean Water Act
- Fish and Wildlife Coordination Act
- Rivers and Harbors Act
- Safe Drinking Water Act
- State and local statues including, but not limited to:
  - Water Quality Improvement Act
  - County planning stipulations that regulate stream buffers

Early consultation with applicable agencies, including the FAA, USFWS, USACE, and MDE should occur to address potential surface water issues. If surface waters deemed jurisdictional by the USACE and MDE under the Clean Water Act are impacted, applicable approvals may include Section 404 Permit and Section 401 certification (jurisdictional wetlands); Section 402 National Pollutant Discharge Elimination System (NPDES) permit (waters of the US); Section 10 permit (navigable waters); and applicable local surface water statutes required to satisfy county planning regulations.

6.3.2.4 Groundwater

Groundwater plays an important role in sustaining Maryland's streams and wetlands and critical to natural ecosystems. Many of Maryland's residents also obtain their drinking water from groundwater sources. Groundwater protection in Maryland is monitored and regulated by the MDE, MDNR, and the Maryland Department of Agriculture (MDA). MDE's Water Supply Program regulates the impacts of groundwater withdrawal through the Water Appropriations and Use Permit process. Primary statutes, Executive Orders, or other guidance applicable, but not limited to, groundwater include:

- Groundwater Protection Program
- Safe Drinking Water Act

6.3.3 Coastal Resources

Coastal resources include all natural resources occurring within coastal waters and their adjacent shorelands. Primary statutes, Executive Orders, or other guidance applicable, but not limited to, coastal resources include:

- Coastal Barrier Resources Act
- Coastal Zone Management Act
- National Marine Sanctuaries Act

The requirements of the Coastal Zone Management Act are administered through the Maryland Coastal Zone Management Program; the Maryland Department of Natural Resources (MDNR) is the lead agency of this networked program. The Maryland coastal zone extends from 3 miles out in the Atlantic Ocean to the inland boundaries of the 16 counties and Baltimore City that border the Atlantic Ocean, Chesapeake Bay, and the Potomac River up to the District of Columbia. Upon review of the coastal zone boundaries, should an airport development action be located within the Coastal Zone, a federal consistency review is to be completed; the federal consistency review is initiated through a Joint Federal/State Permit Application, when applicable, or separately through a Consistency Request.

6.3.3.1 Atlantic and Coastal Bays Critical Area

The geographical zone that encompasses all areas 1,000 feet inland of the Chesapeake Bay and its tributaries as measured from mean high tide water line of tidal waters is the Critical Area. The Critical Area Buffer is the area of at least 100 feet located directly adjacent to the State's tidal waters, tidal wetlands, and tributary streams. The Buffer is expanded beyond 100 feet in areas where there are adjacent sensitive resources such as steep slopes or soils with development constraints. The Atlantic Coastal Bays Critical Area is the geographical zone that encompasses all waters of and lands under the Atlantic Coastal Bays and their tributaries to the head of tide. There is also a Critical Area Buffer within this boundary, which is the area of at least 100 feet from the mean high-water line of tidal waters and landward edge of tidal wetlands, and from the edge of tributary streams located within the Critical Area. All lands in the Critical Area are divided into 1 of 3 land use designations:

- Intensely Developed Areas (IDA): Intensely Developed Areas are summarized as areas where residential, commercial, institutional, and/or industrial uses predominate and relatively little natural habitat exists.
- Limited Development Areas (LDA): Limited Development Areas are areas that are currently developed in low or moderately dense development that co-exists with natural plant and animal habitats.
- Resource Conservation Areas (RCA): Resource Conservation Areas are natural resource areas such as habitats, wetlands, and forest, as well as areas of resource-oriented activities such as farming and fishing.

Many Counties and local municipalities have adopted their own Critical Area Programs, which may utilize different designations for land use categories. The County and local areas work jointly with the Critical Area Commission (CAC) for the Chesapeake and Atlantic Coastal Bays, a division of the MDNR.

Primary statutes, Executive Orders, or other guidance applicable, but not limited to, coastal resources include:

- Chesapeake Bay Critical Area Act
- Atlantic Coastal Bays Protection Act
- Chesapeake Bay Agreement, with commitments to protect and restore living resources, habitat and water quality

Should an airport development project be located within the Critical Area, coordination with the CAC and/or county/local Critical Area Program is required.

6.3.4 Historical, Architectural, Archaeological, and Cultural Resources

Historical, architectural, archeological, and cultural resources encompass a range of sites, properties, and physical resources relating to human activities, society, and cultural institutions. Primary statutes, Executive Orders, or other guidance applicable, but not limited to, historical, architectural, archaeological, and cultural resources include:

- American Indian Religious Freedom Act
- Antiquities Act of 1906

- Archeological and Historic Preservation Act
- Archaeological Resources Protection Act
- Department of Transportation Act, Section 4(f)
- Historic Sites Act of 1935
- National Historic Preservation Act
- Native American Graves Protection and Repatriation Act
- Public Building Cooperative Use Act
- Executive Order 11593, Protection and Enhancement of the Cultural Environment
- Executive Order 13006, Locating Federal Facilities on Historic Properties in Our Nation's Central Cities
- Executive Order 13007, Indian Sacred Sites
- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments
- DOT Order 5650.1, Protection and Enhancement of the Cultural Environment, November 20, 1972
- Executive Memorandum, Government-to-Government Relations with Native American Tribal Governments (April 29, 1994) Executive Memorandum on Tribal Consultation (November 5, 2009)

Section 106 of the National Historic Preservation Act of 1966 (NHPA) is the principal statute concerning historical, architectural, archeological, and cultural resources. Thus, the effects of any airport development project must take into consideration the effects on historic properties, and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on such undertakings, as appropriate. Thus, a Section 106 consultation is to be initiated with the Maryland Historic Trust (MHT).

6.3.5 Land Use

The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts. Airport development actions to accommodate fleet mix changes, the number of aircraft operations, or air traffic changes are examples of activities that can alter aviation-related noise impacts and affected land uses subjected to those impacts. In addition, physical features, such as roads and railroads, that are off airport property, may impact the cost for implementing certain airport development projects and require airports to acquire land, obtain easements, and/or implement compatible land use principles.

The need for airports to gain control over off airport property often arises when airports extend runway lengths, improve approach capabilities, install NAVAIDs, or upgrade ARCs, as these types of projects may impact the airports' runway protection areas (Runway Safety Area (RSA), Runway Object Free Area (ROFA), Runway Protection Zones (RPZ), among others). The FAA prohibits any objects within the RSA and ROFA, except for objects that are fixed-by-function, such as PAPIs, glideslopes, runway visual range, wind cones, and strongly recommends that no incompatible land uses lie within the RPZ.

Primary statutes, Executive Orders, or other guidance applicable, but not limited to, land uses include:

- Airport and Airway Improvement Act of 1982, and subsequent amendments
- Airport Improvement Program
- Airport Safety, Protection of Environment, Criteria for Municipal Solid Waste Landfills
- State and local statues including, but not limited to, local zoning ordinances and land use designations

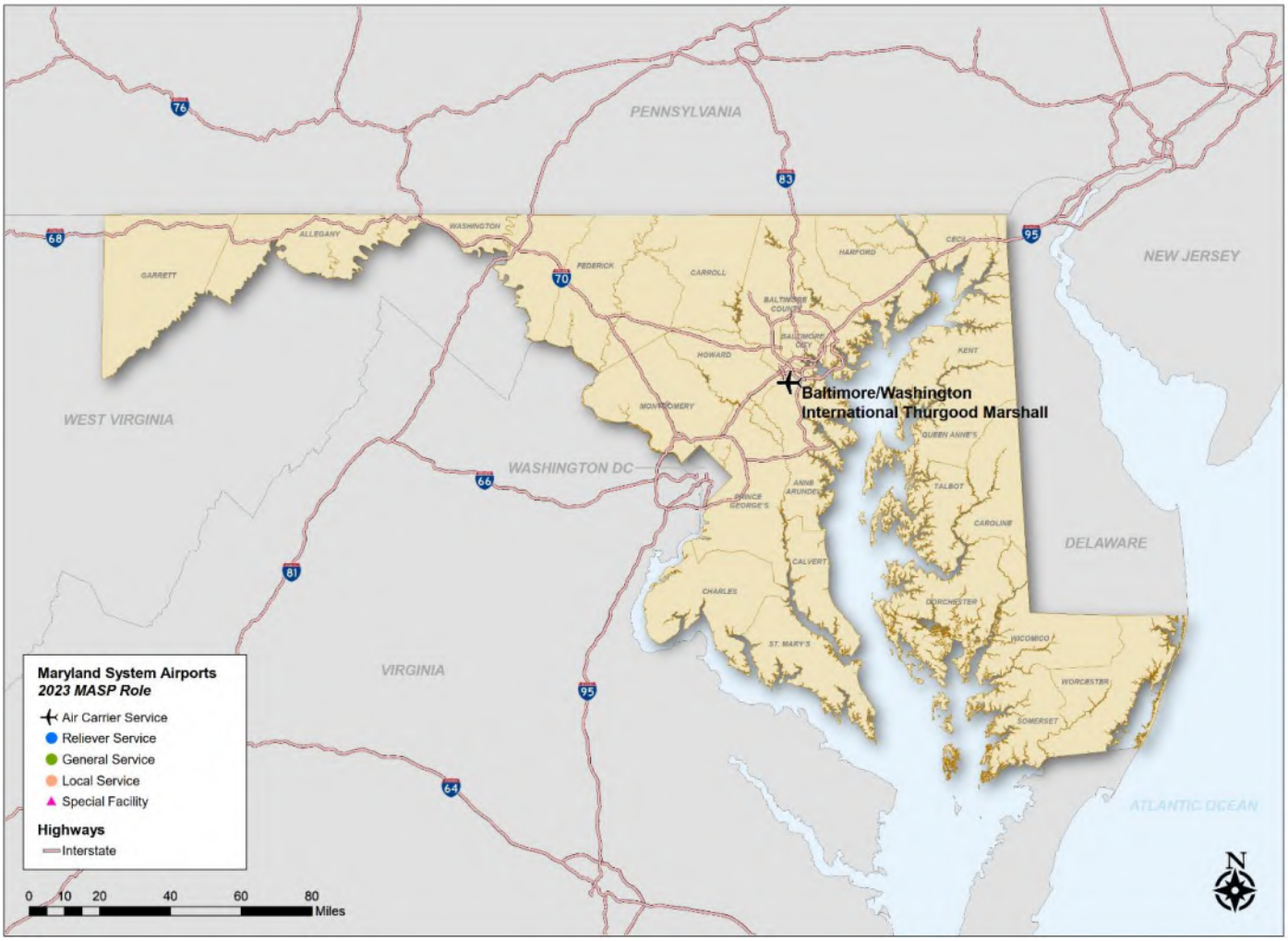
6.4 Airport Summaries

6.4.1 Baltimore/Washington International Thurgood Marshall Airport (BWI)

AIRPORT LOCATION AND FACILITIES

Baltimore/Washington International Thurgood Marshall Airport (BWI) is located 9 miles south of downtown Baltimore, and 32 miles northeast of Washington, D.C. in Baltimore City County. It is the busiest airport in the region. Runway 10/28 is BWI's primary runway. The airport has High-Intensity Runway Lighting (HIRL) and a partial parallel taxiway. There are 2 additional runways at BWI, including Runway 15L/33R and Runway 15R/33L.

Existing Airport Facilities	
Primary Runway Length	10,502 ft
Primary Runway Width	150 ft
Primary Runway Surface	Asphalt
Taxiway Type	Partial Parallel
Approach Type	Precision
Fuel Type(s)	AvGas/Jet A



BWI Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

BWI is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as an Air Carrier facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Primary Commercial Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Air Carrier
FAA/NPIAS Role	Primary Commercial

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the BWI, the based aircrafts will increase from 47 in 2019 to 85 in 2039. The projected operations for general aviation aircraft are expected to increase from 13,286 to 17,301 in 2039. BWI may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	16	29
Multi-Engine	5	45
Jet	25	9
Helicopter	1	2
Other	0	0
Total	**47**	**85**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**13,286**	**17,301**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2012
Latest Airport Layout Plan	2019*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2008 MASP did not identify any projects for BWI to undertake. The 2023 MASP recommends BWI to perform the following projects to meet its Air Carrier facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support BWI objectives.

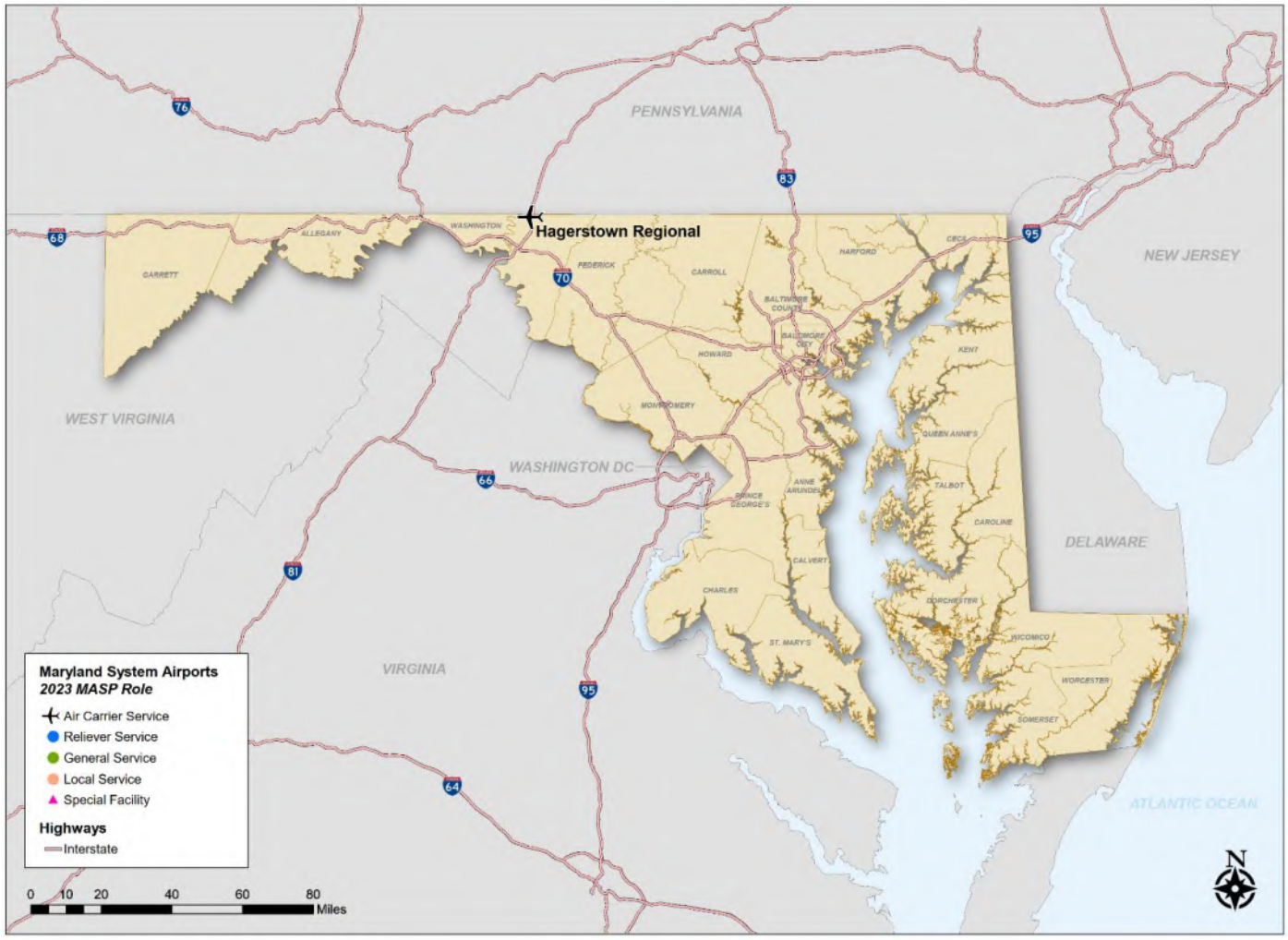
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Master Plan	$1,500,000
Total	**$1,500,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.2 Hagerstown Regional Airport/Richard A. Henson Field (HGR)

AIRPORT LOCATION AND FACILITIES

Hagerstown Regional Airport/Richard A. Henson Field (HGR) is located 4 miles north of Hagertown in Washington County. Runway 9/27 is HGR's primary runway. The airport has High-Intensity Runway Lighting (HIRL) and a full parallel taxiway. There is 1 additional runway at HGR, Runway 02/20.

Existing Airport Facilities	
Primary Runway Length	7,000 ft
Primary Runway Width	150 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Precision
Fuel Type(s)	HIRL



HGR Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

HGR is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as an Air Carrier facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Primary Commercial Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Air Carrier
FAA/NPIAS Role	Primary Commercial

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the HGR, the based aircrafts will increase from 141 in 2019 to 173 in 2039. The projected operations for general aviation aircraft are expected to decrease from 42,320 to 42,310 in 2039. HGR may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	114	140
Multi-Engine	17	21
Jet	6	7
Helicopter	4	5
Other	0	0
Total	**141**	**173**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**42,320**	**42,310**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	2019

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends HGR to perform the following projects to meet its Air Carrier facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support HGR objectives.

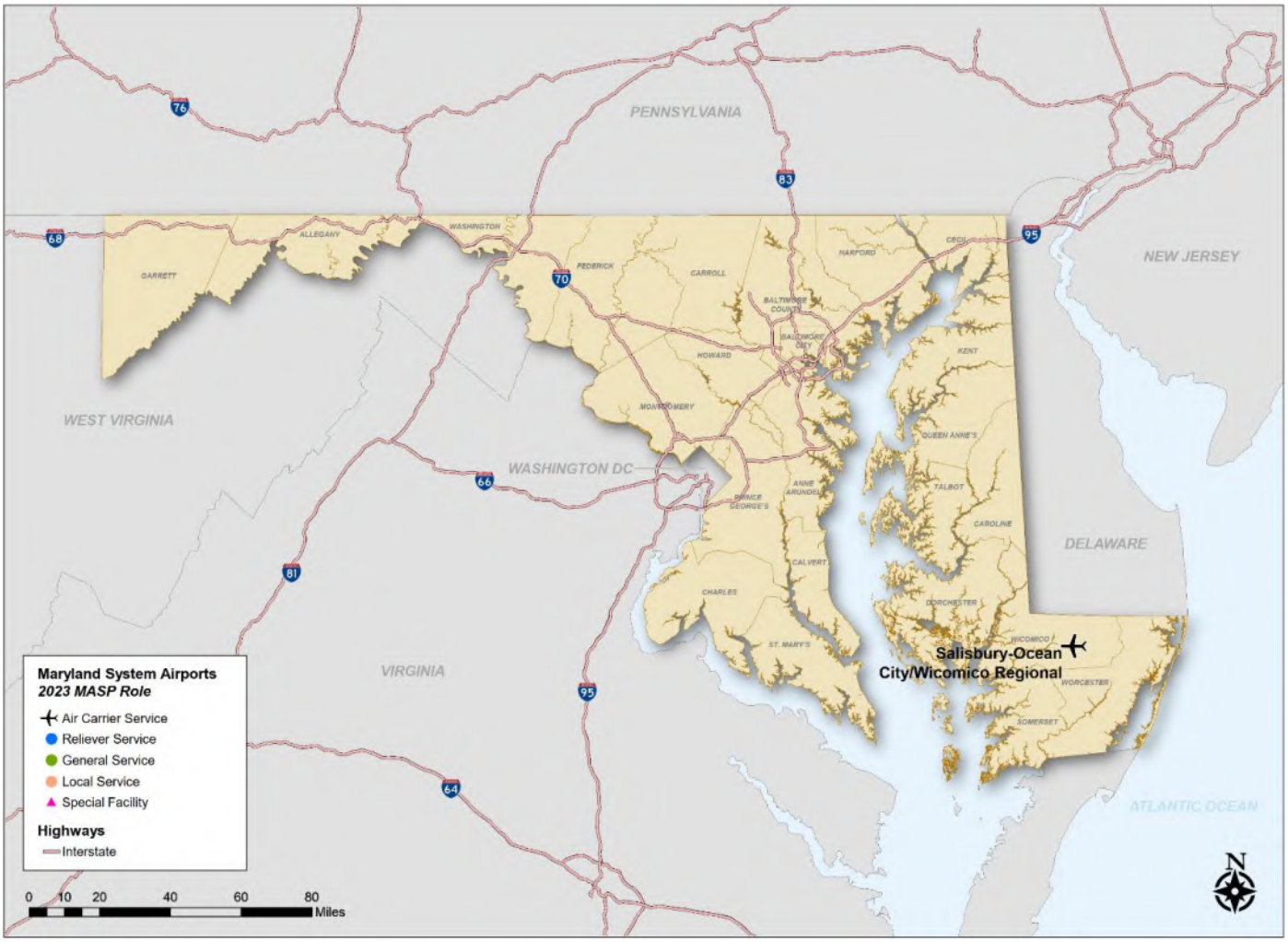
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Master Plan	$1,500,000
Total	**$1,500,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.3 Salisbury-Ocean City/Wicomico Regional Airport (SBY)

AIRPORT LOCATION AND FACILITIES

Salisbury-Ocean City/Wicomico Regional Airport (SBY) is located 4 miles southeast of Salisbury in Wicomico County. Runway 14/32 is SBY's primary runway. The airport has High-Intensity Runway Lighting (HIRL) and a full parallel taxiway. There is 1 additional runway at SBY, Runway 05/23.

Existing Airport Facilities	
Primary Runway Length	6,400 ft
Primary Runway Width	100 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Precision
AvGas/Jet A	AvGas/Jet A



SBY Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

SBY is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as an Air Carrier facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Primary Commercial Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Air Carrier
FAA/NPIAS Role	Primary Commercial

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the SBY, the based aircrafts will increase from 119 in 2019 to 133 in 2039. The projected operations for general aviation aircraft are expected to increase from 36,758 to 39,351 in 2039. SBY may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	49	55
Multi-Engine	64	71
Jet	3	3
Helicopter	3	3
Other	0	0
Total	**119**	**133**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**36,758**	**39,351**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2020
Latest Airport Layout Plan	2019*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2008 MASP did not identify any projects for SBY to undertake. The 2023 MASP also did not identify any projects for SBY. Additional projects, however, may be listed within the five-year capital improvement program in order to support SBY objectives.

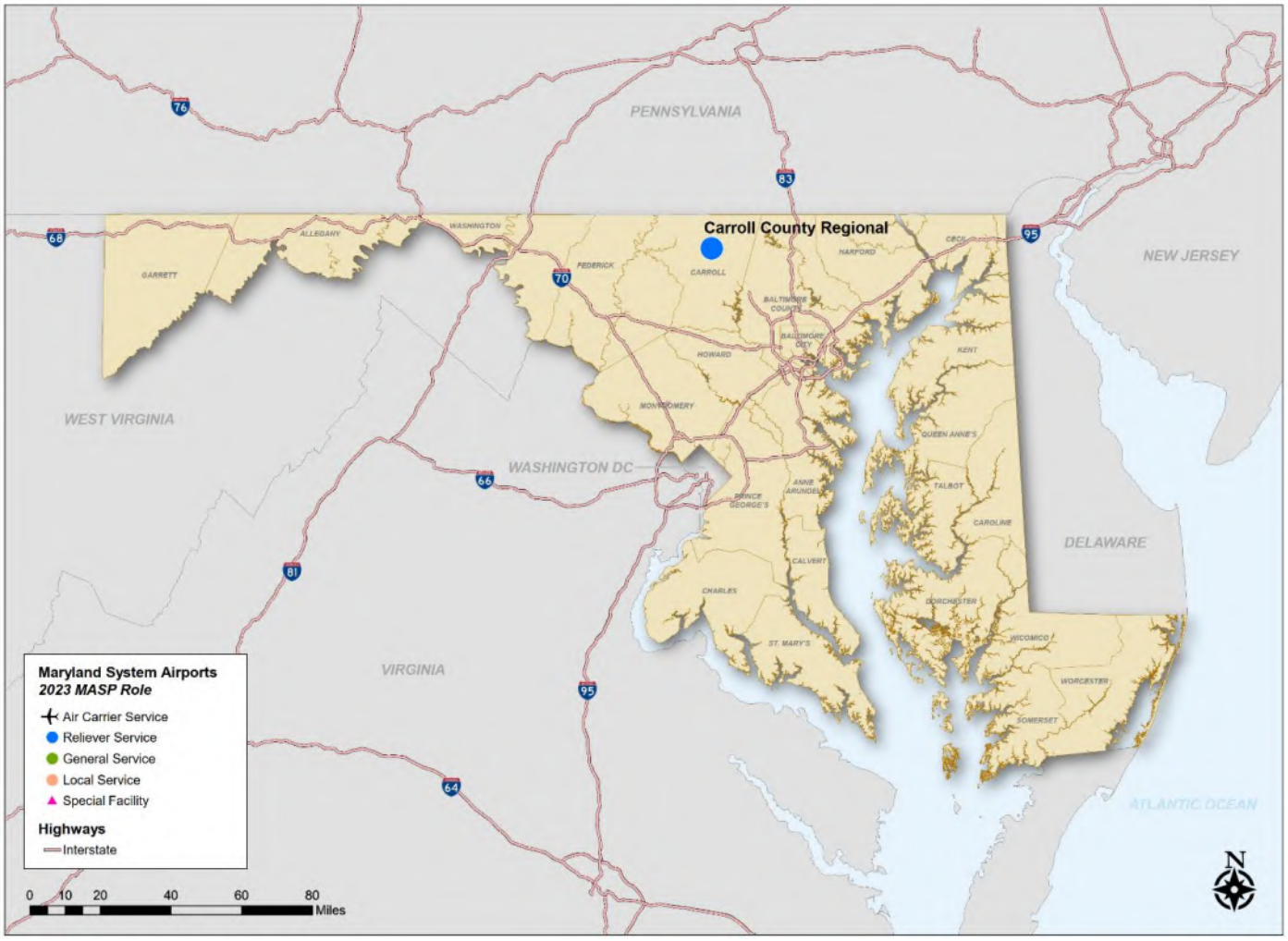
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
No Projects	-
Total	-
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.4 Carroll County Regional Airport/Jack B. Poage Field (DMW)

AIRPORT LOCATION AND FACILITIES

Carroll County Regional Airport/Jack B. Poage Field (DMW) is located 3 miles north of Westminster in Caroll County. Runway 16/34 is DMW's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	5,100 ft
Primary Runway Width	100 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



DMW Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

DMW is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Reliever facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Reliever Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Reliever
FAA/NPIAS Role	Reliever

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the DMW, the based aircrafts will increase from 110 in 2019 to 146 in 2039. The projected operations for general aviation aircraft are expected to increase from 55,724 to 73,887 in 2039. DMW may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	89	118
Multi-Engine	13	17
Jet	4	5
Helicopter	4	5
Other	0	0
Total	**110**	**146**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**55,724**	**73,887**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2015
Latest Airport Layout Plan	2015

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends DMW to perform the following projects to meet its Reliever facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support DMW objectives.

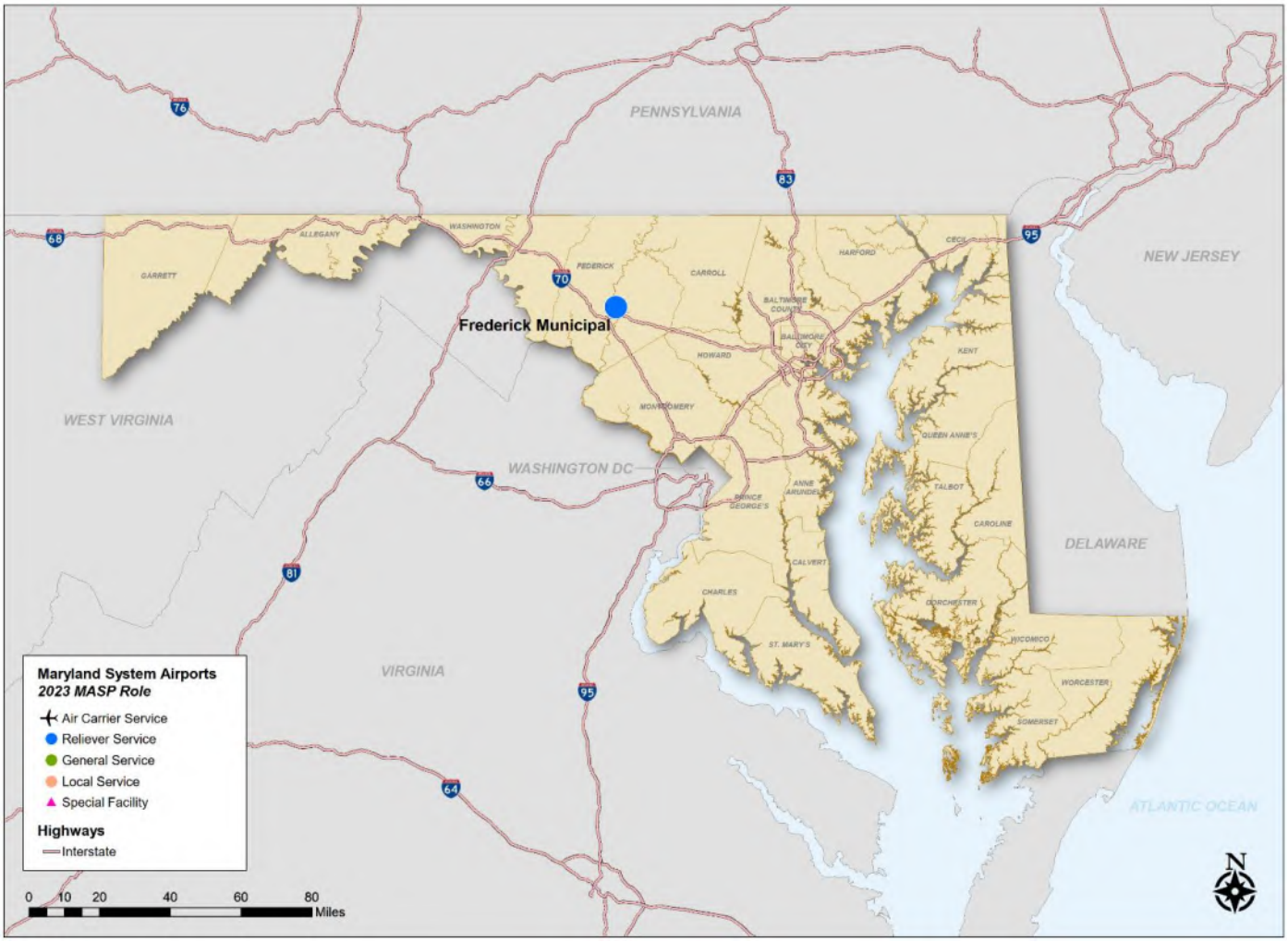
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Runway Lighting to HIRL	$1,068,000
LPV Approach to ¾ Statute Mile	$1,440,000
Total	**$2,508,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.5 Frederick Municipal Airport (FDK)

AIRPORT LOCATION AND FACILITIES

Frederick Municipal Airport (FDK) is located 1 mile east of Frederick in Frederick County. Runway 05/23 is FDK's primary runway. The airport has High-Intensity Runway Lighting (HIRL) and a full parallel taxiway. There is 1 additional runway at FDK, Runway 12/30.

Existing Airport Facilities	
Primary Runway Length	5,219 ft
Primary Runway Width	100 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Precision
Fuel Type(s)	AvGas/Jet A



FDK Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

FDK is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Reliever facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Reliever Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Reliever
FAA/NPIAS Role	Reliever

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the FDK, the based aircrafts will increase from 168 in 2019 to 208 in 2039. The projected operations for general aviation aircraft are expected to increase from 90,843 to 112,588 in 2039. FDK may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	138	171
Multi-Engine	14	17
Jet	4	5
Helicopter	12	15
Other	0	0
Total	168	208
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**90,843**	**112,588**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2008
Latest Airport Layout Plan	2008

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends FDK to perform the following projects to meet its Reliever facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support FDK objectives.

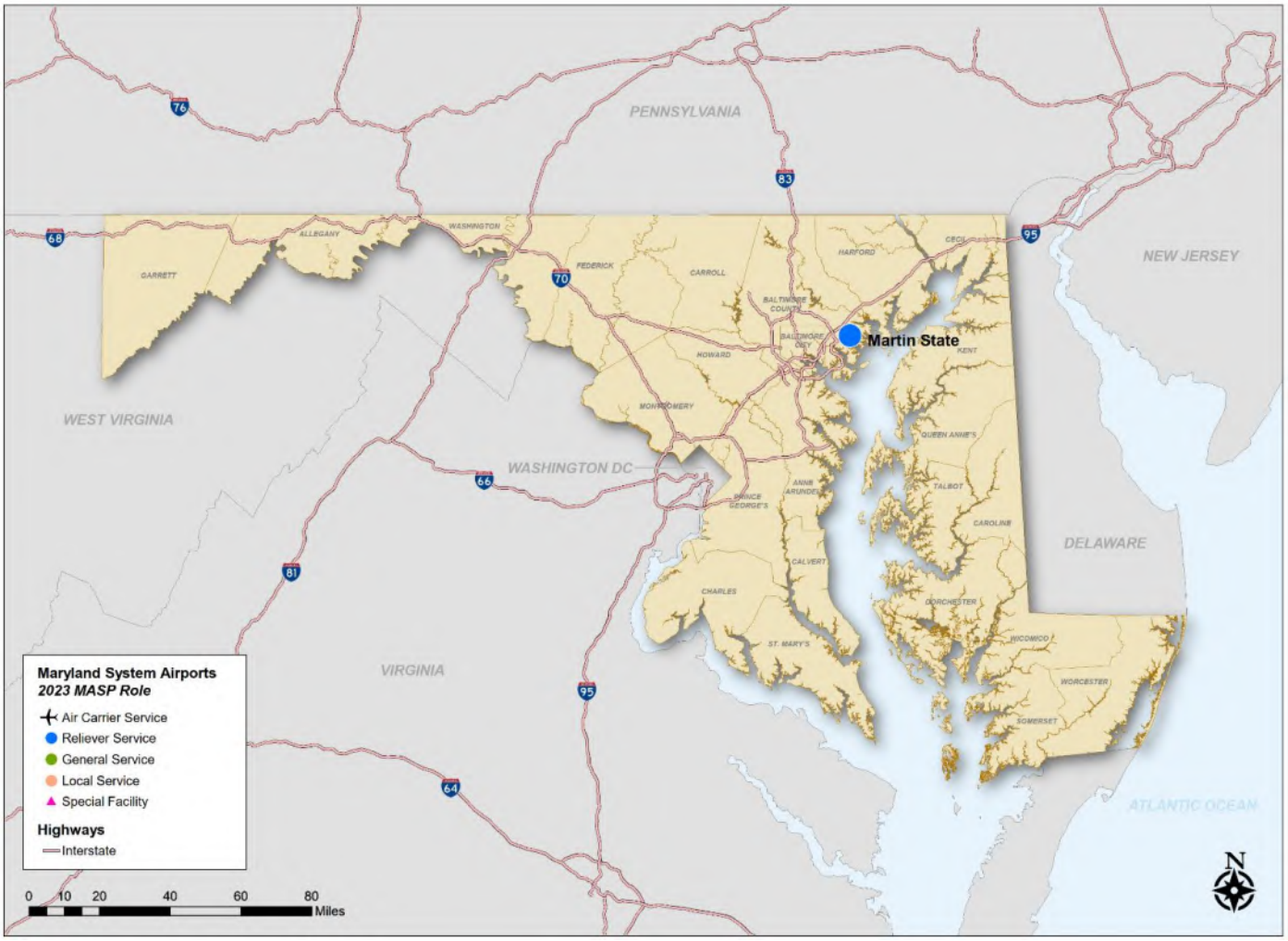
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Airport Property Fence	$905,000.00
Master Plan	$600,000.00
ALP	$250,000.00
Total	**$1,755,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.6 Martin State Airport (MTN)

AIRPORT LOCATION AND FACILITIES

Martin State Airport (MTN) is located 9 miles east of Baltimore, in Baltimore County. Runway 15/33 is MTN's primary runway. The airport has High-Intensity Runway Lighting (HIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	6,996 ft
Primary Runway Width	180 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Precision
Fuel Type(s)	AvGas/Jet A



MTN Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

MTN is a publicly owned. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Reliever facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Reliever Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Reliever
FAA/NPIAS Role	Reliever

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the MTN, the based aircrafts will increase from 255 in 2019 to 320 in 2039. The projected operations for general aviation aircraft are expected to increase from 84,222 to 93,044 in 2039. MTN may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	160	201
Multi-Engine	21	26
Jet	25	31
Helicopter	28	35
Other	0	26
Total	**255**	**320**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**84,222**	**93,044**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2011*
Latest Airport Layout Plan	2020*

Notes: (*) for Master Plan indicates the date of the airport's ALP Narrative was considered as the latest master plan document. (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends MTN to perform the following projects to meet its Reliever facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support MTN objectives.

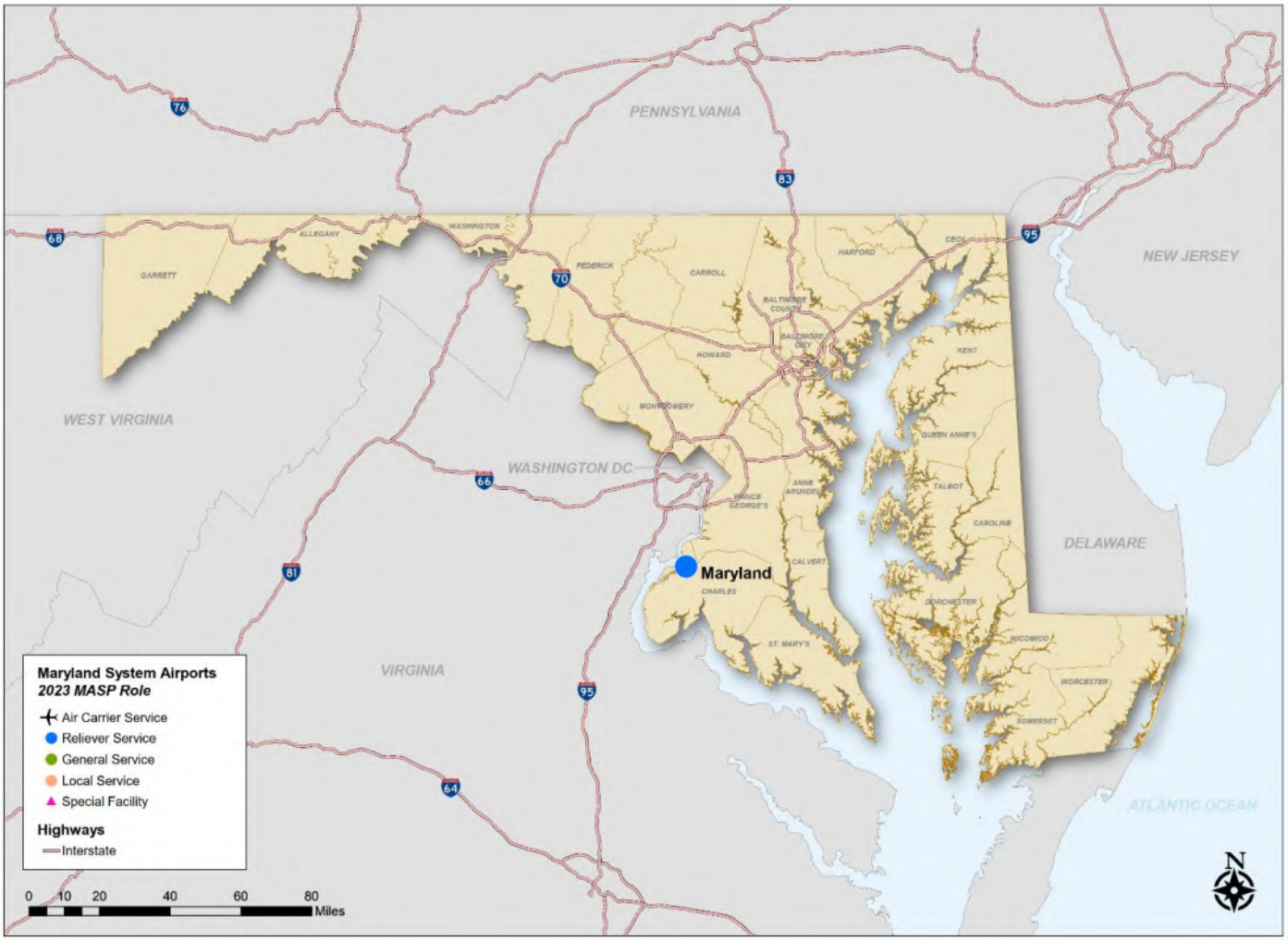
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
LPV Approach to ¾ Statute Mile	No cost available
Master Plan	$750,000
Total	**$750,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.7 Maryland Airport (2W5)

AIRPORT LOCATION AND FACILITIES

Maryland Airport (2W5) is located 4 miles east of Indian Head, in Charles County. Runway 02/20 is 2W5's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	3,740 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



2W5 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

2W5 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Reliever facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Reliever Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Reliever
FAA/NPIAS Role	Reliever

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 2W5, the based aircrafts will stay the same from 2019 to 2039 with 51 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 22,000. 2W5 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	50	50
Multi-Engine	1	1
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**51**	**51**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**22,000**	**22,000**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	1999
Latest Airport Layout Plan	2021*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 2W5 to perform the following projects to meet its Reliever facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 2W5 objectives.

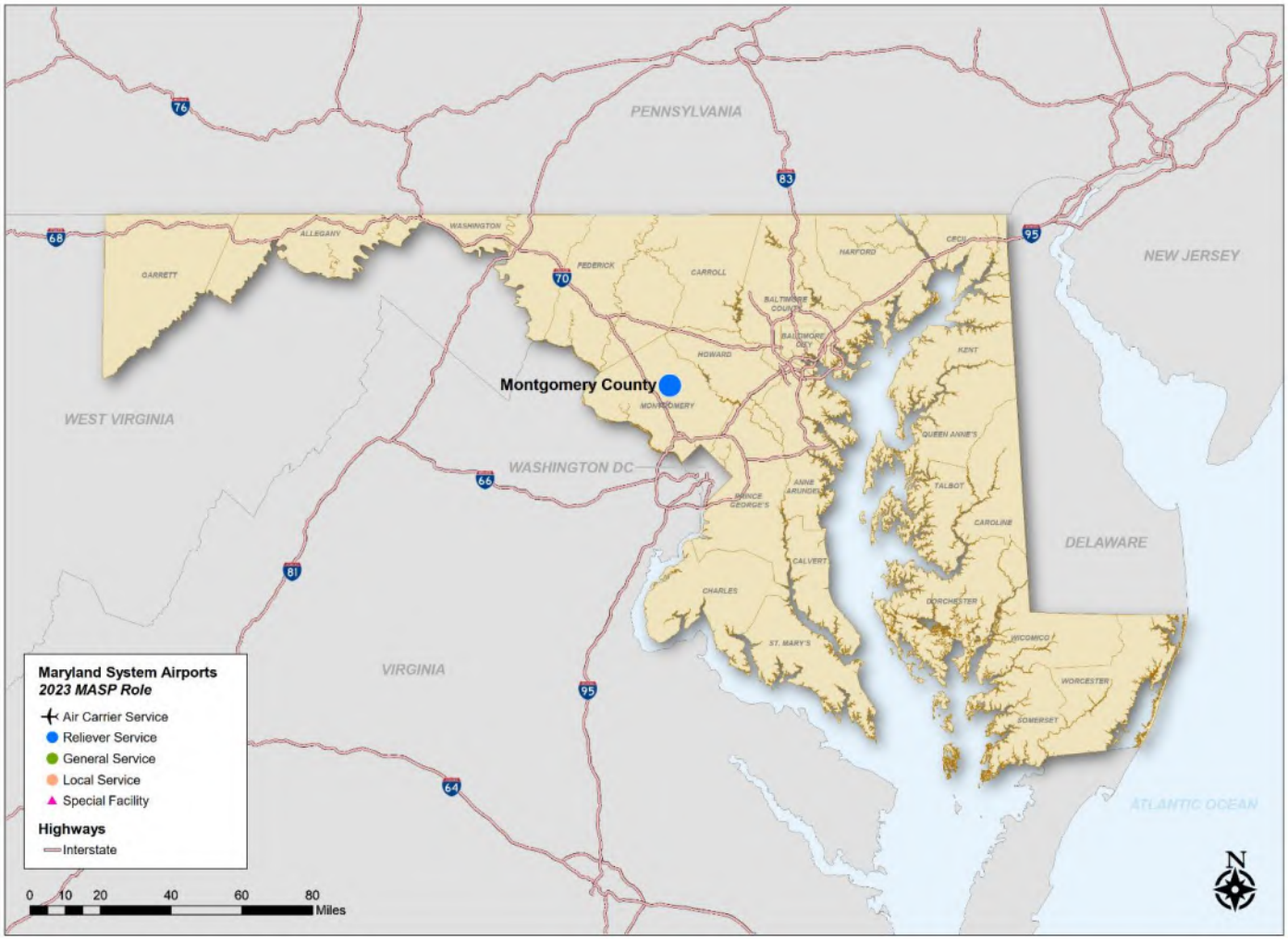
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 5,000’	$9,664,000
ARC to C-II	$13,667,000
Approach Capability to Precision Approach	$6,836,000
ATC Communications	$135,000
Runway Lighting Type to HIRL	$841,000
VGSI to Runway 20 End	$327,000
Weather Reporting System	$640,000
Airport Property Fence	$1,353,000
24-Hour Fueling	$200,000
Snow Removal	$720,000
Master Plan	$750,000
Total	**$35,133,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.8 Montgomery County Airpark (GAI)

AIRPORT LOCATION AND FACILITIES

Montgomery County Airpark (GAI) is located 3 miles northeast of Gaithersburg in Montgomery County. Runway 14/32 is GAI's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	4,202 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



GAI Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

GAI is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Reliever facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Reliever Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Reliever
FAA/NPIAS Role	Reliever

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the GAI, the based aircrafts will stay the same between 2019 and 2039 with 135 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 47,253. GAI may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	122	122
Multi-Engine	11	11
Jet	1	1
Helicopter	1	1
Other	0	0
Total	**135**	**135**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**47,253**	**47,253**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2002
Latest Airport Layout Plan	2013*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends GAI to perform the following projects to meet its Reliever facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support GAI objectives.

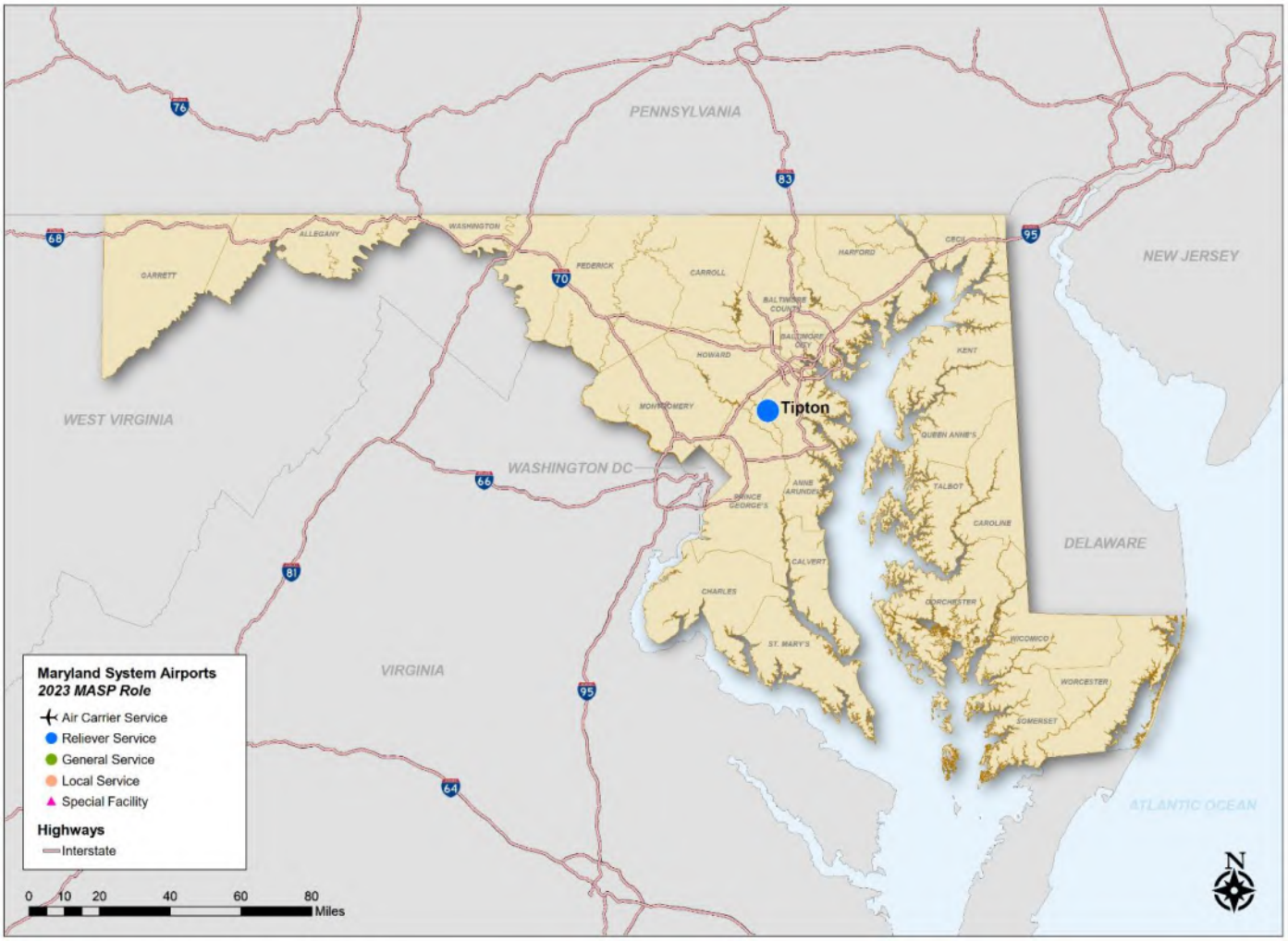
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 5,000’	$65,239,000
ARC to C-II	$184,030,000
Approach Capability to Precision Approach	$6,960,000
Runway Lighting Type to HIRL	$850,000
Master Plan	$750,000
Total	**$257,829,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.9 Tipton Airport (FME)

AIRPORT LOCATION AND FACILITIES

Tipton Airport (FME) is located 1 mile southwest of Odenton in Anne Arundel County. Runway 10/28 is FME's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	3,000 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



FME Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

FME is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Reliever facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Reliever Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Reliever
FAA/NPIAS Role	Reliever

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the FME, the based aircrafts will increase from 115 in 2019 to 195 in 2039. The projected operations for general aviation aircraft are expected to increase from 37,773 to 64,133 in 2039. FME may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	93	158
Multi-Engine	7	12
Jet	0	0
Helicopter	15	25
Other	0	0
Total	**115**	**195**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**37,773**	**64,133**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2010
Latest Airport Layout Plan	2016*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends FME to perform the following projects to meet its Reliever facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support FME objectives.

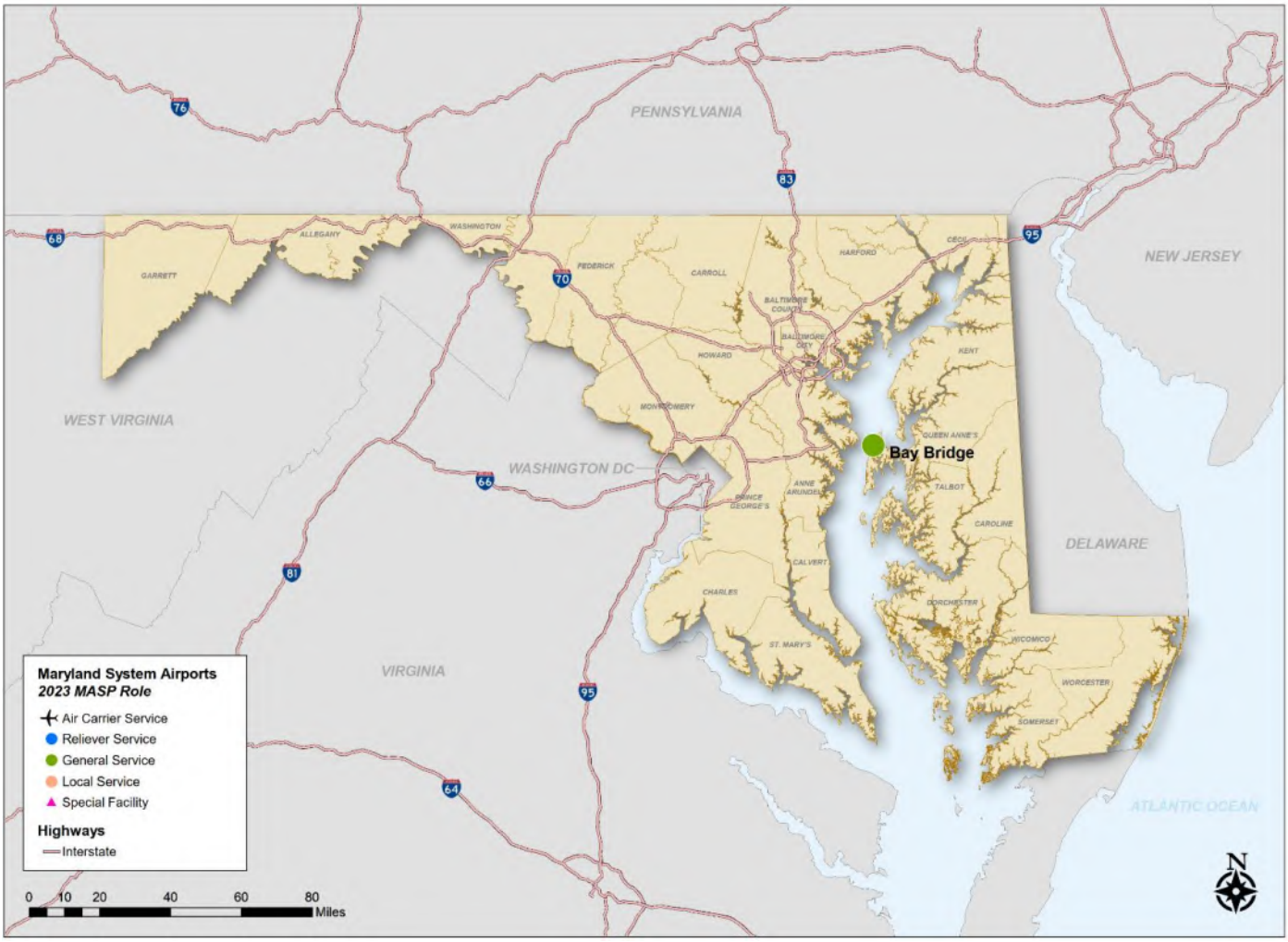
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 5,000’	$14,026,942
ARC to C-II	$9,721,000
Approach Capability to Precision Approach	$6,725,000
Covered Overnight Secure Storage	$2,944,000
ATC Communications	$109,000
Master Plan	$333,333
Total	**$33,859,275**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.10 Bay Bridge Airport (W29)

AIRPORT LOCATION AND FACILITIES

Bay Bridge Airport (W29) is located 1 mile west of Stevensville in Queen Anne's County. Runway 11/29 is W29's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	2,713 ft
Primary Runway Width	60 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas



W29 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

W29 is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the W29, the based aircrafts will stay the same between 2019 and 2038 with 88 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 35,168. W29 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	79	79
Multi-Engine	6	6
Jet	0	0
Helicopter	3	3
Other	0	0
Total	**88**	**88**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**35,168**	**35,168**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	1989
Latest Airport Layout Plan	2021*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends W29 to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support W29 objectives.

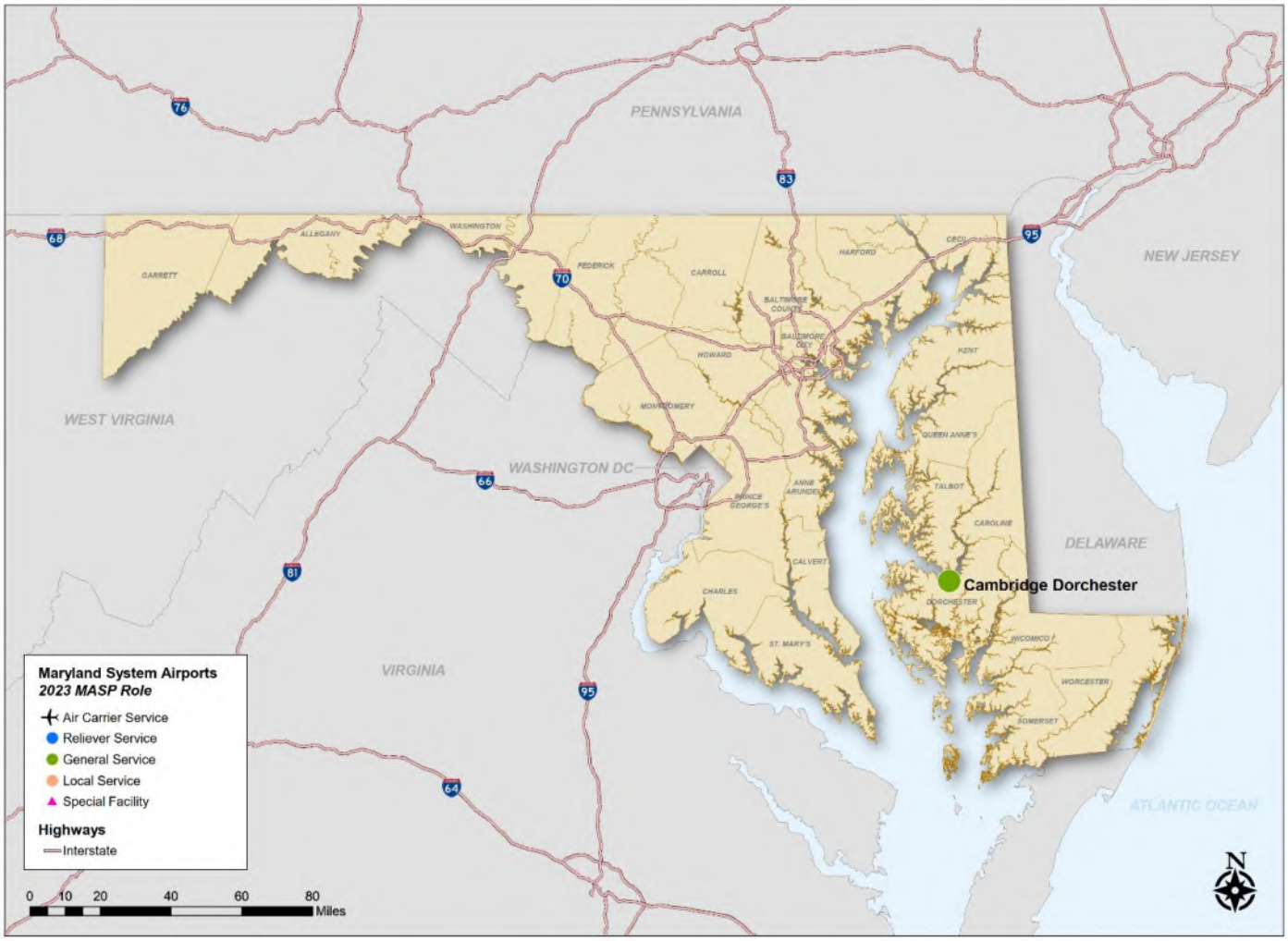
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$2,535,000
ARC to B-I	$10,548,000
Master Plan	$350,000
ARC from B-I to C-II	No cost available
Total	**$13,433,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Approach Capability to Precision Approach	$6,259,000
Primary Runway Length from 3,500’ to 5,000’	No cost available
Total Project Cost	**$6,259,000**

6.4.11 Cambridge-Dorchester Regional Airport (CGE)

AIRPORT LOCATION AND FACILITIES

Cambridge-Dorchester Regional Airport (CGE) is located 3 miles southeast of Cambridge in Dorchester County. Runway 16/34 is CGE's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	4,477 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



CGE Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

CGE is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Authority (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the CGE, the based aircrafts will stay the same between 2019 and 2038 with 38 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 23,713. CGE may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	35	35
Multi-Engine	2	2
Jet	1	1
Helicopter	0	0
Other	0	0
Total	**38**	**38**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**23,713**	**23,713**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	1990
Latest Airport Layout Plan	2015

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends CGE to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support CGE objectives.

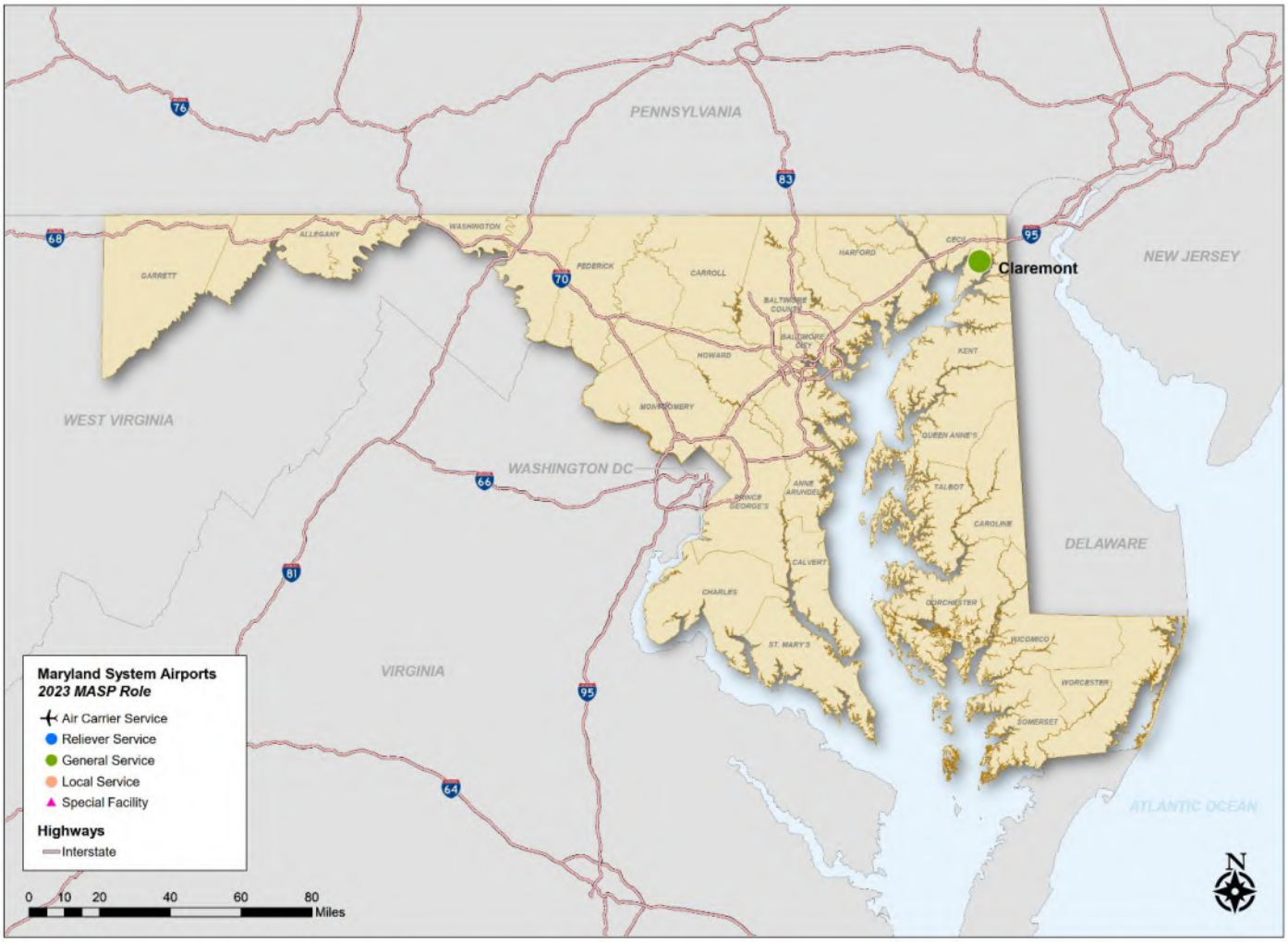
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Snow Removal	$360,000
Master Plan	$350,000
Total	**$710,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Approach Capability to Precision Approach	$6,615,000
Primary Runway Length to 5,000'	$4,202,000
Runway Lighting Type to HIRL	$897,000
ARC to C-II	$15,992,000
Total	**$27,706,000**

6.4.12 Claremont Airport (58M)

AIRPORT LOCATION AND FACILITIES

Claremont Airport (58M) is located 3 miles southwest of Elkton in Cecil County. Runway 13/31 is 58M's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	2,989 ft
Primary Runway Width	70 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas



58M Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

58M is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. As the facility is for private use only, it is classified as a Non-NPIAS (National Plan of Integrated Airport Systems).

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	General
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 58M, the based aircrafts will stay the same between 2019 and 2039 with 49 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 7,689. 58M may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	44	44
Multi-Engine	5	5
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**49**	**49**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**7,689**	**7,689**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2010
Latest Airport Layout Plan	2009

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 58M to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 58M objectives.

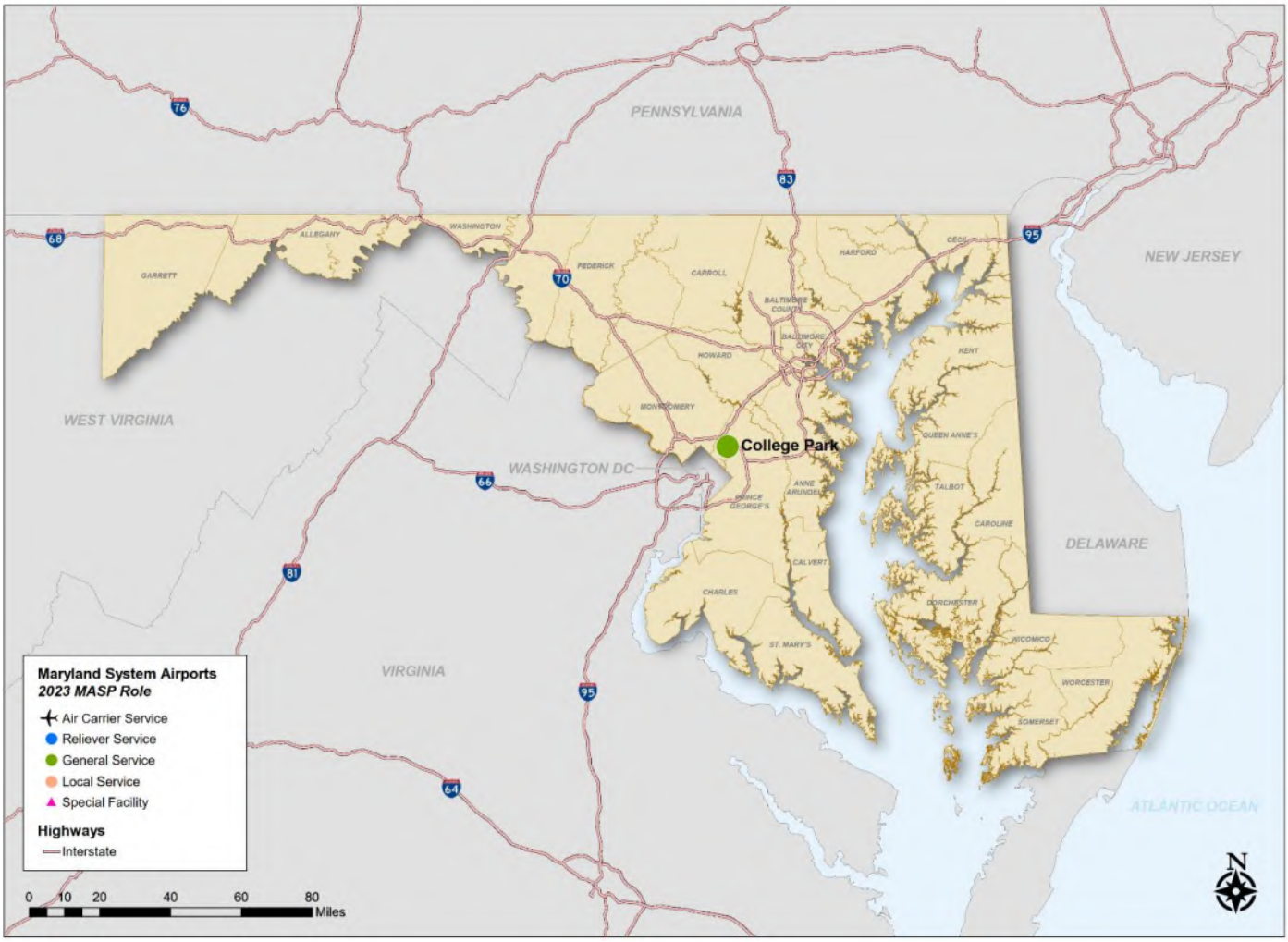
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$2,707,000
Weather Reporting System	$320,000
Airport Property Fence	$556,000
Snow Removal	$360,000
Airport Master Plan	$350,000
ALP	$175,000
Total	**$4,468,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Approach Capability to Precision Approach	$6,270,000
Primary Runway Length from 3,500’ to 5,000’	$4,939,000
Total	**$11,209,000**

6.4.13 College Park Airport (CGS)

AIRPORT LOCATION AND FACILITIES

College Park Airport (CGS) is located 1 mile east of College Park in Prince George's County. Runway 15/33 is CGS's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	2,980 ft
Primary Runway Width	60 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



CGS Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

CGS is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the CGS, the based aircrafts will stay the same between 2019 and 2039 with 38 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 3,164. CGS may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	34	34
Multi-Engine	0	0
Jet	0	0
Helicopter	4	4
Other	0	0
Total	**38**	**38**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**3,164**	**3,164**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	2012*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends CGS to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support CGS objectives.

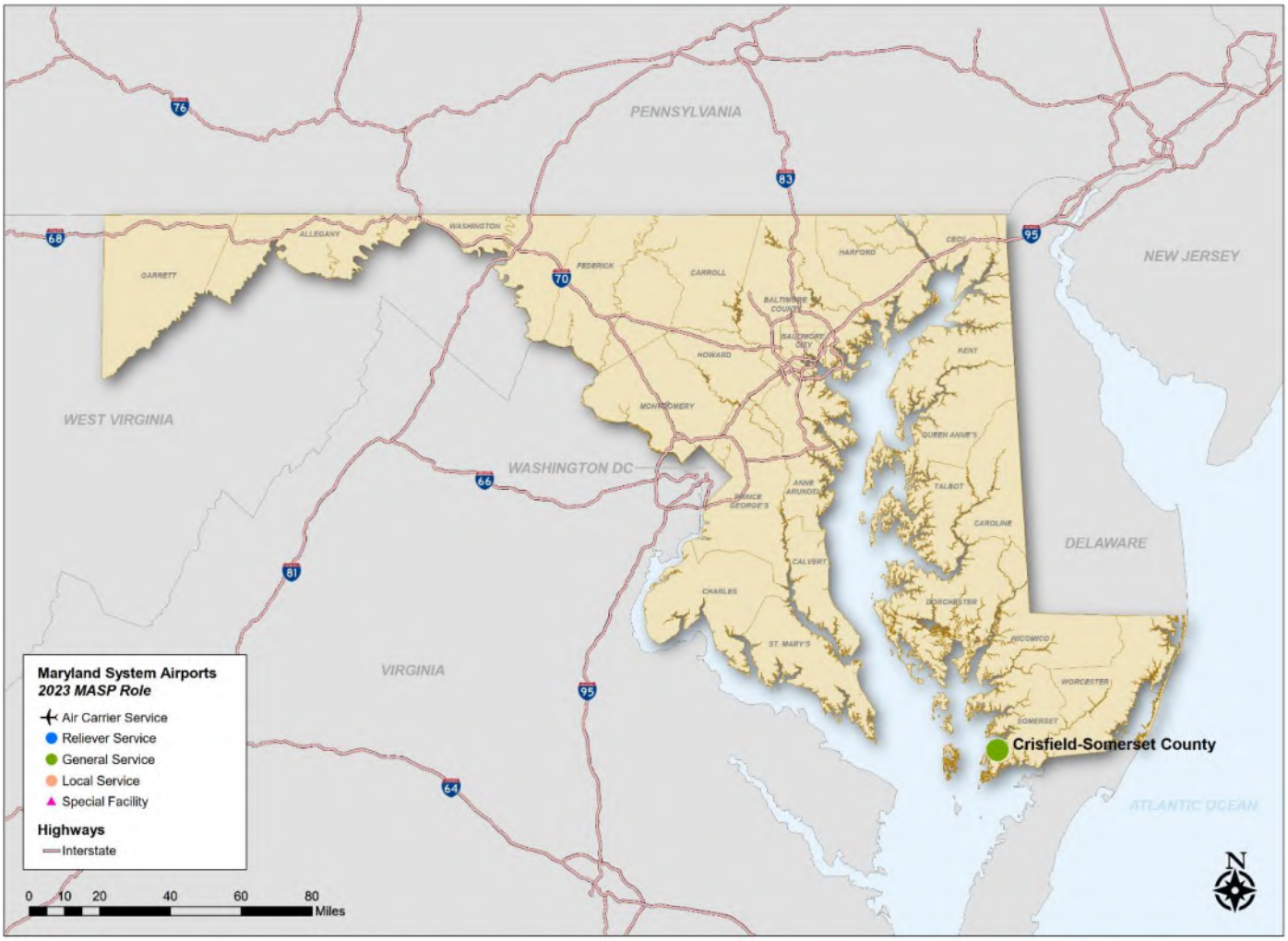
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$3,881,000
REILs to Runway 15/33	$0
VGSI to Runway 15/33	$0
24-Hour Fueling	$200,000
Master Plan	$350,000
Total	**$4,431,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.14 Crisfield-Somerset County Airport (W41)

AIRPORT LOCATION AND FACILITIES

Crisfield-Somerset County Airport (W41) is located 3 miles northeast of Crisfield in Somerset County. Runway 14/32 is W41's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a turnaround taxiway. There is 1 additional runway at W41, Runway 06/24.

Existing Airport Facilities	
Primary Runway Length	2,397 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Turnaround
Approach Type	Non-Precision
Fuel Type(s)	AvGas



W41 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

W41 is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the W41, the based aircrafts will stay the same between 2019 and 2039 with 4 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 1,961. W41 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	4	4
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**4**	**4**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**1,961**	**1,961**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	1995
Latest Airport Layout Plan	2020*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends W41 to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support W41 objectives.

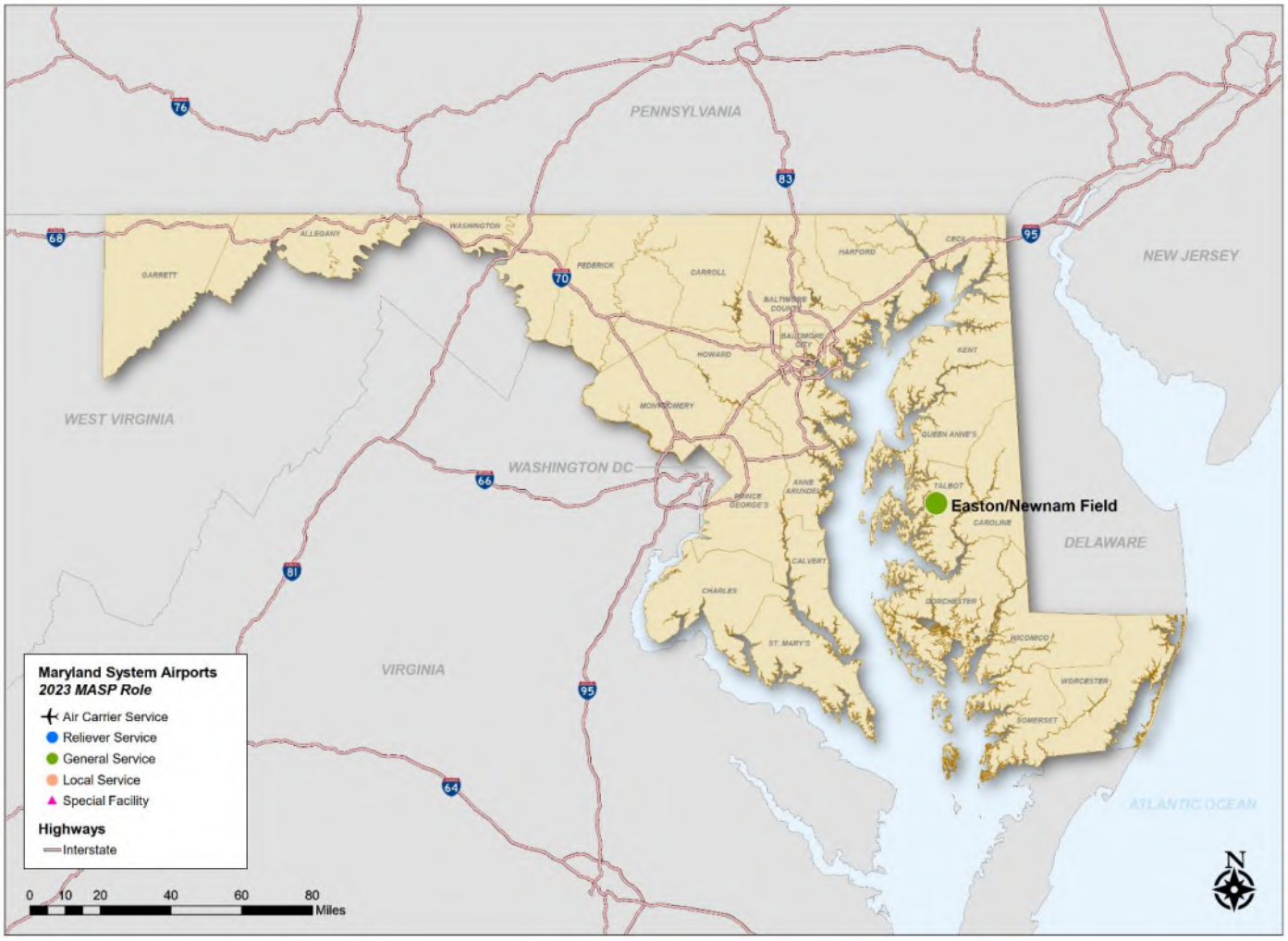
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$7,278,000
Partial Parallel Taxiway	$1,741,000
Weather Reporting System	$639,000
GA/FBO Terminal	$8,077,000
Hangar Space	$1,800,000
ARC to B-I	$3,447,000
Master Plan	$350,000
Total	**$23,332,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.15 Easton/Newnam Field Airport (ESN)

AIRPORT LOCATION AND FACILITIES

Easton/Newnam Field Airport (ESN) is located 2 miles north of Easton in Tablot County. Runway 04/22 is ESN's primary runway. The airport has High-Intensity Runway Lighting (HIRL) and a full parallel taxiway. There is 1 additional runway at ESN, Runway 15/33.

Existing Airport Facilities	
Primary Runway Length	5,500 ft
Primary Runway Width	100 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Precision
Fuel Type(s)	AvGas/Jet A



ESN Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

ESN is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the ESN, the based aircrafts will increase from 222 in 2019 to 231 in 2039. The projected operations for general aviation aircraft are expected to increase from 68,453 to 71,661 in 2039. ESN may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	168	175
Multi-Engine	22	28
Jet	27	23
Helicopter	2	2
Other	3	3
Total	**222**	**231**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**68,453**	**71,661**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2005
Latest Airport Layout Plan	2020*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends ESN to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support ESN objectives.

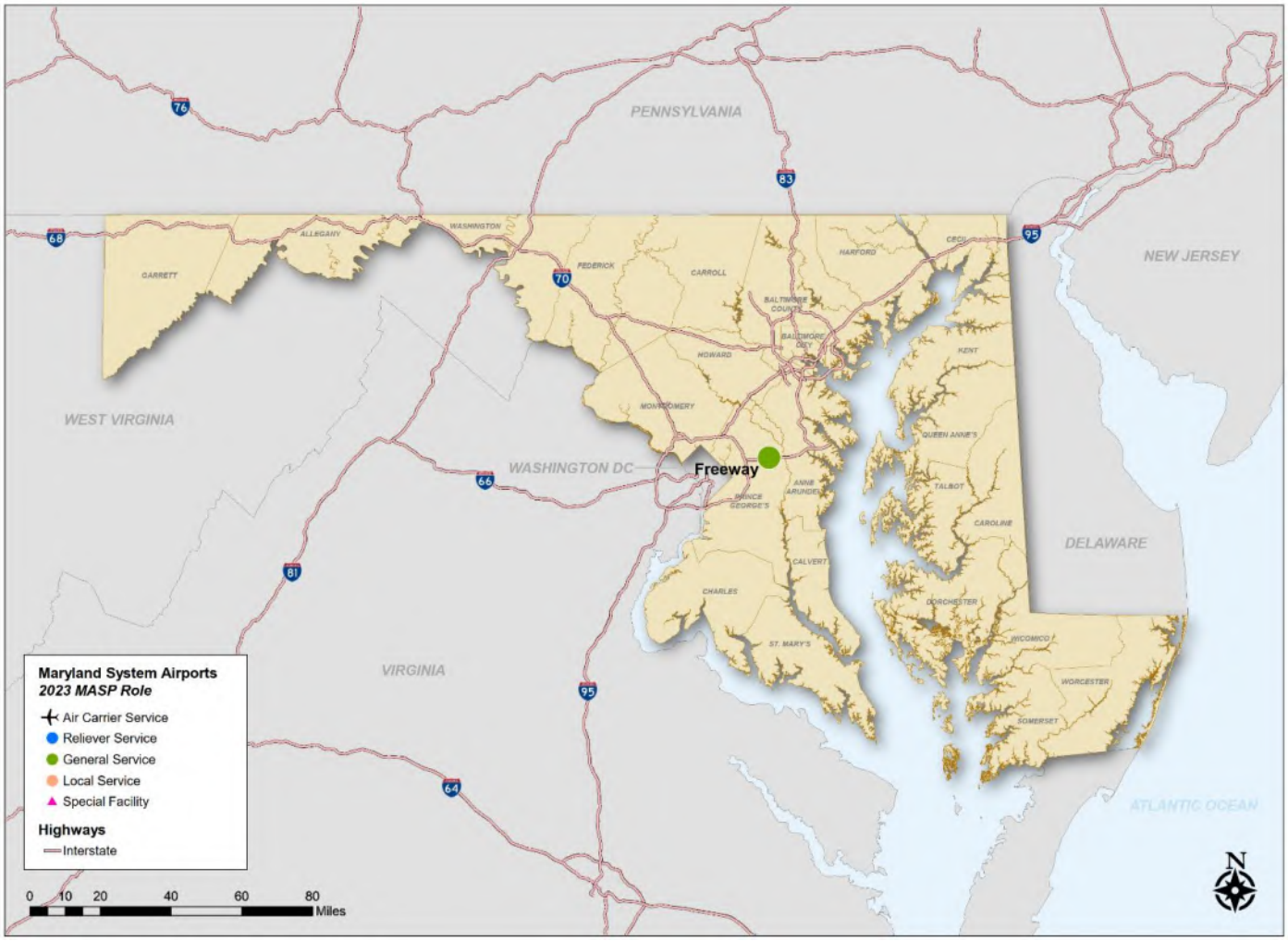
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
REILs to Runway 4 End	$162,000
Master Plan	$350,000
Total	**$512,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.16 Freeway Airport (W00)

AIRPORT LOCATION AND FACILITIES

Freeway Airport (W00) is located 2 miles northwest of Mitchellville in Prince George's County. Runway 18/36 is W00's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	2,430 ft
Primary Runway Width	40 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas



W00 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

W00 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. As the facility is for private use only, it is classified as a Non-NPIAS (National Plan of Integrated Airport Systems).

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	General
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the W00, the based aircrafts will stay the same between 2019 and 2039 with 77 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 32,100. W00 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	74	74
Multi-Engine	2	2
Jet	0	0
Helicopter	0	0
Other	0	1
Total	**77**	**77**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**32,100**	**32,100**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	Unknown

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends W00 to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support W00 objectives.

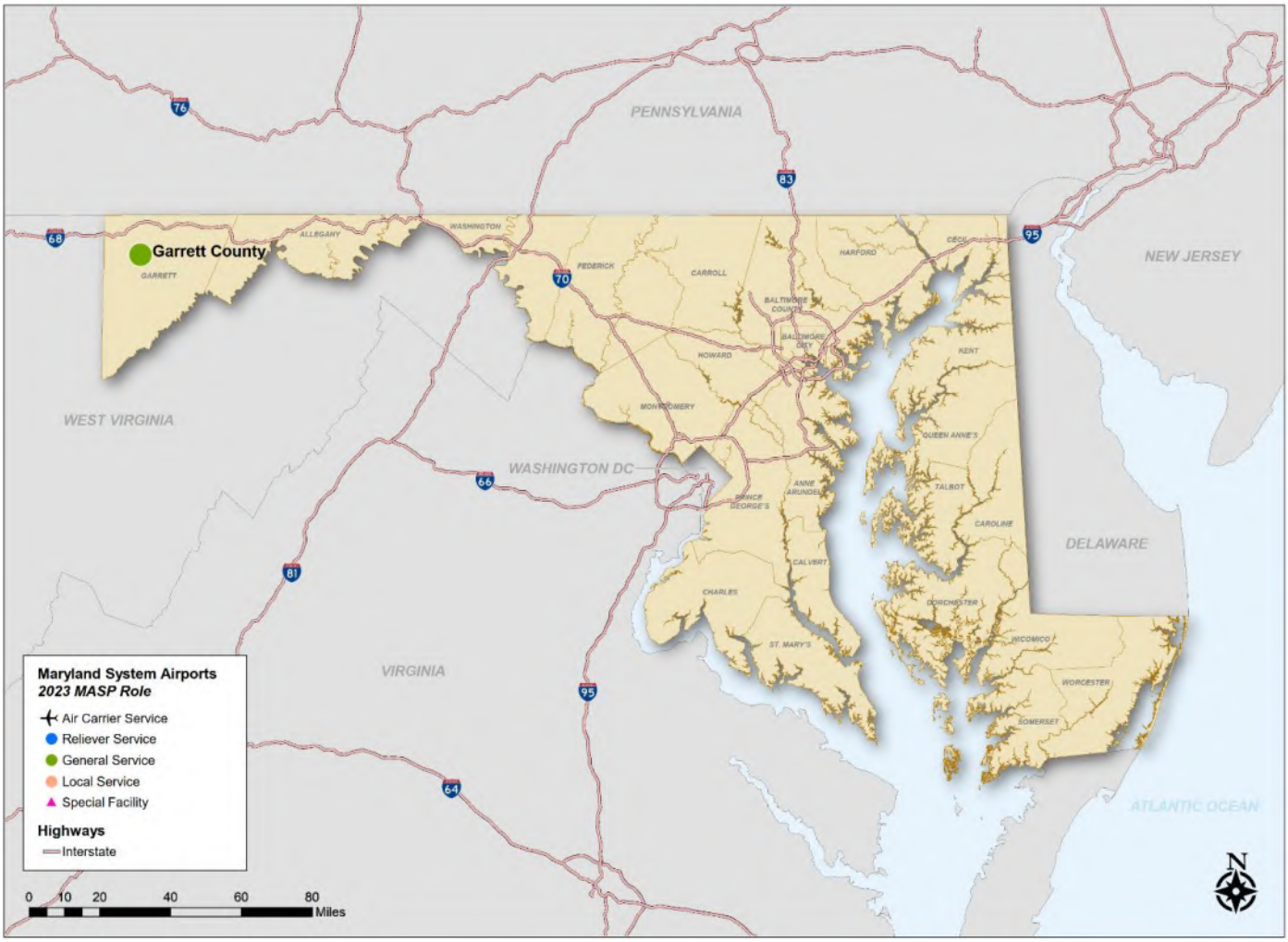
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$13,439,000
Weather Reporting System	$627,000
Airport Property Fence	$427,000
REILs to Runway 18/36	$264,000
24-Hour Fueling	$200,000
Hangar Space	$204,900
Snow Removal	$360,000
Master Plan	$350,000
ALP	$175,000
Total	**$16,046,900**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.17 Garrett County Airport (2G4)

AIRPORT LOCATION AND FACILITIES

Garrett County Airport (2G4) is located 13 miles northeast of Oakland in Garrett County. Runway 09/27 is 2G4's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	5,000 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



2G4 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

2G4 is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 2G4, the based aircrafts will increase from 32 in 2019 to 72 in 2039. The projected operations for general aviation aircraft are expected to increase from 15,500 to 35,165 in 2039. 2G4 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	25	56
Multi-Engine	4	0
Jet	0	9
Helicopter	3	7
Other	0	0
Total	**32**	**72**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**15,500**	**35,165**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2016*
Latest Airport Layout Plan	2016

Notes: (*) for Master Plan indicates the date of the airport's ALP Narrative was considered as the latest master plan document.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 2G4 to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 2G4 objectives.

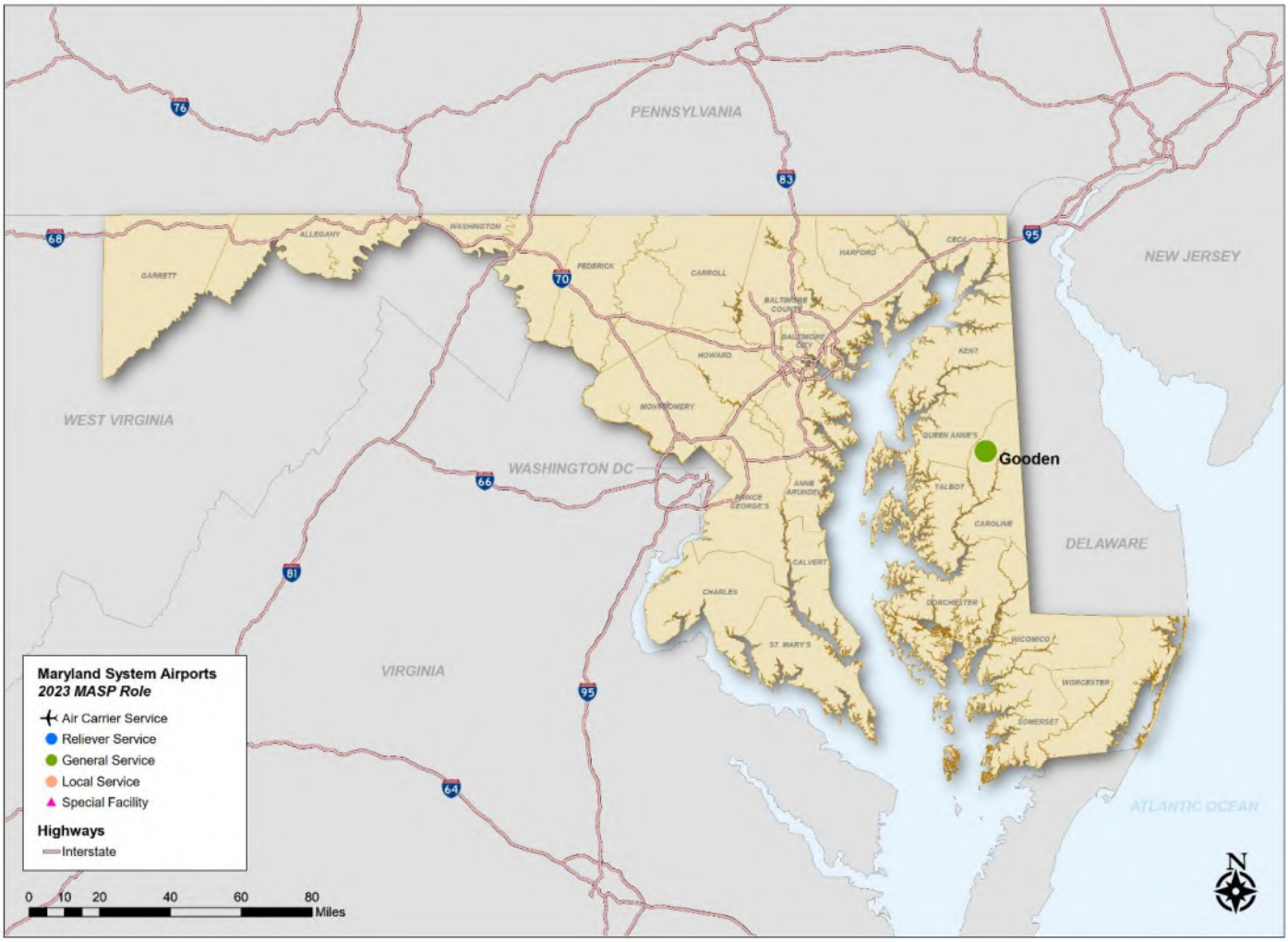
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
No Projects	–
To Meet Coverage Objectives	
Project	**Project Cost**
Approach Capability to Precision Approach	$6,417,000
ARC to C-II	$24,315,000
Runway Lighting Type to HIRL	$940,000
Total	**$31,672,000**

6.4.18 Gooden Airpark (RJD)

AIRPORT LOCATION AND FACILITIES

Gooden Airport (RJD) is located 2 miles northeast of Ridgely in Caroline County. Runway 12/30 is RJD's primary runway. The airport has Low-Intensity Runway Lighting (LIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	3,214 ft
Primary Runway Width	70 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	None



RJD Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

RJD is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	General
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the RJD, the based aircrafts will stay the same between 2019 and 2039 with 13 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 11,900. RJD may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	13	13
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**13**	**13**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**11,900**	**11,900**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends RJD to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support BWI objectives.

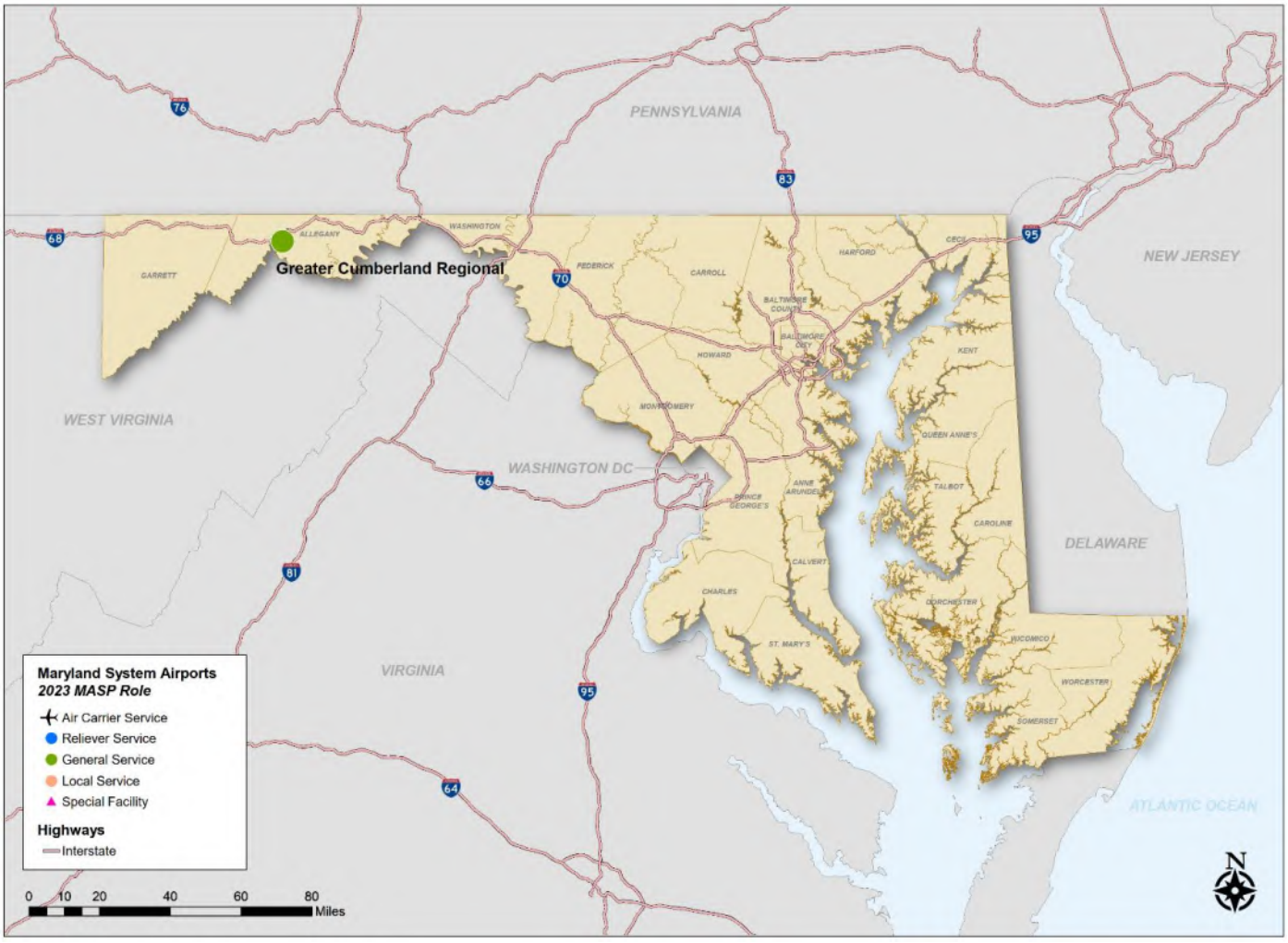
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$2,485,000
Runway Lighting Type to MIRL	$688,000
GA/FBO Terminal	$8,077,000
Airport Property Fence	$638,000
Snow Removal	$360,000
AvGas	$359,000
24-Hour Fueling	$200,000
Paved Aircraft Parking	$73,000
Weather Reporting System	$627,000
Master Plan	$350,000
ALP	$175,000
Total	**$13,857,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Primary Runway Length from 3,500’ to 5,000’	$7,484,000
Total	**$7,484,000**

6.4.19 Greater Cumberland Regional Airport (CBE)

AIRPORT LOCATION AND FACILITIES

Greater Cumberland Regional Airport (CBE) is located 2 miles south of Cumberland, Maryland in Mineral County, Wiley Ford, West Virginia. Runway 05/23 is CBE's primary runway. The airport has High-Intensity Runway Lighting (HIRL) and a partial parallel taxiway. There is 1 additional runway at CBE, Runway 11/29.

Existing Airport Facilities	
Primary Runway Length	5,047 ft
Primary Runway Width	150 ft
Primary Runway Surface	Asphalt
Taxiway Type	Partial Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



CBE Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

CBE is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the CBE, the based aircrafts will increase from 55 in 2019 to 61 in 2039. The projected operations for general aviation aircraft are expected to increase from 14,300 in 2019, to 43,357 in 2039. CBE may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	46	51
Multi-Engine	3	3
Jet	0	0
Helicopter	1	1
Other	5	6
Total	**55**	**61**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**14,300**	**43,357**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2020*
Latest Airport Layout Plan	2020

Notes: (*) for Master Plan indicates the date of the airport's ALP Narrative was considered as the latest master plan document.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends CBE to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support CBE objectives.

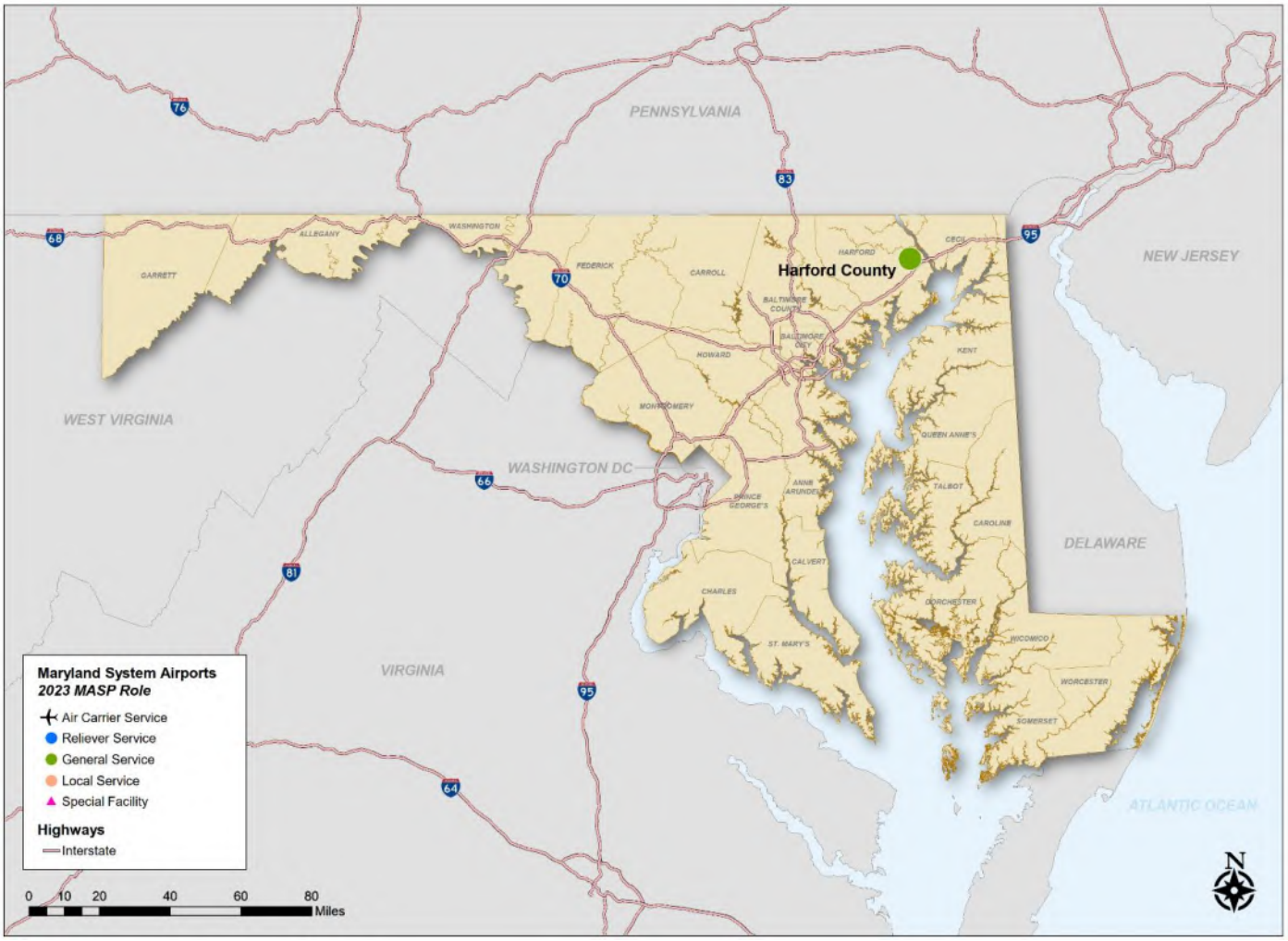
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Airport Property Fence	$1,328,000
REILs to Runway 5 End	$189,000
VGSI to Runway 5 End	$308,000
Total	**$1,825,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Approach Capability to Precision Approach	$6,438,000
Total	**$6,438,000**

6.4.20 Harford County Airport (0W3)

AIRPORT LOCATION AND FACILITIES

Hartford County Airport (0W3) is located 3 miles east of Churchville in Harford County. Runway 01/19 is 0W3's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a partial parallel taxiway. There is 1 additional runway at 0W3, Runway 10/28.

Existing Airport Facilities	
Primary Runway Length	2,856 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



0W3 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

0W3 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	General
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 0W3, the based aircrafts will stay the same between 2019 and 2039 with 50 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 29,840. 0W3 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	45	45
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	5	5
Total	**50**	**50**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**29,840**	**29,840**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	2021

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 0W3 to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 0W3 objectives.

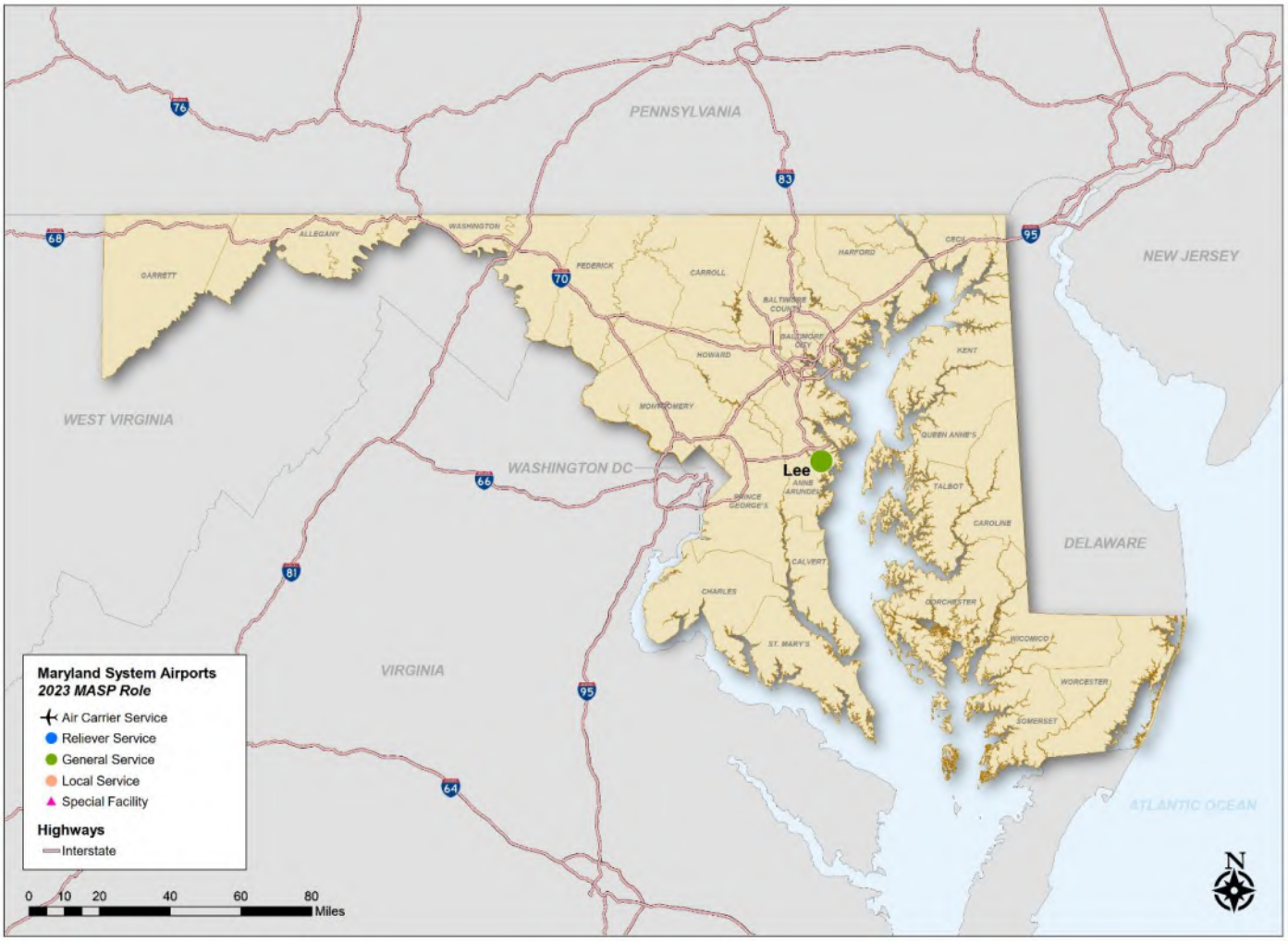
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$3,327,000
Weather Reporting System	$588,000
Airport Property Fence	$943,000
Master Plan	$350,000
Total	**$5,208,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Primary Runway Length from 3,500’ to 5,000’	$6,566,000
Total	**$6,566,000**

6.4.21 Lee Airport (ANP)

AIRPORT LOCATION AND FACILITIES

Lee airport (ANP) is located 5 miles southwest of Annapolis in Anne Arundel County. Runway 12/30 is ANP's primary runway. The airport has Low-Intensity Runway Lighting (LIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	2,500 ft
Primary Runway Width	50 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas



ANP Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

ANP is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	General
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the ANP, the based aircrafts will stay the same between 2019 and 2039 with 72 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 11,646. ANP may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	70	70
Multi-Engine	2	2
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**72**	**72**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**11,646**	**11,646**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends ANP to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support ANP objectives.

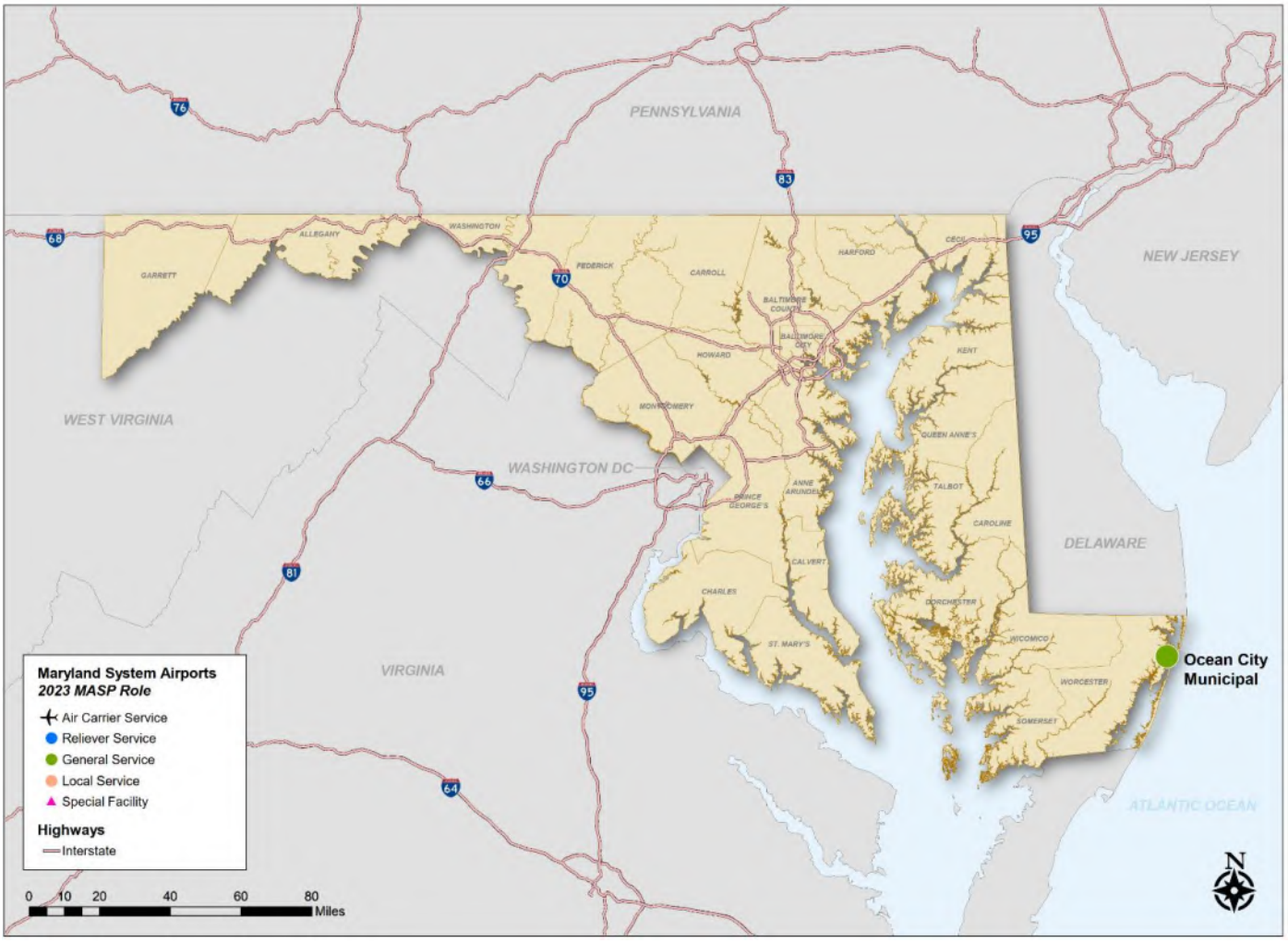
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$59,257,000
Runway Lighting Type to MIRL	$562,000
GA/FBO Terminal	$8,077,000
REILs to Runway 12/30	$267,000
24-Hour Fueling	$200,000
Snow Removal	$360,000
Master Plan	$350,000
ALP	$175,000
Total	**$69,248,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Primary Runway Length from 3,500’ to 5,000’	$6,566,000
Total	**$6,566,000**

6.4.22 Ocean City Municipal Airport (OXB)

AIRPORT LOCATION AND FACILITIES

Ocean City Municipal Airport (OXB) is located 2 miles southwest of Ocean City in Worcester County. Runway 14/32 is OXB's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a partial parallel taxiway. There is 1 additional runway at OXB. There is 1 additional runway at OXB, Runway 02/20.

Existing Airport Facilities	
Primary Runway Length	4,074 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Partial Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



OXB Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

OXB is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the OXB, the based aircrafts will stay the same between 2019 and 2039 with 63 aircraft. The projected operations for general aviation aircraft are expected to increase from 38,306 in 2019 to 57,223 in 2039. OXB may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	53	53
Multi-Engine	7	7
Jet	0	0
Helicopter	3	3
Other	0	0
Total	**63**	**63**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**38,306**	**57,223**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2012
Latest Airport Layout Plan	2020*

Notes: (*) for Airport Layout Plan indicates the date of the latest Pen & Ink Change is listed.

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends OXB to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support OXB objectives.

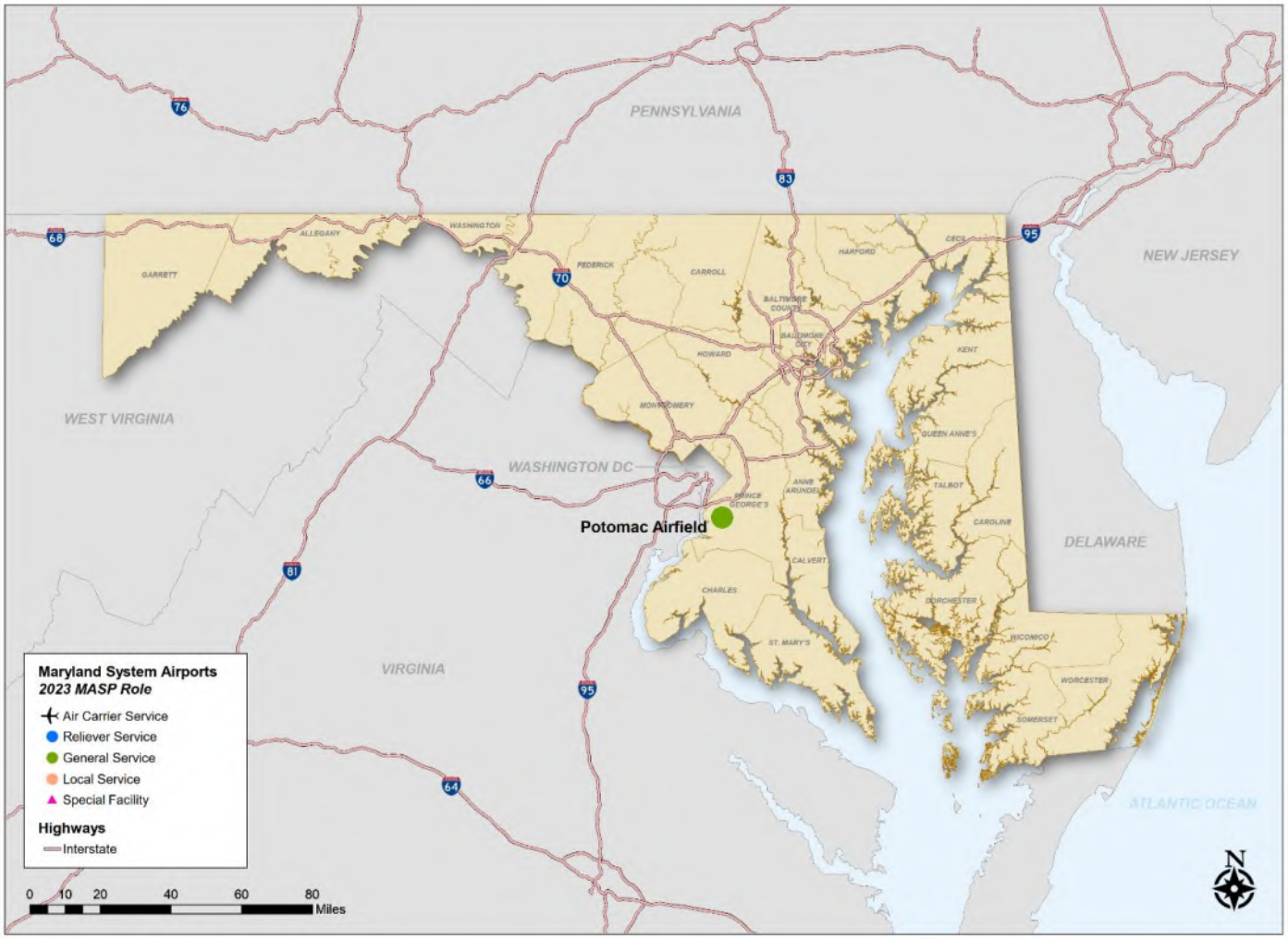
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
REILs to Runway 14/32	$273,000
Total	**$273,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.23 Potomac Airfield (VKX)

AIRPORT LOCATION AND FACILITIES

Potomac Airfield (VKX) is located 9 miles east of Friendly in Prince George's County. Runway 06/24 is VKX's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	2,665 ft
Primary Runway Width	40 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas



VKX Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

VKX is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	General
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the VKX, the based aircrafts will stay the same between 2019 and 2039 with 94 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 12,029. VKX may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	91	91
Multi-Engine	3	3
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**94**	**94**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**12,029**	**12,029**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends VKX to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support VKX objectives.

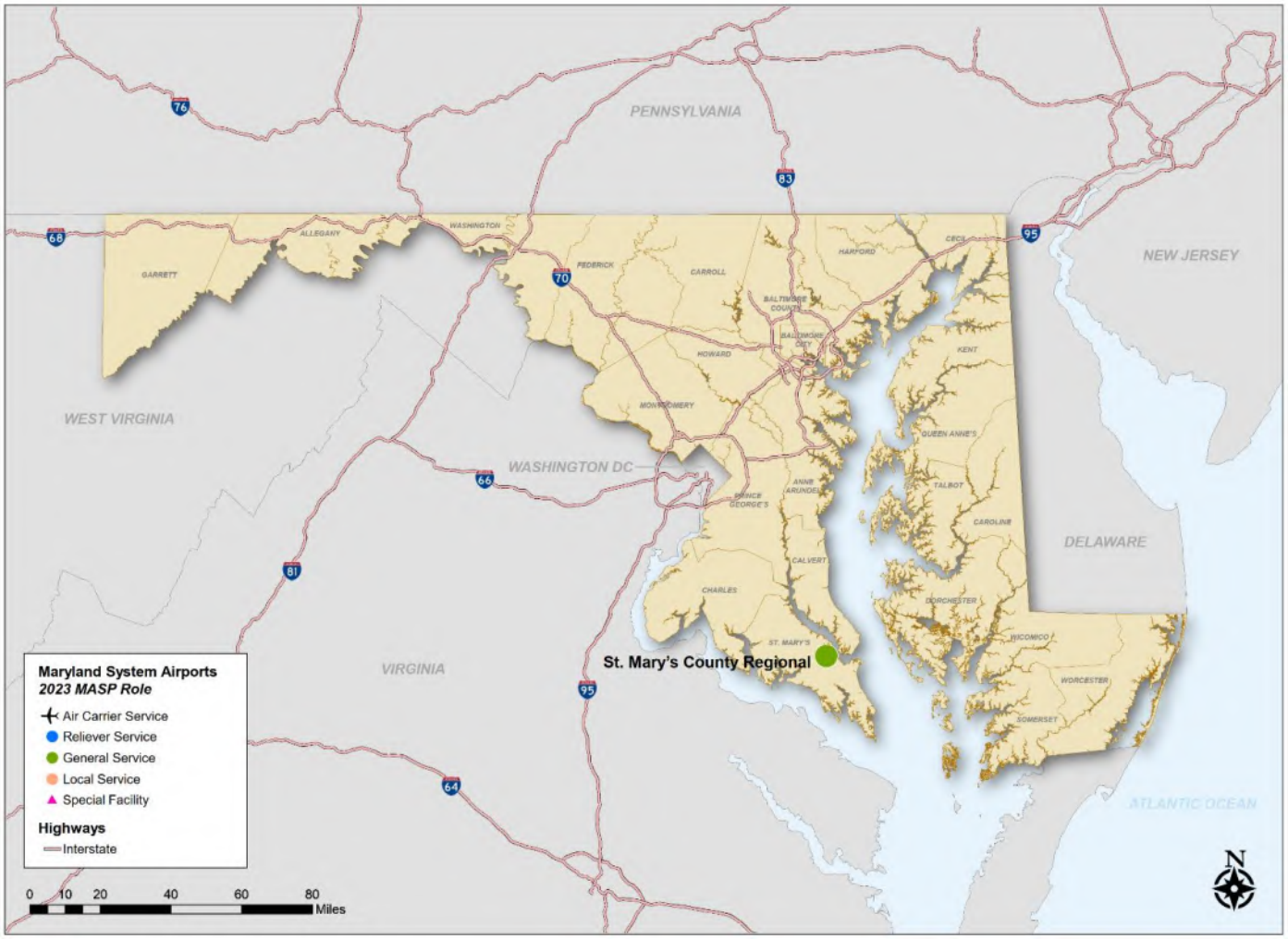
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$4,326,000
ARC to B-I	$8,702,000
Airport Property Fence	$536,000
Snow Removal	$360,000
REILs to Runway 6/24	$264,000
24-Hour Fueling	$200,000
Master Plan	$350,000
ALP	$175,000
Total	**$14,913,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.24 St. Mary's County Regional Airport (2W6)

AIRPORT LOCATION AND FACILITIES

St. Mary's County Regional Airport (2W6) is located 4 miles northeast of Leonardtown in St. Mary's County. Runway 11/29 is 2W6's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	4,150 ft
Primary Runway Width	75 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas/Jet A



2W6 Location Map

Source: AECOM 2022

AIRPORT OWNERSHIP AND ROLE

2W6 is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a General facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a General Aviation Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	General
FAA/NPIAS Role	General Aviation

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 2W6, the based aircrafts will increase from 186 in 2019 to 236 in 2039. The projected operations for general aviation aircraft are expected to increase from 32,650 in 2019 to 41,490 in 2039. 2W6 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	160	203
Multi-Engine	11	14
Jet	3	4
Helicopter	5	6
Other	7	9
Total	**186**	**236**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**32,650**	**41,490**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	2002
Latest Airport Layout Plan	2012

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 2W6 to perform the following projects to meet its General facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 2W6 objectives.

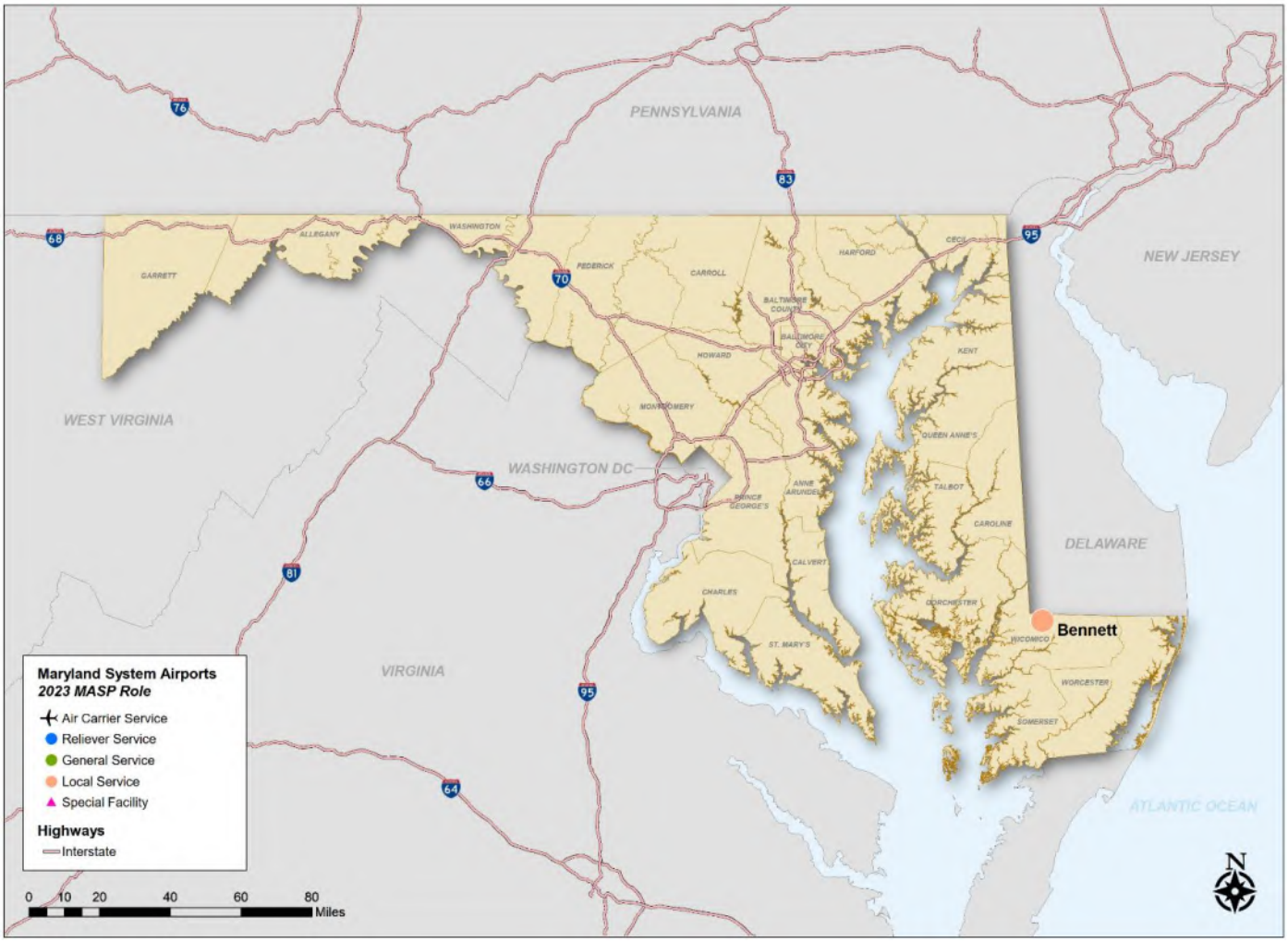
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 5,000’	$16,222,229
ARC to C-II	No cost available
Master Plan	$350,000
Total	**$16,572,229**
To Meet Coverage Objectives	
Project	**Project Cost**
Runway Lighting Type to HIRL	$846,000
Approach Capability to Precision Approach	$6,296,000
Total	**$7,142,000**

6.4.25 Bennett Airport (1N5)

AIRPORT LOCATION AND FACILITIES

Bennett Airport (1N5) is located 4 miles northwest of Salisbury in Wicomico County. Runway 17/35 is 1N5's primary runway. The airport has Low-Intensity Runway Lighting (LIRL) and a turnaround taxiway. There is 1 additional runway at 1N5, Runway 08/26.

Existing Airport Facilities	
Primary Runway Length	3,171 ft
Primary Runway Width	95 ft
Primary Runway Surface	Turf
Taxiway Type	Turnaround
Approach Type	Visual
Fuel Type(s)	None



1N5 Location Map

Source: AECOM 2022

AIRPORT OWNERSHIP AND ROLE

1N5 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 1N5, the based aircrafts will stay the same between 2019 and 2039 with 8 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 2,137. 1N5 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	5	5
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	3	3
Total	**8**	**8**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**2,137**	**2,137**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 1N5 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 1N5 objectives.

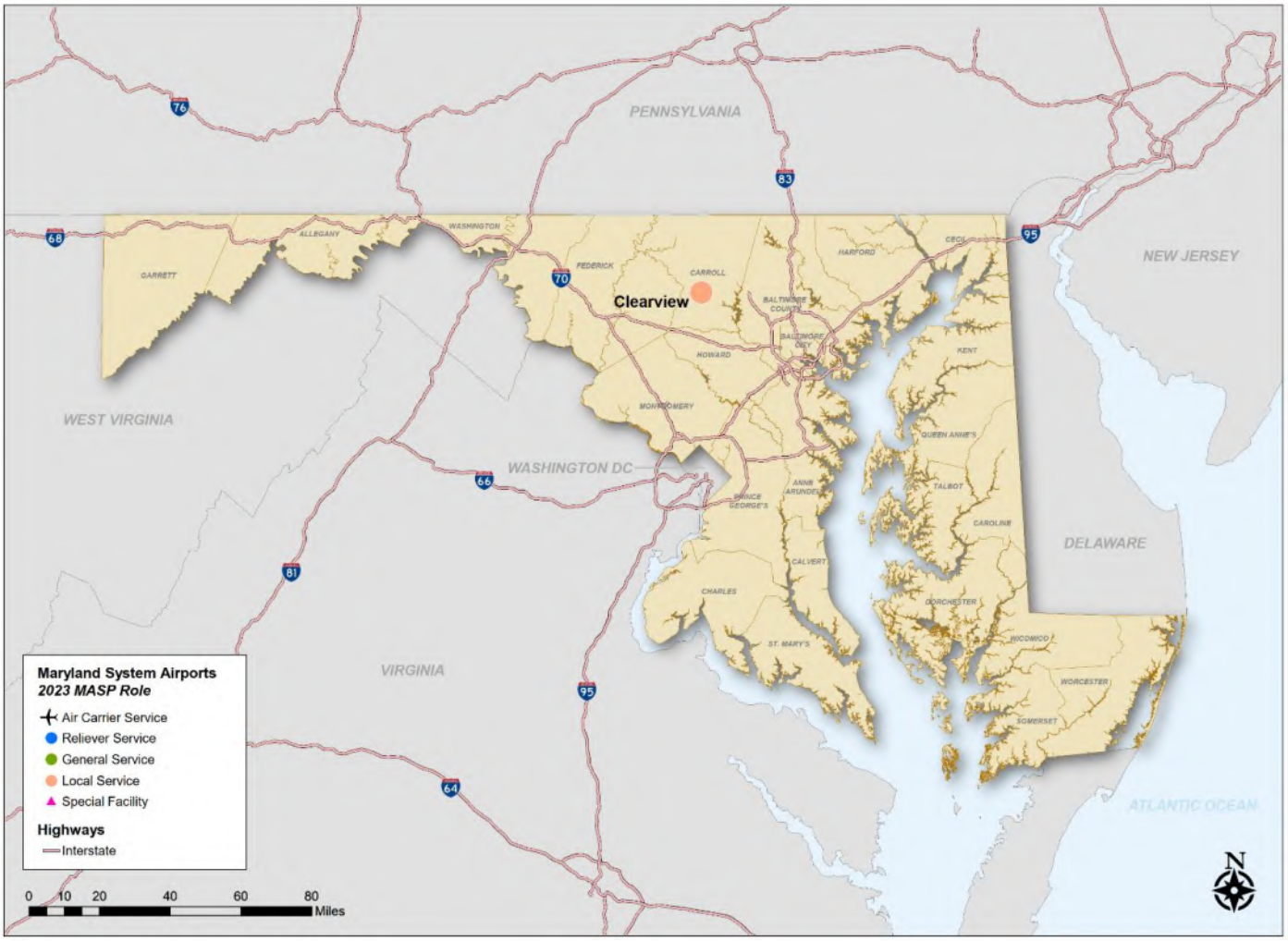
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
AvGas	$368,000
Airport Property Fence	$769,000
24-Hour Fueling	$200,000
REILs to Runway 17/35	$301,000
Hangar Space	$181,800
Master Plan	$300,000
ALP	$175,000
Total	**$2,294,800**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.26 Clearview Airport (2W2)

AIRPORT LOCATION AND FACILITIES

Clearview Airport (2W2) is located 7 miles south of Westminster in Carroll County. Runway 14/32 is 2W2's primary runway. The airport has non standard Low-Intensity Runway Lighting (LIRL) and a partial parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	1,840 ft
Primary Runway Width	30 ft
Primary Runway Surface	Asphalt
Taxiway Type	Partial Parallel
Approach Type	Non-Precision
Fuel Type(s)	AvGas



2W2 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

2W2 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Authority (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 2W2, the based aircrafts will stay the same between 2019 and 2039 with 28 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 8,050. 2W2 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	28	28
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**28**	**28**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**8,050**	**8,050**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 2W2 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 2W2 objectives.

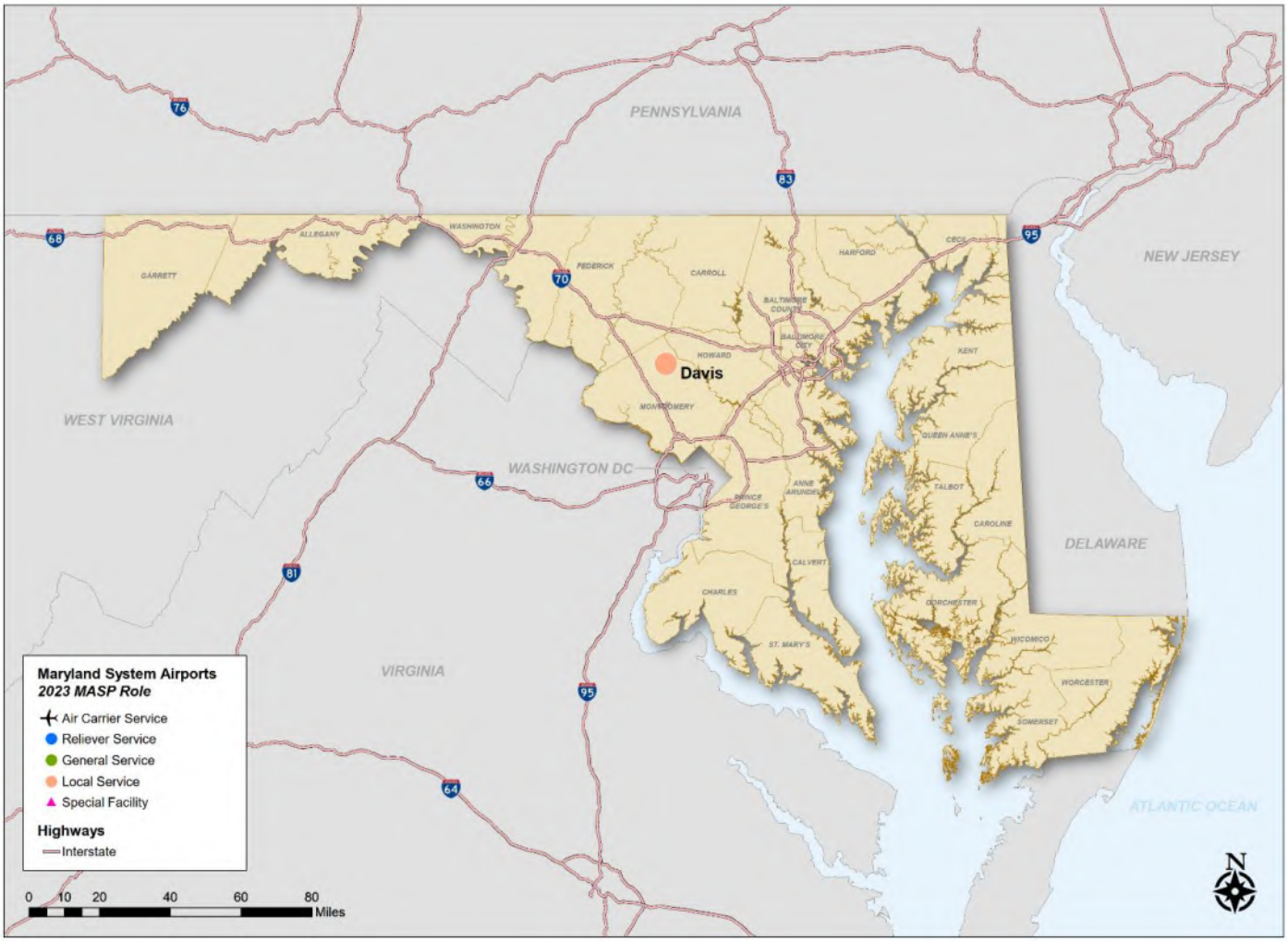
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Primary Runway Length to 3,500’	$854,000
Make LIRL Runway Lighting Type Standard	$456,000
Airport Property Fence	$408,000
Master Plan	$300,000
ALP	$175,000
Total	**$2,193,000**
To Meet Coverage Objectives	
Project	**Project Cost**
Runway Lighting Type to HIRL	$846,000
Total	**$846,000**

6.4.27 Davis Airport (W50)

AIRPORT LOCATION AND FACILITIES

Davis Airport (W50) is located 3 miles north of Laytonsville in Montgomery County. Runway 08/26 is W50's primary runway. The airport has no runway lighting and a full parallel taxiway.

Existing Airport Facilities	
Primary Runway Length	2,000 ft
Primary Runway Width	50 ft
Primary Runway Surface	Asphalt
Taxiway Type	Full Parallel
Approach Type	Visual
Fuel Type(s)	AvGas



W50 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

W50 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the W50, the based aircrafts will stay the same between 2019 and 2039 with 22 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 5,100. W50 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	22	22
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**22**	**22**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**5,100**	**5,100**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	Before 2017

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends W50 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support W50 objectives.

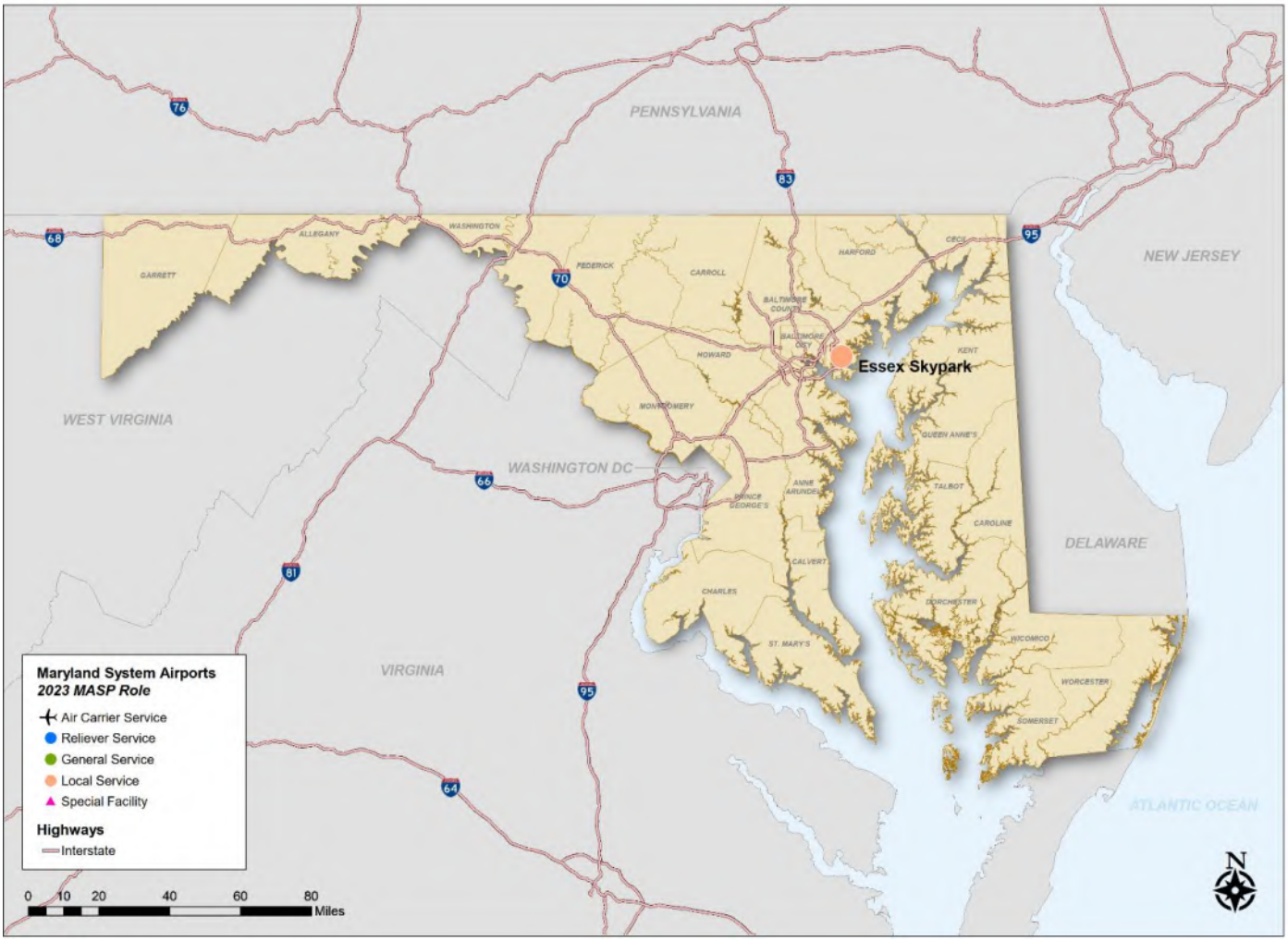
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Runway Lighting Type to LIRL	$110,000
Rotating Beacon	$1,434,000
Lighting to Wind Cone	$80,000
REILs to Runway 8/26	$267,000
VGSI to Runway 8/26	$415,000
Airport Property Fence	$380,000
Master Plan	$300,000
Total	**$2,986,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.28 Essex Skypark (W48)

AIRPORT LOCATION AND FACILITIES

Essex Skypark (W48) is located 3 miles southeast of Baltimore in Baltimore County. Runway 16/34 is W48's primary runway. The airport has Medium-Intensity Runway Lighting (MIRL) and a turnaround taxiway. There is 1 additional runway at W48, Runway 16W/34W.

Existing Airport Facilities	
Primary Runway Length	2,084 ft
Primary Runway Width	30 ft
Primary Runway Surface	Asphalt
Taxiway Type	Turnaround
Approach Type	Visual
Fuel Type(s)	None



W48 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

W48 is a publicly owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Public
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the W48, the based aircrafts will stay the same between 2019 and 2039 with 34 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 5,592. W48 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	30	30
Multi-Engine	2	2
Jet	0	0
Helicopter	1	1
Other	1	1
Total	**34**	**34**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**5,592**	**5,592**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends W48 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support W48 objectives.

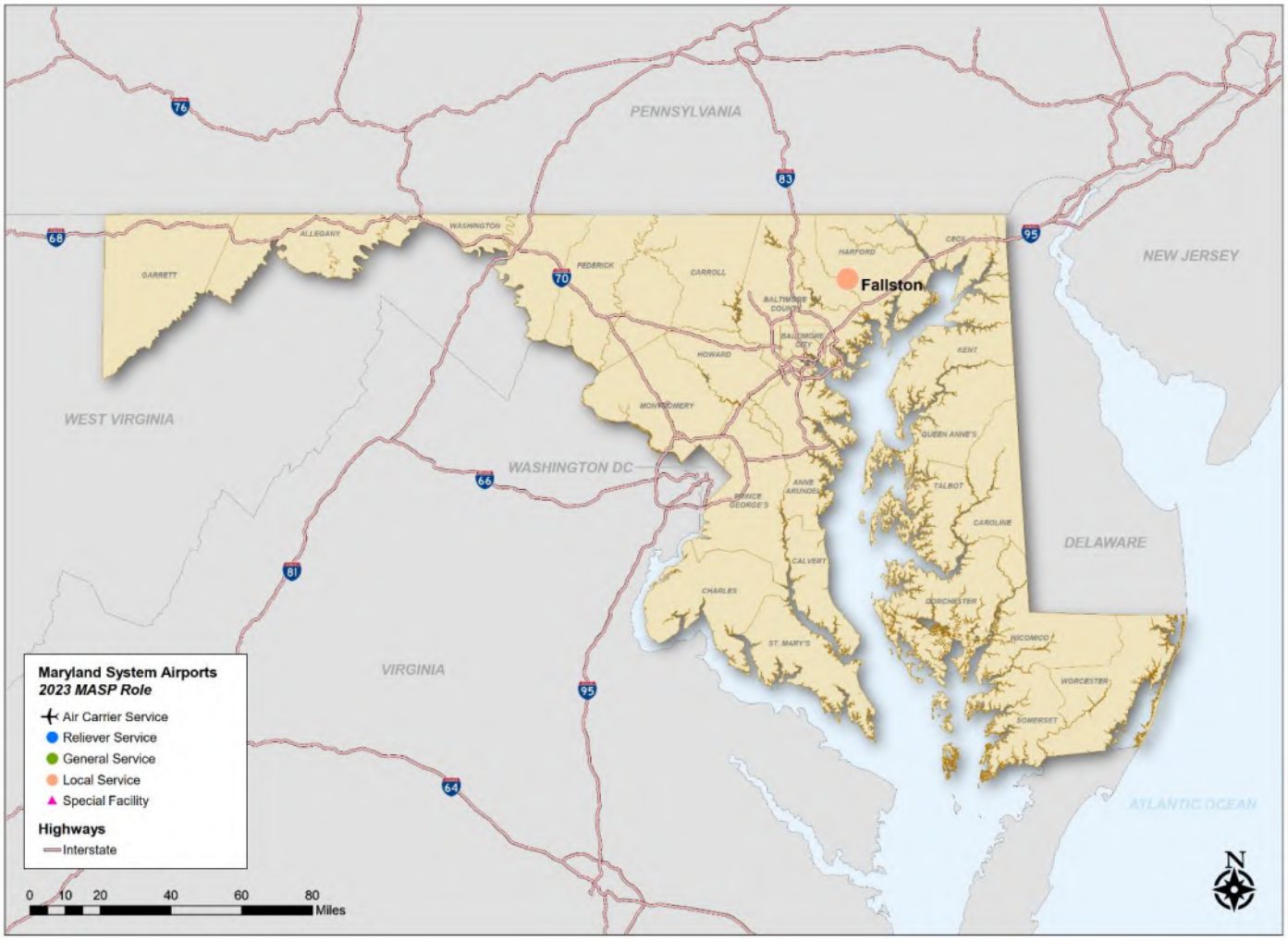
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
AvGas	$359,000
Airport Property Fence	$435,000
24-Hour Fueling	$200,000
Master Plan	$300,000
ALP	$175,000
Total	$1,469,000
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.29 Fallston Airport (W42)

AIRPORT LOCATION AND FACILITIES

Fallston Airport (W42) is located 1 mile south of Fallston in Hartford County. Runway 04/22 is W42's primary runway. The airport has no runway lighting and a turnaround taxiway.

Existing Airport Facilities	
Primary Runway Length	2,200 ft
Primary Runway Width	50 ft
Primary Runway Surface	Asphalt
Taxiway Type	Turnaround
Approach Type	Visual
Fuel Type(s)	AvGas



W42 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

W42 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the W42, the based aircrafts will stay the same between 2019 and 2039 with 20 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 5,957. W42 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	20	20
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**20**	**20**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**5,957**	**5,957**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends W42 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support W42 objectives.

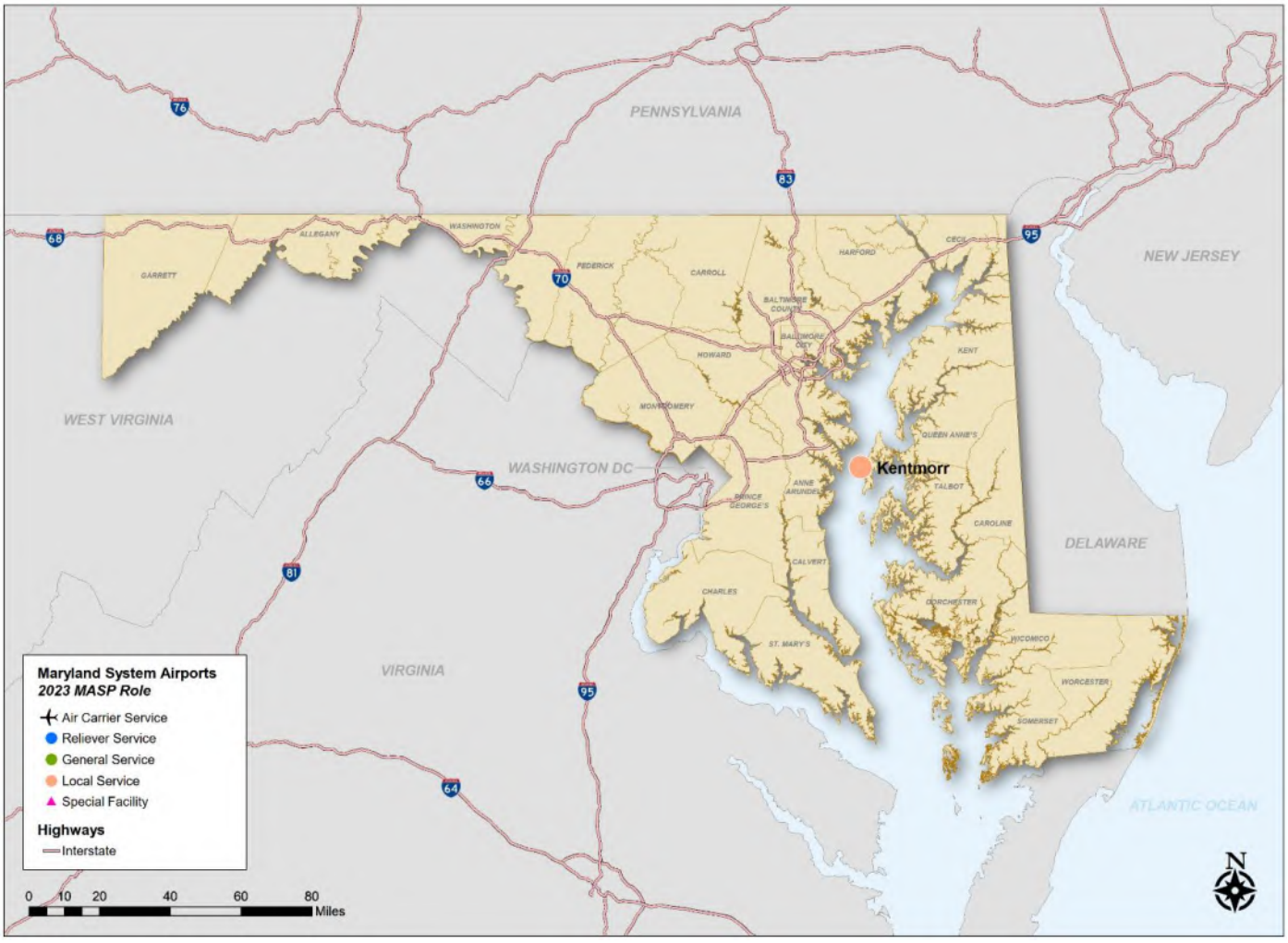
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Runway Lighting Type to LIRL	$500,000
Rotating Beacon	$1,434,000
Lighted Wind Cone	$72,000
REILs to Runway 22 End	$177,000
VGSI to Runway 4/22	$436,000
Master Plan	$300,000
ALP	$175,000
Total	**$3,094,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.30 Kentmorr Airpark (3W3)

AIRPORT LOCATION AND FACILITIES

Kentmorr Airport (3W3) is located 5 miles southwest of Stevensville in Queen Anne's County. Runway 10/28 is 3W3's primary runway. The airport has no runway lighting and a turnaround taxiway.

Existing Airport Facilities	
Primary Runway Length	2,400 ft
Primary Runway Width	75 ft
Primary Runway Surface	Turf
Taxiway Type	Full Parallel
Approach Type	Visual
Fuel Type(s)	None



3W3 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

3W3 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Authority (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 3W3, the based aircrafts will stay the same between 2019 and 2039 with 0 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 1,010. 3W3 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	0	0
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**0**	**0**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**1,010**	**1,010**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 3W3 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 3W3 objectives.

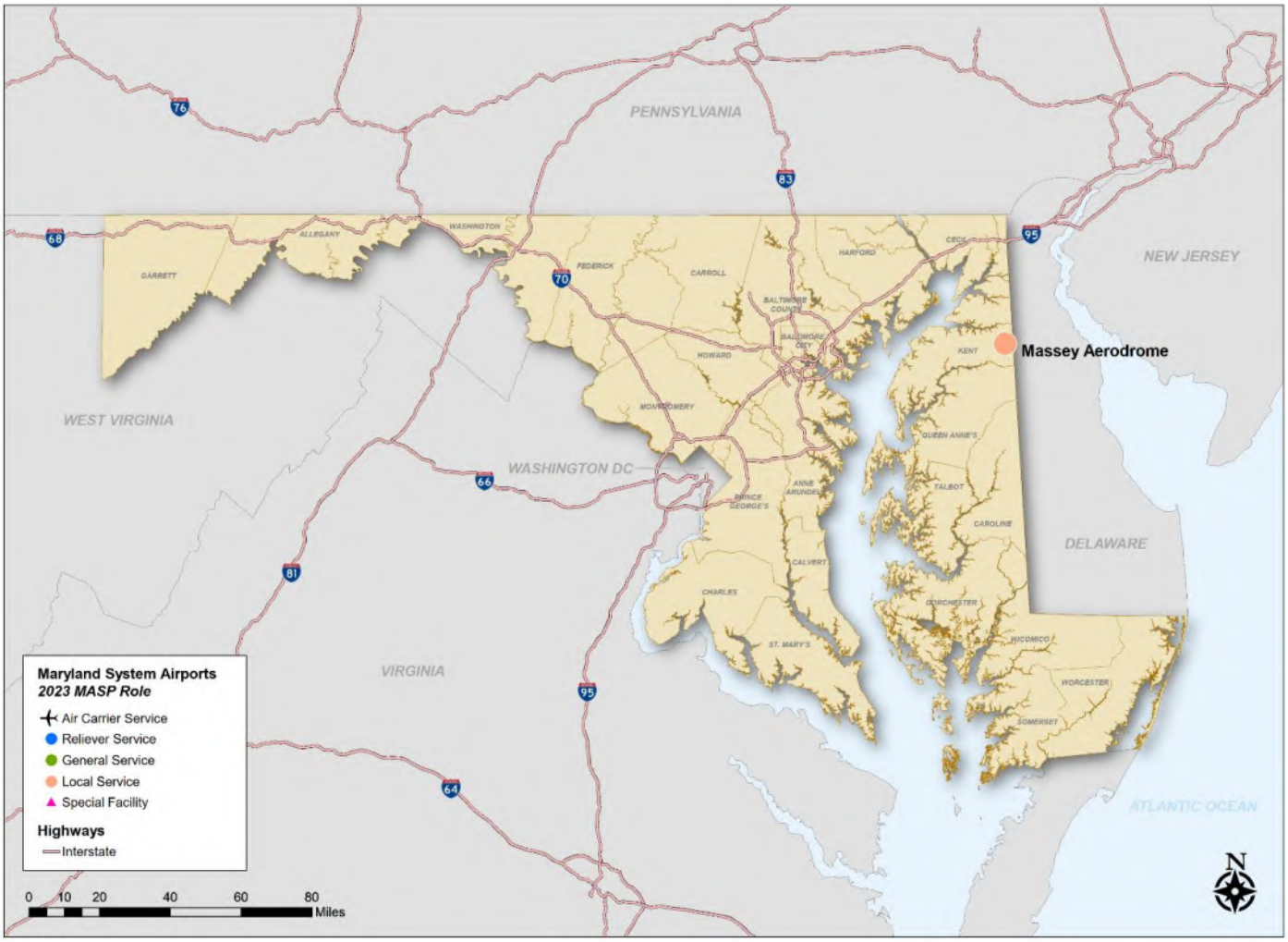
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
VGSI to Runway 10/28	$424,000
AvGas	$366,000
Airport Property Fence	$349,000
REILs to Runway 10/28	$273,000
24-Hour Fueling	$200,000
Hangar Space	$177,300
Master Plan	$300,000
ALP	$175,000
Total	**$2,264,300**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.31 Massey Aerodrome (MD1)

AIRPORT LOCATION AND FACILITIES

Massey Aerodrome (MD1) is located 2 miles east of Massey in Kent County. Runway 02/20 is MD1's primary runway. The airport has no runway lighting and a turnaround taxiway.

Existing Airport Facilities	
Primary Runway Length	3,000 ft
Primary Runway Width	100 ft
Primary Runway Surface	Turf
Taxiway Type	Turnaround
Approach Type	Visual
Fuel Type(s)	None



MD1 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

MD1 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the MD1, the based aircrafts will stay the same between 2019 and 2039 with 35 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 5,150. MD1 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	24	24
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	11	11
Total	**35**	**35**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**5,150**	**5,150**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends MD1 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support MD1 objectives.

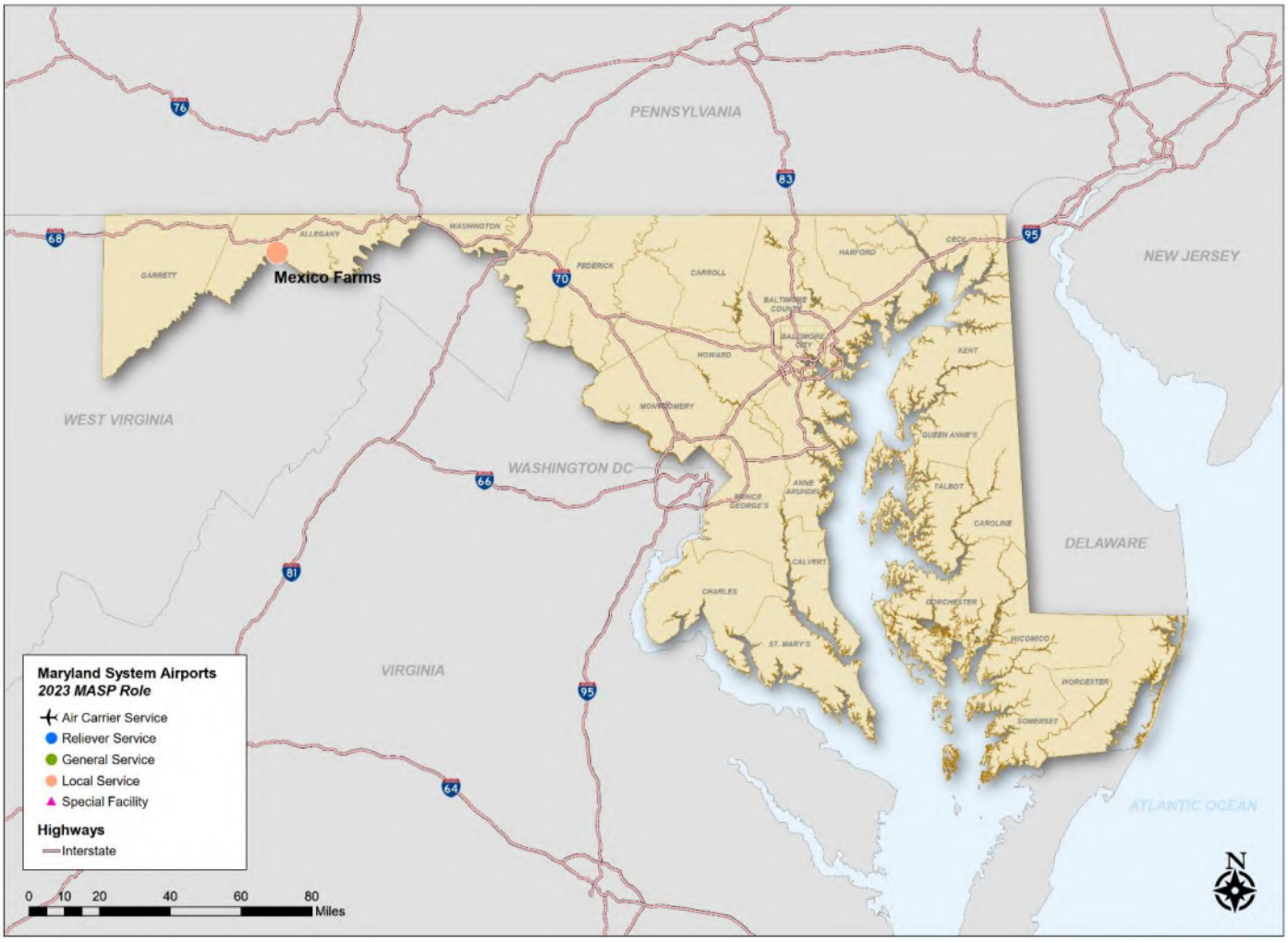
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
Lighting to Wind Cone	$73,000
VGSI to Runway 2/20	$403,000
AvGas	$363,000
Airport Property Fence	$697,000
REILs to Runway 2/20	$279,000
24-Hour Fueling	$200,000
Master Plan	$300,000
ALP	$175,000
Total	**$2,490,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.32 Mexico Farms Airport (1W3)

AIRPORT LOCATION AND FACILITIES

Mexico Farms Airport (1W3) is located 3 miles south of Cumberland in Allegany County. Runway 09/27 is 1W3's primary runway. The airport has no runway lighting and no taxiway.

Existing Airport Facilities	
Primary Runway Length	2,120 ft
Primary Runway Width	190 ft
Primary Runway Surface	Turf
Taxiway Type	None
Approach Type	Visual
Fuel Type(s)	None



1W3 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

1W3 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Local facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Local
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 1W3, the based aircrafts will stay the same between 2019 and 2039 with 14 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 1,261. 1W3 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	8	8
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	6	6
Total	14	14
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**1,261**	**1,261**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP recommends 1W3 to perform the following projects to meet its Local facility, service, and equipment objectives. Additional projects, however, may be listed within the five-year capital improvement program in order to support 1W3 objectives.

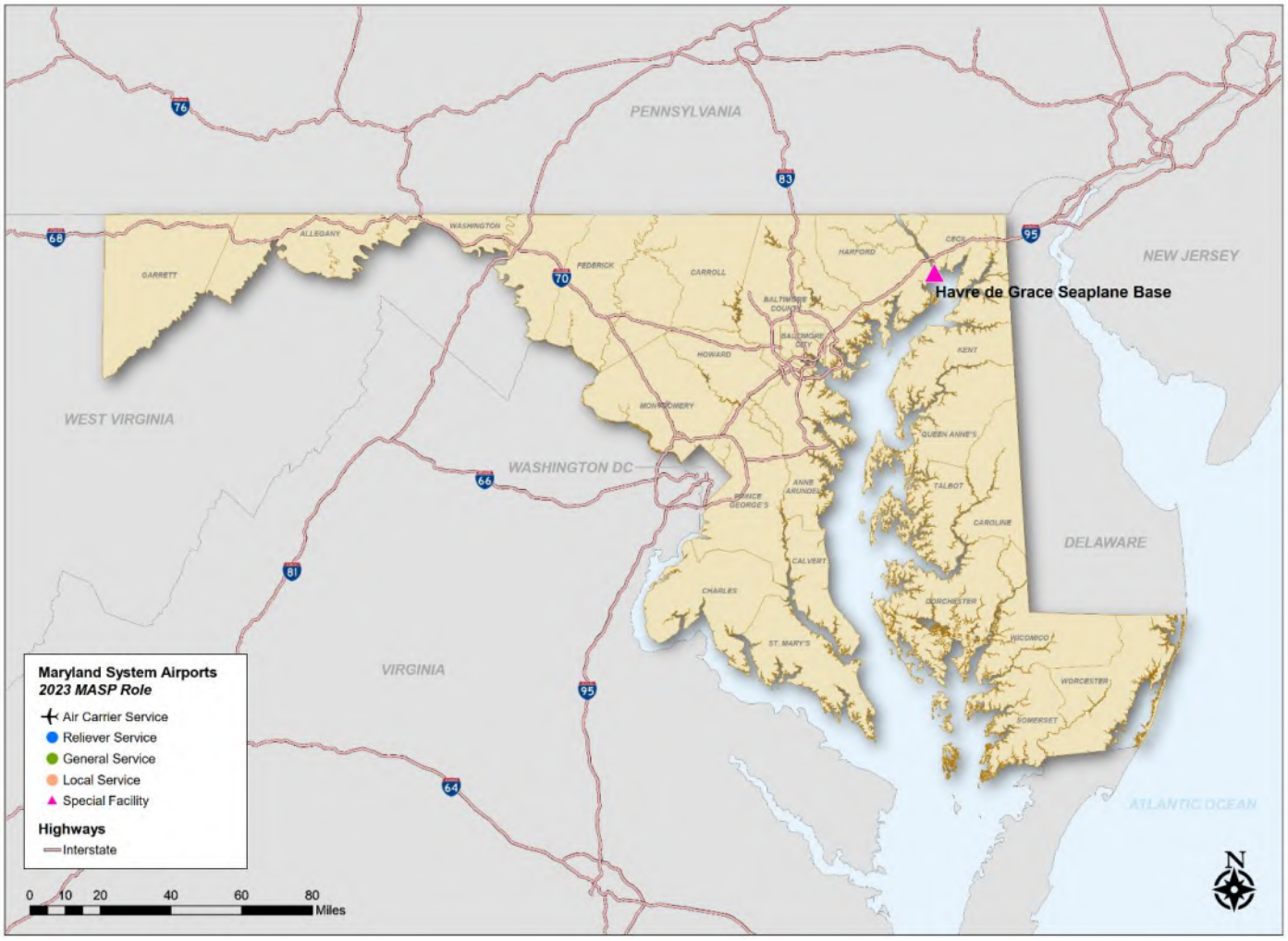
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
AvGas	$366,000
Airport Property Fence	$664,000
Turnaround Taxiway	$414,000
24-Hour Fueling	$200,000
REILs to Runway 9/27	$300,000
VGSI to Runway 9/27	$376,000
Master Plan	$300,000
ALP	$175,000
Total	**$2,795,000**
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.33 Havre de Grace Seaplane Base (M06)

AIRPORT LOCATION AND FACILITIES

Havre de Grace Seaplane Base (M06) is located 1 mile east of Havre de Grace in Harford County. Runway E/W is M06's primary runway. The airport has no runway lighting and no taxiway.

Existing Airport Facilities	
Primary Runway Length	8,000 ft
Primary Runway Width	200 ft
Primary Runway Surface	Water
Taxiway Type	None
Approach Type	Visual
Fuel Type(s)	None



M06 Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

M06 is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Special facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Special
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the M06, the based aircrafts will stay the same between 2019 and 2039 with 0 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 30. M06 may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	0	0
Multi-Engine	0	0
Jet	0	0
Helicopter	0	0
Other	0	0
Total	**0**	**0**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**30**	**30**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP does not identify any projects for M06. Due to the unique nature of Special Facilities in the Maryland airport system, the facility objectives that apply to the other service roles do not apply to the Special Facilities. It is recommended that 4MD preserve its existing conditions.

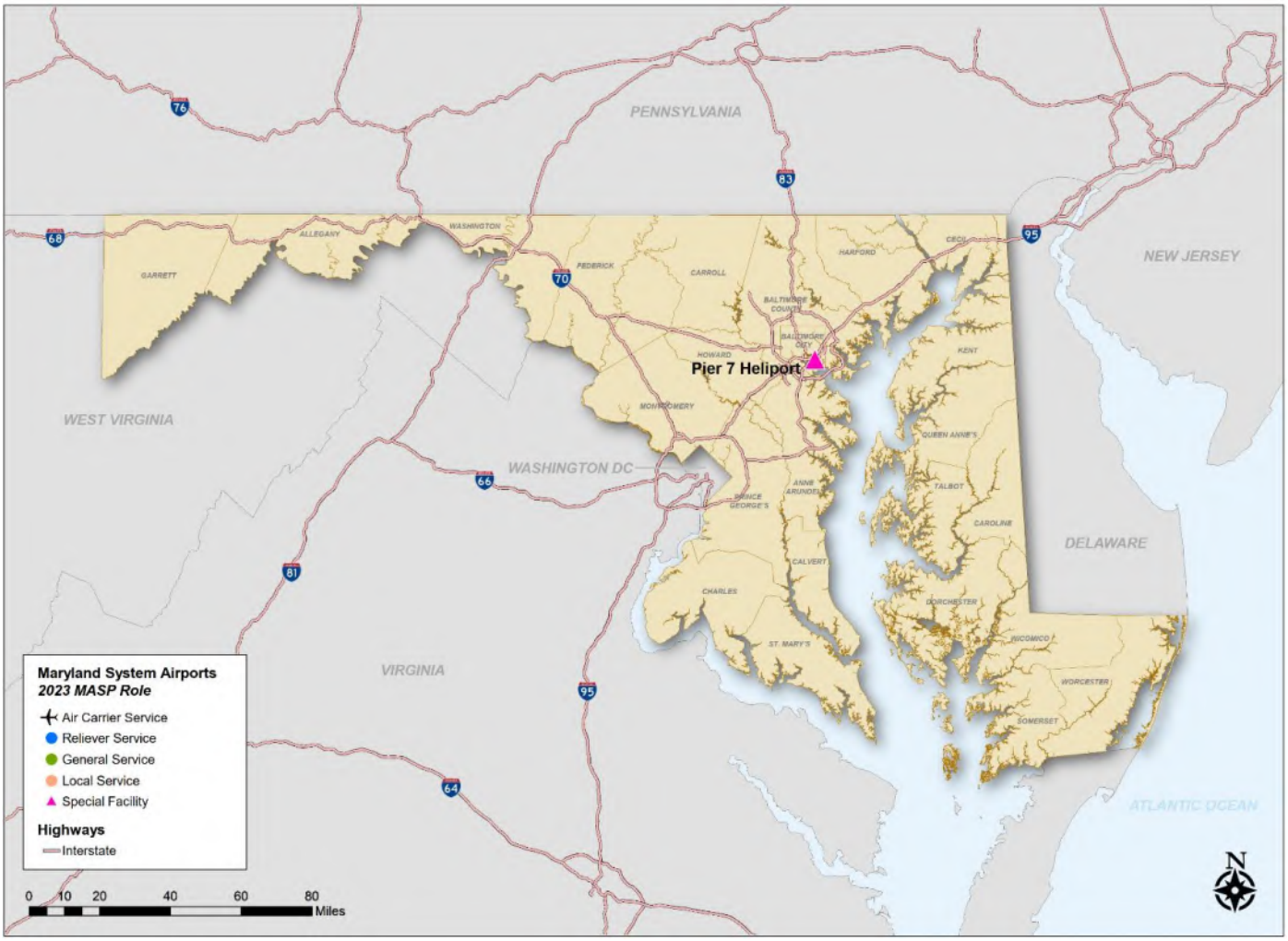
Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
No Projects	–
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

6.4.34 Pier 7 Heliport (4MD)

AIRPORT LOCATION AND FACILITIES

Pier 7 Heliport (4MD) is located 4 miles northeast of Baltimore in Baltimore City County. Runway H1/H1 is 4MD's primary runway. The airport has perimeter lighting and no taxiway.

Existing Airport Facilities	
Primary Runway Length	50 ft
Primary Runway Width	50 ft
Primary Runway Surface	Concrete
Taxiway Type	None
Approach Type	Visual
Fuel Type(s)	Jet A



4MD Location Map **Source:** AECOM 2022

AIRPORT OWNERSHIP AND ROLE

4MD is a privately owned airport. Based on the level of service and type of activity, the recommended role of the airport is categorized as a Special facility. Both the Federal Aviation Administration (FAA) and the National Plan of Integrated Airport Systems (NPIAS) classify the airport as a Non-NPIAS Airport.

Airport Ownership and Role	
Airport Ownership	Private
Recommended MASP Role	Special
FAA/NPIAS Role	Non-NPIAS

CURRENT AND FORECAST ACTIVITY

Based on the estimated forecasts for the 4MD, the based aircrafts will stay the same between 2019 and 2039 with 4 aircraft. The projected operations for general aviation aircraft are expected to stay the same between 2019 and 2039 at 4,650. 4MD may add additional facilities based on increased aviation activity in the future.

Based Aircraft Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Single Engine	0	0
Multi-Engine	0	0
Jet	0	0
Helicopter	4	4
Other	0	0
Total	**4**	**4**
General Aviation Aircraft Operations Projections		
Based Aircraft Type	*Current (2019)*	*Future (2039)*
Total Operations	**4,650**	**4,650**

AIRPORT PLANNING

Airport planning studies enable airports to assess existing conditions, analyze future needs, and identify recommended development plans over a 20-year planning horizon. The newly suggested intervals for master plan and airport layout plans in this 2023 MASP Interim Update are intended as check-in dates to guide airports to undertake planning studies as needs arise at the airport.

Airport Planning Documents	
Latest Master Plan	None available
Latest Airport Layout Plan	None available

FACILITY OBJECTIVES

The facility recommendations table summarizes projects and coverage objectives to meet the system plan goals. The 2023 MASP does not identify any projects for 4MD. Due to the unique nature of Special Facilities in the Maryland airport system, the facility objectives that apply to the other service roles do not apply to the Special Facilities. It is recommended that 4MD preserve its existing conditions.

Facility Recommendations	
To Meet Role Objectives	
Project	**Project Cost**
No Projects	–
To Meet Coverage Objectives	
Project	**Project Cost**
No Projects	–

APPENDIX A

Sample Airport Questionnaire

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND AVIATION ADMINISTRATION

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Maryland Aviation System Plan – Interim Update 2020
Airport Survey Questionnaire

Survey Completed By	
Airport Name	
Airport Representative	
Name	
Telephone	
Mobile Phone	
Email	

General Airport Information	
Airport Identifier	
Associated City	
Airport Ownership	
FAA NPIAS Role	
MDOT MAA Role	

Primary Runway Information			
Runway Designation	/	Airport Reference Code	
Usable Runway Length (ft.)		Parallel Taxiway Separation (ft.) *If no full/partial parallel taxiway available, set to 0*	
Runway Width (ft.)		Taxiway System	
Runway Surface Type	-	Runway Lighting, Standard?	
Approach Capability			
Best Approach Type	/		
Instrument Approach Minimums *Ceiling in feet and visibility in SM or RVR*	- / -		
Runway End Identifier Lights	/		
Runway Markings, Standard?	/		
Visual Glide Slope Indicator (VGSI)	/		
Approach Lighting System	/		

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Maryland Aviation System Plan – Interim Update 2020
Airport Survey Questionnaire

Airside Facility Information			
Weather Reporting System		Rotating Beacon	
Air Traffic Control Tower		Segmented Circle	
Air Traffic Control Communications		Wind Indicator, Lighted?	

Airport Fueling Systems	
AvGas (100LL)	
Jet A	
Self-Serve Fueling	

Hangars and Tie-Downs	
T-Hangars (# spaces)	
Conventional Hangars (# buildings)	
Paved Tie-Downs (# spaces)	
Grass Tie-Downs (# spaces)	

Terminal and Airport Services			
GA Terminal/Admin Building/FBO with Terminal		Covered Overnight Secure Aircraft Storage	
Air Taxi/Charter		Oxygen	
Scheduled Air Service		Deicing	
U.S. Customs		Snow Removal	
Crop Dusting		Aircraft Rental	
Aircraft Repair		Flight Instruction	
Avionics Repair		Car Rental	
Avionics Sales		Courtesy Car/Loaner Car	
Aircraft Sales			

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Maryland Aviation System Plan – Interim Update 2020
Airport Survey Questionnaire

Total Current Based Aircraft	
Single-Engine Piston (#)	
Multi-Engine Piston (#)	
Jet (#)	
Helicopters (#)	
Gliders (#)	
Military (#)	
Other (#) **Ultra-light, UAS, Gyrocopters, etc.**	
Total Based Aircraft (#)	0

Total Operations and Enplanements (2019)	
Air Carrier (#)	
Air Taxi/Commuter (#)	
Itinerant General Aviation (#)	
Local General Aviation (#)	
Military (#)	
Total Operations (#)	0
Enplanements (#)	

Security Systems	
Airport Property Security Fence	
Airport Perimeter Monitoring System	

Additional Notes

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APPENDIX B

Data Sources for Environmental and Manmade Features Analysis

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The majority of the environmental and manmade features Analysis in **Chapter 6: Recommended Plan** was prepared using data from Maryland's GIS data catalog, MD iMAP. When other sources are utilized, it is noted with an asterisk (*). In many cases, more than one set of data was used for each feature. Below outlines the full list of data sources used for the analysis.

Biological Resources

- Fish:
  - Spot Weakfish Croaker Juvenile Habitat (2014)
  - White Perch – Juvenile (2014)
  - White Perch – Spawning (2014)
  - Yellow Perch (2014)
  - Striped Bass Spawning (2014)
  - Herring – Juvenile (2014)
  - Grazers Habitat (2014)
  - Tidal Finfish Habitat (2014)
  - Artificial Reef (2017)
  - Fish Blockage Locations (2010)
- Wildlife:
  - Sensitive Species Project Review Areas (2010)
  - Natural Heritage Areas (2010)
  - Targeted Ecological Areas (2011)
  - Terrapin Habitat (2012)
  - Waterfowl Areas (2010)
  - Coastal Bay Shorebirds (2000)
  - Horseshoe Crab Habitat (2000)
- Forests:
  - Forest Interior Dwelling Species (2014)
  - Forest Easements (2013)

Coastal Resources

- Coastal Zone County:
  - Critical Area Counties (2021)
  - Critical Area Towns (2018)

Historical, Architectural, Archaeological, Cultural

- Historical:
  - National Register of Historical Places (2018)
  - Maryland Inventory of Historic Properties (2018)
- Architectural, Archaeological, and Cultural*[1]:
  - Determination of Eligibility Short Forms
  - Pending Submittal Maryland Inventory of Historic Properties

Water Resources

- Wetlands:
  - Wetlands of Special State Concern (2017)
  - National Wetlands Inventory Palustrine Wetlands (1992)
- Floodplain:
  - Preliminary Floodplain (2017)
  - Effective Floodplain (2017)

[1] Desktop review was performed due to lack of publicly available data.

- Streams:
    - Water Quality Tier II Streams (2016)

Roads/Railroads

- Roads:
    - Maryland Roads (2018)
- Railroads*:
    - Homeland Infrastructure Foundation-Level Data (HIFLD) Rail Network (2019)

Land Use Protection

- Presence and Type*:
    - Maryland Department of Transportation – Maryland Aviation Administration, Office of Regional Aviation Assistance (2021)

Protected Lands

- Private Conservation Lands (2014)
- Rural Legacy Properties (2018)
- Agricultural Land Preservation Foundation Easements (2018)
- DNR-Owned Properties and Conservation Easements (2017)
- Local Protected Lands (2014)
- Protected Federal Lands (2018)
- Coastal and Estuarine Land Conservation Program (2014)
- Transfer and Purchase of Development Rights (2015)
- Chesapeake Bay National Estuarine Research Reserves (2013)

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