

**NAVAL AIR STATION
PATUXENT RIVER

AIR
OPERATIONS
MANUAL**



NASPAXRIVINST 3710.5Y

14 May 2021

**THIS MANUAL SUPERSEDES NASPAXRIVINST
3710.5X DATED 31 AUG 2017**

TRAPNELL FIELD

WEBSTER OLF



DEPARTMENT OF THE NAVY
NAVAL AIR STATION
22268 CEDAR POINT ROAD
PATUXENT RIVER, MD 20670-1154

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NASPAXRIV INSTRUCTION 3710.5Y

From: Commanding Officer, Naval Air Station Patuxent River

Subj: NAVAL AIR STATION PATUXENT RIVER AIR OPERATIONS MANUAL

Ref: (a) Appendix A

1. Purpose. To issue the Naval Air Station (NAS) Patuxent River Air Operations Manual (AOM) which provides rules and regulations for the performance of flight operations at NAS Patuxent River, Maryland, Webster Outlying Field (WOLF), and within all assigned airspace.
2. Cancellation. NASPAXRIVINST 3710.5X and addendums.
3. Background. Rules and Regulations prescribed in the AOM are derived from and supplemented by reference (a).
4. Action. Compliance with this manual is mandatory for all pilots based at or using the NAS Patuxent River, WOLF, and assigned airspace. This instruction has been rewritten in its entirety and should be reviewed as such.
5. Administration. The Air Operations Officer, NAS Patuxent River is responsible for the administration and enforcement of the provisions of this manual. Course rules may be modified immediately, subject to applicable regulations, when deemed necessary by the Commanding Officer, NAS Patuxent River.
6. Change proposals. Change recommendations should be submitted to Air Operations Officer as Urgent, Priority, or Routine. Urgent and Priority change recommendations are defined as Safety of Flight and Airport Safety Risks that need immediate attention. Routine changes will be incorporated during annual review.
7. Records Management
 - a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned per the records disposition schedules located on the Department of the Navy Directorate for Administration, Logistics, and Operations, Directives and Records Management Division portal page at <https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx>.

b. For questions concerning the management of records related to this instruction [notice, change transmittal] or the records disposition schedules, please contact the local records manager or the Department of the Navy Directorate for Administration, Logistics, and Operations, Directives and Records Management Division program office.

5. Review and Effective Date. Per OPNAVINST 5215.17A, the Air Operations Officer will review this instruction annually around the anniversary of its issuance date to ensure applicability, currency, and consistency with Federal, Department of Defense, Secretary of the Navy, and Navy policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will be in effect for 10 years, unless revised or cancelled in the interim, and will be reissued by the 10-year anniversary date if it is still required, unless it meets one of the exceptions in OPNAVINST 5215.17A, paragraph 9. Otherwise, if the instruction is no longer required, it will be processed for cancellation as soon as the need for cancellation is known following the guidance in OPNAV Manual 5215.1 of May 2016.


J. J. BRABAZON

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NASPAXRIVINST 3710.5Y
14 May 2021

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CHAPTER 1

GENERAL

1.1 GENERAL.

This instruction has been prepared per references contained in Appendix A. It shall not be construed as modifying or superseding directives issued by higher authority. Aviators and aircrews shall comply with this instruction and are expected to exercise their best judgment when encountering conditions not covered.

1.1.2 Airport.

1.1.2.1 Namesake.

NAS Patuxent River was christened Trapnell Field on 1 April 1976 in honor of VADM Frederick Mackay Trapnell, USN (1902-1975). VADM Trapnell was an early test coordinator and second commander, Naval Air Test Center. He was a pioneer test pilot whose calculated, daring, and prophetic vision served to advance the science of Naval Aviation test and evaluation. His insistence on formal test pilot training and a systematic approach to flight testing was instrumental in the founding of the U.S. Naval Test Pilot School and the emergence of the engineering test pilot.

1.1.2.2 LOCATION.

NAS Patuxent River is located 50 miles southeast of Washington, D.C., on the West Bank of the Patuxent River at its effluence into the Chesapeake Bay.

Airfield Coordinates

Point	Latitude	Longitude
NAS Patuxent River (Trapnell Field), MD	N 38° 17.30'	W 76° 24.59'
Patuxent River TACAN (NHK)	N 38° 16.86'	W 76° 24.64'
Patuxent River ILS (Glidepath)	N 38° 16.68'	W 076° 25.071'
Patuxent River ILS (Localizer)	N 38° 18.020'	W 076° 23.236'
Patuxent River NDB	N 38° 17.15'	W 76° 24.18'
Chesapeake Ranch Airpark, MD	N 38° 21.67'	W 76° 24.32'

Table 1-1

1.1.2.3 ELEVATION.

Field elevation is 39 feet above mean sea level (MSL).

1.1.2.4 MAGNETIC VARIATION.

Local variation is +11.06 degrees west with a 0.01 annual rate of change.

1.1.2.5 NAS PATUXENT RIVER CLASS 'D' AIRSPACE WITH CLASS 'E' EXTENSIONS.

1. Class D Patuxent River, MD.

a. That airspace extending upward from the surface to and including 2,500 feet MSL within a 4.5 nautical mile(NM) radius of NAS Patuxent River (Trapnell Field) and within a 0.5 NM radius of Chesapeake Ranch Airpark excluding that airspace within Restricted Area R-4005 and R-4007 when active.

b. This Class D airspace area is effective during the specific dates and times established in advance by a Notice to Airmen (NOTAM). The effective date and time will thereafter be continuously published in the Airport Facility Directory.

2. Class E Extensions NAS Patuxent River, MD.

a. That airspace extending upward from the surface within a 4.5 NM radius of NAS Patuxent River (Trapnell field) and within 1.8 NM each side of the NHK TACAN 045° radial extending from the 4.5 NM radius of NAS Patuxent River to 6.1 NM northeast of the TACAN; and within 1.8 NM north of and 2.0 NM south of the NHK TACAN 235° radial extending from the 4.5 NM radius to 6.6 NM southwest of the TACAN; and within 1.8 NM each side of the NHK TACAN 140° radial extending from the 4.5 NM radius to 10.5 NM southwest of the TACAN; and within a 0.5 NM radius of Chesapeake Ranch Airpark, excluding that airspace within Restricted Areas R-4005 and R-4007 when active.

b. This Class E airspace area is effective during those times when the Class D airspace is not in effect.

NOTE:

Although within the confines of R-4007, the NAS Patuxent River Class D airspace is not special use airspace unless R-4007 is specifically activated. Class D airspace ceases to exist with activation of R-4007.

Scheduled activation of R-4007 requires approval of the Air Traffic Control Facility Officer (ATCFO) 24 hours in advance, exclusive use or otherwise.

1.1.3 AIRFIELD FEATURES.

The following airfield features are depicted in Illustration 1.

1.1.3.1 RUNWAYS.

The airport landing area consists of two primary runways and one utility runway.

1. Runway 6/24 is composed of part concrete, part asphalt, and is 200 feet wide and 11,799 feet long. Magnetic headings are 060/240 degrees.
2. Runway 14/32 is composed of part concrete, part asphalt, and is 200 feet wide and 9,732 feet long. Magnetic headings are 137/317 degrees.
3. Runway 2/20 is composed of asphalt and is 75 feet wide and 5,022 feet long. Magnetic headings are 019/199 degrees.

NOTE:

When snow stakes are in place on runway 32, the first 1,630 feet of the runway is closed.

1.1.3.2 TAXIWAYS.

All taxiways are 100 feet wide except Papa taxiway and a section of Charlie taxiway between Bravo taxiway and Runway 2/20, which are 75 feet wide. The following restrictions apply to Bravo taxiway:

1. All aircraft parked along Bravo taxiway shall be on or west of designated parking markings to provide maximum clearance from Bravo taxiway.
2. Large wing aircraft (such as B747 and C5) using Bravo taxiway shall be informed of the following:
 - a. Aircraft parking east of buildings 101, 103, 109, and 1355 may be as close as 120 feet.
 - b. Aircrews will be offered the chance to provide a "wing-walker" or obtain one from AFS.

1.1.3.3 RUNWAY/TAXIWAY MARKINGS.

Runways and taxiways are marked following standard criteria. In addition, the following non-standard markings are applied. See Illustration 26 and ADS for details:

1. Simulated carrier decks are painted on Runway 24 and 32.
2. Ship deck markings (LHD, LPD, CVN, and DDG) and cues for the ADS-33 course are painted on Runway 2/20.
3. Solid white relocated threshold line is located 3,000 feet from the approach end of both Runways 6 and 24, leaving approximately 8,800 feet remaining.

4. A solid white relocated threshold line is located 1,630 feet from the approach end of Runway 32 at 8,100 feet remaining.
5. An alternating red-white dashed catapult foul line is painted on Delta Taxiway prior to the Runway 32 hold short markings to assist in avoiding the hazards associated with jet blast and propeller wash.

CAUTION

Aircraft shall hold short of the red/white foul line when catapult operations (TC-7) are in progress in order to avoid jet blast or propeller wash.

1.1.3.4 HELIPADS.

1. The eight primary helipad locations are:
 - a. Bravo/Echo pad at the Bravo and Echo taxiway intersection.
 - b. Alpha/Echo pad at the Alpha East and Echo taxiway intersection.
 - c. 109 pad located on Bravo taxiway abeam Hangar 109.
 - d. Rinse Rack.
 - e. NAWC pad northwest of Hangar 111.
 - f. VX-1 pad located on Alpha West taxiway east of Hangar 306.
 - g. Charlie pad located on Charlie taxiway abeam Hangar 2805.
 - h. Centerfield Pad or VSTOL Pad is located centerfield on taxiway C.
2. All helipads have standard markings. The NAWC pad is the only lighted helipad.

1.1.3.5 TETHERED HOVER AREA.

The Tethered Hover Area is located north of the approach end of Runway 20, see Illustration 1.

1.1.3.6 AERONAUTICAL DESIGN STANDARD-33 (ADS-33) COURSE.

The ADS-33 Course consists of five segments. The Slalom, Acceleration/Deceleration (Accel/Decel) and Lateral Reposition (Lat Repo) courses are located on runway 2/20. The Pirouette and Hover courses are located north of runway 2/20, adjacent to the sloped landing pads. The tethered hover pad and pirouette course are co-located. See Illustration 1.

1.1.3.7 SHORT TAKEOFF VERTICAL LANDING (STOVL) FACILITIES.

1. The centerfield STOVL facilities are located in the infield area between runway 6/24, runway 2/20, Charlie taxiway, and Echo taxiway, see Illustration 24 and 25. These facilities include the centerfield hover pad, hover pit, expeditionary airfield (EAF) with an LHD outline, and ski jump.

NOTE:

When STOVL facilities are in use, use of Taxiways C and E in the vicinity must be sequenced, and delays may be expected.

2. The Intersection hover pad is located at the intersection of Runways 14/32 and 06/24, south of 14/32, and west of 06/24. The Intersection Pad is considered part of the active runway for STOVL operations.

NOTE:

When an aircraft is within the lateral confines of the intersection pad, due to the close proximity of the runways 06/24 and 14/32, both runways are fouled.

1.1.3.8 SEADROME.

The seadrome includes those waters of the Patuxent River between Town Point and Hog Point shoreward of a line described as follows: Beginning at a point at the shore just west of Lewis Creek, bearing 161° 30' true, 2,000 yards from Patuxent River Light 8 (38° 20' 15"N by 76° 30' 45"W) thence to a point bearing 130° true, 1,850 yards from Patuxent River Light 8; thence to a point bearing 247° 30' true, 3,650 yards from Drum Point Light 2 (38° 21' 45"N by 76° 29' 30"W), thence to a point bearing 235° true, 2,060 yards from Drum Point Light 2; thence to a point bearing 129° true, 700 yards from Drum Point Light 2; thence to a point bearing 137° true, 1,060 yards from Drum Point Light 2; and thence to a point on the shore west of Harper's Creek entrance (38°19' 45"N by 76° 24' 15"W), bearing 158° 30' true, 1,900 yards from Drum Point Light 2.

1.1.3.9 NAVIGATIONAL AIDS.

1. AN/FRN-48 TACAN, NHK 1126/CH39Y is located on the airfield.
2. AN/GRN 33 CAT I ILS, LOC I-NHK 108.7 is located on the airfield.

1.1.3.10 WIND INDICATORS.

Windsocks are located near the touchdown areas of Runways 6/24 and 14/32; in the grass area north of the compass rose; at the Rinse Rack, the NAWC pad, and the VX-1 pad.

1.1.3.11 OPTICAL LANDING SYSTEM (OLS).

OLSs are installed on Runways 6/24 and 14/32. Glide slopes are set at 3.0 degrees on all runways. Change of intensity to the source and datum lights may be coordinated with Air Traffic Control (ATC) and adjusted by AFS. Due to different touchdown points and glide slope settings, the PAR and the OLS glide slopes do not coincide.

NOTE:

OLS and carrier deck lens will be secured when wind exceeds 50 knots.

1.2 HANGAR AND SERVICE FACILITIES.

1.2.1 MAINTENANCE FACILITIES.

Limited maintenance and hangar space for transient aircraft may be coordinated through hosting activities.

1.2.2 TRANSIENT SERVICES.

Transient services are provided by the respective hosting activity to include parking and fueling, see Chapter 6. "Follow Me" services are reserved for operations of an urgent nature, aircraft without radios, and transients not familiar with the field. Routine escort service is not provided. Progressive taxi instructions will be issued.

1.2.3 HIGH POWER RUN-UP AREAS.

Engine run-ups may be conducted at the high-power turn up area or designated areas established by squadron directives. See Illustration 1. High power run-ups by jet aircraft should normally be performed only on concrete portions of the taxiways and runways.

1.2.4 CENTERFIELD THRUST STAND.

A turbojet aircraft stand is available at the center field for use by all squadrons. Its use is scheduled through the Central Schedules at COMM (301) 342-4607 or DSN 342-4607, on first come, first serve basis. To the maximum extent possible, aircrew should attempt to use the Hush House.

1.2.5 HOT REFUELING AREA.

The hot refueling area is located at the intersection of taxiways Alpha East and Delta. Reference (g) contains specific procedures and policies for using the hot refueling pits. NAS Patuxent River Fuel Division is the scheduling authority at COMM: (301) 342-3859 or DSN 342-3859. Aircraft shall provide 30 minutes prior notice to activate the fuel pits. Transient aircraft shall

schedule usage via host activity. NAS Patuxent River Air Operations does not provide hot pit assistance.

1.2.6 RINSE RACK.

An aircraft fresh water rinse system is located on Alpha West taxiway, at the intersection of taxiways Alpha West and Bravo. Rolling over the pressure sensor, located on the east side of the rinse rack activates the system. It will accommodate all types of aircraft. The system has an automatic temperature cut-off switch set to 4°C (38°F). Malfunctions of the rinse rack should be reported to ATC or the Air Operations Duty Officer (AODO), at COMM: (301) 342-3836/7 or DSN 342-3836/7.

1.2.7 AIRCRAFT DEICING.

1. Aircraft deicing shall only be performed on designated squadron flight lines at least 100 feet from any storm or sanitary drain in compliance with references (i) and (j). Any activity deviating from these references will be held responsible for Environmental Protection Agency (EPA) violations.

NOTE:

The airfield rinse rack is not an authorized deicing site. No glycol/water mixture is permitted to enter the storm or sanitary drain systems. Any residual mixture that contacts the deck shall be reclaimed by the using activity. If an accidental release occurs into storm or sanitary drains immediately contact (301) 342-3911 and the spill coordinator at (301) 342-1817. NAS Patuxent River Air Operations does not have the capability to perform aircraft deicing.

2. Fleet Readiness Center (FRC) Mid Atlantic Site Patuxent River will provide equipment as requested by individual activities. It is the responsibility of each activity to provide qualified equipment operators. The point of contact for obtaining equipment during normal working hours is the Support Equipment Issue and Receipt Division at COMM: (301) 342-3468 or DSN 342-3468 or the FRC Duty Office after hours at DSN 342-3311.

1.2.8 FUEL, OIL, AND OXYGEN.

For fuel, oil, and oxygen availability consult the IFR En Route Supplement. Refueling and oxygen servicing facilities are available for most military aircraft. Pilots of transient aircraft are responsible for notifying their host activity of estimated time of arrival (ETA) and fuel logistic requirements.

1.2.9 FLIGHT SERVICES.

Flight services are limited to flight planning assistance, weather briefings, and linemen for transient aircraft hosted by NAS Patuxent River Air Operations. There is a Distinguished Visitor Lounge located adjacent to the Weather Office. Refer to section 6.3 for passenger services.

1.2.10 RUNWAY/TAXIWAY WEIGHT CAPACITIES.

Maximum allowable weight bearing capacities for runway and taxiway movement areas are listed in Illustration 2.

1.3 LIGHTING FACILITIES.

1.3.1 RUNWAYS.

All runways (with the exception of Runway 2/20) are equipped with variable intensity lights. In addition, Runway 6/24 has variable intensity centerline lights.

1.3.2 APPROACH LIGHTS.

U.S. Standard "A" Approach Light System, 3,000 feet long, is installed on the approach to Runway 6. This system has sequenced flashing lights but no roll guidance bars. Approach lighting systems are not available for other runways.

1.3.3 CARRIER DECK LIGHTING.

Runway 32 is equipped with simulated carrier deck lighting. The Landing Signal Officer (LSO) controls the 4-step lighting system. Coordination with TC-7 is required for use of the carrier deck lighting at COMM: (301) 342-1160 or DSN 342-1160.

1.3.4 TAXIWAYS.

All taxiways, except taxiway Papa, are bounded on each side by standard variable intensity blue lights.

1.3.5 ROTATING BEACON.

A rotating airport beacon with one green and one dual-peaked white light is located approximately one mile WSW, bearing 248 from the center of the field. The beacon is operated from sunset to sunrise when airfield is open, and between sunrise and sunset when the reported ceiling or visibility is below basic visual flight rules (VFR) minima.

1.3.6 OBSTRUCTIONS.

Standard red obstruction lights mark permanent obstructions in the vicinity of the airfield. Cones, flags, and/or white, amber, or red blinkers mark temporary obstructions on taxiways and runways.

1.3.7 PILOT CONTROLLED LIGHTING (PCL).

PCL provides airborne and departing aircraft control of airfield lighting. All PCL systems are radio controlled on Tower VHF 123.7. PCL operates all runway and taxiway lights installed with the exception of the Approach Lighting System (ALS). In the event that the PCL system does not activate, the pilot should announce intentions over the frequency. The duty Ground Electronics Maintenance (GEM) Division personnel will manually activate them.

1.4 HOURS OF OPERATION/SERVICES AVAILABLE

1.4.1 HOURS OF OPERATIONS

1. Normal airfield operating hours are 24 hours a day Monday through Sunday. Airfield operations may be suspended by the Commanding Officer or designated representative based on the following factors:

- a. Hazardous condition of landing area.
- b. Availability of crash/rescue equipment.
- c. Weather conditions hazardous to flight.
- d. Status of air navigational aids.

2. Published preventative maintenance for Precision Approach Radar (PAR) is performed Wednesdays from 0800-1200L when the weather is 3,000-foot ceiling and visibility 5 statute miles (SM) or better.

3. NAS ATC Facility provides Radar Approach Control (RAPCON) services Mon-Fri 0700-2300L and Sat-Sun 0800-1800L. ATC services are available during normal operating hours, including RAPCON, Tower Control, and Patuxent River Operating Area (PXOA) Advisory. Flight Planning is available 24 hours a day Monday through Sunday.

4. ATC is responsible for PXOA monitoring during periods of activation. BAYWATCH/Military Radar Unit (MRU) is responsible to the NAS Patuxent River ATC facility as per reference (d) and Letter of Agreement (LOA). See paragraph 3.8.3.3.

5. A Prior Permission Required (PPR) request is required for all transient aircraft per paragraph 6.1.1.

1.4.2 QUIET HOURS.

1. Quiet Hours are defined as that period of time, not to exceed one hour, which is set aside for Change of Command ceremonies and other official events as coordinated by the Air Operations Officer and other base officials. All activities aboard the station shall make every effort to reduce noise levels during established Quiet Hours. Aircraft movement of operational necessity are in no way restricted by this instruction. During designated Quiet Hour periods, only straight-in approaches to full stop landings will be permitted. Specific restrictions to departures, taxi, and helicopter operations will be promulgated via Airfield Advisory and airfield NOTAM.
2. Activities desiring Quiet Hours shall submit a memorandum to the Air Operations Officer, indicating the date, time, location, and nature of ceremony at least 10 business days prior to the requested date.
3. The Air Operations Officer will coordinate and approve Quiet Hours, issue appropriate airfield NOTAM, and notify all station activities to comply with the provisions of this instruction. A general notification will be published in an Airfield Advisory. Central Schedules will coordinate requirements for specific flight operations.
4. Outside of quiet hours designated in accordance with this paragraph, operations are guided by the provisions of paragraph 1.4.1 and 3.6.3.

1.4.3 CLOSED TOWER OPERATIONS.

Aircraft desiring to use Webster OLF (WOLF) after published operating hours must effect coordination with Base Operations at least 24 hours in advance, no later than Thursday for weekend operations and no later than Friday for Monday operations. Final approval for operations after published hours' rests with the Air Operations Officer. The Air Traffic Control Facility Officer has By Direction authority to approve or disapprove requests. Flights during these hours will normally only be approved for operational commitments or test projects of a very high priority. After approval, the requesting squadron should notify the Sustainability Office (SO) via phone call or email for noise abatement planning; COMM: (301) 757-1731 or DSN 757-1731.

1.4.3.1 SERVICES AVAILABLE.

1. GEM Maintenance personnel are on station 24 hours daily.
2. Aircraft Crash and Rescue services are available 24 hours daily.
3. Arresting gear is rigged and in battery at all times unless NOTAMs or Automatic Terminal Information System (ATIS) states otherwise.

1.4.3.2 SERVICE LIMITATIONS.

1. After 1530L, the AODO can be contacted at Base Operations COMM: (301) 342-3836/7, DSN 342-3836/7, or by cellphone at COMM: (301) 684-0282.
2. No ATC services available unless prior approval has been obtained from the ATCFO or delineated via Letter of Agreement (LOA).
3. Airfield Services (AFS). "Follow Me" truck service, field escort services, foreign object damage (FOD)/obstruction checks on movement areas, and optical landing systems are available with prior coordination with the AODO. Qualified arresting gear personnel are available in a recall status.
4. Local Search and Rescue (SAR) services are not available unless obtained via prior coordination.

1.5 COMPASS ROSE

The Compass Rose site is located off Charlie taxiway between Bravo taxiway and Runway 2/20. The secondary is a North-South datum line only and is located off Taxiway Delta, near Hangar 115. Per reference (h), both sites are scheduled through the Naval Test Wing Atlantic, Maintenance Office, at COMM: (301) 342-7982 or DSN 342-7982.

1.6 ANNUAL WEATHER.

1. NAS Patuxent River area experiences a wide variety of weather phenomena throughout the year. This is due in large measure to the Station's latitude and its proximity to the Patuxent River, the Potomac River, the Chesapeake Bay, and the Atlantic Ocean. Summers are typically very warm and humid; winters are generally mild. Precipitation averages 41 inches per year and is distributed uniformly with no pronounced dry or wet season.
2. Flying conditions at NAS Patuxent River are predominately good throughout the year. The following is a summary of meteorological concerns to aviation and ground support:
 - a. Visibility of less than 3 SM is most prevalent during the winter due to fog. In the summer, the formation of thick haze layers can seriously degrade visibility, particularly slant range visibility.
 - b. The prevailing wind direction is northwesterly from October through March, then south to southwest from April through September. A southeasterly sea breeze is a common afternoon phenomenon during periods of warm weather and is observed from April to October.

c. Thunderstorms occur throughout the year; however, maximum occurrence is during the summer months, with the peak occurrence in July. Thunderstorms are usually most severe in the late spring and early summer.

d. Snowfall has been observed from October through April with a maximum occurrence in January. Average annual snowfall is 2-6 inches.

e. Hurricane season extends from June to November with the maximum threat to the local area occurring from mid-August to mid-October. Tropical storm or hurricane frequency in the vicinity of NAS Patuxent River is low due to the relatively high latitude, orientation of the Atlantic coastline, and normal hurricane track recurvate far to the southeast. Though rare, tropical systems pose a serious threat to the local area due to flooding and wind damage. The maximum gust recorded at NAS Patuxent River was 110 knots on 15 October 1954 during Hurricane Hazel.

1.7 ARRESTING GEAR.

1.7.1 PRIMARY ARRESTING GEAR.

Emergency arresting gear (E-28 bi-directional) are installed on Runways 6/24 and 14/32 as depicted in Illustration 1 and noted in Table 1-2.

E-28 Arresting Gear Locations

Runway	Gear No.	Distance (ft.)
6	2	2,180
14	1	1,280
32	3	3,050
24	4	1,500

Table 1-2

1.7.2 OPERATIONAL DATA AND LIMITS.

1.7.2.1 GENERAL DATA.

1. E-28 arresting gear is bi-directional.
2. Lighted "International Arrest" signs mark locations.
3. During normal airfield operations the short field arresting gear for the duty runway shall be de-rigged. The normal arresting gear configuration shall have the remaining three sets of E-28 arresting gear rigged and in battery. The short field E-28 arresting gear on the duty runway shall

be rigged if there is only one other set of E-28 arresting gear available on the airfield (i.e. a minimum of two arresting gear should be available).

4. All available arresting gear shall be rigged if any of the following adverse weather conditions exist:

- a. Wind is sustained at 20 knots or greater.
- b. Wind gusts at 25 knots or greater.
- c. Braking action is reported less than "good."
- d. There is standing water on the runway.
- e. After sunset.
- f. The airfield is IFR.

5. Deviations from the normal arresting gear configuration are permissible in order to accommodate test requirements and shall be coordinated in advance with Air Operations. The following limitations apply:

- a. There shall always be at least one set of E-28 arresting gear rigged and in battery on the airfield.
- b. Rigging the Mark-7 (Mk-7) arresting gear if no other E-28 gear is available on the airfield shall be coordinated in advance with the Mk-7 site.
- c. Testing shall cease and all available arresting gear shall be rigged if any of the adverse weather conditions listed in paragraph 1.7.2.4 exist.

1.7.2.2 RIGGING/RESET TIMES.

1. Under normal conditions, after engagement, minimum re-rigging time is 36 minutes, as per Maintenance Requirement Card. A greater amount of time may be necessary contingent upon arresting gear condition and nature of emergency.

1.7.2.3 ENGAGEMENT WEIGHT/SPEED.

1. The maximum/limits for engagements vary according to weight and speed. Although not all inclusive, 160 knots and 60,000 lbs. can be used as a general rule of thumb. Specific engagement speeds/weights for individual type aircraft are listed in Aircraft Recovery Bulletin 46-12M.

2. It is expected that brakes will be applied when speed is reduced to 20 knots to prevent "two-blocking" the arresting gear. Engagement at near maximum weight and speed should be avoided whenever possible to preclude the possibility of arresting gear failure.

NOTE:

Arrestments greater than 180 knots will require a change to the cross-deck pendant (CDP).

3. Maximum off-center engagement distance is 40 feet.

4. In the event of brake malfunction, aircraft engines should be shut down.

1.7.2.4 PRACTICE ARRESTED LANDINGS.

Practice arrested landings shall be coordinated in advance with the AFS Officer, COMM: (301) 342-4790 or DSN 342-4790, and the AODO (301) 342-3836.

1.7.3 Mk-7 ARRESTING GEAR.

The Mk-7 is a hydraulic arresting gear system that is used on aircraft carriers. Components of the system include a centerline camera and an arresting gear cable (located 836 feet and 1,300 feet, respectively, from the approach end of Runway 32). See paragraph 8.7 for Mk-7 Arresting Gear Operating Procedures and paragraph 8.5.4 for Runway 32 Shortened operations.

1.8 EMERGENCY LOCATOR TRANSMITTER.

1. Emergency locator transmitter (ELT) or emergency identification friend or foe (IFF) transmitter tests may be conducted in the first five minutes of any hour per reference (1) unless otherwise coordinated with ATC at COMM: (301) 342-3740 or DSN 342-3740.

2. Activities performing maintenance on ELTs shall provide a stand-by watch in order to notify ATC in the event of inadvertent transmitter activation/malfunction.

3. If an active ELT or Emergency IFF Transmitter broadcast is identified as emanating from a ground source aboard the station, Flight Planning shall call the maintenance department of each tenant activity and request a line check of all aircraft. Each activity shall report the results of these checks to Flight Planning at COMM: (301) 342-3836 or DSN 342-3836.

1.9 AIR STATION CONSTRUCTION.

1. All proposals for construction, installation of any equipment or apparatus, or designations of parking areas or roadways onboard any part of NAS Patuxent River or Webster Outlying Field (WOLF) shall be submitted to the Air Operations Officer for approval. The Air Operations Officer shall review these proposals for conformity to Navy planning standards, effect on

standard instrument approaches and departures, and influence on use of airspace. Portions of the airfield under construction shall be marked by flags or cones during daylight and flashing amber lights by night to prevent inadvertent entry into the construction zone.

2. The Airfield Facilities Coordinator shall keep the AFM, ATC, and GEM Division personnel advised of maintenance/construction equipment scheduled to operate on the airfield. During hours of darkness and periods of reduced visibility such equipment shall have obstruction lights operating.

1.10 DANGER TO LIFE OR PROPERTY.

1. A report shall be made without delay to the AFM whenever any of the following conditions are observed by any person or reported by the pilot:

a. An aircraft drops a bomb or drop tank or fires a gun, rocket, or any other missile outside of a designated target area.

b. It is discovered upon return from a flight that aircraft components and/or externally mounted equipment and/or stores were unintentionally jettisoned or found missing (TFOA).

c. It is considered that any ordnance or weapons expended or flight maneuvers performed may have unduly annoyed or endangered life or property of another person (civilian or military).

d. Uncontrolled fire is observed.

e. Violations of flight rules are observed.

2. The AFM will fully investigate each report. In cases where personal injury or property damage is determined to exist or to be probable, the Air Operations Officer will inform the Commanding Officer of the circumstances. This does not relieve the pilot of responsibility for any other reports that may be required.

1.11 BIRD/ANIMAL AIRCRAFT STRIKE HAZARD (BASH).

1. The hazard posed by birds and animals to safe flight operations at an airfield is an ever-present problem, which is impossible to totally eliminate due to its very nature. Per references (m) and (n), an active program has been implemented to reduce aircraft exposure to bird and animal hazards on and about the airfield. Airfield users shall be made aware of potential hazards via ATIS and other radio broadcasts whenever bird/animal activities are observed or reported.

2. The following condition codes are set by ATC and used for rapid communication of bird activity information:

a. **Code Red:** Heavy concentration of wildlife on or directly above the active runway, in the immediate vicinity of a low-level route or training area, or other locations that represent an immediate hazard to safe flying operations. Aircrews should thoroughly evaluate mission need before operating in areas under Code Red. Wildlife dispersal crews shall be dispatched immediately to these areas.

b. **Code Yellow:** Concentrations of wildlife are observable in locations that represent a probable hazard to safe flying operations; or conditions exist (such as weather or known flight/migration patterns) which are likely to result in the presence of dangerous concentrations of birds and other wildlife on or around the airfield. Code Yellow requires increased vigilance by all agencies and extreme caution by aircrews. Wildlife dispersal crews should monitor these areas closely and conduct dispersal activities as deemed necessary.

c. **Code Green:** Normal wildlife activity with a low probability of hazards.

3. Per references (n) and (o), a BASH report shall be completed and submitted into the Naval Safety Center WESS system for each strike event. The WESS report shall be completed by the squadron involved in the strike event. A copy of the WESS ID number must be sent to the Installations Aviation Safety Officer at COMM: (301) 757-3019 and the Natural Resources Manager at the Public Work Department at COMM: (301) 342-3670. The tower or flight planning must be made aware of the event as soon as possible so a FOD sweep of the area can be conducted by USDA and/or AFS and any wildlife remains removed from the airfield to reduce the attraction of other animals and for identification. All wildlife remains must be delivered to the Natural Resources Manager at the Public Works Department, building 504.

4. The United States Department of Agriculture (USDA) Wildlife Biologist is available to brief local and transient users on bird/animal strike hazards and can be reached at COMM: (301) 342-5905. Local users shall periodically brief aircrews on bird/animal strike hazards and prevention.

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CHAPTER 2

FLIGHT PLANNING

2.1 GENERAL.

Reference (a), establishes policy, requirements, and general procedures applicable to flight authorization, planning and approval. The intent of this chapter is not to be restrictive nor derogate pilot responsibility, but to clarify local procedures to ensure that the ATC system can provide timely and correct flight-following of flights departing or arriving NAS Patuxent River.

2.1.1 FLIGHT PLANNING SERVICE FACILITIES.

1. Flight Information Publications and charts are available for planning; however, publications are not available for issue. NOTAMs are available upon request from the Dispatcher who will access the website and print out the required NOTAMs. Flight Planning is staffed Mon-Fri 0600-2200L and Sat-Sun 0800-1800L. Flight plans required outside of these hours must be received by the Flight Planning office prior to the office closing so they can be routed to the appropriate facility for filing. NAS Norfolk is the alternate facility for entering flight plans and providing flight guard for NAS Patuxent River. NAS Norfolk can provide assistance in the event of equipment outages.

NOTE:

Tenant activities are expected to maintain their own automatic distribution of FLIP product. The Defense Logistics Agency (DLA) office at NAS North Island (DSN 735-6070) issues charts and flight information publications and provides assistance with automatic distribution procedures as defined in the DOD catalog of aeronautical charts and publications.

2.1.2 FLIGHT PLAN FORMS.

2.1.2.1 DD-1801 (DOD International Flight Plan).

This form shall be used for flights entering international airspace and filed at least 2 hours prior to ETD. Aircraft desiring Area Navigation (RNAV) departures or arrivals shall file a DD-1801 per FAA JO 7110.10.

2.1.3 STEREO ROUTES.

1. Departure, arrival, approach procedures, and stereo routes for local use only are found in Flight Planning. In addition, local squadrons may submit VFR or Instrument Flight Rules (IFR) stereo routes specific to their operations to Flight Planning for ease of filing.

2. Pilots desiring to use the stereo routes shall call Flight Planning at COMM: (301) 342-3836 or DSN 342-3836 or frequency 302.55 at least 30 minutes prior to ETD with the following:

- a. Route requested.
- b. Call sign.
- c. Type aircraft/equipment suffix.
- d. True airspeed.
- e. ETD.
- f. ETE (to/from and delay).

3. Pilots desiring to file a stereo route shall be on a daily flight schedule.

4. Stereo routes which are defined with a return leg shall be used for round robin flights only.

2.1.4 DAILY FLIGHT SCHEDULES.

1. The daily flight schedule may be used for flights within the established local flying area as per reference (a). Aircraft that are not going to penetrate the Washington, DC Special Flight Rules Area (SFRA) can request a local squawk from Clearance Delivery. Aircraft that will penetrate the DC SFRA must be on an IFR or VFR flight plan filed through Flight Planning or operating under a Letter of Agreement with Potomac TRACON. Aircraft using the PXOA shall request a squawk on the restricted area Check-in frequency.

2. Local flying activities shall deliver their daily flight schedule by email or fax to Flight Planning by 1800L the day prior to commencement of flight operations. The Squadron Duty Officer shall amend daily flight schedules by calling Flight Planning. In addition to the required elements listed in reference (a), the following information shall be printed on the flight schedule:

- a. Squadron event number.
- b. SAR Helo coverage required. SAR 2H coverage is assumed unless otherwise annotated.

3. Squadron call signs such as Tester, Salty Dog, etc., may be used for local flights only. Aircraft filing a DD-175, DD-1801, preferred, or stereo route shall use Voice Radio Calls as outlined in the DOD FLIP General Planning.

2.1.5 TELEFAX FLIGHT PLAN.

1. Local-based aircraft may file DD-175/DD-1801 flight plans with the Flight Planning Branch via TELEFAX: (301) 342-5961 or DSN 342-5961. Flying club members may file FAA 7233-1 flight plans in this manner as well.
2. Do not fax cover/transmittal sheets; fax only the flight plan form. Ensure signature of approval authority is included. Confirm receipt at COMM: (301) 342-3836 or DSN 342-3836. All faxed flight plans must include a telephone number where the pilot-in-command can be reached for route clarification.

NOTE:

It is the responsibility of the Pilot-in-Command to call Flight Planning to confirm the receipt of the flight plan. Flight plans will not be entered into the national airspace system until a confirmation call is received.

3. Flight plan changes can be made by flight planning with pilot in command concurrence, but changes should be limited to minor route changes and altitudes. Complex changes require filing a new flight plan.
4. TELEFAX procedures do not waive preflight planning and weather briefing requirements.

WARNING

Aircraft on a departure procedure or stereo route that transits the PXOA restricted areas (E.G. Salisbury departure, SWABY Departure, NHK stereo routes) are considered a participant, therefore separation services are not provided from other PXOA participants, see paragraph 3.8.2.3. Aircraft shall receive an area brief from Clearance Delivery and maintain VMC within the PXOA. See and avoid doctrine applies. Pilots who cannot comply must file a flight plan avoiding the PXOA restricted areas.

2.1.6 NOTAMS.

NOTAMS are available via the Defense Internet NOTAM Services (DINS) website at <https://www.notams.faa.gov>

2.1.7 WEATHER SERVICES.

A Weather Forecaster is on duty 24 hours a day, 365 days a year at the Naval Aviation Forecast Center (NAFC) Norfolk, VA. A weather forecaster is on duty during airfield operating hours at the Patuxent River Weather Office, Building 103, adjacent to Flight Planning. The following weather services are available:

1. Telephone flight briefings by the NAFC Norfolk Forecast Duty Officer at COMM: (757) 445-2500/9456 or DSN 565-2500/9456.
2. Flight Weather Briefer (FWB), the computer-based weather briefing system sponsored by Commander, Naval Meteorology and Oceanography Command (CNMOC) and operated by NAFC Norfolk, is available at <https://fwb.metoc.navy.mil>. The back-up URL for FWB is <https://fwb.navo.navy.mil> (only use if primary URL is not working). A DD 175-1 may be requested and/or downloaded through this system. Flight Weather Briefer assistance is available at 1-888-PILOTWX or DSN 565-4555.
3. NAS Patuxent River METRO (NAS Weather Office) on radio frequency 356.2 MHz.
4. Weather Vision is available in most squadron hangars.
5. The Automated Surface Observing Systems (ASOS) broadcast for NAS Patuxent River is available at COMM: (301) 342-3398.

2.2 WEATHER MINIMUMS.

2.2.1 VFR MINIMUMS.

The following table contains weather minimums for operations not listed in FLIP. Ceilings are in feet above ground level (AGL), visibility in statute miles (SM).

WEATHER MINIMUMS

Operation	Minimums (ft./SM)
Basic VFR	1,000/3
Initial for the Break/Overhead	2,100/3
Radar Vectors for the Break/Overhead	2,600/3
FCLPs	1,000/3, SVFR 600/2
PALS (Station Based Aircraft)	2,000/4 ¹
PALS (Fleet Squadrons)	2,000/7 ¹
PPEL/SFO	Pattern + 1,000/5 ²
Gliders (Restricted)	1,000/3
Gliders (Soaring)	3,500/3
STOVL	1,000/3
Helo Grass pattern	SVFR 500/1
1 - Tower must be able to maintain situational awareness with all aircraft in the pattern.	
2 - PPEL/SFOs require 1,000 feet clearance above the highest altitude requested.	

Table 2-1

NOTE:

Although weather criteria may be reported as suitable for specific operations, ATC may initiate certain restrictions when poor visibility conditions restrict the controller's ability to maintain visual contact with aircraft in the traffic pattern.

2.2.2 SPECIAL VFR (SVFR).

1. Authorized as per reference (a).
2. Refer to section 9.6 for helicopter SVFR routes and procedures.

2.2.3 LANDING MINIMUMS.

As depicted for each approach and runway in the DOD FLIP US Terminal Instrument Approach Procedures.

2.2.4 TAKE OFF MINIMUMS.

Per reference (a).

2.3 SPECIAL OPERATIONS/EXERCISE SUPPORT.

1. Fleet units desiring to use NAS Patuxent River for detachment or special exercises shall become thoroughly familiar with local operating procedures published in this manual. Specific items which should be published by Letter of Instruction (LOI), as well as briefed to all aircrews, include:
 - a. Local course rules brief is required for all aircrew prior to operating within the PXOA, with emphasis on safe operating procedures and noise abatement procedures.
 - b. Flight clearance authorization.
 - c. Area and route scheduling, coordination, communications, procedures, and restrictions.
 - d. Weather minimums for each area, route, or exercise conducted.
 - e. Coordination, control, and area clearance.
 - f. Ordnance plans and fueling requirements.
 - g. SAR and aircrew survival considerations.
 - h. Safety.

2. Detachment/exercise LOIs shall be forwarded to NAS Patuxent River (Codes 8.0, 8.5, 8.5.2) a minimum of two weeks prior to scheduled deployment/exercise.

2.4 CIVILIAN AIRCRAFT.

1. Civilian aircraft must possess a Civilian Aircraft Landing Permit (Facility License) to land at NAS Patuxent River or WOLF as per reference (p). Flight Planning maintains a list of current Civilian Aircraft Landing Permits.

2. If a civil aircraft makes an emergency or unauthorized landing, it is mandatory that the pilot, if able, completes a Landing Permit Form and provides a copy of Certificate of Insurance if a Landing Permit is not already on file. The pilot should also provide a handwritten statement including:

- a. Name.
- b. Address.
- c. Phone number.
- d. Airmen certificate number.
- e. Reason(s) for landing.

3. If a civil aircraft makes an emergency landing, the civil user will be billed for costs incurred by the government as a direct result of such a landing at NAS Commanding Officer's discretion. The pilot is required to complete a civil landing permit packet prior to departure authorization. The aircraft will not be granted authorization to depart the airfield until the AFM has been notified and ensures all NAVFAC required paperwork has been completed.

4. If a civil aircraft makes an unauthorized, non-emergency landing, Base Security will impound the aircraft pending collection of the required documentation.

5. For all civil, unauthorized landings, the following agencies shall be contacted immediately: Security, AFS, Crash Crew, AFM and CDO.

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CHAPTER 3

COURSE RULES

3.1 GENERAL.

1. NAS Patuxent River's course rules are designed to promote aviation safety and to meet Research, Development, Test, and Evaluation (RDT&E) and fleet operational requirements. The RDT&E mission and the variety/mixture of turboprops, jets, helicopters, gliders, and unmanned aircraft system (UA) result in complex traffic patterns and procedures. Adherence to course rules plays a very large part in ensuring a safe and orderly flying environment.
2. All clearances and instructions are based on known or observed traffic and are issued for the purpose of preventing collisions. They do not constitute authorization for the pilot to violate or disregard any instruction, which governs the conduct of the flight. When weather conditions permit, during the time an IFR flight is operating in VMC, it is the direct responsibility of the pilot to avoid other aircraft since VFR flights may be operating in the same area without the knowledge of ATC. Traffic clearances provide standard separation only between IFR flights.

WARNING

Due to frequent multiple runway/helipad operations and unique test flight patterns, (e.g. catapult launches, arrested landings, support vehicles, and equipment on the airfield), pilots are cautioned to be extremely vigilant during all phases of aircraft operations.

NOTE:

Per reference (a), tilt-rotor aircraft in airplane mode shall comply with fixed-wing procedures.

3.1.1 ANNUAL COURSE RULES BRIEFING REQUIREMENTS.

Aircrews including UA Operators utilizing NAS Patuxent River, WOLF, and/or the PXOA shall be knowledgeable about course rules and procedures contained in this manual. As per reference (c), units shall obtain an annual course rules brief to maintain aircrew currency. Units needing an annual or refresher brief shall contact ATC, COMM: (301) 342-3836 or DSN 342-3836, to schedule a briefing.

3.1.2 RUNWAY USE PROGRAM.

1. When the wind is 5 knots or greater, the runway most aligned with the wind should be the active runway.
2. Runway 6 is designated the calm wind runway.
3. Intersecting runway operation minimums are 2,000 feet MSL ceiling and 4 SM visibility.

4. Wind component and traffic permitting, departures prior to 0800L shall use Runway 6 or 14.
5. Wind component and traffic permitting, arrivals after 2200L shall use Runway 24 or 32.
6. When the sustained crosswind component is greater than 15 knots, the duty runway shall be the runway most aligned with the wind. RDT&E projects requiring special runway operations shall be terminated if they result in a crosswind component of greater than 15 knots or a tailwind of greater than 5 knots on the duty runway. Waivers to this policy require approval from the Air Operations Officer in concurrence with the Navy Test Wing Atlantic (NTWL) Operations Officer.

3.2 TAXI INSTRUCTIONS.

3.2.1 CLEARANCE DELIVERY/CHECK-IN.

Prior to taxi, aircraft departing NAS Patuxent River Class D airspace shall contact Clearance Delivery and/or Check in for assigned beacon codes.

3.2.2 GROUND CONTROL.

1. Departing aircraft shall contact NAS Patuxent River Ground Control with current ATIS code for taxi instructions prior to leaving their line or ramp area and shall remain on Ground Control frequency until ready for takeoff or authorized for frequency change.

NOTE:

If UHF equipped, aircraft shall utilize UHF frequencies to assist in maintaining awareness and reducing repetitive transmissions.

2. Ground Control will authorize an aircraft to taxi to a specific runway, issue taxi instructions, and state any hold short instructions or runway crossing clearances. Pilots shall read back: the runway assignment, any clearance to enter a runway, and any instruction to hold short of a runway.

NOTE:

When given a taxi clearance, pilots shall hold short all runways unless specifically cleared to cross. The absence of hold short instructions shall not be interpreted as clearance to cross any runway which the taxi route intersects.

3. Large prop type and heavy aircraft (e.g. P-3, P-8, C-130, E-6A) are not permitted to taxi on taxiway Alpha East between taxiway Delta and Echo when the hot refueling pits are in use. Smaller aircraft may use this portion of the taxiway with the following provisions:

- a. Utilization of that portion of the taxiway is based on status of hot pits and type of aircraft.

b. Aircraft shall not stop on Alpha East taxiway until clear of the fuel pits so as not to impede emergency vehicle access to the area.

4. Unless absolutely necessary, large aircraft with outboard engines (e.g. E-6) should not be authorized to taxi on Charlie taxiway between Bravo taxiway and Echo taxiway due to the FOD hazard and the ski jump wing span limitations.

5. When Mk-7 operations are in progress, the portion of Runway 32 short of the relocated threshold (Illustration 26) shall not be used for taxi except by aircraft involved in the project using the Mk-7. See paragraph 8.5.4 on Runway 32 shortened operations.

3.2.3 ROADWAY CROSSINGS.

1. When approaching an intersecting station roadway, the pilot shall maintain a sufficiently slow taxi speed in the event a vehicle fails to yield right of way. Once assured all vehicles have stopped, speed may be increased to clear the intersection. Do not slow speed when taxiing through the restricted movement area.

2. Stop signs and flashing red lights control vehicular traffic on Cedar Point Road at Foxtrot taxiway, and Delta taxiway. Aircraft do not require specific clearance to cross these intersections.

3. The intersection of Alpha West taxiway and Cedar Point Road is controlled for both aircraft and vehicles by a standard traffic light system activated by the control tower. Taxiing aircraft shall contact Ground Control for activation of the light system and report clear of roadway crossing at the posted signs. With the exception of T34/ T-6 formation flights, only one aircraft will be allowed to cross at a time. Successive aircraft will be given hold short instructions by Ground Control so as not to block the restricted movement area. When activated, the lights automatically reset in 60 seconds to give the green light to vehicles. Re-activation before the cycle is complete will not prevent the lights from changing. Pilots should report outages of the light system to Ground Control. When the traffic light system is out, aircraft are prohibited from crossing Cedar Point Road without the assistance of NAS Patuxent River Naval Security Force.

3.2.4 TAXI SAFETY AND SPEED.

When taxiing near obstructions or other aircraft, a qualified taxi director shall attend the taxiing aircraft to ensure safe movement. Taxiing aircraft shall not overtake other taxiing aircraft or vehicles without ATC approval. Aircraft that can safely operate on one half of a taxiway may pass opposite direction with another aircraft that can do the same with the concurrence of both pilots in command.

3.2.5 EMERGENCIES.

Taxiing/towed aircraft sighting emergency vehicles displaying flashing red lights, or having knowledge the tower is controlling an emergency shall give way to emergency vehicles.

NOTE:

Emergency vehicles may display flashing red lights while working on the non-active runway. This may not constitute an emergency, but is used to provide the tower with the location of vehicles servicing arresting gear, Fresnel lens, etc. Additionally, airfield sweeper trucks and follow-me trucks display flashing amber lights while operating on the airfield.

3.2.6 WARM-UP AREA.

Jet aircraft shall be positioned to prevent jet blast erosion of asphalt-stabilized shoulders.

3.3 TAKEOFF INSTRUCTIONS.

See Chapter 8 for Fixed Wing Course Rules. See Chapter 9 for Rotary Wing Course Rules.

3.4 LANDING INSTRUCTIONS.

See Chapter 8 for Fixed Wing Course Rules. See Chapter 9 for Rotary Wing Course Rules.

3.5 ORDNANCE/WEAPONS HANDLING

3.5.1 GENERAL.

1. Regulations for the expenditure of ordnance within the PXOA have been established by Title 33, Code of Federal Regulations (CFR).
2. The Commanding Officer, NAS Patuxent River, Maryland, and such agencies as may be designated shall enforce the regulations in this section.

3.5.2 ORDNANCE HANDLING.

1. Reference (hh), NAVSEA OP5, Vol. 1, contains specific criteria on loading areas, ordnance hazard classifications, and quantity/distance requirements, and shall be used to determine in which area a specific ordnance item may be loaded.
2. Landings, takeoffs, and movement of aircraft with Class A and B cargo are situations that require a stand-by truck be positioned on the field. After the aircraft lands, the crash truck will follow the aircraft to the unloading area and stand by during unloading.

3. Helicopter arming/dearming will be conducted at the end of the assigned runway. If using forward firing ordnance, refer to 3.5.2.1 for scheduling and requests.

3.5.2.1 COMBAT AIRCRAFT LOADING AREAS (CALA).

Pursuant to reference (hh), combat configured ordnance shall be loaded on combat-type aircraft in the following CALA only, see Illustration 1.

1. CALA - Located adjacent to Echo taxiway, heading 036 degrees.
2. Alternate CALA/Hot Cargo Pad - Located adjacent to the VTOL pad on Charlie taxiway, heading 054 degrees.
3. The CALA is mandatory during loading/downloading and rearming of aircraft carrying class/division 1.1, 1.2, and all forward firing ordnance, see Illustration 1. To use the CALA, squadron schedulers must submit a CALA request/input to Atlantic Test Range Central Schedules at COMM: (301) 342-4607.

3.5.2.2 FLIGHT LINE LOADING.

In general, the following ordnance may be loaded on the aircraft flight line if the quantity-distance requirements of Appendix A, reference (hh) and site approval requirements are satisfied:

1. Practice bombs.
2. Pyrotechnics (except photoflash).
3. Small arms, 20mm, 30mm, target practice (TP), and Tracer only.
4. Inert bombs, fuses, and boosters.
5. Inert missiles.
6. Inert mines.
7. Sounding Underwater Sensor (SUS) without explosive.
8. Inert Cluster Bomb Units (CBU) with live MK-339/FMU-140 fuses.
9. Chaff/Chaff Buckets.
10. Inert Torpedoes.

3.5.2.3 HANDLING PROCEDURES.

1. Forward firing ordnance shall be pointed toward an area clear of inhabited buildings, public areas, other aircraft, etc., on the prescribed headings, paragraphs 3.5.2.1 and 3.5.2.4.
2. Arming of ordnance shall be accomplished in one of the five "arm/de-arm aircraft areas" depicted in Illustration 1, under supervision of the ordnance officer or representative.

NOTE:

Captive air training missile (CATM) with inert motors/warheads may be armed/de-armed in the throat, at the end of the squadron flight line.

3. Rounds shall not be charged into guns nor arming switches activated until the aircraft has reached the planned firing area.
4. De-arming of aircraft shall be accomplished in the areas depicted in Illustration 1. Upon landing, aircraft shall proceed as directed by Tower. Unit ordnance personnel, when notified, shall meet the aircraft on the field to check and de-arm/unload as necessary before the aircraft returns to the flight line.
5. Deviations from the procedures above require approval from Naval Ordnance Safety and Security Activity (NOSSA) or CNO. Written requests for deviations are required and shall be coordinated through the NAS Patuxent River Explosive Safety Officer and shall include proposed operating procedures, safety precautions, and justification for the deviation.

3.5.2.4 ARM/DE-ARM AREAS. See Illustration 1.

1. AREA 1 - Located at the intersection of Alpha East and Delta taxiways, heading 083 degrees.
2. AREA 2 - Located at the high power turn-up area on Alpha East taxiway, heading 045 degrees.
3. AREA 3 - Located on Charlie East taxiway adjacent to the approach end Runway 24, heading 057 degrees.
4. AREA 4 - Located on Foxtrot taxiway adjacent to approach end of Runway 14, heading 036 degrees.
5. AREA 5 - Located south of tethered hover pad, heading 037 degrees.

3.5.3 AERIAL FIRING RANGE AND SURFACE EFFECTS.

3.5.3.1 SURFACE PARAMETERS.

The range danger zone and active times are located in 33 CFR 334.200 and defined as follows:

1. The danger zone encompasses the waters of the Chesapeake Bay within an area bounded as follows:

a. Beginning at the eastern most extremity of Cedar Point (N38°17'30", W076°22'20") proceeding easterly to the southern tip of Barren Island (N38°19'15", W076°15'30").

b. The southern tip of Barren Island proceeding southeasterly to N38°01'15", W076°5'33".

c. N38°01'15", W076°05'33" proceeding southwesterly to Chesapeake Channel Buoy 50 (approximately N37°59'25", W076°10'54").

d. Chesapeake Channel Buoy 50 proceeding northwesterly to N38°02'20", W076°17'26".

e. N38°02'20", W076°17'26"W proceeding northerly to Point No Point Light (N38°08', W076°18').

f. Point No Point Light proceeding northwesterly to the shore at N38°15'45".

g. The shore at N38°15'45" proceeding northeasterly along the shore back to the eastern most extremity of Cedar Point.

2. Aerial and surface firing and dropping of non-explosive ordnance will be conducted in this area throughout the year, Mon-Sat, except national holidays.

3.5.3.2 TARGET SURFACE PROHIBITED AREAS.

1. A circular area with a radius of 1,000 yards having its center at latitude N38°13'00" and longitude W076°19'00" identified as Hooper Target. See illustration 9.

2. A circular area with a radius of 1,000 yards having its center at latitude N38°02'18" and longitude W076°09'26" identified as Hannibal Target. See illustration 9.

3.5.3.3 PROCEDURES.

1. Through navigation of surface craft outside the target areas will be permitted at all times. Vessels shall proceed on their normal course and shall not delay their progress.

2. Prior to firing or ordnance drops, naval surface craft or aircraft will patrol the range to warn watercraft likely to be endangered. Surface craft so employed will display a square red flag. Naval aircraft will use a method of warning consisting of repeated shallow dives in the area, following each drive by a sharp pull-up.
3. Any watercraft underway or at anchor, upon being so warned, shall immediately vacate the area and shall remain outside the area until the conclusion of firing practice.
4. Nothing in this section shall prevent the taking of shellfish or the setting of fishing structures within the range outside target areas in accordance with Federal and State regulations, provided that no permanent or temporary fishing structures or oyster ground markers are placed in the western side of the Chesapeake Bay between Point No Point and Cedar Point without prior written approval of the Commanding Officer, NAS Patuxent River.
5. Naval authorities will not be responsible for damage caused by projectiles, bombs, missiles or Naval or Coast Guard vessels to fishing structures or fishing equipment, which may be located in the aerial firing range immediately adjacent to the target areas.
6. Non-explosive projectiles and bombs will be dropped at frequent intervals in the target areas. Hooper and Hannibal targets shall be closed to navigation at all times, except vessels engaged in operational and maintenance activities as directed by the Commanding Officer, NAS Patuxent River.
7. No person in the waters, vessel, or other craft shall enter or remain in the closed area or climb on targets except with written approval of the Commanding Officer, NAS Patuxent River.

3.5.4 ORDNANCE JETTISON AREA.

Hannibal and Bloodsworth Targets are designated as the emergency ordnance jettison areas. Aircraft shall contact PAX ADVISORY/BAYWATCH prior to entering R-4002 or R-4005 to coordinate drops.

3.5.5 HUNG OR UNEXPENDED ORDNANCE.

1. Aircraft returning to NAS Patuxent River with hung ordnance will normally be given straight-in approval to Runways 24 or 32, or a left downwind to Runway 14 to allow aircraft to remain over water to the maximum extent possible.
2. Aircraft with unexpended ordnance will use normal recovery procedures unless the weapon/attachment point is on-standard or is an untested design. The pilot is responsible for determining appropriate recovery for the specific unexpended ordnance condition.

3. After landing, aircraft with hung ordnance or unexpended **live** ordnance will be de-armed in the designated de-arming area, then taxied to the CALA.
4. After landing, aircraft with unexpended **inert** ordnance may taxi to the line area.
5. Helicopters returning with hung/unexpended ordnance should proceed as above to the field boundary then fly directly to the appropriate de-arming area.

3.5.6 HAZARDS OF ELECTROMAGNETIC RADIATION TO ORDNANCE (HERO).

Due to possible loading/unloading of HERO susceptible ordnance, no aircraft radar or HF transmissions are permitted within 125 feet of designated ordnance-handling areas, Illustration 1, while they are active. HERO conditions will be broadcast on the ATIS and secondary net of the ALERT PLUS system (i.e. "crash phone"). HERO conditions will also be communicated to the RDC. The RDC will broadcast the condition over the ELMR Fire and Police channels. See reference (r) for further details. Tower will notify ground traffic via radio/frequency.

3.6 NOISE ABATEMENT PROCEDURES.

3.6.1 GENERAL.

Arrival/departure corridors and flight patterns may be over noise abatement areas, Illustration 23. Aircrews should, to the maximum extent practicable, reduce aircraft noise impacts and avoid noise abatement areas. Refer to paragraph 3.6.3 for the noise abatement policy.

3.6.2 NOISE ABATEMENT POLICY.

1. It is the policy of the Commanding Officer, NAS Patuxent River to conduct required test, evaluation, and operational flights with a minimum impact on the surrounding communities. All aircrew using NAS Patuxent River, WOLF, the PXOA Restricted Areas, and the Helicopter Operation Areas are responsible for the safe conduct of procedures. Aircrews must be familiar with the noise profiles of their aircraft and must be committed to minimizing noise impacts without compromising operational and safety requirements.
2. A noise disturbance response system has been established to handle noise complaints from the local community by contacting COMM: (866) 819-9028 or emailing paxnoise@navy.mil.
3. All aircrew using the PXOA shall attend Noise Awareness Briefs annually provided by the Range Sustainability Office, commercial phone COMM: (301) 757-1731.
4. Noise sensitive areas are defined by the Environmental Impact Statement, reference (jj), as locations where populations are particularly sensitive to noise (e.g., densely populated residences, schools, hospitals, churches, etc.).

5. Noise abatement areas are identified in this manual and should be avoided to the maximum extent practicable. Arrival and departure corridors and flight patterns may be over noise abatement areas, but pilots should make the maximum practical effort to minimize aircraft noise impacts.

3.6.3 NOISE ABATEMENT RESTRICTIONS.

1. Aircraft are restricted to full stop landings and departures from 2200L to 0700L daily and prior to 1000L Saturdays and 1200L Sundays, with the exception of helicopters established in the grass pattern. During closed tower operations, low approaches may be conducted over the landing runway in order to satisfy BASH requirements. Aircrews should strive to minimize aircraft noise impacts to local housing areas to the maximum extent practical.

2. Field carrier landing practice (FCLPs), precision approach landing system (PALS) approaches, and practice approaches shall not be conducted after 2200L unless approved by the Air Operations Officer.

3. High power run-ups 1630-2200L are restricted to those of urgent necessity only. Run-ups 2200-0700L shall not be conducted unless approved by the NAS Patuxent River Commanding Officer.

4. Fixed Wing shall not and Rotary Wing should not overfly Solomons Island below 1,000 feet AGL.

5. Aircraft shall not overfly Mattapany-Sewell Manor House.

6. Aircraft shall not overfly VQ-4.

7. Aircrews should minimize aircraft noise over Cedar Cove to the maximum extent practical.

8. Low pattern operations, as defined in paragraph 8.5.6, including FCLPs and project flights, should plan to utilize patterns that remain over water and minimize impact noise abatement areas to the maximum extent practical.

a. Low pattern operations shall avoid Cedar Cove below 1,000 feet AGL with the exception of FCLPs and project flights. Runway 32 left-hand low pattern shall be authorized only for FCLPs and project flights.

b. Aircraft established in the Runway 24 low pattern, including FCLPs and project flights, shall remain clear of Cedar Cove. If unable to avoid Cedar Cove laterally, climb above 1,000 feet AGL until over water.

c. When utilizing Runway 32 low pattern, downwind turns should avoid Solomons Island and Drum Point. If unable to avoid laterally, aircraft shall climb above 1,000 feet AGL for noise abatement.

9. PALS pattern downwind turns should avoid Drum Point below 1,000 feet AGL. Refer to paragraph 8.8.

10. Aircraft STOVL configuration should avoid Drum Point to the maximum extent practical. Refer to paragraph 8.9.

11. WOLF Noise Abatement restrictions are contained in chapter 10.

12. Aircraft shall not overfly Blackwater National Wildlife Refuge below 3,000 feet AGL.

13. In the interest of noise abatement, helicopters shall maintain the highest practicable altitude consistent with the procedures contained in this manual.

3.7 DEFINITION OF LOCAL FLYING AREAS.

1. The local flying area is that portion of the United States and the Atlantic Ocean west of the Air Defense Identification Zone within a 350 nautical mile radius of the NAS Patuxent River TACAN, and is generally geographically defined by the following VORTACs:

- a. Charleston, SC.
- b. Spartanburg, SC.
- c. Cleveland, OH.
- d. Buffalo, NY.
- e. Syracuse, NY.
- f. Nantucket, MA.

2. A local flight is defined by reference (d) as a flight conducted entirely within the established local flying area and landing at the point of departure or at another facility with which the originating station has direct station-to-station communications. NAS Patuxent River has direct station-to-station communications with Marine Corps Air Station (MCAS) Quantico and National Aeronautics and Space Administration (NASA) Wallops. Aircraft departing NAS Patuxent River desiring to land at other than NAS Patuxent River, MCAS Quantico, or NASA Wallops should file an applicable flight plan or stereo route to the maximum extent practical.

3.8 SPECIAL USE AIRSPACE (SUA)

3.8.1 GENERAL.

References (a) and (d) establish DoD policy and general procedures for military aircraft operating in SUA. This chapter provides local procedures for the PXOA and W-386.

NOTE:

NAS Patuxent River is designated as the using agency for the PXOA and is responsible for all administrative and operational facets of assigned SUA.

3.8.2 DEFINITIONS.

3.8.2.1 CONCURRENT USE SUA.

The term "concurrent use" indicates that more than one event is scheduled at the same time within a block of airspace and/or surface area.

3.8.2.2 EXCLUSIVE USE.

The term "exclusive use" is synonymous with "exclusive scheduling" which indicates that only one event is scheduled at a time within a block of airspace and/or surface area.

3.8.2.3 PARTICIPATING AIRCRAFT.

Only those aircraft engaged in and a part of the activity being conducted. Aircraft shall:

1. Be scheduled and authorized by Patuxent ATC (i.e. "PAX ADVISORY" or "PAX APPROACH") or BAYWATCH (see paragraph 3.8.3.3) to operate concurrently or exclusively within assigned SUA.
2. Obtain an area check-in brief prior to operating within assigned SUA.
3. Receive clearance to operate within assigned SUA with ATC/BAYWATCH approved altitudes.
4. Maintain continuous communications with ATC/BAYWATCH.
5. Display an ATC/BAYWATCH assigned Mode 3/C transponder beacon code.
6. Maintain VMC unless otherwise approved by PAX ATC.

NOTE:

BAYWATCH cannot provide aircraft IFR services. Aircraft shall contact PAX ATC for IFR handling.

3.8.2.4 NON-PARTICIPATING AIRCRAFT.

Any aircraft, DOD or civil, that is not engaged in, and a part of, the activity being conducted. Non-participating aircraft shall remain clear of active SUA.

3.8.2.5 JOINT-USE AIRSPACE.

PXOA SUA is designated Joint-Use Airspace IAW reference (u).

3.8.2.6 REAL-TIME SUA ACTIVATION.

All PXOA SUA is activated real-time IAW reference (u).

NOTE:

PXOA is not automatically activated based on squadron flight schedules. Pilots must contact "check-in" at least 30 minutes prior to take off to ensure the airspace is available at take-off time. This is imperative for the first user of the day. A phone call to Base Ops prior to manning the aircraft is suitable. Patuxent ATC has an agreement to provide restricted airspace back to Washington Center when the airspace is not required. Per this agreement, it can take up to 30 minutes to activate airspace when IFR traffic density is high.

3.8.2.7 TIMES OF USE.

"Times of Use" on all airspace charts, and references, indicate the period during which NAS Patuxent River is authorized to schedule and use its delegated SUA. All other times require a NOTAM.

NOTE:

PXOA is not automatically activated based on the times on the charts.

3.8.3 PXOA.

3.8.3.1 GENERAL.

PXOA Altitudes

AREA	ALTITUDES
R-4002	SFC up to FL200
R-4005	SFC up to 24,999 ft. MSL
R-4006	3,500 ft. up to 24,999 ft. MSL
R-4006N (NORTH TRIANGLE)	3,500 ft. up to 7,500 ft. MSL
R-4006S (PIKE)	3,500 ft. up to 24,999 ft. MSL
R-4007	SFC up to 4,999 ft. MSL
R-4008	FL250-FL850
R-6609	SFC up to FL200

Table 3-1

NOTE:

All aircraft operating within PXOA excluding the CRESSIE ATC Assigned Airspace (ATCAA), shall, regardless of altitude, use the Patuxent River local altimeter setting.

3.8.3.2 SCHEDULING.

1. Restricted areas under the cognizance of NAS Patuxent River are scheduled through the Patuxent Central Schedules Office. Normal hours of operation are Mon-Fri, 0700-1600 ET.
2. All users must submit a PXOA schedule request to Central Schedules at COMM: (301) 342-4607/8 or DSN: 342-4607/8 IAW reference (v). Users shall provide the following week's inputs to Central Schedules by 1200L Wednesday. Central Schedules will then provide all operators with a consolidated schedule of airspace usage for the next week by 1200L Friday.
3. In addition to submitting a PXOA schedule request, all outside (non-local) users shall brief the controller upon initial check-in on type mission and requirements. This requirement is waived if a mission brief definition sheet has been provided to ATC.

3.8.3.3 ADVISORY AND BAYWATCH.

1. NAS Patuxent River TRACON, callsign PAX ADVISORY, is responsible for aircraft operations conducted within the PXOA and the ATCAA delegated to NAS Patuxent River by the FAA. The Atlantic Test Ranges (ATR) MRU, callsign BAYWATCH, is not an FAA approved ATC facility; however, the PXOA may be delegated to BAYWATCH under the cognizance of PAX ADVISORY. PAX ADVISORY maintains oversight and coordination responsibility of the SUA at all times.

2. BAYWATCH provides the following services in place of PAX ADVISORY when the airspace is delegated:

- a. VFR traffic advisories to participating aircraft.
- b. Restricted area boundary information to aircraft operating within the PXOA.
- c. Exclusive use airspace coordination within restricted area boundaries.
- d. Coordinates with PAX ADVISORY concerning spill-ins, spill-outs, and IFR handling.

NOTE:

BAYWATCH cannot provide aircraft with Flight Plan clearances or IFR services. Aircraft shall contact PAX advisory for IFR handling, including penetrating through cloud layers in the restricted areas.

3. BAYWATCH hours of operation are Mon-Fri, 0830-1630L, excluding holidays, periods of liberal leave, and essential personnel only.

3.8.3.4 RESTRICTED AREA SATURATION.

The PXOA shall be considered saturated whenever the number of aircraft operating within R-4005, R-4006, and R4008 reaches a combined total of 10 aircraft when only NAWCAD aircraft are present, or 6 aircraft when outside users are present, with the following exceptions:

1. A flight of two aircraft remaining within 1 mile horizontally and 100 feet vertically of each other can be counted as one aircraft.
2. Aircraft operating exclusively in the following areas may be excluded from the limit if remaining only in their scheduled area:
 - a. R4005 below 3,500 ft. MSL
 - b. R-4002 below 3,500 ft. MSL
 - c. R-6609
 - d. R-4006S (PIKE)
3. NAWCAD aircraft transiting the PXOA to other operating areas (e.g. W386, W72, etc.) may be excluded from the aircraft count dependent on ATC workload and provided the aircraft plans a direct route through the PXOA with no intent to delay in the PXOA.

4. If the area becomes saturated and scheduled users are requesting entry, aircraft outside their scheduled use time will be asked to depart the areas followed by aircraft listed as "first to go" on the central schedule, if necessary.
5. Deviations to this paragraph are permissible on a case-by-case basis when coordinated with Air Operations and Naval Test Wing Atlantic.

3.8.3.5 AIRCRAFT PRIORITIES.

In the event that more than 10 aircraft request use of the PXOA simultaneously, unless otherwise agreed by Air Ops and NTWL, RDT&E aircraft will have priority over outside users. Within NAWCAD, the following priorities will determine which aircraft will be authorized to remain in the area:

1. Test Pilot School - 4 aircraft.
2. VX-23 - 4 aircraft.
3. VX-20 - 2 aircraft.
4. HX-21 - 1 aircraft.

3.8.3.6 BOUNDARY ALERTS.

PAX ADVISORY/BAYWATCH will issue a 5-mile boundary warning call to aircraft approaching PXOA boundaries. Upon receipt of this warning, pilots shall take appropriate action to remain within the area boundary. Pilots may request delayed boundary warning calls (e.g. 3-mile or 1-mile) if 5 mile calls interfere with mission conduct. (Supersonic aircraft 10-mile, 5-mile, 3-mile).

3.8.3.7 TRAFFIC ALERTS.

All traffic calls made by PAX ADVISORY/BAYWATCH shall be acknowledged. When traffic is called within 5 miles, testing will cease until there is visual contact or the traffic is broadcasted as no longer a factor. (Supersonic aircraft 10-mile, 5-mile, 3-mile).

3.8.3.8 VFR DEPARTURE/ARRIVAL PROCEDURES.

1. VFR transit to and from the restricted areas should utilize the Piney and Barren departures/arrivals described in sections 4.5 and 4.6. Pilot deviations must be coordinated with ATC. See illustrations 27 and 28.

WARNING

Due to the close proximity of Federal Airways, aircraft should be alert for overhead IFR traffic when departing NHK and R-4007. Traffic is routinely routed overhead at 5,000 feet MSL. UA routinely transit R-4005SW at 3,500 feet MSL enroute from WOLF to/from the UA Operating area.

NOTE:

Departing VFR aircraft are ultimately responsible for their own separation from other aircraft. See and avoid.

2. Station-based aircraft using the PXOA shall contact Check-In on 369.9 MHz, or 119.275 if VHF only, prior to launch. These aircraft shall specify callsign, type aircraft, altitudes requested, exclusive use airspace (if required), and the frequency to be monitored (if other than the standard traffic advisory frequencies).

NOTE:

Patuxent ATC has an agreement to provide restricted airspace back to Washington Center when the airspace is not required. Per this agreement, it can take up to 30 minutes to activate airspace when IFR traffic density is high.

3.8.3.9 AIRSPACE PROCEDURES.

1. All aircraft operating within the PXOA shall have an operable transponder with Mode 3/C and assigned beacon code.

2. All aircraft operating within PXOA, excluding the CHESIE ATCAA, shall, regardless of altitude, use the Patuxent local altimeter setting. Aircraft operating in CHESIE ATCAA shall set altimeter to 29.92 and use Flight Levels. When aircraft test profiles require different altimeter settings, pilots shall inform PAX ADVISORY/BAYWATCH.

3. When using R-4006 or 4008, the aircraft traffic pattern will be counterclockwise to the maximum extent practicable. If unable to comply, aircraft shall inform PAX ADVISORY/BAYWATCH with the appropriate maneuvering call prior to deviation.

a. Definitions. "Vertical Maneuvering" is defined as a 3,000 feet (or more) altitude change within an approximate 3-mile radius circle. "Dynamic Maneuvering" is defined as sharp turns or direction changes of more than 90 degrees that will deviate from counter-clockwise flow pattern.

b. Procedures.

(1) Pilots will call "Vertical Maneuvering" (to final altitude) or "Dynamic Maneuvering."

Example: "SALTY DOG THREE TWO FIVE VERTICAL MANEUVERING TO TWO ZERO THOUSAND" or "TESTER ONE SIX DYNAMIC MANEUVERING NEXT ONE ZERO MINUTES."

(2) PAX ADVISORY/BAYWATCH will immediately respond by calling the nearest traffic and monitoring the maneuvering aircraft.

Example: "TESTER ONE SIX NEAREST TRAFFIC TWO FOUR ZERO, ONE ZERO MILES, EASTBOUND."

(3) Pilots should expect a "nearest traffic" call and will decide whether to commence maneuver based on existing conditions.

(4) PAX ADVISORY/ BAYWATCH will notify aircraft that may be approaching the maneuvering aircraft with an advisory call, similar to area boundary calls.

Example: "TESTER ONE SIX MANEUVERING AIRCRAFT, ZERO SIX ZERO, FIVE MILES, BETWEEN FLIGHT LEVEL ONE EIGHT ZERO AND TWO TWO ZERO."

(5) If there is an imminent traffic conflict or traffic is within two miles PAX ADVISORY/BAYWATCH will use the term "TRAFFIC ALERT."

Example: "SALTY DOG THREE TWO FIVE, TRAFFIC ALERT, THREE SIX ZERO, TWO MILES, FLIGHT LEVEL TWO ZERO ZERO, ACKNOWLEDGE."

(6) PAX ADVISORY/BAYWATCH expects a response from the aircraft.

4. Commands with access to Flight Information Scheduling and Tracking (FIST) shall ensure the system is updated appropriately for ATC planning purposes and SUA activation/deactivation. Tenant commands without FIST access shall contact Flight Planning, at COMM: (301) 342-3836 or DSN 342-3836, upon completion of its daily PXOA/W386 flight operations.

5. When a scheduled event is delayed/cancelled, tenant activities shall contact Central Schedules immediately with their intentions. Coordination must be completed for a scheduled event time to change or shift. After normal working hours, changes should be submitted to Patuxent ATC at COMM: (301) 342-3740 or DSN 342-3740.

6. Patuxent TRACON maintains that portion of R-4006 north of SBY R-313, 3500-7500 feet MSL (R-4006 North) extensively for transiting (nonparticipating) aircraft when airspace is active. (See Illustration 8.) Military aircraft desiring use of this altitude block in R-4006 North can obtain it (or a portion of it) by one of the following methods:

a. Scheduling those altitudes needed through Central Schedules in the normal airspace scheduling process or,

b. Prior to departure, requesting and reconfirming those altitudes needed upon check-in with PAX ADVISORY/BAYWATCH or,

c. While airborne, aircraft shall remain within requested altitudes through a radio request to PAX ADVISORY/BAYWATCH.

3.8.4 EXCLUSIVE USE AREAS AND TARGETS.

Any flight within R-4002, 4005, 6609, or 4007 that may present a greater than normal hazard to other aircraft, shall cause the specific airspace required for the project to become exclusive. Any ordnance expenditure requires that specific area to be scheduled for exclusive use at and below the altitudes requested. Refer to Illustration 8.

NOTE:

Exclusive use areas should be specifically scheduled with Central Schedules prior to use (see section 3.8.4.7).

3.8.4.1 R-4002.

R-4002 contains Bloodsworth Island, a former shore bombardment and bombing range located on the PXT R-123 at 16 DME. NAS Patuxent River controls Bloodsworth airspace with regulations, precautions and requests for usage as set forth in reference (u) and 33 CFR 334.190.

NOTE:

BLOODSWORTH ISLAND IS NOT AVAILABLE FOR LIVE OR INERT BOMBING.

The Bloodsworth Island impact range is closed to all impact operations. The associated SUA is always available for overflights occurring above 3,000 ft. for fixed wing and 1,000 ft. for rotary wing aircraft. Aircraft overflights below 3,000 ft. for fixed wing and 1,000 ft. for rotary wing aircraft are not authorized during the migratory waterfowl season (15 Nov - 31 Mar) due to the increased potential of Bird Aircraft Strike Hazard and disturbance to overwintering waterfowl. Exceptions to the restrictions must be requested and submitted in the project plan, reviewed by the Aviation Safety Officer, and approved by the NAS Environmental Review Board.

3.8.4.2 R-4005.

R-4005 is divided into the following four sectors to accommodate multiple exclusive use flights.

1. R-4005 North - ATR operates Hooper Target Complex and six radar/optical/communications sites within R4005N. It consists of a configuration of five visual targets and is used primarily for aircraft RDT&E. The primary target, known as center main target, is a large billboard centered at N38°12'54," W076° 18'43" on NHK R-146 at 6.1 DME. Four smaller pyramid-shaped peripheral targets surround the center main target.
2. R-4005 South - Contains Hannibal Target located on the NHK R-150 at 19.1 DME. A surface restricted area with a radius of 600 yards centered on N38°02'18" by W076°09'26" surrounds the target. The WWII Liberty ship is scuttled on a sandbar oriented 341°/161° True.
3. R-4005 West - Overlies WOLF.

4. R-4005 Southwest (ROCKFISH) - Overlies the Potomac River, Contains UA operations from the surface up to 3,500 feet. R-4005SW (ROCKFISH) may be scheduled exclusive use at all altitudes except between 3,500 feet and 5,500 feet MSL. Flights west of NHK R210 shall remain at 3,000ft MSL or lower. Flights shall comply with noise abatement requirements of paragraph 3.6.

WARNING

UA routinely transit R-4005SW at 3,500 feet MSL between WOLF and the UA operating area.

3.8.4.3 R-4006N (NORTH TRIANGLE).

R-4006N (NORTH TRIANGLE) is a triangular subdivision of R-4006 bounded on the West and East by the R-4006 boundaries and on the South by the 313 radial from Salisbury. The floor of the area is 3,500 ft. MSL and the ceiling is 7,500 ft. MSL. Within the same lateral confines, and between 10,000 ft. MSL and FL850 resides the NORTH TRIANGLE area.

3.8.4.4 R-4006S (PIKE).

R-4006S (PIKE) is a subdivision of R-4006 bounded on the North by R-4005SW (ROCKFISH), on the East by R-6609, on the South and West by the R-4006 boundaries. The vertical limits of the area are between 3,500 ft. MSL and 24,999 ft. MSL. The airspace of R-4006S (PIKE) between 3,500 ft. MSL and 6,000 ft. MSL is the primary UA operating area. Scheduling R4006S (PIKE) above 15,000 ft. MSL requires prior coordination with Air Operations and Naval Test Wing Atlantic.

3.8.4.5 R-6609.

R-6609 contains the former Tangier Island Target which consists of two scuttled cargo ships, 415 feet long located at N37°47.9' by W076°03.8' on NHK R-161 at 34 DME. This target was formerly used for air-to-ground exercises using practice bombs and rockets.

3.8.4.6 R-4007.

R-4007 may be scheduled exclusive use 24 hours in advance with ATCFO approval. R-4007 is normally scheduled only for the following events: weapons separation, "X" aircraft (aircraft w/o an airworthiness certificate), NVD operations without external aircraft lighting, UA's, or as previously coordinated with the ATCFO.

NOTE:

NAS Patuxent River Class D airspace ceases to exist with activation of R-4007.

3.8.4.7 EXCLUSIVE USE PROCEDURES.

1. Pilots must request exclusive use from Central Schedules and reaffirm exclusive use on initial radio contact with Check-In and PAX ADVISORY/BAYWATCH.
2. Flights shall inform PAX ADVISORY/BAYWATCH upon initial contact of the specific area, altitudes, and operating frequency required. The area will become "exclusive" upon receiving clearance to "operate within (area) exclusively." Aircrews requesting exclusive use airspace should limit the altitude block requested to only that, which is necessary to perform their mission.
3. Flights may request, as necessary, up to three adjoining areas/sectors for exclusive use.
4. Only the participating project aircraft and no others shall utilize the exclusive use area.
5. PAX ADVISORY/BAYWATCH shall inform all PXOA flights when particular areas are under exclusive use rules. All aircraft must acknowledge exclusive area calls from PAX ADVISORY/BAYWATCH prior to activation. When the exclusive use involves internal airspace divisions, acknowledgment will be requested and provided in the form of an "IDENT." If the exclusive use places a restriction to de-conflict with FAA-controlled traffic (e.g. an airspace floor or ceiling), a verbal roll-call acknowledgement is required.

3.8.4.8 TARGET PROCEDURES.

Users of the PXOA shall become familiar with the procedures established in references (x) and (y) and the respective Range Safety (RS) standard operating procedures (SOP) before utilizing the requested target/firing range(s). In addition, the following procedures shall be adhered to:

1. NAWCAD aircraft should ensure all missions are scheduled. If mission is not scheduled, then pilot shall inform PAX ADVISORY/BAYWATCH Check-In of intentions.
2. Due to the close proximity of Patuxent's Class D airspace, no unscheduled runs on Hooper Target in R-4005N will be authorized.
3. Outside users are not authorized to make unscheduled runs on any targets.
4. Unless exclusive use of the target or area has been authorized, the pilot shall notify PAX ADVISORY/BAYWATCH prior to commencing runs on any target and use the following radio transmissions:
 - a. When commencing a run on the target, "(Callsign), inbound run on (target) at (altitude) from the (compass position)."
 - b. Aircraft shall call clear of target. "(Callsign), clear of (target)."

5. PAX ADVISORY/BAYWATCH shall ensure that, if multiple aircraft are operating on the same target, all runs are in the same direction and aircraft have acknowledged all traffic calls.
6. Inbound legs to Hannibal target are as follows:
 - a. From the Southwest; Heading 045.
 - b. From the Northeast; Heading 225.
 - c. Aircraft shall not spill out of R-4005S below 3,500 feet without coordination with PAX ADVISORY/BAYWATCH.

3.8.5 SPIN AREAS.

Refer to Illustration 8 for depiction of the spin areas. Specific spin area location and dimensions are as follows:

1. The North Spin area is located on the NHK R-105 at 25 NM (N38°15.0, W075°53.0). It is 5NM in diameter from 3500 ft. MSL to FL850 when in use or as specified by PAX ADVISORY/BAYWATCH.
2. The South Spin area is located on the NHK R-186 at 27 NM (N37°50.0, W076°23.0). It is 5 NM in a diameter from 3500 ft. MSL to FL850 when in use or as specified by PAX ADVISORY/BAYWATCH. South spin shall not be combined with R-6609 for purposes of exclusive use.
3. The Triangle Spin area is defined by the lateral confines of R-4006N (NORTH TRIANGLE). The airspace may be activated between 10,000 ft. MSL and FL850.

3.8.6 IN-FLIGHT REFUELING PATTERN.

Illustration 8 depicts the primary and alternate in-flight refueling pattern within the PXOA to be flown at 16,000 feet, unless otherwise coordinated with Central Schedules or PAX ADVISORY/BAYWATCH. All airborne tankers should use the prescribed tanking pattern to the maximum extent possible.

1. The primary tanker pattern is a left-hand, racetrack pattern on the BRV VORTAC R-123 from 49-68 DME. When R-6609 is reserved for exclusive use at or above the tanker's altitude, the tanking pattern will be shortened so as not to extend southeast of Smith Point. The tanker track is designed to avoid the South Spin Area. Minor track alterations and altitude deviations are authorized to maintain separation from the South Spin Area, exclusive use airspace and PXOA boundaries.

2. The alternate tanker pattern is a left-hand, racetrack pattern centered on the HCM VORTAC R-045 from 35-75 DME with the NE (045°) leg east of the radial and the SW (225°) leg west of the radial.

3.8.7 CHESSIE ATCAA.

3.8.7.1 GENERAL.

1. ATCAA is designated to accommodate flight operations not compatible with the basic ATC system. To supplement PXOA, aircraft have at their disposal the airspace designated as "CHESSIE ATCAA" depicted in Illustration 10.

2. CHESSIE was developed exclusively for NAS Patuxent River ATC and is subdivided into A, B, and C areas. This ATCAA is not to be construed in any way as a restricted area. This area is part of the national Class A airspace structure, and as such, the same rules apply as in any Class A airspace operation.

3.8.7.2 CHESSIE A, B, AND C OPERATING PROCEDURES.

1. CHESSIE ATCAA is available on a first-come, first-served basis, contingent upon coordination by Patuxent TRACON with Washington Center.

2. Scheduling the CHESSIE ATCAA is accomplished through Central Schedules. Pilots shall activate CHESSIE by contacting Check-In on 369.9 MHz (local button 17) or Patuxent ATC at COMM: (301) 342-3740 or DSN 342-3740 at least 30 minutes, but not more than 1 hour prior to activation time. CHESSIE A and B ATCAA are not available from 0900-1030L and 1400-1500L.

3. Known delays of scheduled use of CHESSIE ATCAA must be coordinated with Patuxent ATC as early as possible.

NOTE:

Patuxent ATC will cancel the request for CHESSIE ATCAA if aircraft departure or arrival is delayed by 15 minutes. Patuxent ATC has a commitment to immediately notify Washington Center when CHESSIE is no longer required. Therefore, it is imperative that pilots cancelling use of CHESSIE contact ATC as soon as possible.

4. Approval for operations is contingent upon Washington ARTCC having normal, full radar coverage of the area and projected IFR traffic density that will accommodate use by NAS Patuxent River aircraft. Operating transponder with Mode C capability is mandatory for operations in CHESSIE.

5. Operations in CHESSIE A and B are confined to any three consecutive flight levels between FL270 and FL410 with the lowest flight level requested being an odd flight level. Only one altitude block may be activated at a time.
6. Operations in CHESSIE C are confined to any three consecutive altitudes between FL180 and FL500.
7. CHESSIE C need only be activated when BAYWATCH is operational.
8. Pilots are responsible for remaining within the boundaries and assigned flight levels.
9. Commanding Officers and Officers-in-Charge shall assume responsibility for aircraft separation when less than standard separation is required between aircraft under their command [i.e. Military Assumes Responsibility for Separation of Aircraft (MARSA)], reference (a). They are also responsible for thoroughly briefing flying units on correct procedures for entrance and conduct in the ATCAA.
10. When CHESSIE ATCAA is in use, Washington Center will not clear non-participating aircraft into the area without providing full coordination with the NAS Patuxent River TRACON at least ten minutes prior to entry. Washington Center will not change assigned flight levels or paths of transiting aircraft without prior approval from Patuxent TRACON.
11. Aircraft experiencing lost communications shall squawk 7600 and descend to the lowest assigned CHESSIE altitude for reentry into PXOA. Upon reentry, follow procedures set forth in section 5.14.

3.8.8 WARNING AREAS (W-386).

1. The warning areas are located east of Cape Henlopen, Delaware, and extending south to Cape Charles. Refer to Illustration 11 for warning area depiction. Subareas are scheduled through the Fleet Area Control and Surveillance Facility Virginia Capes Operating Area Coordinator (FACSFAC VACAPES) (FFVC) at COMM: (804) 433-1216/8 or DSN 433-1216/8. Users shall comply with the policies and procedures contained in reference (w), and are not considered participants or a part of saturation unless delaying.
2. VFR transition of the PXOA to/from the off-shore warning areas may be authorized for station based aircraft on a case-by-case basis. When authorized, transition shall be at a VFR altitude below 18,000 feet and should remain level during the transit.
3. All aircraft shall check-in/out with VACAPES, callsign "GIANT KILLER." Aircraft shall check-in with Patuxent ATR, callsign "ECHO" when the MRU has been delegated the Airspace from GIANT KILLER.

4. All IFR aircraft entering/exiting warning areas from NAS Patuxent River, through Potomac TRACON or Washington Center airspace, shall have an IFR flight plan on file.
5. All IFR aircraft entering/exiting warning areas to/from NAS Patuxent River will be routed as follows:
 - a. Low altitude transit stereo route, IFR at or below 5,000 feet from and 6,000 feet to the field, is available during airfield operating hours and can be obtained by contacting NAS Patuxent River Flight Planning. Aircraft on these routes are considered participants in the PXOA during the transit, shall maintain VMC, and require a check-in brief.
 - b. High altitude transit stereo routes, IFR at FL210 from and FL220 to the field, are available. Transits at different altitudes should be requested through Clearance Delivery. Aircraft on these routes are considered participants in the PXOA during the transit, shall maintain VMC, and require a check-in brief.
6. All VFR aircraft entering/exiting Warning Areas to/from NAS Patuxent River will be coordinated real time via FFVC, Potomac TRACON or Washington Center, and Patuxent TRACON.

3.8.9 UNMANNED AIRCRAFT SYSTEMS (UA).

3.8.9.1 GENERAL.

1. UA operations shall be conducted as per reference (a). Procedures in this manual shall apply to UA unless specific UA procedures have been delineated.
2. UA operations shall be conducted within active SUA unless operating with an approved FAA Certificate of Authorization (COA).
3. For UA operations, the following equipment is considered the minimum essential for entry into the PXOA.
 - a. Fully operational primary and secondary control links.
 - b. Operating IFF transponder to allow for ATC tracking.
 - c. Operational collision avoidance lighting.
 - d. Operational display of UA position to UA operator/pilot in command.
 - e. Operational and tested lost link behavior/ return home feature.

f. Two-way radio contact between the UA control station and PAX ADVISORY/BAYWATCH.

4. The Air Operations Officer may approve a waiver to the criteria listed above on a case-by-case basis. If UA equipment requirements cannot meet the provisions of listed above, the following procedures shall be followed:

a. UA operator shall request R-4005W exclusive use, surface to 2,000 feet.

b. Two-way radio communications with UA operator and ADVISORY/BAYWATCH will be maintained.

c. Any request for a higher altitude within R-4005W or for operations in an area other than R-4005W shall require the approval of the ATC Facility Watch Supervisor. Approval will be based upon traffic conditions and controller workload.

5. Continuous UA operations over a single neighborhood or populated area should be avoided as much as practicable. Although UA are not loud in traditional sense of aircraft, their continued presence and low level background noise can generate noise complaints.

6. Unless a UA operation is under the authority and ownership of a tenant activity responsible to NAS Patuxent River or NAWCAD, the Test and Evaluation Group reserves the right of final concurrence on all test evolutions (including test plan approval), training, and operational flights of a UA. NAS/NAWCAD representative shall be on site at WOLF to provide this oversight authority.

3.8.9.2 UA OPERATIONS IN R-4006S (PIKE).

1. The UA Operating Area has been incorporated into R-4006S (PIKE) and no longer exists. UA normally operate in this area between 3,500 and 6,000 feet. Activities shall schedule R-4006S (PIKE) for UA operations with Central Schedules using the normal scheduling process.

2. UA operations in R-4006S (PIKE) originating or terminating at Webster Field shall follow the UA procedures in Chapter 10.

3. UA transiting R-4005SW (ROCKFISH) between WOLF and R-4006S (PIKE) shall not climb above 3,500 feet until within the confines of R-4006S (PIKE).

3.8.9.3 UA ROUTES.

1. To alleviate noise concentration over the Virginia land mass, UA routes have been developed within the PXOA(R-4005/6). Flight outside these profiles is restricted to transitioning to/from the profile, entry into the landing pattern, or to a pre-designated ditching area under emergency

conditions. When specifically coordinated, UA may operate on the UA routes depicted in Illustration 22 concurrently with manned aircraft in R-4005/6.

2. When operating on the UA routes, the following procedures shall be used:

a. UA routes shall be scheduled through Central Schedules and specified on the daily flight schedule.

b. Normal operating altitudes on the UA routes are 3,500-6,000' MSL unless previously coordinated with the ATCFO.

c. When a UA is operating on a UA route, PAX ADVISORY/BAYWATCH shall make a broadcast on all frequencies. Manned aircraft shall provide PAX ADVISORY/BAYWATCH with advance notice of any descent to an altitude below 6,500' MSL if their flight track will place the aircraft within 5 NM of the R-4006 boundary. This notice will allow PAX ADVISORY/BAYWATCH time to issue a timely traffic call or position report concerning the UA.

3. UA route operations originating or terminating at Webster Field shall Webster Field shall follow the UA procedures in Chapter 10.

3.9 LOCAL OBSTRUCTIONS.

Local obstructions are depicted in the local approach plates and sectionals.

3.10 DESIGNATED PARKING AREAS FOR AIRCRAFT LOADING AND OFFLOADING HAZARDOUS MATERIALS.

See 10.3.6 for more information.

3.11 VEHICULAR AND PEDESTRIAN TRAFFIC.

3.11.1 DEFINITIONS.

1. Movement area - The runways, taxiways, and other areas of an airport which are utilized for taxiing, hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. Specific approval for entry onto the movement area must be obtained from ATC. No person may operate a vehicle on a movement area without a current airfield operator's license.

2. Non-movement area - Access roads and ramp areas not under the control of ATC.

3. Restricted movement area - An area within which the operation of aircraft and/or vehicles is restricted.

3.11.2 PEDESTRIAN TRAFFIC.

Pedestrian traffic on movement areas is prohibited without AFM and ATC approval. Approved pedestrians require radio contact with Tower.

3.11.3 VEHICULAR TRAFFIC.

3.11.3.1 ACCESS.

Limited vehicle access to the airfield is required to minimize the potential for FOD. Vehicle entry and exit to flight lines shall be through access roads and designated gates.

3.11.3.2 GENERAL.

1. Vehicles on aircraft movement and ramp areas shall be restricted to that necessary for airfield and aircraft operations.
2. Vehicles shall make maximum use of the base road network except when access through the airfield is required to reach destination.
3. All personnel shall ensure that their vehicles are FOD free prior to entering any aircraft movement area.
4. At no time are vehicles allowed to randomly drive on the infield or grass area.
5. Private vehicles are not allowed on the movement areas. The AFM and ATC may grant exceptions on a case-by-case basis. Private vehicles authorized for use on the movement areas shall utilize hazard lights or check out a flashing beacon from GEM at building 426.

3.11.3.3 COMMUNICATION.

1. Vehicular traffic operating on airfield movement areas shall be radio equipped or escorted by a radio equipped vehicle. Escort services can be obtained by contacting Flight Planning at COMM: (301) 342-3836/7 or DSN 342-3836/7.
2. Radio contact must be established and maintained with Tower on 138.975 MHz Fire Department units will utilize the Enterprise Land Mobile Radio (ELMR) Crash channel for all communications with ATC. Strict adherence to radio discipline and procedures is mandatory, especially during an emergency. Light signals shall not be used for controlling vehicles unless the Tower experiences a radio equipment outage or otherwise coordinated.
3. Radio call signs on the airfield net shall be per reference (k) or as assigned by the AFM. Users of portable radios shall identify type of vehicle on initial contact with Tower.

4. All vehicles shall receive specific approval, prior to entry onto the movement area from the Tower and report when clear of the area.

WARNING

All vehicles should be alert for calls by tower on HELO/VTOL area activation and avoid these areas while in use.

Emergency vehicles shall obtain Tower clearance to operate on any movement area without exception.

3.11.3.4 RIGHT-OF-WAY.

1. Emergency vehicles, when displaying red lights and/or siren, have the right-of-way over all vehicles, taxiing aircraft, and personnel.
2. Vehicles may not approach parked aircraft closer than 20 feet, unless a qualified director is present.
3. No vehicle shall be stopped, parked, or driven in the danger area of an aircraft while the engines are in operation. The danger area for turbine-driven aircraft consists of an area the width of the wing span, 50 feet forward of the engine intakes and 200 feet aft of the exhaust cones. For propeller-driven aircraft, vehicles shall stay clear of areas 50 feet forward and 100 feet aft of the propeller arcs.

3.11.3.5 VEHICLE SPEED LIMITS.

The following maximum speed limits shall be observed at all times:

1. Emergency vehicles - as required.
2. Vehicles/aircraft in tow - 5 mph.
3. Vehicles operating in aircraft parking area - 15 mph.
4. In the vicinity of VQ-4: 15 mph.
5. Within 25 feet of aircraft: 5 mph.
6. All other areas: 25 mph.

WARNING

Increased attention should be given to vehicle speeds when icy conditions exist.

3.11.3.6 VEHICLE MARKINGS/LIGHTING.

1. Vehicles regularly used on the airfield shall be marked with identification numbers and painted aviation orange.
2. Vehicles not appropriately marked for airfield use shall carry a flag, three-foot square, attached to a staff and flying above the vehicle whenever operating on the airfield. The flag consists of international orange and white squares not less than one foot on each side and is available in Flight Planning.
3. Emergency vehicles will have a red rotating beacon.
4. Escort, "FOLLOW ME", or utility vehicles will have a yellow rotating beacon.
5. Airfield sweepers and vehicles towing or escorting shall operate yellow, rotating beacons both day and night.
6. Vehicles operating on the airport between sunset and sunrise shall use low beam headlights.
7. Vehicles moving during the day or night, shall have the yellow rotating beacon on, if so equipped. Vehicles not equipped with beacons shall have emergency flashers in operation. Portable yellow rotating beacons are available for use at Ground Electronics Maintenance building 426.

3.11.3.7 VEHICLE OPERATOR QUALIFICATION.

The following are required of all vehicles/operators including personnel operating ground support equipment (GSE) and grass mowers:

1. A valid state driver's license.
2. Valid airfield license which is obtained annually as per NASPAXRIVINST 3721.2 which establishes the minimum training requirements necessary for all airfield drivers. Classes and instructor designation can be coordinated with the Airfield Vehicle Operator Instructor Course (AVOIC) Program Manager, located at AFS.

3.11.3.8 TOWING AIRCRAFT.

1. Prior to towing aircraft on movement areas, permission must be obtained from Tower. Tower will issue instructions for crossing all runways.
2. Aircraft or vehicles shall not be left unattended on movement areas.

3. Aircraft using the scales in Hangar 111 may be towed through the helicopter line area with prior approval of HX21 Maintenance Control, at COMM: (301) 342-1961 or DSN 342-1961.

3.12 PRACTICE PRECAUTIONARY EMERGENCY LANDINGS (PPEL).

See Chapter 8 for Fixed Wing Course Rules.

3.13 RUNWAY USE PROGRAM.

1. When the wind is 5 knots or greater, the runway most aligned with the wind should be the active runway.
2. Runway 6 is designated the calm wind runway.
3. Intersecting runway operation minimums are 2,000 feet MSL ceiling and 4 SM visibility.
4. Wind component and traffic permitting, departures prior to 0800L shall use Runway 6 or 14.
5. Wind component and traffic permitting, arrivals after 2200L shall use Runway 24 or 32.
6. When the sustained crosswind component is greater than 15 knots, the duty runway shall be the runway most aligned with the wind. RDT&E projects requiring special runway operations shall be terminated if they result in a crosswind component of greater than 15 knots or a tailwind of greater than 5 knots on the duty runway. Waivers to this policy require approval from the Air Operations Officer in concurrence with the Navy Test Wing Atlantic NTWL Operations Officer.

3.14 FCLP AND PALS. See Chapter 8 for Fixed Wing Course Rules.

3.15 STOVL OPERATING PROCEDURES. See Chapter 8 for Fixed Wing Course Rules.

3.16 GLIDER OPERATIONS. See Chapter 8 for Fixed Wing Course Rules.

3.17 TOW BANNER DROP AREA. See Chapter 8 for Fixed Wing Course Rules.

3.18 SEAPLANE OPERATIONS.

On occasion, seaplane landings and takeoffs will be practiced in the seadrome area described in paragraph 1.1.3.8. Standard Federal Aviation Regulations (FAR), reference (1), for seaplane operations apply. All operations require prior coordination with Air Operations Department via the AODO at COMM: (301) 342-3836 or DSN 342-3836.

WARNING

Waterfowl migratory season commences 15 November and ends 31 March. Bird/aircraft strike hazards should be briefed before seaplanes and other water vehicles are allowed to operate in the seadrome.

3.19 LOCAL AIRPORTS/VFR CORRIDORS.

1. Civilian aircraft may use these corridors only under VFR conditions (1,000/3) with positive radio contact and clearance or prior approval from Patuxent TRACON. Refer to Illustration 12 for depiction of local airports and VFR corridors.

2. Civilian aircraft shall not operate above 800 feet MSL in the following areas:

a. Within a 1 NM radius of Chesapeake Ranch Airport and along a 1 NM wide corridor centered on the Nottingham VORTAC (OTT) 153-degree radial from the airport to the northwestern boundary of R-4007.

b. Within a 1 NM radius of Chandler Field and along a 1 NM wide corridor running from the western shore of the Potomac River (240-degree bearing from WOLF), thence to the southern tip of St. George's Island and thence on a heading of 090 degrees to Chandler Field.

c. Within a 1 NM radius of Cherry Field and along a 1 NM wide corridor outbound on the NHK R-210 until clear of R-4005 or a 1 NM wide corridor running 274 degrees magnetic from Cherry Field to Piney Point, thence either 336 degrees from Piney Point to McKay's Beach and clear of R-4007, or from Piney Point outbound on the NHK R220 until clear of R-4007. Aircraft may depart Cherry Field to the west VFR if the area is clear of WOLF traffic.

d. Within a 1.5 NM radius of West St. Mary's Airport and along a 1 NM wide corridor running 272 degrees magnetic from West St. Mary's Airport direct to McKay's Beach and thence northwestward along the Potomac River until clear of R-4007.

e. Within a 1 NM radius of Cove Point LNG Heliport (OTT R-113/7 DME) and along a 1 NM wide corridor running north from the Cove Point LNG Heliport on the OTT VORTAC 152-degree radial until clear of R-4007.

f. Within a 1 NM radius of Wing Field and along a 1 NM wide corridor from the western shore of the Potomac River on a 250-degree bearing from Wing Field and thence to the southern tip of St. George's Island direct to Wing Field.

g. The Marshall VFR Corridor is a 1 NM wide corridor that starts at St. Jerome's Point and proceeds on a 318 degree bearing to West St. Mary's Airport, then on a 272 degree bearing to McKay's Beach and lastly, northwest along the Potomac River until clear of R-4008.

3. Civilian aircraft shall not operate above 1,000 feet MSL in the following areas:

a. Within a 1 NM radius of Piney Point Airport and along a 1 NM wide corridor running 336 degrees magnetic from Piney Point Airport to McKay's Beach and thence northwestward along the Potomac River until clear of R4007. Additionally, within a 1 NM corridor running along the NHK TACAN 220-degree radial from Piney Point to the Virginia shoreline until clear of R-4007.

b. Within a 1 NM radius of St. Mary's County Airport (NHK 293 at 7.5 NM) including an area within a 1.5 NM radius east of the airport's eastern boundary.

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CHAPTER 4

INSPECTIONS

4.1 GENERAL.

1. NAS Patuxent River Airfield Management (AFM) conducts routine inspections of the airfield surfaces, to include runways, taxiways, and parking ramps. AFM inspections include but are not limited to inspecting for FOD, clear zones, lighting, airfield marking and signage, pavement condition, airfield construction, BASH hazards, and the general status of the airfield. AFM serves as determining authority for usage of airfield surfaces.
2. AFM will report airfield conditions to ATC for dissemination via NOTAM or inclusion on the ATIS as appropriate.
3. AFM will periodically inspect aircraft parking aprons for unified facility criteria compliance, gear adrift, pavement conditioning to include marking requirements, lighting requirements, and general ramp condition of the parking ramp.
4. Squadrons/tenant commands shall report TFOA to airfield management/ATC immediately upon discovery so that a FOD sweep may be conducted on aircraft movement areas.
5. AFM may periodically close portions of the airfield for inspection to ensure safe operating conditions.
6. AFM may periodically inspect vehicles operating on aircraft movement areas for AVOC licensure, proper lighting and marking, and adherence to FOD free agreement.
7. AFS shall complete an airfield inspection no later than 0700L and report results to Airfield Management and ATC daily prior to 0730L. Additional inspections shall be conducted when directed by AFM or Tower. Flight Planning will maintain the inspection sheets for a period of six months or as required for accident related situations.
8. Per reference (f), airfield FOD walk downs are conducted on an as needed basis. Aircraft located in the vicinity of the area of the FOD walk down are prohibited from engaging auxiliary power units or engines and taxiing in movement and ramp areas.

4.1.1 CONSTRUCTION OR MAINTENANCE WORK ON PAVEMENT OR SAFETY AREAS.

1. AFM will determine whether safety waivers are required to be in place prior to the commencement of any construction or maintenance work on airfield pavements.

2. AFM will coordinate with ATC and NTWL to open, close, or modify the use of airfield surfaces during construction or maintenance work.
3. Airfield Management shall inspect any emergency repairs completed on aircraft movement areas to ensure safe operating conditions prior to reopening movement areas.

4.2 ROUGH/WAVY PORTIONS OF PAVEMENT/SAFETY AREAS.

The AFM will communicate the status of rough or wavy portions of pavement or safety areas to ATC for NOTAM or ATIS inclusion as necessary.

4.3 THE PRESENCE AND DEPTH OF SNOW, SLUSH, ICE, OR WATER ON RUNWAYS/TAXIWAYS.

The AFM will coordinate with ATC and Airfield Services (AFS) to conduct Runway Condition Readings during snow or freezing rain events, or as requested. Results will be forwarded to ATC for dissemination.

4.4 THE PRESENCE OF SNOW NEXT TO RUNWAYS/TAXIWAYS.

In the event that snow height presents a hazard to aircraft, AFM will coordinate with ATC to disseminate information via NOTAM or ATIS.

4.5 PARKED AIRCRAFT OR OTHER OBJECTS ON OR NEXT TO RUNWAYS/TAXIWAYS.

Violations of runway or taxiway clear zones will be reported via NOTAM, ATIS or other appropriate means. When applicable, AFM will acquire a NAVAIR safety waiver.

4.6 THE FAILURE OR IRREGULAR OPERATION OF AIRPORT LIGHTING SYSTEM.

Any failure or irregular operation of all or part of the airfield lighting system will be reported via NOTAM.

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CHAPTER 5

AIR TRAFFIC CONTROL

5.1 GENERAL.

5.1.1 AIR TRAFFIC CONTROL FACILITY CLASSIFICATION.

NAS Patuxent River ATC Facility (ATCF) is designated as a Class IVB Facility that provides ATC services and Special Use Airspace control services. Procedures for the control of air traffic are based on standard FAA/DOD guidelines as supplemented by Letters of Agreement (LOA) with adjacent FAA facilities.

5.1.2 TERMINAL.

Radar Approach Control (RAPCON) is a branch of the ATCF. The RAPCON (Patuxent Approach or Patuxent Departure) provides approach control services from Mon-Fri 0700-2300L and Sat-Sun 0800-1800L, regardless of airfield operating hours. Patuxent River ATCF has been delegated control jurisdiction, by the FAA, of airspace areas from the surface to 7,000-9,000 feet. See Illustration 7.

5.1.3 EN ROUTE.

1. NAS Patuxent RAPCON provides enroute control services to aircraft filed at or below 7,000/9,000 feet and on a route that will penetrate NAS Patuxent's area of jurisdiction.
2. The FAA provides enroute services for traffic operating within NAS Patuxent River RAPCON airspace outside of RAPCON hours of operation in section 1.4.

5.2 DESCRIPTION OF ATC SERVICES PROVIDED.

5.2.1 RAPCON.

NAS Patuxent River RAPCON provides ATC services in accordance with reference (q) as follows:

1. Sequencing of all arriving and departing aircraft.
2. Standard IFR separation between IFR aircraft.
3. Traffic advisories between IFR and VFR aircraft.
4. Traffic advisories between VFR aircraft and, as appropriate safety alerts.

5.2.2 TOWER.

The NAS Patuxent River Air Traffic Control Tower (ATCT) provides vehicles and aircraft with positive control on the naval airport's surface and within the NAS Patuxent River's Class "D" airspace. The ATCT is responsible for issuing clearances and information to aircraft and vehicular traffic operating on runways, taxiways, and other designated areas of the airfield and to aircraft operating within the Class D.

5.3 EMERGENCY PROCEDURES.

1. Any pilot experiencing an in-flight emergency situation should notify ATC as soon as possible in order to provide maximum ground reaction time. Pilots declaring an emergency shall be given priority handling by ATC. ATC shall immediately broadcast the emergency information over the ELMR crash channel to the immediate response alert standby (duty truck) and the Regional Dispatch Center (RDC), then activate the primary net of the ALERT PLUS system (i.e. "crash phone") and standing by. All other aircraft radio transmissions will be kept to an absolute minimum during emergency situations.

2. Anyone monitoring a base radio to which an aircraft indicates an emergency situation shall immediately report this fact to ATC. The report should include aircraft callsign, type and the radio frequency. Make the report by whichever of the following means is most effective and expeditious:

a. Base Operations (301) 342-3836/7 or by cellphone at (301) 684-0282.

b. ATC Radar Room – (301) 342-3740.

3. Immediately upon receipt of an aircraft emergency transmission, Flight Planning and/or Tower will activate the secondary net of the ALERT PLUS system (i.e. "crash phone"), giving all available information. Aircraft in emergency situations that do not require immediate landing may, with ATC approval, change from an assigned ATC frequency to contact their squadrons on tactical frequencies to receive emergency instructions. AFM will be notified.

4. Any pilot who becomes disoriented or lost should not hesitate to call NAS Patuxent River RAPCON on guard or any frequency in Table 5-1, or any other ATC facility and request assistance.

5.4 PROCEDURES FOR CIVIL OPERATIONS.

5.4.1 CROP DUSTING.

The ATC Facility Watch Supervisor may authorize crop dusting within NAS Patuxent River Class D Airspace. The activities are governed by Code of Federal Regulations (CFR) Part 137, Reference (e), and Letter of Agreement.

5.5 RESTRICTIONS AND PILOT/CONTROLLER ADVISORIES FROM PALS CERTIFICATION FINAL REPORT.

Air Traffic Control will conduct PALS certification as per criteria set forth from certification team.

5.6 LOCAL FREQUENCY CHANNELIZATION.

Local channelization numbers are used in lieu of frequencies for NAWCAD aircraft arriving/departing NAS Patuxent River. ATC will issue directives to aircraft to switch to local channel numbers as listed in Table 5-1.

Local Channel Frequencies		
Channel	Frequency (MHz)	Agency
4	336.4 / 120.6	NHK Ground
5	343.65 / 123.7	NHK Tower
6	250.3 / 121.0	NHK App/Dep
7	281.8 / 120.05	NHK App/Dep
8	354.8	NHK Advisory/BAYWATCH
9	270.8	NHK Advisory/BAYWATCH
10	362.6	NHK GCA
11	318.8	NHK GCA
12	348.0	NHK GCA

Table 5-1

NOTE:

All other channels are assigned by wing or squadron directives.

5.7 RADIO COMMUNICATIONS.

1. To alleviate frequency congestion and reduce repetitive transmissions, all pilots shall use the ATIS, frequency 322.425 MHz to obtain general airfield information. Operating times are normal field operating hours. ATIS message content and format will be:

- a. Airport identification.
- b. Current phonetic alphabet code.
- c. Coordinated Universal Time (UTC).
- d. Weather information consist of ceiling, sky conditions, visibility, obstructions to vision, wind direction and speed, air temperature, dew point, pressure altitude, and altimeter setting.

NOTE:

If ceiling, sky conditions, and visibility is greater than 5,000/5, it may be omitted from the ATIS broadcast.

- e. Landing runway/Arrivals in use.
- f. Helicopter pattern in use.
- g. Takeoff runway (if other than landing runway).
- h. NOTAMS affecting departures and arrivals.
- i. Other pertinent information (e.g. Low Level Wind Shear Alert System (LLWAS), braking action reports, frequencies in use, etc.).
- j. SAR Condition.
- k. BASH Code.
- l. A request for pilot acknowledgment of the current ATIS message upon initial contact.
- m. A repeat of the current ATIS phonetic alphabet code.

2. On initial radio contact with Ground Control, pilots shall state their callsign, type aircraft, position on the field, VFR or IFR, destination, anticipated time enroute (when VFR) and the ATIS code letter.

3. All aircraft operating within NAS Patuxent River Class D Airspace and Class E extensions shall use the UHF Tower primary frequency, 343.65 MHz or VHF 123.7 MHz.

NOTE:

If UHF equipped, aircraft shall use UHF tower frequencies to assist in maintaining awareness and reducing repetitive transmissions. If aircraft within the class D airspace are operating on UHF and VHF tower frequencies, tower will simulcast on the UHF and VHF tower frequencies. Aircraft requiring a frequency other than tower primary shall request the desired frequency on initial check-in with ATC.

5.8 OPERATION OF IFF/SELECTIVE IDENTIFICATION FEATURE (SIF).

When operating in the PXOA and the helicopter operating areas, aircraft transponders shall be on Mode 3/C with ATC assigned discrete beacon codes.

5.9 IFR DEPARTURES.

1. NAS Patuxent River currently has two Standard Instrument Departures (SIDs) established for aircraft requesting high altitude departures that transit the PXOA: SWABY and SBY. Departure instructions will be as published unless otherwise dictated. An ATC brief is required for all departures transiting the SUA.

NOTE:

SIDS are not authorized departures off RWY 02/20.

2. Standard departure instructions for all other IFR Departures are fly runway heading and climb and maintain 3,000 feet, expect requested altitude (RAL) 10 minutes after departure.
3. A GCA clearance is an IFR clearance for aircraft requesting an IFR departure into the PAR/Surveillance Approach (ASR) pattern. Normal altitude for a ground controlled approach (GCA) box is 1,600 feet.
4. The Instrument Pattern clearance is an IFR clearance for aircraft requesting an IFR departure into the navigational aid (NAVAID) pattern. Normal altitude for the instrument pattern is 2,500 feet.
5. ADDAM departures are established to all aircraft to climb VFR-On-Top (OTP) into the SUA on an IFR clearance during periods of inclement weather, reduced visibility or IFR training. The ADDAM departure may only be requested with Clearance Delivery and may not be filed with Base Ops or via a DD-175.

5.10 IFR APPROACHES.

5.10.1 RADAR APPROACHES.

NAS Patuxent River RAPCON is available for approaches during published airport operating hours. Radar approaches are available to all runways except runway 2/20. Briefings on radar approach patterns and procedures are available from ATC at COMM: (301)342-3740 or DSN 342-3740.

5.10.2 PRACTICE INSTRUMENT APPROACHES.

Practice instrument approaches are provided on a workload-permitting basis. However, in view of the density and complexity of traffic between 0800-1700L, activities are encouraged to conduct practice instrument approaches outside these hours.

5.11 AIRCRAFT PRIORITY.

ATC service is normally provided on a first-come-first-served basis in order to ensure a safe, efficient sequence of aircraft. When traffic conditions dictate, the following priority sequencing will be used:

1. Emergencies.
2. Active SAR/Lifeguard/MEDEVAC aircraft.
3. Glider landings (Off tow).
4. TACAMO Alert aircraft departures.
5. IFR arrivals/departures and practice approaches.
6. SVFR/VFR arrivals/departures and practice approaches.

5.12 FUEL RELEASE.

Fuel release shall be accomplished at or above 6,000 feet AGL and performed, except in an emergency, in the PXOA over water. All fuel releases must be reported to PAX ADVISORY and/or BAYWATCH/MRU as soon as practicable. Type aircraft, approximate altitude, location, and estimated amount of fuel released must be reported.

5.13 MINIMUM FUEL.

The term "minimum fuel" is advisory in nature and does not require pattern priority. If priority is required to ensure a safe landing, the pilot shall declare an emergency. Aircraft returning to NAS Patuxent River with minimum fuel shall notify ATC upon initial contact.

5.14 LOST COMMUNICATIONS.

1. In the event of lost communications aircraft should squawk 7600 and carry out standard procedures per Flight Information Handbook (FIH).
2. Aircraft experiencing lost communications can expect ATC to attempt contact on primary UHF Guard (243.0 MHz), VHF Guard (121.5 MHz), and the last assigned ATC frequency.

5.14.1 DEPARTURES.

Aircraft will not be allowed to depart without two-way radio capability unless previously coordinated and approved by ATC.

5.14.2 VFR LOST COMMUNICATIONS.

1. Fixed-wing aircraft shall enter the pattern at the initial, rock wings or blink landing/navigation lights while flying down the active runway at break altitude. Aircraft may also enter the pattern via High Key. Tower will use light gun signals as specified in the DoD FLIP planning document.

2. Rotary-wing aircraft.

a. If operating in the East, South, or West Helo Op Areas, make a standard entry to the field using the Solomons Bridge Arrival, paragraph 9.5.1.1, and, while flashing landing lights, proceed to the B/E pad via taxiway E. Do not cross the extended centerline of runway 14-32. Tower will use light gun signals as specified in the DoD FLIP planning document.

NOTE:

Lost communications aircraft returning from the East Helo Op Area should transit via Cove Point, remaining clear of KNHK Class Delta until reaching Solomons Bridge.

b. If operating in R4005, R4006, R6609, or returning from Webster field, make a standard entry to the field using the Cross Field Arrival, paragraph 9.5.1.2, and, while flashing landing lights, proceed to the A/E pad. Aircraft with an external load shall remain feet wet and south of the arrival corridor for runway 32 and hold feet wet until cleared by tower. Once cleared to land (solid green light gun), aircraft with external loads shall cross Johnson Road between the lights on the approach end of runway 32 and proceed to the A/E pad for landing. Aircraft operating in

4006 without access to R4005/R6609 shall remain clear of KNHK Class Delta, proceed, via Cove Point, to the Solomons Island Bridge, and recover via the procedures in 5.14.2.2.a.

c. If lost communications occur after entering the Class D airspace, proceed via last clearance. If clearance to cross a runway approach corridor was not received, hold short as depicted in illustrations 3 and 4. Tower will use light gun signals as specified in the DoD FLIP planning document.

d. After landing, hold until cleared to taxi by tower. If runway crossing is required to reach the ramp, hold short of each runway until cleared across. Tower will use light gun signals for taxi and crossing instructions. If signals are not recognized or the aircraft does not respond, the tower will coordinate for a "follow me" vehicle or a tow.

NOTE:

River Mouth and Gold Coast arrivals are not authorized for helicopters experiencing lost communications.

5.14.3 IFR LOST COMMUNICATIONS.

Unless instructed otherwise, aircraft experiencing lost communications while being vectored to a PAR or ASR approach in IMC should maintain 2,500 feet MSL or last assigned altitude, whichever is higher, and execute a TACAN or GPS approach to the active runway at NAS Patuxent River. Aircraft not equipped with TACAN or GPS approach capability should execute a non-directional beacon (NDB) approach to Runway 06 or proceed with intentions previously coordinated with the controller.

NOTE:

Pilots are advised to use extreme caution at all times and to call station operations upon shutdown to ensure their flight plan is closed out.

5.14.4 MISSED APPROACH/CLIMB-OUT PROCEDURES.

Missed approach procedures shall be conducted as outlined in current FLIP (Terminal) Instrument Approach Procedures. PAR/ASR missed approach procedures are as directed by Patuxent RAPCON. The expected PAR/ASR missed approach procedures are to climb on runway heading to 1,600 feet MSL.

5.14.5 MINIMUM SAFE ALTITUDES.

Minimum safe altitude within 25 NM and emergency safe altitude within 100 NM of NAS Patuxent River are published in current FLIP (Terminal) Instrument Approach Procedures.

5.15 UA OPERATIONS.

Requests for UA operations other than as defined in this publication should be referred to the UA Airspace Access Coordinator via Base Operations at (301) 342-3836.

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CHAPTER 6

TRANSIENT AIRCRAFT

6.1 ACCOMMODATIONS AVAILABLE.

6.1.1 PPR.

NAS Patuxent River is a PPR airfield. Aircraft landing at NAS Patuxent River or WOLF must have prior hosting arrangements with base operations or a local tenant activity and receive a PPR number either from NAS Patuxent River Air Operations, COMM: (301) 342-3836 or DSN 342-3836, or the host activity.

6.1.2 PARKING.

1. Hosting activities are responsible for arranging transient aircraft parking.
2. Only aircraft hosted by NAS Patuxent River Air Operations or aircraft previously approved by the AFM will be parked at the Air Operations ramp. Wide-body aircraft will be required to be hosted by a squadron or tenant command.
3. To reduce safety hazards and noise levels, aircraft at the Air Operations ramp shall secure engines and turbine powered auxiliary power units as soon as possible after parking. External power will normally be used while engines are secured.

6.1.3 SERVICING.

1. Fuel/oil shall not be issued until the transient pilot provides DOD fuel card. If the fuel card is unavailable the pilot must provide UIC/DODACC, with single code and funding code. Additionally, the pilot must provide POC of requesting activity, phone number, and address.
2. Refer to section 1.2 for more information on services and facilities available.

6.1.4 MISCELLANEOUS SERVICES.

1. Station telephones with DSN service are available in the Flight Planning Office.
2. Naval message services are available through the NAS Patuxent River CDO Office. NAS Patuxent River CDO can be reached at COMM: (240) 731-7527.

6.1.5 BILLETING AND MESSING.

Navy Gateway Inns and Suites (NGIS) facilities are normally available for transients. The hosting squadron should assist transient crews in obtaining the required quarters by calling COMM: (301) 342-3601 or DSN 342-3601. There are limited messing services available.

6.2 TRANSPORTATION.

1. On station transportation is provided by NAS command or host activity duty driver when available.
2. Commercial bus and taxi service is available near the main gate.
3. Enterprise Rental Car agency is available for automobile delivery on base by calling (301) 866-9500.

6.3 PASSENGER SERVICE.

1. A passenger is defined as any individual traveling in an aircraft that is not a member of the assigned crew. Clearance of passengers in military aircraft will be per reference (a) and (aa).
2. NAS Patuxent River does not meet the requirements to operate as a passenger/cargo air service terminal per reference (bb). The hosting activity must coordinate passenger and cargo services.
3. The pilot-in-command is required to deposit an accurate list of crew and passengers aboard the aircraft with Host Squadron prior to departure. Aircraft making a stopover flight shall leave a corrected manifest as required by reference (a).

6.4 DISTINGUISHED VISITORS.

1. Distinguished Visitors (DVs) are extended maximum courtesy and cooperation. Aircraft commanders transporting DVs will ensure that flight plans reflect the highest rank on board.
2. Aircraft inbound with DVs aboard should contact Flight Planning 302.55 MHz, 15 to 30 minutes prior to arrival.
3. Flight Planning shall notify the following of the ETA/ETD of dignitaries:
 - a. Air Operations Officer or AFM.
 - b. ATC Facility Watch Supervisor.

- c. Protocol Office.
 - d. CDO.
4. Aircraft transporting DVs should expect parking at the Air Operations Ramp.

6.5 PERSONNEL ON ORDERS.

Personnel on orders shall report to the NAS Patuxent River Command Duty Officer (CDO) for required endorsements, COMM: (301) 342-1095 or DSN 342-1095.

6.6 CUSTOMS/AGRICULTURE SERVICES.

1. NAS Patuxent River is designated as a United States Limited Port of Entry. As such, customs/agriculture inspections are provided for U.S. military flights with U.S. military personnel only.
2. It is the responsibility of the parent activity and the pilot to comply with entry requirements in reference (a). U.S. customs, immigration, and agriculture inspections are available with 24 hours prior notice.
3. The AODO shall notify the Customs coordinator of the ETA and parking intentions of inbound aircraft requiring customs service.
4. Flights returning from outside CONUS should ensure that all refuse is placed in a double plastic waste bag and given to the Customs Inspector.

6.6.1 FOREIGN AIRCRAFT STAGING.

1. Arriving foreign aircraft must receive prior approval from the Chief of Naval Operations (CNO), Navy Foreign Liaison Office (N2L), per reference (cc). NAS Patuxent River may furnish normal logistics support such as fueling, berthing, and messing.
2. Upon arrival of each foreign aircraft, the AODO shall notify the NAS Patuxent River CDO of all pertinent information. Accounting data for support should be included in the authorization message from the CNO.

6.7 FLIGHT RATIONS.

Flight rations are not provided on the installation due to the limited galley/dining facilities. It is recommended that flight crews plan accordingly.

6.8 OBTAINING REGISTERED PUBLICATIONS NECESSARY FOR FLIGHT.

Flight information publications and charts are available for planning. Publications are not available for issue.

6.9 TEMPORARY STOWAGE OF REGISTERED MATERIAL AND WEAPONS.

There are no procedures for stowing registered material in the installation.

6.10 FAA FLIGHT INSPECTION PRIORITY.

FAA Flight Inspection aircraft shall be given priority for refueling and servicing over routine transient aircraft.

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CHAPTER 7

AIRCRAFT CRASH AND RESCUE

7.1 CRASH AND RESCUE BILL.

1. Reference (dd) contains the crash and rescue bill, which includes detailed instructions concerning station crash and rescue procedures.
2. Crashes occurring on the field will cause that portion of the field to be closed. All unauthorized personnel shall remain clear.

7.1.1 IMMEDIATE RESPONSE ALERT/CRASH CREW.

1. In accordance with reference (dd) an immediate response alert standby (duty truck) shall be maintained at all times when landings and takeoffs are being conducted. This alert shall be maintained at the fire station and will respond immediately to an emergency. ATC will request the duty truck by contacting the RDC via the ELMR crash channel in accordance with reference (c).
2. Emergency arrestments are an alert situation requiring all equipment to respond.
3. Extra-hazardous flight operations are those which have increased potential for an aircraft mishap. Determination of whether an activity is conducting extra-hazardous flight operations is the responsibility of the Commanding Officer or Officer in Charge. Station Commanding Officers, Operation Officers, Flight Test Directors, Commanding Officers of Tenant Commands, and Fire Chiefs should maintain close coordination in order that the Aircraft Rescue and Firefighting (ARFF) organization can properly prepare for such operations. Such preparations may include, but are not limited to, stationing a major ARFF vehicle at the site of the extra hazardous operation in order to immediately respond to an unannounced emergency. This includes but is not limited to; project arrestments at any gear, Mk-7 operations, TC-7 operations, and simultaneous dual aircraft hot refuels. However, one truck can stand by when Mk-7, TC-7, and refueling operations are being conducted simultaneously.
4. Movement of aircraft including landings and takeoffs with hazardous cargo are situations that require a stand-by truck be positioned on the field. After the aircraft lands, the crash truck will follow the aircraft to the unloading area and stand by during unloading and loading.

7.1.2 AIRCRAFT CRASH ALERT NETWORKS.

1. The primary net of the ALERT PLUS system (i.e. "crash phone") is activated by the control tower. The stations on the primary crash phone circuit are as follows:

- a. Control Tower.
 - b. Radar room.
 - c. Helicopter Search and Rescue (SAR).
 - d. Flight Planning.
 - e. Naval Medical Clinic (Quarterdeck).
2. Flight Planning activates the secondary net of the ALERT PLUS system (i.e. "crash phone"). The stations on the secondary crash phone circuit are as follows:
- a. Flight Planning.
 - b. SAR.
 - c. ATR ECHO.
 - d. HAZELRIG.
 - e. Weapons.
 - f. Fuel Farm.
 - g. VXX.
 - h. HGR 144.
 - i. NAS Patuxent River Safety, Building 588.
 - j. Photo Lab, Bldg. 1354.
 - k. NAS Patuxent River CDO.
 - l. All squadrons.
3. Tower or Flight Planning activates the SAR Crash Warbler. Warbler outlets are also located in the Air Operations Building and the SAR Ready Room, Hangar 110.
4. The primary crash phone circuits and the SAR Crash Warbler shall be tested daily at 0730 (Mon-Fri), and 0830 (Sat-Sun). The secondary crash phone shall be tested on Mondays (except holidays) following the primary crash phone test.

5. Normally, ATC will be the reporting activity for all crashes occurring on the station. However, any person observing a crash either on or off the station should report the occurrence to an emergency dispatcher by dialing 911 and give the following information. Squadron Duty Officers or other persons receiving crash reports from outside sources should obtain the following information:

- a. Type of aircraft.
- b. Side number or other identifying numbers.
- c. Location of crash site in relation to known landmarks.
- d. Damage to aircraft or property.
- e. Survivors or injuries, if known.
- f. Name, address, and telephone number of reporting person.

6. Tower or Flight Planning will contact GEM to initiate examination of all communications, navigational aids, and radar systems active at time of incident, and safeguard all evidentiary media and materials as per NATOPS guidance for aircraft mishaps and/or hazards.

7.1.3 CRASH/EMERGENCY PROCEDURES.

1. During aircraft in distress or aircraft emergency situations, the following procedures shall be accomplished:

- a. Broadcast the information over the ELMR crash channel, crash phone, and Air Operations public address (PA) system.
- b. The Fire Chief/Senior Fire Officer shall determine the crash/fire/rescue equipment to be dispatched and position them accordingly.
- c. The SAR helicopter may or may not be launched, depending on the response time involved, availability, and the situation as evaluated by the Air Operations Officer.

2. If an aircraft has crashed, or a crash is imminent on or near the field, the SAR Warbler shall be sounded, and the information broadcast on the ELMR crash channel, crash phone, and Air Operations PA system.

3. All aircraft fire fighting and rescue equipment including the ambulance and SAR helicopter, if available, will proceed immediately to the scene of the accident. The SAR helicopter will closely monitor 282.8 until it is determined whether or not medical evacuations are necessary.

The on-scene Fire Chief/Senior on-scene Fire Officer shall determine equipment requirements. The Crash Captain controls the airfield in the event of an emergency and will secure the emergency and release the airfield back to the Control Tower.

4. When an incident occurs off-station in the local tri-county area, the NAS Patuxent River Fire Department will be notified immediately and the Senior Fire Officer on duty will determine the availability of equipment and personnel to respond. The SAR helicopter, if available, will be launched after the arrival of medical personnel. All forced aircraft landings shall be reported to the AODO for relay to the Air Operations Officer.

5. In the event of hot brakes, blown tires, lost communications or other minor problems, ATC will determine whether or not to declare an emergency or notify the duty truck for response.

7.2 SEARCH AND RESCUE BILL.

1. Search and rescue helicopter procedures are detailed in reference (ee).

2. NAS Patuxent River lies within the Norfolk SAR Sub-region of the Atlantic Maritime SAR Region and is a station on the Norfolk SARTEL (DF-Radar Net Hotline). The Commanding Officer, NAS Patuxent River, is designated SAR Coordinator for local incidents involving all locally based aircraft. Norfolk rescue will retain or assign net control for all extended searches.

3. For the purpose of establishing SAR conditions, local flight operations are defined as any single engine, twin engine (tactical) aircraft, or helicopter based at NAS Patuxent River that is operating on a local flight plan within an area where water entry is a risk. The duty SAR Helicopter Aircraft Commander is responsible for the setting of SAR conditions. The following are normal SAR postures:

a. SAR Condition ONE HOTEL (1H). SAR HELO and crew in 15-minute alert status. 1H is normally established 15 minutes prior to the start of the requested event time and is maintained until the Category C or D test events are completed, or cancelled, per reference (ff). Squadron must specifically request this service.

b. SAR Condition ONE HOTEL AIRBORNE (1HA). SAR HELO is airborne in the general vicinity (within 30NM) of Wallops Flight Facility (KWAL) or on deck in the general vicinity of KWAL in a 15-minute alert 1HA is normally established 15 minutes prior to the start of the requested event time and is maintained until the Category C or D test events are completed or cancelled. Local squadrons of Category C and D flight testing taking place in the Warning Areas must specifically request the setting of this condition.

c. SAR Condition ONE HOTEL IFR (1H-IFR) - established when weather conditions are below SVFR minimums of 500-1. This condition denotes SAR HELO and crew in 15-minute

alert status however, response time to actual emergencies may be delayed due to the IMC conditions.

d. SAR Condition TWO HOTEL (2H) - SAR HELO and crew in a 1-hour alert status. SAR Condition 2H is maintained from secure of 1H/1HA to 2300L, if aircraft are flying. If aircraft are not flying, the SAR posture may be downgraded to SAR Condition 3H (non-alert).

e. SAR Condition THREE HOTEL (3H) - SAR HELO services not available for any of the following reasons: severe weather (freezing rain, sleet, snow, etc.), maintenance difficulties, or holiday routine. SAR Condition 3H is maintained between the hours of 2300-0800L. Normal weekend SAR posture is Condition 3H. However, the weekend SAR posture may be upgraded to SAR Condition 1H or 2H, on Saturdays only, at the request of a squadron during periods required by local flight operations. Requests for exceptions to the above times and days may be forwarded to SAR division at COMM: (301) 342-3743/5336 or DSN 342-3743/5336, a minimum of 48 hours in advance for review and approval of the Air Operations Officer or his designated representative.

f. SAR Condition ONE BRAVO. Established when SAR helicopter assets are unavailable. Local U.S. Coast Guard boat assets at Oxford and/or St. Inigoes, MD are in 30-minute alert status. Although USCG assets are usually underway within 15 minutes of notification, transit time can often exceed 1 hour, depending on the location of the incident. At any time if SAR Condition 1B is set, Flight Planning will notify commands via the Destructive Weather circuit.

4. ATIS and base Weather Vision shall reflect the correct SAR status condition.

7.2.1 MEDEVAC PROCEDURES.

1. The following procedures shall be followed when handling MEDEVAC aircraft, including Maryland State Police engaged in MEDEVAC operations, when landing and departing NAS Patuxent River. ATC shall accomplish the following:

- a. Post a crash vehicle near the site designated for landing.
- b. Pass load factor to the crash crew (i.e. location of patients in aircraft including number of ambulatory and number of litter patients on board).
- c. Pass load factor and any additional information to the AFM/AODO so those requirements may be coordinated with the NAS Patuxent River Branch Medical Clinic.

2. After the MEDEVAC aircraft lands, the crash vehicle shall follow the aircraft to the designated parking area and stand by until all patients are off loaded. If the patients are to continue with the aircraft, or patients are to be loaded onto the aircraft, the crash vehicle shall stand by until the aircraft is serviced and is ready for taxi. The crash vehicle shall then follow

the aircraft to the runway or helipad and stand by until the aircraft safely departs the Class D Airspace.

7.2.2 CONTROLLED EJECTIONS AND BAILOUTS.

When a planned ejection or bailout is necessary, the pilot should contact Patuxent Approach Control for coordination of the operation. The aircraft will normally be vectored to intercept the 140 degree radial outbound from NAS Patuxent River. When practical, the aircraft should be trimmed in slightly nose-down attitude so that impact will occur in the Chesapeake Bay.

7.3 SALVAGE BILL.

1. The Air Field Services (AFS) Officer is the designated Salvage Officer for NAS Patuxent River and WOLF. NAS Patuxent River Air Operations does not own or maintain any aircraft salvage equipment/material. Salvage efforts will be a coordinated effort between Air Operations, Aircraft Rescue and Firefighting (ARFF), Public Works, and the activity to which the mishap aircraft is attached.

2. The following procedures have been established for salvage operations:

a. The AFS Officer will automatically assume responsibility for aircraft salvage operations following any crash in the vicinity of NAS Patuxent River or WOLF. Salvage operations will be conducted per reference (gg) and in such a manner that additional damage to aircraft and civilian property is held to a minimum.

b. The activity to which the mishap aircraft is attached, if locally based, will be required to post security watches on the aircraft until salvage is completed. If the crashed aircraft is a transient aircraft, the hosting activity will furnish security watches until salvage of the aircraft is complete. In cases where this is not possible, NAS Patuxent River will provide security watches, if personnel are available.

c. Normally, mishap aircraft will not be moved or salvage operations begun until written approval is obtained from the Aircraft Mishap Board or the Naval Safety Center. In case of a crash on the field or at other areas requiring immediate removal, the aircraft will be moved immediately upon receiving permission from competent authority. Extreme caution shall be taken to preserve all parts or other evidence.

d. The Salvage Officer shall supervise salvage operations. Air Operations, Aircraft Rescue and Firefighting (ARFF), Public Works, and the activity to which the aircraft is attached will provide all equipment used for salvage operations. The reporting custodian of the aircraft involved shall provide a working party as required by the Salvage Officer.

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CHAPTER 8

FIXED WING COURSE RULES

8.1 GENERAL.

The following fixed wing course rules are designed to maximize safety and minimize controller workload. Strict adherence to these course rules is of utmost importance. Refer to Chapter 3.

8.2 NOISE ABATEMENT. Refer to paragraph 3.6.

8.3 TAXI INSTRUCTIONS. See Chapter 3

8.4 DEPARTURE INSTRUCTIONS.

8.4.1 TAKEOFF INSTRUCTIONS.

1. Pilots shall acknowledge all “hold short,” “line-up-and-wait” and takeoff instructions. Aircraft cleared for takeoff are expected to depart without delay. Any unexpected delay on the runway or request for back-taxi must be reported to Tower prior to calling for takeoff. Aircraft planning an aborted takeoff shall advise Tower of their intentions prior to taxiing onto the runway. If notification of a planned aborted takeoff cannot be transmitted to Tower via the radio due to training considerations, prior coordination shall be effected with Tower via Base Ops prior to taxi.
2. Aircraft using the TC-7 catapult gear shall obtain clearance from Tower before launching.
3. Aircraft shall not request clearance to perform any unusual maneuvers in NAS Patuxent River Class D airspace unless essential to the performance of flight. Tower clearance shall be obtained prior to any maneuver.
4. When Mk-7 operations are in progress, the portion of Runway 32 short of the relocated threshold (Illustration 26) shall not be used for taxi except by aircraft involved in the project using the Mk-7. See paragraph 8.6.4 on Runway 32 shortened operations.

WARNING

When back-taxiing on runway 32 to the relocated threshold, aircraft shall not cross the relocated threshold in order to prevent jet blast and prop-wash damage to the camera equipment located on the centerline of the closed portion of the runway.

8.4.2 UNRESTRICTED CLIMBS.

All departure clearances will include an intermediate altitude within approach control airspace. Aircraft that desire an unrestricted climb (climb to filed altitude without leveling off at intermediate altitudes) shall make this request to ATC on initial contact. Approval for an unrestricted climb is not to be misunderstood to be approval for a high performance climb. Low transitions and high performance climbs (climbs at steep angles) are prohibited as per reference (a).

8.4.3 INTERSECTION DEPARTURES.

Intersection departures may be authorized with ATC approval. Runway intersection distances are contained in Table 8-1. Distances from intersections to E-28 arresting gear are contained in Table 8-2. Distance remaining provided by ATC will be rounded down to the nearest 50 feet.

Runway Intersection Distances

INTERSECTION	DIST	INTERSECTION	DIST
RWY 2/Charlie	1,600	RWY 20/Echo	4,820
RWY 2/Closed	209	RWY 20/Charlie	3,400
		RWY 20/Closed	4,080
RWY 6/Echo	7,470	RWY 24/Golf	7,180
RWY 6/RWY 32	6,850	RWY 24/RWY 32	4,960
RWY 6/Golf	4,620	RWY 24/Echo	4,330
RWY 14/Bravo	8,910	RWY 32/RWY 6	5,220
RWY 14/RWY 20	7,850	RWY 32/Charlie	4,160
RWY 14/Charlie	5,540	RWY 32/RWY 20	1,850
RWY 14/RWY 6	4,480	RWY 32/Bravo	790

Table 8-1

Runway Intersection to E-28 Arresting Gear Distances

INTERSECTION	DIST	INTERSECTION	DIST
RWY 6/Echo	5,960	RWY 24/Golf	4,980
RWY 6/RWY 32	5,340	RWY 24/RWY 32	2,750
RWY 6/Golf	3,110	RWY 24/Echo	2,130
RWY 6/24 – Short-field gear to Long-field gear			8,090
RWY 14/Bravo	5,870	RWY 32/RWY 6	3,910
RWY 14/RWY 20	4,810	RWY 32/Charlie	2,850
RWY 14/Charlie	2,500	RWY 32/RWY 20	540
RWY 14/RWY 6	1,400	RWY 32/Bravo	-----
RWY 14/32 – Short-field gear to Long-field gear			5,380

Table 8-2

8.4.4 FORMATION TAKEOFFS.

Guidelines concerning formation takeoffs are contained in reference (a). Formation flights requesting other than simultaneous takeoff rolls shall make request to Tower prior to positioning on the active runway.

8.4.5 INITIAL HEADINGS.

To avoid conflict between departures and other Tower traffic, do not turn to intercept the departure radial, turn to the departure heading, or climb above 1,000 feet MSL until the upwind (departure) end of the runway. When Tower is reporting IMC (i.e. VFR traffic pattern closed), the 1,000-foot climb restriction is waived.

WARNING

Aircraft departing in VMC are ultimately responsible for their own separation from other aircraft and have a responsibility to avoid traffic in the VFR patterns. See and avoid.

8.4.6 AIRCRAFT SPEED.

Unless the airspeed required or recommended in the aircraft NATOPS Manual to maintain safe maneuverability is greater than 250 knots, aircraft are restricted to 250 knots below 10,000 feet MSL per references (a) and (l) when operating outside of the SUA. High-speed traffic reduces ATC reaction time, degrading safe traffic flow.

8.4.7 VFR DEPARTURES TO THE RESTRICTED AREAS.

1. VFR departures to the restricted areas should use either the Piney or Barren departures depicted in illustrations 27 and 28. Pilot requests for direct routing to the restricted areas must be coordinated with ATC.

WARNING

Due to the close proximity of Federal Airways with the PXOA, departing aircraft should be alert for overhead IFR traffic. Traffic is routinely routed overhead at 5,000 feet MSL. UAS routinely transit R-4005SW at 3,500 feet MSL enroute from WOLF to/from the UAS operating area. Aircraft departing in VMC are ultimately responsible for their own separation from other aircraft and have the responsibility to avoid traffic in the VFR patterns. See and avoid.

NOTE:

To the maximum extent possible, traffic on Federal Airways below 5,000 feet MSL will be vectored clear of departure corridor for the runway in use. In the event it becomes necessary for airway traffic to overfly Patuxent River's Class D airspace below 5,000 feet MSL, ATC will amend departure/arrival procedures and altitudes or delay VFR departures as necessary until conflicting traffic is clear.

2. Aircraft cleared direct to the restricted areas shall maintain 4,500 or 3,500 feet MSL or as assigned until established within SUA.

NOTE:

R-4007 is not PXOA unless specifically activated, see paragraph 3.8.2.6.

3. VMC flights in the PXOA shall not enter the NAS Patuxent River Class D airspace (2,500 feet MSL and 4.5 NM) or the WOLF airspace (2,500 feet MSL and 4 NM) unless in radio communications with the appropriate ATC facility or are following established lost communications procedures.

4. Station-based aircraft using the PXOA shall contact Check-In on 369.9 MHz or 119.275 MHz prior to launch. These aircraft shall specify callsign, type aircraft, altitudes requested, exclusive use airspace (if required), and the frequency to be monitored (if other than the standard traffic advisory frequencies).

5. VFR transition of the PXOA to/from the off-shore warning areas may be authorized for station-based aircraft on a case-by-case basis.

8.5 ARRIVAL INSTRUCTIONS.

8.5.1 VFR ARRIVALS FROM RESTRICTED AREAS.

1. All VFR arrivals should use either the Piney or Barren arrival as depicted in illustrations 27 and 28. Pilot requests for direct routing to the initial may be approved on a case-by-case basis.
2. Aircraft operating in the PXOA shall advise PAX ADVISORY/BAYWATCH when they are return to base (RTB) with type arrival (e.g. overhead, straight-in). Sufficient notice shall be given to allow PAX ADVISORY/BAYWATCH time to coordinate appropriate control information to ATC.
3. PAX ADVISORY/BAYWATCH will instruct the aircraft to proceed toward Barren/Piney as appropriate, descend to 3,500 feet MSL, and switch to assigned frequency.
4. Aircraft will report the initial to Tower at 2,100 feet MSL; descend to cross the approach end of the runway at 1,500 feet MSL, and break level, descending on downwind to an altitude of 1,000 feet MSL. Refer to Table 8-3 for initial point locations.

VFR Initial Points

RUNWAY	INITIAL POINT
6	NHK TACAN 240 radial at 4 NM
14	NHK TACAN 320 radial at 4 NM
24	NHK TACAN 060 radial at 4 NM
32	NHK TACAN 163 radial at 3 NM (if cleared direct to the initial from the restricted areas, use runway centerline at 4 NM)

Table 8-3

8.5.2 TRAFFIC PATTERN DIRECTION.

1. Standard traffic patterns are left turns to Runways 02, 14, and 24 and right turns to Runways 6, 20, and 32. Patterns are frequently adjusted to accommodate test projects.
2. Pilots conducting touch and go landings should indicate to Tower their intentions to conduct a full stop landing at the earliest opportunity.
3. After landing, pilots shall clear the runway as expeditiously as practicable. Aircraft shall not stop, reverse direction on the landing runway, or turn on any other runway without clearance from Tower.

8.5.3 TRAFFIC PATTERN ALTITUDES.

1. Standard traffic pattern altitude for all runways is 1,000 feet MSL.
2. All aircraft shall maintain an altitude of at least 500 feet over the magazine area located north of the intersection of Runways 14/32 and 6/24.
3. Fixed-wing aircraft shall be at 1,000 feet MSL or above when flying over the NAWC Pad and helo grass pattern, when active.
4. Minimum altitude for fixed wing aircraft over the slope and TERF areas is 500 feet AGL.

8.5.4 RUNWAY 32 SHORTENED OPERATIONS.

The first 1,630 feet of Runway 32 may be closed for various reasons requiring use of the relocated threshold. A solid white relocated threshold line is located on Runway 32 at 8,100 feet remaining (Illustration 26). Anytime the relocated threshold is in use, it shall be broadcast on ATIS frequency. When Mk-7 operations are in progress as described in paragraph 8.7, the relocated threshold shall be used. If airfield conditions require the active runway to be Runway 32 during Mk-7 operations, the following procedures will be used:

1. Departures will be from in front of the relocated threshold. The portion of Runway 32 short of the relocated threshold shall not be used for taxi except by aircraft involved in the project using the Mk-7.

WARNING

When back-taxiing on runway 32 to the relocated threshold, aircraft shall not cross the relocated threshold in order to prevent jet blast and prop-wash damage to the camera equipment located on the centerline of the closed portion of the runway.

2. VFR landing clearances shall include "Runway 32 shortened." Pilots shall read back "shortened" when acknowledging the landing clearance.

WARNING

When the relocated threshold is in effect due to Mk-7 operations, camera equipment may be located and marked by a flashing red light as high as three feet, its located on the centerline of the closed portion of the runway.

WARNING

When the relocated threshold is in effect due to Mk-7 operations, landing aircraft not participating in Mk-7 operations shall cross the Mk-7 site high enough to prevent jet blast and prop-wash damage to the camera equipment.

3. Radar approaches to a low approach at or above 500 feet AGL are authorized.
4. Aircraft conducting radar approaches to a touchdown shall be notified that Runway 32 is shortened. Pilots shall discontinue the approach at a point appropriate for their aircraft to ensure landing beyond the relocated threshold. For landing clearances, aircraft on final will be instructed as follows:
 - a. PAR approach – “(Callsign), at decision height, discontinue approach Runway 32 shortened.”
 - b. ASR approach – “(Callsign), over missed approach point, Runway 32 shortened.”

8.5.5 REDUCED SAME RUNWAY SEPARATION.

1. Reduced Same Runway Separation (RSRS) may be used as follows:
 - a. Between locally based Navy/Marine Corps aircraft only. Other aircraft types temporarily assigned to NAS Patuxent River's tenant commands may be added to the appropriate group on a case-by-case basis. Requests shall be directed to the Air Operations Officer or the Air Traffic Control Facility Officer.
 - b. Conducted when weather minimums are 1000/3 or greater, between sunrise and sunset, on a dry runway, and utilizing Tower frequency 343.65/123.7.
 - c. Between aircraft of similar performance characteristics, or when the preceding aircraft is of higher performance, as per reference (q) and grouped as follows:
 - (1) Group A: T-38
 - (2) Group B: F/A-18, EA-18, F-35, EA-6B, T-45
 - (3) Group C: LR-24, LR-25, E-2, C-26, C-38, C-2, T-6
 - (4) Group D: BE-20(C-12), DHC-2(U-6), DHC-3(U-2), T-34
 - d. Distances will be from runway threshold.
 - e. RSRS is NOT authorized when heavy aircraft wake turbulence will be a factor.
2. Reduced same runway separation will be applied to an arrival following an arrival using the following criteria:
 - a. Separation minima based on centerline landings opposite sides of runway centerline must be as follows:

- (1) Group A followed by Group A: 5,000 feet.
- (2) Group A followed by Group B, C, or D: 3,000 feet.
- (3) Group B followed by Group B, C, or D: 3,000 feet.
- (4) Group C followed by Group C or D: 3,000 feet.
- (5) Group D followed by Group D: 3,000 feet.

b. Separation minima based on runway centerline landings must be as follows:

- (1) Group A followed by Group A, B, C, or D: 5,000 feet.
- (2) Group B followed by Group B, C, or D: 5,000 feet.
- (3) Group C followed by Group C or D: 5,000 feet.
- (4) Group D followed by Group D: 5,000 feet.

3. All others not included in paragraph 2 above shall be separated in accordance with standard separation as per reference (q).

4. RSRS may be applied to aircraft conducting a touch-and-go operation behind a full stop landing using the same criteria in paragraph 2.

5. The Tower Supervisor may suspend the use of RSRS due to weather, safety of flight issues, or when it is otherwise deemed necessary.

6. Distances applicable for reduced runway separation are from aircraft crossing the landing threshold to the preceding aircraft on the runway.

7. Formation flights are controlled as one aircraft. Separation of aircraft within the formation is the responsibility of the flight leader unless the flight leader requests otherwise.

8.5.6 LOW PATTERN.

1. A 600-foot low pattern is authorized for NAWCAD carrier-based type aircraft only. Either a left or right-hand traffic pattern is authorized for all runways. Aircraft shall obtain approval from Tower prior to entering the low pattern. Carrier breaks are not authorized at NAS Patuxent River. The low pattern shall be entered via a normal overhead break with a descent to 600 feet commencing on downwind leg.

WARNING

Aircraft established in the low pattern shall remain off the helicopter grass pattern, if active. If unable to avoid the grass pattern laterally, climb on runway heading 1,000 feet AGL to remain clear of the helicopter grass area traffic 500 feet AGL and below.

2. FCLPs and project flights requiring the 600-foot pattern shall schedule and utilize the low pattern in accordance with paragraph 8.8. When not scheduled as a project requirement, the low pattern is only available on a not to interfere basis with low altitude traffic (i.e. helo grass pattern, slope area, etc.). Runway 32 left-hand low pattern shall be authorized only for FCLPs and project flights.

3. Low pattern operations shall comply with paragraph 3.6 and should plan to utilize patterns that remain over water and minimize impact to noise abatement areas to the maximum extent practical.

8.5.7 TRAFFIC PATTERN SATURATION.

1. If, in the tower controller's judgment, the local traffic pattern approaches saturation, aircraft may be required to either depart or make full-stop landings as deemed necessary.

2. The priority for remaining in the tower pattern shall be:

- a. Active scheduled projects;
- b. Locally based aircraft, first come first served basis;
- c. All others, on a not to interfere basis.

8.5.8 OVERHEAD DELTA.

Tower will assign overhead delta when circumstances dictate. The pattern is 2,000 feet MSL remaining within 3 NM of the airfield or as assigned by ATC.

WARNING

VFR initial points for runways 6, 14, and 24 are at 4 NM at 2,100 feet MSL. VFR initial point for runway 32 is at 3 NM.

8.5.9 WAVEOFFS.

Aircraft waving off in the tower pattern shall advise Tower and fly as directed. Do not directly overfly the LSO cart. All waveoffs issued by Tower are MANDATORY.

8.6 PRACTICE PRECAUTIONARY EMERGENCY LANDINGS (PPEL).

Per reference (a), Practice Precautionary Approaches/Simulated Flameouts (PPA/SFO) are prohibited, unless specifically authorized by individual NATOPS manuals or other waiver. The following local procedures apply for both NAS Patuxent River and WOLF.

8.6.1 GENERAL.

1. Circling PPA/SFOs are not authorized when weather conditions prevent Tower from maintaining visual contact with the aircraft during all phases of the approach. At a minimum, the ceiling shall be 1,000 feet above the highest requested altitude and the visibility shall be 5 statute miles as per reference (q).
2. PPA/SFOs shall only be conducted between the hours of sunrise and sunset.
3. PPA/SFOs will not be afforded priority handling and may be disapproved based on traffic unless prior coordination with ATC has been accomplished.

NOTE:

Tower approval for a PPA/SFO does not absolve the pilot-in-command from responsibility to comply with standard aircraft separation and right-of-way rules.

8.6.2 PROCEDURES.

The following procedures have been designed to allow for smoother handling of PPA/SFO aircraft in conjunction with normal pattern traffic:

1. Aircraft within the tower pattern who request a PPA/SFO will be instructed to "Report abeam high key, left/right turns, squawk *assigned beacon code*."
2. Upon reporting abeam high key, the PPA/SFO will be sequenced with other Tower traffic and instructed to report high or low key.
3. It is the pilot's responsibility to depart high key and maintain an acceptable interval on the traffic that is being followed. High key departure will normally occur when the interval is through the 135 position, but this will vary with the type of aircraft being followed and the type of approach being flown. If PPA/SFO aircraft was instructed to report high key, the aircraft shall state, "(callsign), high key." Tower will instruct the aircraft to either, "report low key with gear," or, if spacing is not adequate at the time, "make one turn at high key, report abeam."
4. Once aircraft depart low key, wave-off instructions should not be issued unless ATC determines continuation of the approach is unsafe.

8.6.3 ALTITUDES.

Unless otherwise coordinated, PPA and PPEL maneuver altitudes are contained in Table 8-4.

PPA and PPEL Maneuver Altitudes

Aircraft	High Key (ft. MSL)	Low Key (ft. MSL)
E-2/C-2	6,000	3,200
T-6	3,000	1,500
T-34	2,500	1,200
T-45	5,000	3,000

Table 8-4

8.7 MK-7 ARRESTING GEAR OPERATIONS.

The Mk-7 is a hydraulic arresting gear system that is used on aircraft carriers. Components of the system include a centerline camera and an arresting gear cable (located 836 feet and 1,300 feet, respectively, from the approach end of Runway 32).

8.7.1 MK-7 OPERATING RESTRICTIONS.

When Mk-7 operations are in progress, the following restrictions apply:

1. The first 1,630 feet of Runway 32 shall be closed to non-participating aircraft requiring use of the relocated threshold (8,100 feet remaining). Runway 14 will be closed.
2. When the field is IMC, SVFR clearance is required for Mk-7 aircraft. If weather conditions or traffic preclude SVFR operations, Mk-7 aircraft may be vectored in the GCA pattern to decision height or missed approach point on the project frequency (281.75 or 340.2 MHz).
3. When the active runway is 14 in accordance with paragraph 3.6.4, Mk-7 operations are not authorized and the Mk-7 gear shall not be rigged.

8.7.2 MK-7 OPERATING PROCEDURES.

1. Arresting gear #3 (i.e., the E-28 short field gear) shall be de-rigged and pulled clear of the runway.
2. A crash truck will be posted at the Mk-7 site.

3. Mk-7 gear will be rigged. If installed, a centerline camera will be marked with a flashing red light, approximately 250' short of the arresting gear.
4. Two-way radio communications between the Tower and Mk-7 personnel shall be maintained. The LSO will give all "clear deck" and "foul deck" calls on project frequency (281.75 or 340.2 MHz). Additionally, a set of red and green lights located at the LSO platform aid in determining clear/foul deck status.
5. Taxi clearances will be issued so as to keep non-project aircraft clear of Mk-7 equipment. All departing aircraft shall be instructed to back taxi from the intersection of Runways 6 and 32.

WARNING

When back-taxiing on runway 32 to the relocated threshold, aircraft shall not cross the relocated threshold in order to prevent jet blast and prop-wash damage to camera equipment located on the centerline of the closed portion of the runway.

6. Tower may grant the LSO control if the Mk-7 aircraft(s) is/are alone in the landing pattern. Tower retains overall responsibility for safety and shall assume control when any non-participating aircraft enters the VFR pattern, an aircraft is on an IFR approach, or an aircraft is cleared for takeoff or full-stop landing. The LSO shall acknowledge all calls from Tower.
7. A NOTAM will be issued when the Mk-7 site is operational.

8.8 FCLP AND PALS.

Activities require both day and night FCLP periods to renew carrier deck qualifications of aircrews conducting shipboard project work. This requalification's are time critical and are scheduled according to ship availability. Therefore, FCLPs at NAS Patuxent River may have priority over other project evolutions being conducted on the airfield. It is essential that FCLPs are scheduled through the Central Schedules Office and that any conflicts in priority are resolved in advance.

8.8.1 FCLP PROCEDURES.

1. Traffic Patterns – Standard left-hand FCLP patterns shall be flown in accordance with the Low Pattern described in paragraph 8.5.5 and comply with the noise abatement restrictions in paragraph 3.6.
2. Pattern Entry – Initial entry into the FCLP pattern shall be conducted as instructed by Tower. Carrier breaks are not authorized.

WARNING

Aircraft established in the low pattern shall remain clear of the helicopter grass pattern, if active. If unable to avoid the grass pattern laterally, climb on runway heading to 1,000 feet AGL to remain clear of the helicopter grass area traffic 500 feet AGL and below.

3. Traffic Volume – A maximum of six aircraft (daytime) and four aircraft (nighttime) may use the FCLP pattern.

4. Weather Criteria – 1,000 feet ceiling/3 SM visibility.

a. When the weather is reported at least 600 feet ceiling and 2 SM visibility, the ATC Facility Watch Supervisor (FWS) may authorize SVFR FCLPs. A maximum of 4 aircraft are allowed in the pattern.

b. When fleet requirements dictate, the weather minimums may be reduced to 600 feet/1 SM visibility with concurrence of both the pilots and the LSO. Tower must be able to keep aircraft in sight to continue operations. Under these conditions, a maximum of two aircraft are allowed in the pattern.

c. When the field is IMC, SVFR clearance is required. If weather conditions or traffic preclude SVFR operations, FCLP aircraft may be vectored in the GCA pattern to decision height or missed approach point on the project frequency (281.75 or 340.2 MHz).

5. Noise Abatement – Refer to paragraph 3.6.

6. Tower may grant the LSO control if the FCLP aircraft is/are alone in the landing pattern. Tower retains overall responsibility for safety and shall assume control when any non-participating aircraft enters the VFR pattern, an aircraft is on an IFR approach, or an aircraft is cleared for takeoff or full-stop landing. The LSO shall acknowledge all calls from Tower.

7. Full Stop landings require tower clearance.

8. A NOTAM will be issued when FCLPs are scheduled. Local flying activities shall limit pattern operations to the maximum extent practical during FCLP periods. Outside users shall not interfere with the FCLP pattern.

8.8.2 PALS PROCEDURES.

The following procedures apply to the PALS pattern:

1. Traffic Pattern – Runway 32 standard is right traffic.

WARNING

PALS aircraft in non-standard, left pattern shall remain clear of the helicopter grass pattern, if active. If unable to avoid the grass pattern laterally, climb on runway heading to 1,000 AGL to remain clear of the helicopter grass area traffic 500 feet AGL and below.

2. Pattern Entry – Initial entry into the PALS pattern shall be conducted via the overhead maneuver.
3. Pattern Altitude – 1,500 feet, descend to 1,200 feet in the hook to final.
4. Leg Lengths – As required, normally 6-7 NM.
5. Traffic Volume – A maximum of 4 aircraft may use the PALS pattern at any one time.
6. Weather Criteria:
 - a. Station Based Aircraft – 2,000-foot ceiling and 4 SM visibility (subject to the Tower controller's ability to maintain situational awareness to the aircraft).
 - b. Fleet Squadrons – 2,000-foot ceiling and 7 SM visibility.

NOTE:

Aircraft must maintain VMC at all times in the PALS pattern.

7. Noise Abatement – Refer to paragraph 3.6.
8. See reference (s) for further PALS procedures.
9. A NOTAM will be issued when the PALS pattern is scheduled. Local flying activities shall limit pattern operations to the maximum extent practical during PALS operations. Outside users shall not interfere with the PALS pattern.

8.8.3 IFR PALS PROCEDURES.

When ceiling/visibility is less than 2,000'/4 nm, the "IFR PALS pattern" will utilize the standard Ground Controlled Approach (GCA) box pattern to Runway 32.

1. PALS aircrew will call the Facility Watch Supervisor (FWS) prior to the flight brief to coordinate airfield status, approach pattern availability and frequency assignment.
2. PALS aircraft will contact Clearance Delivery prior to taxi for squawk and to verify the frequency assignment.

3. ATC will provide radar vectors for an Airport Surveillance Radar (ASR) approach using normal IFR procedures at 1,600' MSL pattern altitude. When traffic allows, PALS aircraft may request a "short hook" to final as close as 7 nm from the runway.
4. PALS aircraft shall maintain normal IFR speeds in the box pattern.
5. The ASR final controller will provide the following calls:
 - a. Once the aircraft is "on course" no further course information is required unless the aircraft deviates to a position "well left/right of course."
 - b. When to commence descent to the minimum descent altitude (MDA). Subsequent distances from the runway and recommend altitudes will not be provided unless requested by the pilot or required due to the maximum time allowed between radio transmissions.
 - c. Missed approach point (required). Based on the situation (e.g. weather, traffic) the ASR final controller may provide additional calls at their discretion.
 - d. Based on the situation (e.g. weather, traffic) the ASR final controller may provide additional calls at their discretion.
6. PALS aircraft will not descend below MDA unless all requirements are met to continue the approach according to the normal IFR criteria.
7. PALS approaches may be flown with observed weather below the ASR approach minimums provided no landing is intended as long as the weather is above the PAR minimums for the duty runway and the PAR is operational. The ASR approach clearance will be for a "low approach" with a minimum altitude of 500' AGL.
8. PALS approaches to a "low approach" with a minimum altitude of 500' AGL may be flown to Runway 32 when the runway is closed.
9. R-4005N. The PALS activity must schedule R-4005N for concurrent use to preclude another event activating the airspace exclusive use.
10. Duty Runway 6/24. The IFR PALS pattern may be allowed when Runway 6/24 would otherwise be in use for instrument approaches at the discretion of the FWS. The IFR PALS pattern shall not be authorized when Runway 14 is required as the duty runway.

NOTE:

PALS requirements necessitate testing in adverse weather, to include rain and low visibility to ensure the equipment under test works in all weather conditions. Minimum communication is

desired on final approach to facilitate test-related communication between the aircraft and the test team.

8.9 STOVL OPERATING PROCEDURES.

8.9.1 STOVL PROCEDURES.

The STOVL pattern shall conform to the standard fixed-wing traffic pattern whenever possible. Deviations to the standard patterns shall be coordinated in advance. The centerfield STOVL facilities are described in section 1.1.3.7. The following procedures apply:

1. Charlie taxiway between Runway 2/20 and Echo taxiway shall be closed when the infield STOVL facilities are in use.

2. The Intersection Pad is considered part of the active runway for STOVL operations.

NOTE:

When an aircraft is within the lateral confines of the intersection pad, due to the close proximity of runways 06/24 and 14/32, both runways are fouled.

3. Operations on the EAF and Ski Jump shall be considered the same as operations on Runway 2/20.

4. Two-way radio communications between the Tower and centerfield personnel shall be maintained at all times.

5. Tower clearance shall be required for each takeoff, landing or Vertical Takeoff (VTO).

6. When traffic permits, simultaneous operations may be conducted from the STOVL facilities (e.g. press-ups at LHD Pad, engine runs at Hover Pit) and active runways, grass pattern and helo pads.

7. Tower may grant the LSO control if the STOVL aircraft(s) is/are alone in the pattern. Tower retains overall responsibility for safety and shall assume control when any non-participating aircraft enters the VFR pattern, an aircraft is on an IFR approach, or an aircraft is cleared for takeoff or full-stop landing. The LSO shall acknowledge all calls from Tower.

8.9.2 STOVL TRAFFIC PATTERNS.

1. Aircraft arriving and departing to/from the STOVL facilities (i.e. the centerfield facilities and the Intersection Pad) shall conform to the traffic pattern in use by ATC unless deviations have been coordinated in advance.

2. Departures are depicted in Illustration 24:

- a. When departing from the Centerfield via Runways 06 and 14, transition to the runway prior to the intersection.
- b. When departing from the Centerfield via Runways 24 and 32, transition to the runway prior to the intersection of Runway 02/20 centerline.
- c. When departing from the Ski Jump or EAF follow the departure pattern for Runway 02.

WARNING

When STOVL aircraft are taking off or landing at the EAF or departing off the ski jump, the tethered hover area shall be clear and helicopters in the TERF and slope area shall be on deck.

3. Arrivals are depicted in Illustration 24. STOVL aircraft shall transition from the runway to Centerfield at an appropriate speed to avoid the helicopter grass pattern.

- a. Transitions to Centerfield via Runways 06 or 14 shall be completed once clear of Runway 02/20 centerline.
- b. Transitions to Centerfield via Runways 24 and 32 shall be accomplished at pilot's discretion unless ATC directs otherwise.
- c. When arriving to the EAF follow the arrival pattern for Runway 02.

4. Aircraft cleared to land at "Centerfield" are permitted to land at any of the centerfield facilities. The Intersection Pad is not part of the centerfield facilities.

5. Noise Abatement – Refer to paragraph 3.6.

8.9.3 TC-7 (STEAM CATAPULT).

TC-7 is a shipboard based steam catapult launch system. TC-7 steam catapult is located on the left side of the approach end of RWY 32 with an 8 degree offset from the RWY heading.

8.10 GLIDER OPERATIONS.

1. Extended glider operations shall not be conducted within a 5 NM radius of NAS Patuxent River except with prior approval of the Air Operations Officer. Normally, all glider operations shall be conducted using aircraft as the tow vehicle. The use of another means of glider launch will be coordinated in advance with the Air Operations Officer. Two-way radio communications must be established before takeoff and be maintained throughout the flight.

2. The following operations are authorized:

a. Extended glider/soaring operations are authorized in one of the three glider operating areas or at WOLF. Refer to illustrations 14 through 17.

b. Restricted glider operations consist of aircraft tow from take-off directly to a designated release point, followed by short duration non-aerobatic maneuvering and a landing.

3. Glider operations within airspace under the jurisdiction of NAS Patuxent River require the following ceiling and visibility minima as reported by Patuxent River Weather Office:

a. For extended gliding/soaring operations in any of the three glider operating areas at NAS Patuxent River or WOLF, a ceiling of 3,500 feet and visibility of 3 SM is required.

b. For restricted glider operations, a ceiling of 1,000 feet and a visibility of 3 SM is required.

8.10.1 GLIDER OPERATING AREAS.

The glider operating areas listed below will be specified at the pre-launch briefing and, except the WOLF area, are normally for use only during non-working hours. Glider flights outside these areas are restricted to transits directly to and from these areas or entry into landing patterns. Aerobatics are permitted in the WOLF (R-4005W) area and the NAS Patuxent River Class D airspace (R-4007) when such airspace is designated for exclusive glider operations. The pattern for all other traffic shall be on the opposite side of the runway.

8.10.2 NORTHWEST GLIDER OPERATING AREA.

Beginning from a line 1/2 NM northwest of and parallel to Runway 6/24 centerline, the area extends northwesterly within a 5 NM radius of NAS Patuxent River, except where reduced to avoid excessive water overflight, see Illustration 14. The base of this area is 1,000 feet and the ceiling is 5,000 feet. It is used when Runway 6/24 is in use as the active runway.

8.10.3 SOUTHWEST GLIDER OPERATING AREA.

Beginning from a line 1/2 NM southwest of and parallel to Runway 14/32 centerline, the area extends southwesterly within a 5 NM radius of NAS Patuxent River, except where reduced to avoid excessive water overflight and departing traffic, see Illustration 15. The base of this area is 1,000 feet and the ceiling is 5,000 feet. This area is used when Runway 14/32 is in use as the active runway.

8.10.4 SOUTHEAST GLIDER OPERATING AREA.

Beginning from a line 1/2 NM southeast of and parallel to the centerline of Runway 6/24, south of Cedar Point, within a 5 NM radius of NAS Patuxent River, except where reduced to avoid excessive water overflight and departing traffic, see Illustration 16. The base of this area is 1,000 feet and the ceiling is 5,000 feet. This area is used when Runway 6/24 is in use as the active runway.

8.10.5 GLIDER DEPARTURE PROCEDURES.

1. Runway 2/20 is designated as the primary glider operating runway. The runway to be used will be specified at the pre-launch briefing and will be determined by the active runway and wind direction.
2. The NHK R-193 is designated as the departure and arrival route from and to NAS Patuxent River. Minimum outbound altitude is 1,500 feet. When airborne, the tow pilot shall maintain radio contact with Patuxent Tower. Before departing the NAS Patuxent River Class D Airspace, the tow pilot shall be instructed to contact Webster Tower for clearance into R-4005 West. Refer to section 10.3.5.4.5 for glider operations at WOLF.

8.10.6 GLIDER RECOVERY PROCEDURES.

1. Aircraft returning to NAS Patuxent River to the Test Pilot School with a glider in-tow shall advise the Patuxent Tower when airborne from WOLF. Inbound altitude is 3,000 feet.
2. The tow pilot will contact Tower at 5 NM or as directed by Patuxent TRACON. The tow plane pilot shall report arrival at the designated glider release point (e.g. West Seaplane Basin) as shown in Illustration 17 at 3,000 feet or as directed.
3. When directed by Tower, the glider shall release and land as soon as possible. The tow aircraft and glider shall avoid the approach and departure corridors of primary runways prior to release.
4. Tower will broadcast a warning to all aircraft that the glider is inbound.
5. The tow aircraft shall request clearance from Tower to drop the tow rope between taxiway Echo and Runway 14, west of taxiway Bravo or in the tow drop zone east of Runway 2/20 as described in section 4.12 below. This request shall imply that the towrope landing areas have been observed by the pilot to be clear of personnel and vehicles.

8.11 TOW BANNER DROP AREA.

The tow banner drop area is depicted in Illustration 1. Tow targets will be dropped at NAS Patuxent River to the right side of Runway 20 from an altitude of 500 feet. If an altitude of other than 500 feet is needed, prior coordination with the Tower is required. Tow aircraft shall contact

Tower prior to entering NAS Patuxent River Class D airspace to ensure the drop zone is clear. Tow aircraft shall enter the pattern at their drop altitude on a heading of 200 degrees. When a chase plane accompanies the tow aircraft, the chase aircraft will call the drop. If the tow aircraft is unescorted, Tower will call the tow release. Prior coordination is mandatory and shall consist of, at a minimum, a telephone call to the FWS 30 minutes before departure for all tow banner operations.

8.12 SUPERSONIC FLIGHT OPERATIONS.

1. Supersonic flights should be conducted in W-386 or in the PXOA as per reference (a). Sonic Boom monitoring devices are installed throughout the PXOA. The monitors are used to record sonic boom events and location.
2. When operating in the PXOA, the aircrew is responsible for notifying ATC prior to the supersonic event and for filing appropriate flight reports after the flight.
3. NAWCAD aircraft are authorized to perform supersonic runs in the PXOA above 30,000 feet in the local restricted areas. All supersonic flights above 30,000 feet shall be flown over the Chesapeake Bay.
4. Only NAWCAD aircraft are authorized to perform supersonic runs in the PXOA below FL300. Supersonic runs below FL300 are restricted to essential test flights for weapons separation. Essential supersonic test flights that require tracking by ATR for weapons separation are authorized in R-4005 North.
5. Sonic boom impact shall be analyzed prior to supersonic flight within the PXOA, regardless of altitude, to aid in developing flight paths which will minimize sonic boom impact over populated areas. Assistance with sonic boom impact analysis is available from ATR. Contact Central Schedules for information.
6. Other users may use restricted areas for supersonic operations above FL300 if all of the following conditions are met:
 - a. Performing a maintenance check flight and coordinated via Central Schedules,
 - b. Sonic boom impact shall be analyzed by ATR prior to flight and verified completed with ATC, and
 - c. Specifically approved by the NAS Commanding Officer via Air Operations prior to conduct of the supersonic run.

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CHAPTER 9

ROTARY WING COURSE RULES

9.1 GENERAL PROCEDURES.

The following rotary wing course rules are designed to affect single direction traffic flow, maximize safety, and minimize controller workload. Strict adherence to these course rules is of utmost importance. General flight rules include the following:

1. After receipt of takeoff clearance, helicopters will taxi into position and depart in accordance with the helicopter traffic pattern in effect as depicted in illustrations 3 and 4 or as approved by Tower.
2. As per reference (a), helicopters operating VFR shall not exceed 500 feet AGL within NAS Patuxent River Class 'D' airspace unless cleared by ATC.
3. Helicopters shall not overfly taxiing or parked aircraft and shall not pass within 200 feet laterally of buildings or other fixed obstacles.
4. Helicopters shall remain clear of arriving and departing traffic and, in particular, shall remain clear of the extended centerline of Runway 14 once inside the Solomon's Bridge. When Runway 14 is active, aircraft should remain clear of the extended centerline of Runway 14 outside of the Solomon's Island Bridge to the maximum extent practical to avoid IFR traffic on final at 1,600 to 2,500 feet MSL.

9.2 NOISE ABATEMENT. Refer to Chapter 3.6.

9.3 HELIPADS.

Refer to Illustration 1. The seven primary helipads are described in section 1.1.3.4, however, helicopters may land on any existing runway, taxiway, or grass area as coordinated with Tower. All helipads have standard markings.

1. Transients will normally land at the intersection of Echo and Bravo taxiways, just north of the tower and taxi to assigned parking. When the destination is HX-21 or TPS, transient helicopters may use the NAWC pad.
2. Use extreme caution when landing at the Rinse Rack so as not to overfly the restricted movement area.
3. The NAWC helipad is lighted with standard pad and approach lights.

4. The VX-1 pad is restricted to locally based helicopters. See Section 9.9 for operating procedures.
5. Helicopters requiring use of the hot refueling pits will normally utilize the Alpha/Echo pad.

9.4 DEPARTURE INSTRUCTIONS.

9.4.1 TAKEOFF INSTRUCTIONS.

Pilots shall acknowledge "hold short," "Line-up-and-wait," and takeoff instructions. Aircraft cleared for takeoff are expected to depart without delay. Any expected delay on the runway or helipad must be reported to Tower prior to calling for takeoff.

9.4.2 IFR DEPARTURE PROCEDURES.

Helicopters departing with an IFR clearance may depart the airfield via a runway or helipad, with the exception of the VX-1 pad.

9.4.3 VFR DEPARTURE PROCEDURES.

Helicopters are not authorized to cross arrival/departure corridors without Tower approval. Helicopters may request deviations from the following departure procedures; however, unless otherwise cleared by Tower, are expected to fly via the established departure routes. Helicopters requesting departures using compass headings (i.e. Northwest, West) will be cleared and are expected to depart via the requested heading. Desired departure shall be requested coincident with request for takeoff clearance.

9.4.3.1 WEST BASIN DEPARTURE.

After reaching the West Basin, track 270 degrees until clear of Class D Airspace while remaining south of WPTX antennas, 386 feet MSL (NHK R-279/8 DME).

9.4.3.2 CROSS-FIELD DEPARTURE.

Flights desiring a cross-field departure to the south, PXOA, or WOLF shall proceed to the Cedar Cove water tower or as directed by Tower while conforming to the prevailing helicopter traffic pattern. Hold short of the approach corridor of Runway 6 until cleared to cross.

9.4.3.3 RIVER MOUTH DEPARTURE.

Helicopters shall depart and hold short of the approach corridor of Runway 14 until cleared to cross, then proceed to and report the Patuxent River mouth remaining feet wet.

9.4.3.4 GRASS PATTERN ENTRY.

Departures intending to go immediately to the grass area adjacent to Runway 2/20 shall conform to the prevailing helicopter traffic pattern.

9.5 ARRIVAL INSTRUCTIONS.

9.5.1 VFR ARRIVAL PROCEDURES.

The initial check-in for all arrivals shall be made prior to entering NAS Patuxent River Class D airspace at or below 500 feet AGL. The pilot shall inform Tower of the flight's location and the type of arrival desired. Depending on volume and direction of traffic, Tower may clear the flight as requested, or direct the flight to enter via the Solomon's Bridge arrival, paragraph 9.5.1.1, or Cross-Field arrival, paragraph 9.5.1.2.

NOTE:

Cross-field, river mouth, and gold coast arrivals are not authorized for helicopters experiencing lost communications.

9.5.1.1 SOLOMONS BRIDGE ARRIVAL.

Helicopters shall proceed to and report 1 NM northwest of the Solomon's Island Bridge at 500 feet AGL along the western bank of the Patuxent River. Inbound aircraft will proceed over the west bank of the bridge so as to arrive over the West Seaplane Basin (or abeam the basin for the south pattern), and then conform to the prevailing traffic pattern for full-stop landing or grass pattern entry. If the NAWC or VX-1 pad is occupied, a VFR holding pattern will be assumed at the West Basin as depicted in illustrations 3 and 4.

9.5.1.2 CROSS-FIELD ARRIVAL.

Helicopters departing WOLF to NAS Patuxent River or arriving from the south shall proceed inbound via the NHK R-180 and contact Patuxent Tower prior to entering the Class D airspace. Approval for a cross-field entry means that helicopters shall report the Cedar Cove water tower (NHK R-180/1.9 DME). Helicopters shall hold at the Cedar Cove water tower at or below 500 feet AGL as depicted in illustrations 3 and 4, until cleared to cross Runway 6. When cleared, aircraft shall conform to the prevailing traffic flow.

<p>CAUTION</p>

Do not overfly the restricted movement area.

9.5.1.3 RIVER MOUTH ARRIVAL.

Contact Patuxent Tower prior to entering Class D airspace from the north or east over the Chesapeake Bay and report the Patuxent River mouth. Remain feet wet until receiving landing clearance. Do not cross arrival/departure corridor of any runway without specific approval from Tower.

9.5.1.4 GOLD COAST ARRIVAL.

Helicopters arriving from the PXOA may proceed inbound to Cedar Point at 200 feet AGL or below remaining clear of the approach corridor of Runway 32 or as coordinated with Tower. From Cedar Point, proceed along the coastline remaining feet wet to the river mouth or entry to the Slope/TERF area. Hold short of the approach corridors of Runways 24 and 14 until cleared to cross.

9.6 SPECIAL VFR HELICOPTER OPERATIONS.

1. Special VFR Helicopter Routes provide separation between arriving and departing NAS Patuxent River based SVFR helicopters and fixed-wing IFR aircraft. Refer to Illustration 6 for route depictions.
2. Helicopters departing with an SVFR clearance may depart the airfield via a runway or any helipad.
3. Helicopters cleared in accordance with the following SVFR routes shall maintain visual reference to the surface at or below the altitude assigned by ATC and report to Tower at each designated reporting point. Deviations from the published routes are not authorized without ATC approval.

9.6.1 SPRING RIDGE (SOUTH) DEPARTURE/ARRIVAL ROUTES.

NOTE:

Initial headings are as flown from the helicopter grass pattern unless otherwise note.

9.6.1.1 SPRING RIDGE DEPARTURE.

After ATC clearance and release for departure have been received, depart on heading of 185°, remaining east of both MD 712 (Gate 3/Forest Park Rd) and MD 235. Follow MD 235 south to the Spring Ridge School (NHK R193/5 DME). Report, to Tower, abeam the school. After Spring Ridge School, contact Advisory/BAYWATCH for clearance southbound through R-4005W or Webster Tower for entry into the WOLF traffic pattern.

9.6.1.2 SPRING RIDGE ARRIVAL.

Arrivals inbound to NAS Patuxent River shall contact the Tower 1 NM South of the Chesapeake Theodolite Station (NHK R-183/4 DME), then hold south of the Theodolite, over land, until clearance is received. Upon receiving clearance, proceed on a heading of 355°, along the shoreline, to the Pylon Theodolite Station (NHK R-183/1.5 DME). Depart the Pylon Station on a heading of 330° for a cross-field entry. Report to Tower when departing the Chesapeake Theodolite Station.

CAUTION

Water tower 181 feet MSL one-mile south of the NHK.

9.6.2 COVE POINT (NORTH/EAST) DEPARTURE/ARRIVAL ROUTES.

9.6.2.1 COVE POINT DEPARTURE.

After ATC clearance and release for departure has been received, depart on a heading of 010° and proceed to Drum Point (NHK R-358/2 DME). Depart Drum Point along the coast on a heading of 045° to the Cove Point Lighthouse (NHK R-015/5.5 DME). Report Cove Point to Tower.

9.6.2.2 COVE POINT ARRIVAL.

Contact Tower prior to the Cove Point Lighthouse. Hold at Cove Point until clearance is received. After receiving clearance, proceed along the coast on a heading of 225° to Drum Point. Depart Drum Point heading 190° to the grass area or 225° to the NAWC pad. Report, to Tower, departing both Cove and Drum Points.

9.6.3 BALL PARK (WEST) DEPARTURE ROUTE.

After ATC clearance and release for departure have been received, depart on a heading of 265° or 250° from the NAWC pad and proceed to the Chancellor's Run Regional (Ball) Park (NHK R-265/5 DME) on Chancellor's Run Road. Report, to Tower, abeam the ballpark.

NOTE:

SVFR arrivals from the west shall use the Solomon's bridge arrival.

9.7 PREVENTIVE CONTROL.

Preventive control is defined as successive operations involving takeoffs and landings or low approaches where the aircraft obtains Tower approval for initial pattern entry, conforms to the published traffic pattern, provides own separation from other aircraft, and is not required to request approval for successive operations. Preventive control is authorized for all helicopters

operating on Runway 2/20 and in the grass area patterns in accordance with the Preventive Control LOA, reference (kk). ATC instructions shall always take precedence over preventive control procedures.

9.8 HELICOPTER VFR GRASS PATTERN.

The grass area is defined as the area between Bravo taxiway, Runway 2/20, Charlie taxiway, and Alpha taxiway. Procedures for operations in the grass area are as follows:

1. Helicopter traffic patterns are dependent upon grass area traffic direction (i.e. north or south), which is usually determined by the active runway in use. When Runway 14 or 24 is the active runway, the south pattern is normally used as depicted in Illustration 3 and when Runway 6 or 32 is the active runway, the north pattern is normally used as depicted in Illustration 4. If unfavorable winds or safety considerations dictate, the direction of traffic flow may be changed at the request of the pilot(s) established in the grass pattern. All pilots established in the pattern must agree to the directional change and obtain Tower approval prior to effecting a change.
2. The grass area traffic pattern is 500 feet or below and oriented north or south in direction as determined by Tower. The pattern is bounded by Runway 2/20, Echo taxiway, Saufley Road, and Alpha West taxiway.
3. The grass area is limited to one taildragger (U-1/U-6) aircraft at a time. Helicopters may be offered other areas of the airfield and if they choose to operate Runway 2/20 they shall operate same direction as the taildragger.
4. Helicopters and taildragger aircraft may not operate simultaneously in the grass area. If no scheduling conflicts arise, ATC will issue the grass area on a first come first served basis.

CAUTION

Do not overfly the VQ-4 restricted movement area.

3. Helicopters in the grass area or the associated Runway 2/20 traffic pattern are considered to be operating the same area and shall be responsible for separation between themselves and other helicopters operating in these areas and taxiing aircraft.
4. A maximum of four helicopters at one time may operate in the grass area/Runway 2/20 or associated traffic pattern during VFR conditions.
5. Practice auto rotations beginning above 500 feet shall not be performed without specific clearance from Tower.
6. Helicopters shall specifically request use of Runway 2/20 from Tower and abide by all of the above procedures.

7. Both aided and unaided night operations are authorized in the grass pattern and on Runway 2/20, however, mixed operations are not authorized, first-come basis. Refer to section 9.13.

WARNING

Runway 02/20 and the helo grass pattern are unlighted areas. Helicopters operating at night in these areas shall do so at their own risk as per reference (1).

NOTE:

Mowers operate in the grass area every Wednesday morning from sunrise to 1200L during summer months.

9.9 VX-1 HELIPAD.

1. Helicopters departing the VX-1 complex will taxi to and hold short of the helipad located on Alpha West taxiway between VX-20 and Cedar Point Road.

2. Departing helicopters shall:

- a. Obtain takeoff clearance for entry into the prevailing traffic pattern from Tower. For a south traffic pattern, helicopters will join the pattern on downwind. For a north traffic pattern, helicopters will join the pattern on the base leg.
- b. Obtain specific approval from the Tower before deviating from these departure procedures.

3. Arriving helicopters shall:

- a. Conform to standard arrival procedures when inbound to NAS Patuxent River. Winds permitting, the pilot may request a straight in landing from the west.
- b. One hundred feet AGL or above is required for crossing Cedar Point Road. Arrivals from the west shall maintain 200 feet AGL or above until abeam Building 305 before descending for obstacle clearance over high power lines. West Basin departures shall be 200 feet AGL or above abeam Building 305 enroute to the climb altitude of 500 feet.

4. All flights to and from the VX-1 Pad shall be conducted directly over Alpha West taxiway. Do not overfly VQ-4.

5. The VX-1 Pad is not authorized for use when large category aircraft on spot 5 of the VX-20 ramp are executing high power turns.

6. Transient aircraft are not permitted to use the VX-1 Pad.

7. Both aided and unaided night operations are authorized in the grass pattern and on Runway 2/20. Mixed operations between aided and unaided aircraft are not authorized and ATC will provide services on a first come first served basis. Refer to section 9.1

9.10 SLOPE/TERRAIN FLIGHT (TERF) AREA.

1. The TERF Area provides an area within the Class D Airspace for assessing helicopter-handling qualities in the low-level flight regime and on sloped landing surfaces. These areas are located north of the intersection of Runways 6/24 and 14/32 surrounding Harper Creek and are depicted in Illustration 5.

2. The Slope Area is located within the TERF Area and contains three concrete landing pads sloped at 6, 9, and 12 degrees. The TERF area contains an unprepared landing area (with landing zone (LZ) A, C, and F) and four maintained LZ (B, D, G, and H) designed for confined area landings (CAL). LZ 'G' is not available during terrapin nesting season (May-September). LZ 'E' is not maintained.

WARNING

Not all helicopters may have adequate obstacle clearance in which to land safely. Therefore, aircraft shall operate at their own risk.

3. The following procedures apply to operations in the Slope/TERF Area:

a. Operations in Slope/TERF are limited to daytime (sunrise to sunset) with the exception of night vision device (NVD) operations. Refer to section 9.13.

b. Altitude shall be at or below 100 feet in the Slope Area and 200 feet or below in the TERF Area. Tower may approve higher altitudes on a case-by-case basis.

c. Pilots are responsible for remaining clear of vehicular traffic on Cedar Point Road and Bronson Road.

d. Runway 20 arrivals and Runway 2 departures are not authorized while TERF or slope operations are in progress.

e. Operations in the Slope Area and the TERF Area may be conducted concurrently unless exclusive use in either area is requested. During daylight hours only one helicopter is permitted to operate in the Slope Area and two helicopters simultaneously in the TERF area. At night only one helicopter may operate in the entire Slope/TERF Area.

f. Tower approval is required for entry into or departure from the areas.

g. Ordnance storage bunkers must be avoided by a minimum lateral distance of 500 feet.

h. Minimum weather for Slope/TERF Area operations is 500 feet and 1-mile visibility with SVFR clearance from Tower.

9.11 TETHERED HOVER AREA.

The Tethered Hover Area is located north of the approach end of Runway 20, see Illustration 1. When this area is in use, Runway 20 is restricted to Runway 20 departures only.

9.12 ADS-33 COURSE.

The ADS-33 Course consists of five segments. The Slalom, Acceleration/Deceleration (Accel/Decel) and Lateral Reposition (Lat Repo) courses are located on runway 2/20. The Pirouette and Hover courses are located north of runway 2/20, adjacent to the sloped landing pads. The tethered hover pad and pirouette course are co-located.

NOTE:

The tethered hover pad is not an ADS-33 segment, but is co-located with the pirouette course.

9.13 NVD OPERATIONS.

1. NVD operations are authorized and shall be conducted in accordance with reference (a).

NOTE:

Airfield lighting at NAS Patuxent River may be adjusted on a not to interfere basis with other pattern traffic unless NVD aircraft is operating under exclusive use. NVD aircraft must illuminate all required external lighting unless operating within active, exclusive PXOA.

2. WOLF may be utilized for NVD operations in accordance with paragraph 10.1.4.

9.14 HELICOPTER OPERATING AREAS.

VFR helicopter operating areas provide airspace which minimizes flight over water and permits low altitude operations for all helicopters and the following fixed-wing aircraft: U-1, U-6, T-34, and V-22. See Illustration 13.

9.14.1 GENERAL.

1. All aircraft are required to contact Clearance Delivery for assigned beacon code with area requested and time enroute.

2. All aircraft shall operate with Patuxent TRACON on frequency 250.85 and shall monitor guard continuously.

WARNING

ATC provides VFR traffic advisories only as workload permits. Aircraft operating in these areas must adhere to see-and-avoid doctrine.

3. Traffic flow is a clockwise racetrack pattern.
4. Spins and aerobatics are prohibited.
5. Aircraft requiring altitudes above 3,000 feet shall obtain prior approval from Patuxent TRACON.
6. Maximum number of aircraft per area is four, with exception of the West area, which is five aircraft.
7. Fixed-wing aircraft will transit to/from these areas as per ATC instructions and procedures.
8. Refer to Section 3.19, local airports and civilian VFR corridors, for possible traffic conflicts.

9.14.2 WEST HELO OPERATING AREA.

9.14.2.1 BOUNDARIES.

The West Helo operating area is defined as the airspace abeam Chesapeake Beach (NHK 354/26 DME, 38°41.5'N by 76°32.5'W) to Colton's Point (NHK 270/18 DME, 38°13'N by 76°47'W) to the North of the extended centerline runway 6 shoreline (NHK 240/10 DME, 38°11.5'N by 76°33'W) to no closer than 5 NM of Patuxent (NHK 240/05, 38°15'N by 76°29'W) along the 5 NM arc to Cove Point (NHK 015/5.5 DME, 38°23'N by 76°23'W).

9.14.2.2 CONFLICTS.

1. The area is **not** designated Special Use Airspace and is traversed by three airways, three military training routes (MTR) with an alternate exit/entry point (VR 1711/12/13) and NAS Patuxent River radar approach corridors to Runways 6, 14, and 24.
2. When Runway 14 is active, aircraft should remain clear of the extended centerline of Runway 14 outside of the Solomon's Island Bridge to the maximum extent practical to avoid IFR traffic on final at 1,600 feet to 2,500 feet MSL.
3. The area is also utilized by civilian aircraft for VFR practice, and although not depicted, is traversed by commuter aircraft on uncharted IFR routes. Civil general aviation aircraft from several local airports use the VFR practice area in VFR conditions. Stalls, spirals, "S" turns, low altitude work and forced landings are performed.

4. Calvert Cliffs Nuclear Power Plant is located at NHK R003/9 DME.

NOTE:

Do not loiter in the vicinity of the power plant.

5. St. Mary's County Airport is located at NHK R295/6.7 DME.

NOTE:

Do not overfly St. Mary's County Airport at less than 1,500 feet MSL.

9.14.2.3 PROCEDURES.

1. Helicopters shall use the following Class D Airspace VFR egress/ingress routes:

a. Egress - Depart Class D airspace via a West Basin Departure. Upon departing Class D airspace, turn north to enter area.

b. Ingress - Intercept the west bank of Patuxent River prior to entering Class D airspace. Fly down river, remaining over water and enter Class D airspace via Solomon's Bridge Arrival.

2. After departure, and when directed by Tower, aircraft shall switch to Patuxent TRACON frequency 250.85 for traffic advisories.

3. When established in the West Helo area and operating below 3,000 feet MSL, remain northwest of the NHK 10 DME arc between the egress/ingress routes to avoid conflict with the St. Mary's County Airport traffic pattern and the TACAN Runway 14 approach corridor.

4. MTR activation times are available from Leesburg FSS via telephone 1 (866) 225-7410 prior to departure or on frequency 255.4 MHz when airborne.

9.14.3 SOUTH HELO OPERATING AREA.

9.14.3.1 BOUNDARIES.

The South Helo operating area is defined as the airspace south of Colton's Point (NHK 270/18 DME, 38°13'N by 76°47'W) to north of power lines (NHK 255/26 DME, 38°32.36'N by 76°01.8'W) over Virginia landmass to the southern limit of R-4006 (NHK 190/32 DME, 37°44.83'N by 76°24.64'W).

9.14.3.2 CONFLICTS.

1. Underlies restricted areas beginning at 3,500 feet MSL.

2. NAS Patuxent River radar approach corridor to Runway 6.

9.14.3.3 PROCEDURES.

Departures/arrivals will be flown as per course rules.

9.14.4 EAST HELO OPERATING AREA.

9.14.4.1 BOUNDARIES.

The East Helo operating area is defined as the airspace over land mass north/northeast of NAS Patuxent River (NHK 096, 38°13'N by 76°47'W) along the eastern boundary of R-4006 to remain south of Route 50 to Cambridge Dorchester (CGE) (NHK 054/22, 37°45.5'N by 76°53'W). Includes the landmass west of CGE on the east side of the Chesapeake Bay.

9.14.4.2 CONFLICTS.

1. Bounded by restricted areas beginning at 3,500 feet MSL.
2. CGE GPS/NDB runway 34 approach procedures.
3. Blackwater National Wildlife Refuge. A lake and surrounding wetlands centered at 38°25'N by 76°17'W. See Baltimore/Washington VFR terminal chart for exact location. Aircraft shall not overfly Blackwater National Wildlife Refuge below 3,000 feet AGL.

9.14.4.3 PROCEDURES.

River mouth departures/arrivals shall be utilized for helicopters operating in this area unless other routes approved by ATC.

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14 May 2021

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CHAPTER 10

WEBSTER OLF

10.1 GENERAL.

Webster Field (KNUI) is an Out Lying Field of NAS Patuxent River also known as WOLF. Operation of the airport and airspace at WOLF is the responsibility of the Commanding Officer, NAS Patuxent River, and is exercised through the NAS Patuxent River Air Operations Officer. Unless otherwise stated, applicable provisions of this manual are enforced at WOLF in the same manner as NAS Patuxent River.

10.1.1 AIRPORT.

10.1.1.1 LOCATION.

WOLF is located at N38°08.76' by W076°25.71'. The field is on the NHK R198 at 8.7 DME and within R-4005W on the northeast bank of the St. Mary's River.

10.1.1.2 ELEVATION.

Field elevation is 21 feet above mean sea level.

10.1.1.3 WOLF CLASS G/E AIRSPACE.

For the purpose of local procedures, WOLF is in Class G/E Airspace and covers a four nautical mile radius from the center of the airfield, up to and including 2,500 feet AGL. However, when R-4005W is active, NUI Class G/E airspace becomes a restricted area.

10.1.2 HANGAR AND SERVICE FACILITIES.

10.1.2.1 SERVICES AND FACILITIES.

Ramp space and aircraft services are not available

10.1.2.2 RUNWAYS, HELIPADS, AND TAXIWAYS.

1. Each runway is 150 feet wide and 5,000 feet long and composed of asphalt. All taxiways are composed of asphalt and are 75 feet wide. All taxiways northeast of Runway 15/33 are closed. See Illustration 18. The distances remaining for intersection departures for each runway are contained in Table 10-1.

WOLF Runway Intersection Distances

Intersection	Dist. (Ft)	Intersection	Dist. (Ft)
RWY 08 @ 15/33	3,033	RWY 26 @ 15/33	1,967
RWY 15 @ 08/26	1,450	RWY 33 @ 08/26	3,450

Table 10-1

2. Table 10-2 depicts information on Runway headings and threshold elevations.

WOLF Runway Headings and Elevation

Runway	Magnetic Heading	Threshold Elevation
08/26	076°/256°	12/21 feet
15/33	152°/332°	13/22 feet

Table 10-2

3. The helipad is located north of the control tower on Alpha taxiway. It has standard markings.

4. UA (Unmanned Aircraft) vertical takeoff and landing points are located as follows: "UA Spot 1" is located on Alpha taxiway adjacent to Hangar 8139. "UA Spot 2" is located on the closed runway between Bravo taxiway and runway 08/26. See Illustration 18 for diagrams and Table 10-3 for coordinates of the spots.

WOLF UA VTOL Spots

Spot	Location	Latitude	Longitude
1	Alpha taxiway	N 38° 09' 02.85"	W 076° 26' 07.67"
2	Closed runway	N 38° 08' 45.09"	W 076° 25' 34.94"

Table 10-3

5. UA operations and ground equipment emplacement may occur on Bravo taxiway in the area east of Runway 15/33. A NOTAM shall be in place when such operations are scheduled to occur or equipment obstructs the taxiway or adjacent surfaces.

6. The grass area located northeast of Runway 15/33 is utilized by helicopters with a maximum of 4 allowed at any one time. The grass area may also be used by UA. The grass area is approximately 700 feet east-west and 900 feet north-south. Tires located in the grass area provide visual boundaries of the following coordinates:

WOLF Grass Area Boundaries

CORNER	LATITUDE/LONGITUDE	CORNER	LATITUDE/LONGITUDE
NW	N 38° 09.01' / W 076° 25.86'	NE	N 38° 09.05' / W 076° 25.69'
SW	N 38° 08.85' / W 076° 25.79'	SE	N 38° 08.89' / W 076° 25.64'

Table 10-4

10.1.2.3 WEIGHT BEARING CAPACITY.

The movement areas are not stressed for weights in excess of 50,000 pounds. Table 10-5 illustrates runway and taxiway pavement weight limitations:

WOLF Weight Bearing Capacities

Area	AIRCRAFT GROSS WEIGHT (LBS)			
	Single Gear	Dual Gear	Single Tandem	Dual Tandem
Runway 15/33	72,600	105,000	155,000	210,000
Runway 08/26	72,600	105,000	155,000	200,000
Bravo taxiway	72,600	105,000	155,000	200,000
Alpha taxiway	72,600	105,000	155,000	200,000

Table 10-5

NOTE:

H-53 aircraft are authorized to operate in the helicopter grass area only.

10.1.2.4 WIND INDICATORS.

Windsocks are located at the approach end of each runway, Building 8143 northwest of the tower, and in the helicopter grass area. A tetrahedron is located south of the grass area near the runway intersection.

10.1.3 AIRFIELD LIGHTING.

Airfield lighting is not available.

10.1.4 HOURS OF OPERATION.

1. WOLF Control Tower is open for operations Mon-Fri, 0900-1700 EST/EDT or Sunset, whichever is earlier, excluding holidays. Use must be coordinated through Central Schedules and unscheduled requests for use of Webster shall be coordinated with ATC.

2. 24-hour advance notice is required to operate from the airfield with a closed control tower. Air Operations Officer or ATCFO approval is required to operate with the control tower closed. All aircraft, including UA, operating at WOLF after published hours shall report the number of pattern operations conducted to NAS Patuxent River Base Operations, COMM: (301) 342-3836/7, DSN 342-3836/7, as soon as possible after completion.

3. A PPR is required for non-NAS Patuxent River based aircraft.

10.1.5 COMPASS ROSE

Compass Rose is not available at WOLF.

10.1.6 ANNUAL WEATHER.

WOLF area experiences a wide variety of weather phenomena throughout the year, similar to NAS Patuxent River as described in paragraph 1.6.

10.1.7 ARRESTING GEAR

No arresting gear installed at WOLF.

10.2 FLIGHT PLANNING

Flight Planning procedures are outlined in Chapter Two of this manual.

10.2.1 IFR CLEARANCE.

1. Flight Planning facilities are not available.
2. If IFR services are required, the aircraft shall depart VFR to pick up an IFR clearance when airborne. Webster Tower will instruct pilot to contact NAS Patuxent River TRACON on 121.0/250.3 MHz.

10.2.2 WEATHER CRITERIA.

1. Manned flight operations may be conducted with weather no lower than 1,000 feet and 3 SM provided:
 - a. Pilots maintain cloud clearance as specified by Federal Aviation Regulations.
 - b. Tower personnel maintain visual contact with the aircraft.

2. UA operations with weather below 1,000 feet and 3 SM may be authorized via MOA or with specific authorizations from Webster Tower.

a. Group I UA flight operations may be conducted with a ceiling of 300 feet and sufficient visibility to maintain visual contact with the UA.

b. Vertical Takeoff UA (VTUA) is authorized to operate with a ceiling of 500 feet and visibility of 1 SM if it is the only aircraft in Webster airspace (excluding any small UA operating in the Small UA box). VTUA shall maintain clear of clouds and within visual contact of the operator.

10.3 COURSE RULES.

10.3.1 GENERAL.

NAS Patuxent River's course rules are designed to promote aviation safety and to meet Research, Development, Test, and Evaluation (RDT&E) and fleet operational requirements. The RDT&E mission and the variety/mixture of turboprops, jets, helicopters, gliders, and unmanned aircraft system (UA) result in complex traffic patterns and procedures. Refer to paragraph 3.1.

10.3.2 TAXI PROCEDURES.

1. Pilots shall request taxi instructions from Tower on the primary UHF frequency prior to taxiing on any movement area, and shall maintain a listening watch on Tower frequency. Pilots shall contact Tower for takeoff at the hold short.

2. Pilots of taxiing aircraft sighting emergency vehicles responding on the field shall stop and hold their position until authorized to proceed by radio or light signal from Tower.

3. Since the active runway is used for taxiing, the tower may authorize 180-degree turns on the runway after landing rollout.

4. Pilots conducting high power turn-ups shall position their aircraft in such a manner as to avoid presenting a prop wash hazard to other traffic.

10.3.4 TAKEOFF INSTRUCTIONS.

10.3.4.1 MANNED AIRCRAFT DEPARTURE PROCEDURES.

1. Outbound aircraft shall depart through ALPHA or BRAVO as directed by Webster Tower. Aircraft in the runway pattern shall depart at 1,000 feet MSL or above. Helicopters in the helicopter grass pattern shall depart at 500 feet AGL.

CAUTION

UA may be holding at echo or sierra at 2,000 feet MSL.

2. When returning to NAS Patuxent River, fixed-wing aircraft shall proceed VFR and contact Patuxent Tower prior to entering KNHK Class D airspace.
3. Helicopters returning to NAS Patuxent River shall comply with procedures in paragraph 9.5.

10.3.4.2 UA DEPARTURE PROCEDURES.

1. UA operators intending to depart Webster to the PXOA shall check-in with PAX ADVISORY/BAYWATCH on "Button 21" in accordance with paragraph 10.5.2 prior to launch. Airspace can take up to 30 minutes to activate. The PXOA procedures in Chapter 3 apply.
2. The UA operator shall contact Tower for taxi instructions and takeoff clearance and provide the status of the airspace that has been coordinated with PAX ADVISORY/BAYWATCH.
3. Fixed Wing UA should climb to 1,000 feet MSL via runway heading and then a departure course to enter approved special use airspace. UA needing to remain in the runway pattern prior to departing on course rules shall coordinate the pattern with Webster Tower prior to takeoff.
4. VTUA shall climb to 500 feet AGL and fly the departure route as depicted in Illustration 21. VTUA shall remain at 500 feet AGL until cleared by Webster Tower/BAYWATCH for a higher altitude or established in R-4005SW (ROCKFISH) unless R-4005W has been coordinated for exclusive use. UA needing to remain overhead Webster prior to departing shall coordinate the pattern with Webster Tower prior to takeoff.

10.3.4.3 VFR ARRIVAL AND DEPARTURE PROCEDURES.

All aircraft (including UA) shall establish positive contact with Webster Tower prior to entering Webster Airspace and shall remain on Webster Tower frequency (358.0) until reporting clear of the Webster airspace, or until positively switched by Webster Tower.

1. Refer to Illustration 20 for a depiction of the manned aircraft check points listed in Table 10-6.

WOLF Manned Aircraft Ingress/Egress Points		
Point	Lat/Long	Location
ALPHA	N 38° 11.3'	Cooper Creek
	W 076° 28.6'	NHK R211/7.0 DME
BRAVO	N 38° 10.7'	Route 5 and St Indigoes' Creek
	W 076° 26.1'	NHK R194/6.8 DME

Table 10-6

2. Refer to Illustration 20 for a depiction of the rotary wing check points listed in Table 10-7.

WOLF UA Ingress/Egress Points

POINT	LAT/LONG	LOCATION
WHISKEY	N 38° 06' 00"	R-4005SW (ROCKFISH), approximately 4 NM SSW of WOLF (SE Of St. George's Island)
	W076° 27' 00"	
SIERRA	N 38° 06' 00"	R-4005W, approximately 4 NM SSE of WOLF
	W076° 24' 00"	
ECHO	N 38° 09' 44"	R-4005W, approximately 4 NM ENE WOLF
	W076° 22' 31"	
Saint Mary's River Buoy	N 38° 04' 00"	R-4005SW (ROCKFISH), approximately 5 NM South of WOLF. Lost link return home point (RHP)
	W076° 24' 18"	

Table 10-7

10.3.5 LANDING INSTRUCTIONS.

10.3.5.1 REDUCED SAME RUNWAY SEPARATION.

Reduced same runway separation is not used at WOLF, unless a specific waiver is requested and an LOA exists.

10.3.5.2 MANNED AIRCRAFT ARRIVAL PROCEDURES.

1. Inbound VFR aircraft shall not enter R-4005 West unless in radio contact with PAX ADVISORY/BAYWATCH or Webster Tower. Aircraft intending to operate in the Webster Tower Pattern shall report over ALPHA or BRAVO as directed by Webster Tower.
2. Fixed-wing aircraft shall maintain 1,000 feet MSL or above. Helicopters shall maintain 500 feet AGL, until established in the traffic pattern. U-1 and U-6 type aircraft may enter and depart WOLF at 500 feet AGL in accordance with the helicopter course rules, provided lateral separation is maintained from the grass pattern at all times.

NOTE:

Flying club aircraft are not permitted to use WOLF without a PPR.

10.3.5.3 UA ARRIVAL PROCEDURES.

1. Fixed Wing UA shall plan to return to the airfield via point SIERRA or ECHO depicted in Illustration 20 unless cleared direct, by PAX ADVISORY/BAYWATCH or Webster Tower, to the active runway. Holding altitudes shall be 2,000 feet MSL or higher, unless lower is approved by Webster Tower.
2. When directed by Tower, Fixed Wing UA shall proceed inbound from the holding area (SIERRA or ECHO) to the appropriate pattern.
3. VTUA shall plan to return to the airfield via WHISKEY as depicted in Illustration 21 unless cleared direct by PAX ADVISORY/BAYWATCH or Webster Tower. Permission to enter R-4005SW (ROCKFISH)/R4005W shall be obtained prior to proceeding to WHISKEY.
4. VTUA may request the arrival procedures for Fixed Wing UA at the discretion of the Aircraft Commander with approval from Webster Tower.

10.3.5.4 TRAFFIC PATTERNS.

10.3.5.4.1 RUNWAY TRAFFIC PATTERN.

1. The break altitude is 1,500 feet. Pattern altitude is 1,000 feet for fixed-wing and 500 feet for helicopters. U-1, U-6, and UA may fly the pattern at 500 feet. Refer to Illustration 18 for a graphical depiction of the traffic patterns. Primary traffic pattern directions are:
 - a. Runways 08 and 15 right traffic.
 - b. Runways 26 and 33 left traffic.
2. Alternate pattern directions may be authorized by Webster Tower.
3. When the Altitude Identification and Measuring System (AIMS) Range is active, fixed-wing patterns may be restricted to Runway 15/33. See paragraph 10.3.9.2. The patterns are extended upwind and downwind and traffic direction may be opposite normal traffic pattern.
4. Refer to paragraph 10.3.7.2 for noise abatement restrictions.

10.3.5.4.2 HELICOPTER GRASS AREA PATTERN.

Helicopter patterns in the grass area should be opposite of runway pattern in use. The pattern may be modified with Tower approval. The following pattern guidelines apply:

1. Helicopters shall not overfly the crash crew position on the field.
2. Helicopters may be authorized to operate on other areas of the airfield with Tower approval.

3. Refer to paragraph 10.3.7.2 for noise abatement restrictions.

NOTE:

The helicopter grass pattern is always a preventative control operation conducted in accordance with paragraph 10.5.4.

10.3.5.4.3 PRACTICE PRECAUTIONARY EMERGENCY LANDINGS.

Refer to section 8.6 for PPA/PPEL procedures at WOLF.

NOTE:

High altitudes above 2,500 feet MSL at WOLF require coordination with PAX ADVISORY/BAYWATCH for clearance into R-4005W. Clearance for PPA/PPEL may be delayed or amended as a result of airspace restrictions.

10.3.5.4.4 SMALL UA BOX.

1. A flight area for small UA, from surface to 200 ft. AGL, is depicted, with coordinates, in Illustration 19.
2. A NOTAM for this area shall be posted and Webster Tower shall be notified when the UA is airborne. If the tower is closed, an after-hours approval shall be obtained and PAX ADVISORY/BAYWATCH shall be notified when the UA is airborne.

10.3.5.4.5 GLIDER OPERATIONS.

Glider Operations are normally incompatible with other aircraft operations. Glider operations shall be conducted in scheduled exclusive use airspace. Tower has final approval authority on concurrent fixed-wing and glider operations; however, concurrent operations shall only be conducted with tow pilot concurrence. Pilots of the tow and glider aircraft shall be responsible for providing their own separation from all other VFR traffic. The following rules apply:

1. Use of WOLF for glider operations is restricted to TPS.
2. TPS shall coordinate the use of WOLF with Central Schedules Office.
3. Extended glider operations are conducted in that portion of R-4005 West within 5 NM of WOLF, from the surface to 5,000 feet MSL. Higher altitudes shall be coordinated with Tower when operating.
4. Restricted glider operations are conducted in that portion of R-4005 West within a 4 NM radius of WOLF and up to 2,500 feet MSL.

5. Webster Tower shall inform Patuxent Tower when gliders are returning to NAS Patuxent River. See paragraph 8.10 for procedures.

10.3.5.4.6 HALF-SCALE OPERATIONS.

Small radio-controlled model aircraft flown by UA operators to maintain proficiency shall be geographically separated from manned aircraft as coordinated with Tower. Radio communications with the Tower shall be maintained and special procedures are not required.

10.3.5.4.7 SEAPLANE OPERATIONS.

The Department of the Interior conducts seaplane operations on the St. Mary's River and St. Indigoes' Creek. Pilots should expect to be informed upon initial contact if no crash boat is available; therefore, seaplane operations are at the pilot's discretion.

10.3.6 ORDNANCE/WEAPONS HANDLING.

1. Unexpended ordnance is defined as a store on the aircraft where no attempt has been made to release the store. In case of unexpended ordnance, normal UA recovery procedures will be used.
2. Hung ordnance is defined as any store or weapon that remains with the aircraft after an attempted release. If a hung ordnance situation occurs, the UA operator shall safe the system and the aircraft shall RTB. If a hung ordnance situation occurs while in the PXOA, the UA will remain over water to an approach to runway 08 or 15 to avoid over-flight of populated areas.

10.3.7 NOISE ABATEMENT.

10.3.7.1 GENERAL.

Arrival/departure corridors and flight patterns may be over noise abatement areas, Illustration 23. Aircrews should, to the maximum extent practicable, reduce aircraft noise impacts and avoid noise abatement areas. Refer to paragraph 3.6 for the noise abatement policy.

10.3.7.2 NOISE ABATEMENT RESTRICTIONS.

1. Continuous UA operations over a single neighborhood or populated areas should be avoided as much as practicable. Although UA are not loud in traditional sense of aircraft, their continued presence, and low level background noise generate noise complaints.
2. UA should utilize the operating area developed within the PXOA to the maximum extent practicable. Refer to paragraph 3.8.9.3 and Illustration 20 for UA training routes and associated guidelines.

3. UA and other aircraft should maintain 1,500 feet MSL or above when overflying St. George's Island.
4. Aircraft should not overfly St. Mary's City or St. Mary's College to the maximum extent possible.
5. Aircraft should not overfly St. Ignatius Church southeast of WOLF Gate 1 or Cross Manor to the north of WOLF.

10.3.8 DEFINITION OF LOCAL FLYING AREAS.

The Local Flying area is as defined in Chapter 3 of this manual.

10.3.9 SPECIAL USE AIRSPACE.

10.3.9.1 R-4005 WEST.

R-4005 West - Overlies WOLF. Procedures for the operation within the R4005 West shall be in accordance with Chapter 3 of this manual.

10.3.9.2 R-4006 SOUTH.

Refer to paragraph 3.8.9.2.

10.3.9.3 AIMS RANGE.

The AIMS Range is an airspeed calibration range controlled by Webster Tower in R-4005 West and Southwest at or below 3,000 feet MSL. See Illustration 20. The following guidelines apply:

1. Aircraft requiring the AIMS Range must schedule R-4005W through Central Schedules. Familiarization operations by propeller powered aircraft may be conducted with Webster Tower approval without prior scheduling.
2. PAX ADVISORY/BAYWATCH shall coordinate inbound traffic with Webster Tower. Aircraft shall contact Webster Tower on 358.0 MHz or 126.2 MHz prior to commencing runs.
3. Approaches are made to two targets in the water, located southwest of WOLF. Runs are made south to north with an immediate climb out to the left after passing the final mark.
4. Refer to paragraph 10.3.7.2 for noise abatement restrictions.

10.3.10 OBSTRUCTIONS.

Table 10-8 depicts surface elevations of prominent obstructions within 4 NM of WOLF.

WOLF Obstructions	
Obstruction	Height
Webster Control Tower	75 feet
TACAN Antenna Site	105 feet
Windsock (1,000 feet North of Webster Control Tower)	50 feet
Coast Guard Water Tower	91 feet

Table 10-8

10.3.11 DESIGNATED PARKING AREAS FOR AIRCRAFT LOADING AND OFFLOADING HAZARDOUS MATERIALS.

Loading and Offloading Hazardous materials is not authorized at WOLF.

10.3.12 VEHICULAR AND PEDESTRIAN TRAFFIC.

1. Vehicular traffic on the airfield movement surfaces shall abide by the procedures in section 3.11 of this manual. Refer to section 3.11.3.8 of this manual for procedures for towing or moving air vehicles by hand on the airfield movement surfaces.
2. All vehicular traffic shall establish and maintain radio contact with Tower on Primary or FM Ground. Vehicles proceeding onto the airfield shall be cleared by Tower, before entering the movement area and comply with radio instructions.
3. Escort services for vehicular traffic which is not radio equipped may be arranged by contacting the Webster Airfield Manager at (301) 995-8016 or NAS Patuxent River Flight Planning at COMM: (301) 342-3836/7 or DSN 342-3836/7.
4. Pedestrian traffic is prohibited on movement area unless specific clearance is received from Tower and two-way radio communication is maintained.
5. When Webster Tower is closed, all movements on the airfield shall be announced on Webster CTAF.

10.4 AIRFIELD INSPECTIONS.

Prior to scheduled airfield opening, the crash crew shall conduct inspections of emergency vehicles. Airfield Services will conduct inspections of the grass landing strip, grass area, all runways, and taxiways for FOD.

10.5 AIR TRAFFIC CONTROL.

10.5.1 FREQUENCIES.

The frequencies listed in Table 10-9 are utilized.

Local Channel Frequencies	
Frequency (MHz)	Agency
126.2	NUI Tower primary VHF. Common Traffic Advisory Frequency (CTAF) when tower is closed.
358.0	Primary UHF
316.45	Back up UHF
340.2	Back up UHF
326.5	PAX ADVISORY/BAYWATCH Check-in ("Button #21").
278.0	AIMS Range
322.425	Patuxent ATIS
140.1	FM Ground

Table 10-9

10.5.2 RADIO COMMUNICATIONS.

1. All aircraft operating within WOLF G/E Airspace shall use the primary UHF frequency (358.0), if equipped with UHF. When Webster Control Tower is closed, aircraft shall use the primary VHF frequency as the CTAF to self-announce position and intentions when operating within 10 NM of the airport.
2. All aircraft operators shall ensure transmissions are appropriately succinct and shall use standard aeronautical phraseology in accordance with Aeronautical Information Manual (AIM) Chapter 4, Section 2, and this manual.
3. Aircraft on deck at Webster intending to use the PXOA shall check-in with PAX ADVISORY/BAYWATCH on 326.5 ("Button #21") prior to launch, specifying callsign, type aircraft, airspace and altitudes requested, and exclusive use airspace, if required.

a. ATR has installed a UHF radio repeater at a remote communications site located between NAS Patuxent River and WOLF. The relative location between the two airfields and tower height makes it a suitable communications bridge. Two UHF radios are configured as a stand-alone and autonomous repeater, whereby the WOLF side of the radio repeater is set to 326.5 MHz and the NAS Patuxent River side of the radio is set to 369.4 MHz. Transmissions received at the remote site on 326.5 are re-transmitted on 369.4 and vice versa. The abbreviated nomenclature for the 326.5/369.4 frequency combination is "Button 21."

b. Airspace can take up to 30 minutes to activate. Aircraft shall contact PAX ADVISORY/BAYWATCH prior to contacting Webster Tower for takeoff to ensure restricted airspace has been activated and exclusive use airspace has been established, if required.

4. All aircraft shall contact Webster Tower for takeoff clearance. Aircraft departing to the PXOA shall inform Tower of the status of the airspace that has been coordinated with PAX ADVISORY/BAYWATCH. Aircraft shall remain on Webster Tower frequency until reporting clear of the Webster airspace (2,500 feet MSL/4 NM or in R4005SW) or until positively switched by Webster Tower.

5. Manned aircraft may use 326.5 to communicate with PAX ADVISORY/BAYWATCH if their operating altitude precludes contact on the primary PXOA frequencies (#8/354.8 or #9/270.8). Once manned aircraft are at higher altitudes where radio frequency line of sight is reestablished they should switch back to the primary.

6. PXOA frequency (#8 or #9) as directed.

NOTE:

If UHF equipped, aircraft shall use UHF primary frequency to assist in maintaining awareness and reducing repetitive transmissions.

10.5.3 CIVILIAN VFR CORRIDORS.

Refer to section 3.19 and Illustration 12 for civilian aircraft VFR corridors affecting WOLF and surrounding areas.

10.5.4 PREVENTIVE CONTROL.

In accordance with reference (kk), helicopters, UA and USNTPS U-1, U-6, C-12, T-6, and gliders may be authorized to operate at WOLF under preventive control procedures on runways and taxiway surfaces. An LOA is required. Preventive control is defined as successive operations involving takeoffs and landings or low approaches where the aircraft obtains Tower approval for initial pattern entry, conforms to the published traffic pattern, provides own separation from other aircraft, and is not required to request approval for successive operations. Tower instructions shall always take precedence over preventive control procedures.

NOTE:

The helicopter grass pattern is always a preventative control operation. Aircraft shall remain within 4 NM of the airfield.

10.6 TRANSIENT AIRCRAFT.

Transient aircraft will comply with all procedures outlined in Chapter 6 of this manual.

10.7 AIRCRAFT CRASH AND RESCUE.

1. WOLF is designated a Category II airfield. The Federal Fire Department maintains sufficient crash, fire, and rescue equipment to conduct Fire Fighting Category II operations (aircraft having a maximum gross weight between 14,001 – 200,000 pounds). The Federal Fire Department will keep ATC apprised of airfield category status. Whenever the airfield falls below category II standards, ATC shall notify all aircraft operating and divert all aircraft with a gross weight over 14,001 lbs. If the airfield category is degraded below category I, all aircraft will be directed to depart.

2. In accordance with reference (dd) an immediate response alert standby (duty truck) shall be maintained at all times when landings and takeoffs are being conducted. This alert shall be maintained at the fire station and will respond immediately to an emergency. ATC will request the duty truck to be posted by contacting the RDC via the Enterprise Land Mobile Radio (ELMR) crash channel.

3. During aircraft in distress or aircraft emergency situations, the following procedures shall be accomplished; ATC will broadcast the information over the ELMR Crash channel and activate the crash bell. The Fire Chief/Senior Fire Officer shall determine the crash/fire/rescue equipment to be dispatched and position them accordingly. The on scene Fire Chief/Senior on-scene Fire Officer shall determine equipment requirements.

4. The NAS Patuxent River Fire Department will respond to all off-field crashes. The Aircraft/Structural and Fire/Rescue equipment at WOLF may be used as directed by the NAS Patuxent River Fire Chief or his shift supervisor. Extra-hazardous flight operations are those which have increased potential for an aircraft mishap. Determination of whether an activity is conducting extra-hazardous flight operations is the responsibility of the Commanding Officer or Officer in Charge. Station Commanding Officers, Operation Officers, Flight Test Directors, Commanding Officers of Tenant Commands, and Fire Chiefs should maintain close coordination in order that the ARFF organization can properly prepare for such operations. Such preparations may include, but are not limited to, stationing a major ARFF vehicle at the site of the extra hazardous operation in order to immediately respond to an unannounced emergency.

10.8 UNMANNED AIRCRAFT OPERATIONS.

10.8.1 GENERAL.

1. WOLF is the designated primary location for UA operations. UA operating in Webster airspace shall remain entirely within R 4005W unless R 4007 has been specifically scheduled for use.
2. No later than 30 minutes prior to operations, the UA operator or mission commander shall provide Webster Tower with the following information via flight schedule or phone brief:
 - a. Time of departure
 - b. Route of intended flight or pattern work
 - c. Preprogrammed return home point (RHP)
 - d. Mission profile
 - e. Estimated time of arrival

NOTE:

Changes to the flight schedule require notification to the tower.

3. UA shall have an operating transponder Mode 3/C and aircraft lighting when departing WOLF unless the UA is operating under the provisions of paragraph 3.8.9.1.
4. UA shall have two-way communications with the appropriate ATC facility and adhere to the procedures in paragraph 10.5.
5. UA must meet the requirements of paragraph 3.8.9.
6. Refer to paragraph 10.3.7.2 for noise abatement restrictions.

10.8.2 CONCURRENT OPERATIONS.

1. For the scope of this instruction, concurrent operations are defined as UA operating concurrently with locally based, manned fixed wing or rotary wing aircraft, and/or other UA in Webster field traffic patterns and airspace. An LOA is required to conduct concurrent operations. Concurrent operations may be conducted with the following procedures:
 - a. The WOLF runway pattern (including taxiways) and the grass pattern may be scheduled separately. Central Schedules shall note the Runway pattern as "Webster (Rwy)" and grass

pattern as "Webster (Grass)." Aircraft intending to stay in the pattern need only schedule the appropriate pattern for use and not the entire R-4005W. Aircraft requiring exclusive use of both runway and grass patterns and/or the entire WOLF airspace shall schedule R 4005W exclusive up to the altitude required for the operations.

b. Manned aircraft and UA shall not be mixed in the same pattern (i.e., runway or grass) concurrently. When scheduled as prescribed above a butterfly pattern shall be used (e.g. manned helicopter in the grass pattern with UA in the runway pattern and vice versa).

c. When UA are operating in Webster (Rwy), manned aircraft shall be permitted to enter and depart Webster (Grass).

d. When UA are operating in Webster (Grass), manned aircraft shall be permitted to enter and depart Webster (Rwy). UA shall not enter or depart Webster from Webster (Grass). VTUAV arrivals and departures as per paragraph 10.3.4.2 and 10.3.5.3 are permitted at the discretion of Webster Tower.

2. When delineated in the LOA, multiple UA may be flown in the same pattern. Direct communication and coordination shall be conducted between all UA operators involved.

3. Unless Webster has been coordinated for exclusive use, each UA shall have a dedicated visual observer, other than the Air Vehicle Operator (AVO), capable of scanning the airspace around the UA for other aircraft that may be a potential collision hazard. The visual observer shall maintain effective two-way communications with the UA operator. To be effective, the visual observer must maintain situational awareness to the location of the UA at all times until the UA departs the pattern.

4. Concurrent Vertical Takeoff Unmanned Aircraft (VTUA) hover checks, launches, and recoveries in accordance with VTUA launch and recovery procedures in are permitted at the discretion of Webster Tower unless prevented by exclusive use restrictions.

5. Weather minimums for concurrent operations are accordance with paragraph 10.2.2.

10.8.3 UA RUNWAYS AND TRAFFIC PATTERNS.

1. Unless otherwise coordinated, UA requiring a runway shall use the active runway for takeoffs and full stop landings.

2. UA should conform to the traffic patterns as described in paragraph 10.3.5.4.1.

10.8.4 UA LOST-LINK PROCEDURES.

1. In the event the UA operator loses data link (contact) with the air vehicle, the UA operator shall notify ATC immediately. The UA shall be programmed to automatically proceed in a predictable manner dependent on the location of the air vehicle at the time of occurrence of lost link. ATC shall clear all conflicting traffic from the vicinity of the UA route of flight. The normal lost link return home point (RHP) is located at the Saint Mary's River Buoy, described in Table 10-7, unless otherwise coordinated with Webster Tower.
2. UA without the capability to land autonomously shall remain at the RHP until link is re-established. The UA operator shall notify ATC of how long the aircraft is expected to hold until out of fuel or a flight termination maneuver is planned.
3. UA that have the capability to land autonomously may program the aircraft to depart the UA RHP after a minimum 10-minute delay (fuel permitting) and fly the arrival procedures as described in paragraph 10.3.5.3.
4. If lost-link occurs during departure from Webster, the UA shall continue at 3,000 feet MSL or below (if entering R 4005SW) and establish at the briefed RHP.
5. If lost-link occurs during arrival to Webster after the UA departs Point Sierra, Echo, or Whiskey, the UA shall continue to fly to the field as the system permits. If link cannot be re-established prior to the aircraft arriving at the runway, UA that have the capability to land autonomously shall be programmed to land. UA without the capability to land autonomously shall continue straight ahead and follow the lost-link during departure procedures in the paragraph 10.3.4.2.
6. UA shall continue to fly to the field as the system permits. If link cannot be re-established prior to the aircraft arriving at the runway, UA that have the capability to land autonomously shall be programmed to land. UA without the capability to land autonomously shall continue straight ahead and follow the lost link during departure procedures in the paragraph 10.3.4.2.
7. If lost-link occurs while established in the pattern at Webster, UA that have the capability to land autonomously shall be programmed to land. UA without the capability to land autonomously shall continue straight ahead and follow the lost-link during departure procedures in the paragraph 10.3.4.2.
8. Group I UA shall utilize their launch point as their lost-link RHP, unless otherwise coordinated with Webster Tower.

10.8.5 UA LOST RADIO COMMUNICATIONS PROCEDURES.

1. If the UA operator loses two-way UHF/VHF communications with Tower during taxi, the UA shall hold position and contact Webster Tower on the Airfield Net. If UHF/VHF communications are not reestablished, the UA shall taxi back to its line.
2. If the UA operator loses two-way UHF/VHF communications with Tower in the pattern, the Operator shall contact Webster Tower on the Airfield Net and execute a full stop landing.
3. If the UA operator loses two-way communications with Webster Tower inbound to the airfield, the UA operator shall contact Tower via the airfield net, phone, or in person. UA should plan to hold at Point Echo, Sierra or Whiskey at the appropriate altitude until permission to enter is obtained.
4. In the event the UA operator loses total radio communications with Tower, UA personnel shall obtain voice authorization, via phone (or in person), for landing clearance or standard light gun signals may be used until the UA is safely recovered.

10.8.6 UA ROUTES.

Defined UA operating routes in the PXOA are depicted in Illustration 20. UA intending to use the routes shall coordinate in advance with Air Operations as they involve operations in high use special use airspace.

10.8.7 UA HUNG/UNEXPENDED ORDNANCE.

1. Unexpended ordnance is defined as a store on the aircraft where no attempt has been made to release the store. In case of unexpended ordnance, normal UA recovery procedures will be used.
2. Hung ordnance is defined as any store or weapon that remains with the aircraft after an attempted release. If a hung ordnance situation occurs, the UA operator shall safe the system and the aircraft shall RTB. If a hung ordnance situation occurs while in the PXOA, the UA will remain over water to an approach to runway 08 or 15 to avoid over-flight of populated areas.

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14 May 2021

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Illustration 1
Patuxent River Airfield Diagram

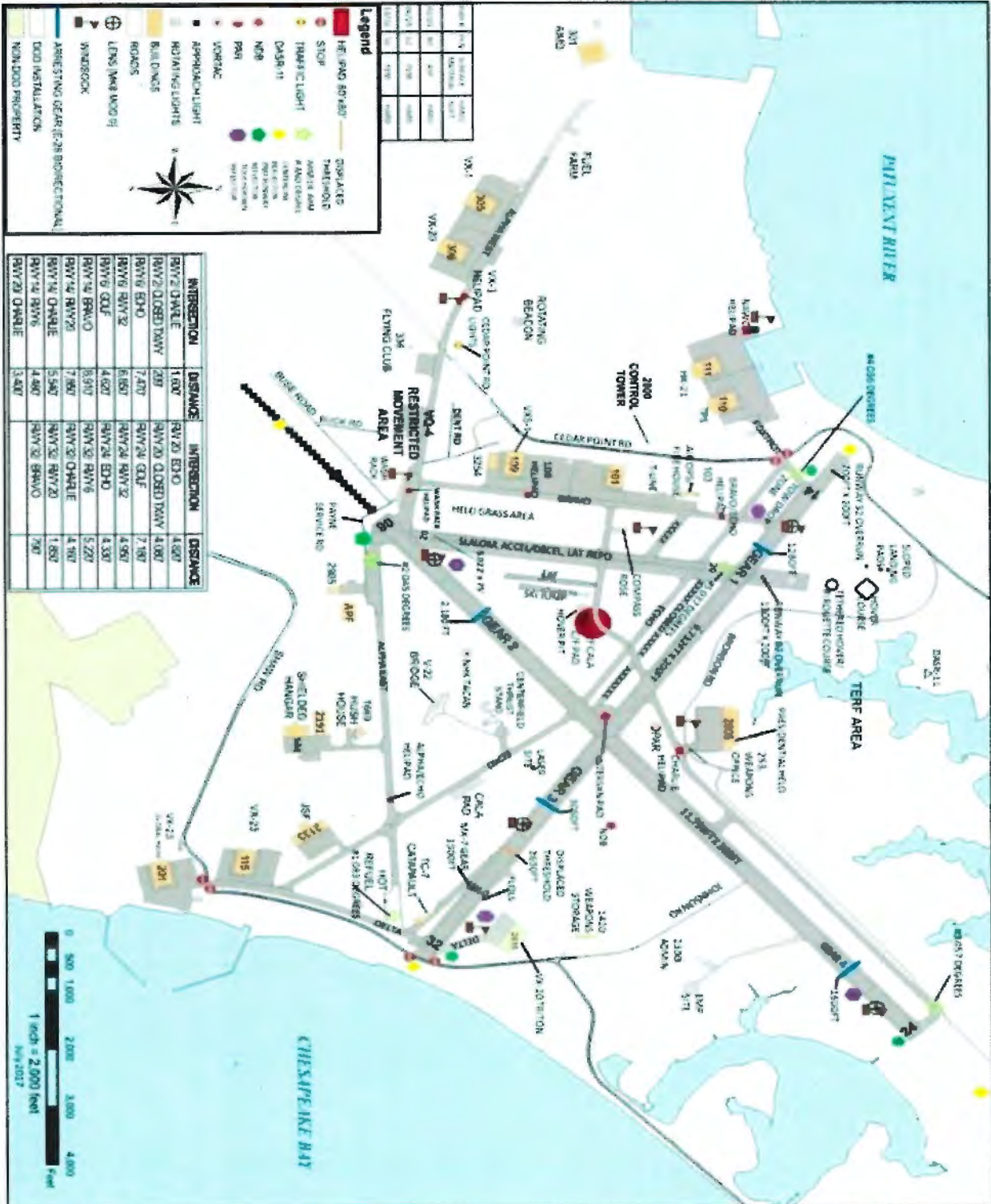
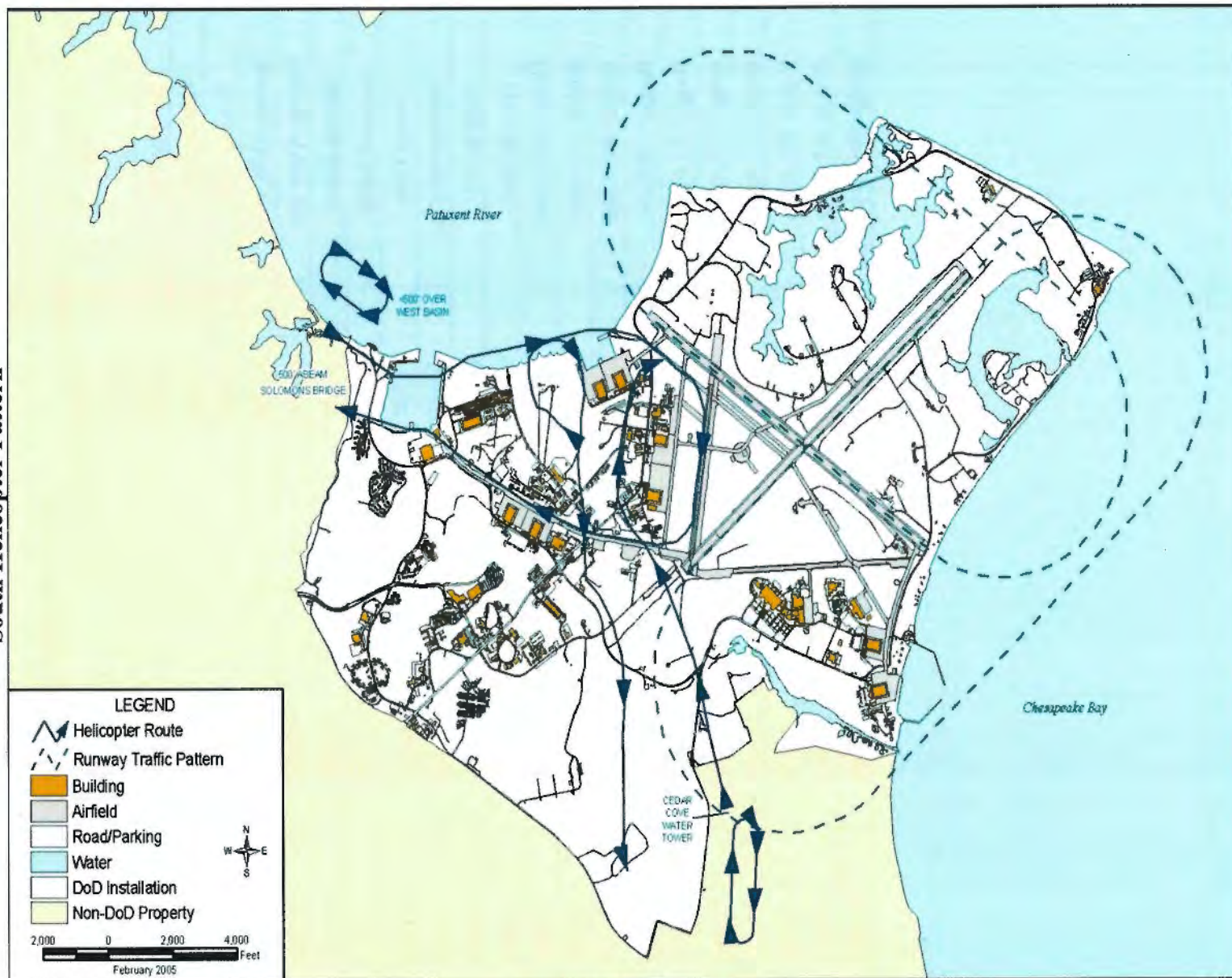


Illustration 2
Patuxent Airport Movement Area Weight Limitations

AREA	AIRCRAFT GROSS WEIGHT (LBS)			
	SINGLE WHEEL GEAR		DUAL GEAR	DUAL TANDEM
	150 psi	400 psi		
Runway 6/24	126,000	105,000	188,000	340,000
Runway 14/32	147,000	121,000	222,000	389,000
Runway 2/20	102,000	84,000	159,000	316,000
Taxiway Alpha West	147,000	113,000	226,000	339,000
Taxiway Alpha East	105,000	82,000	198,000	332,000
Taxiway Bravo	100,000	78,000	170,000	351,000
Taxiway Charlie	104,000	88,000	170,000	351,000
Taxiway Delta	78,000	65,000	122,000	255,000
Taxiway Echo	104,000	88,000	170,000	351,000
Taxiway Golf	147,00	147,000	225,000	370,000
Taxiway Papa	60,000	47,000	96,000	251,000
Flying Club Apron	68,000	52,000	110,000	267,000
Hangar 101 Apron	68,000	52,000	110,000	267,000
Hangar 109 Apron	70,000	55,000	120,000	271,000
Hangar 110 Apron	70,000	55,000	120,000	271,000
Hangar 115 Apron	90,000	76,000	140,000	286,000
Hangar 144 Apron	147,000	147,000	225,000	445,000
Hangar 201 Apron	105,000	80,000	160,000	309,000
Hangar 301 Apron	84,000	65,000	138,000	290,000
Hangar 305 Apron	74,000	60,000	126,000	287,000
Hangar 306 Apron	74,000	60,000	126,000	287,000

Illustration 3
South Helicopter Pattern

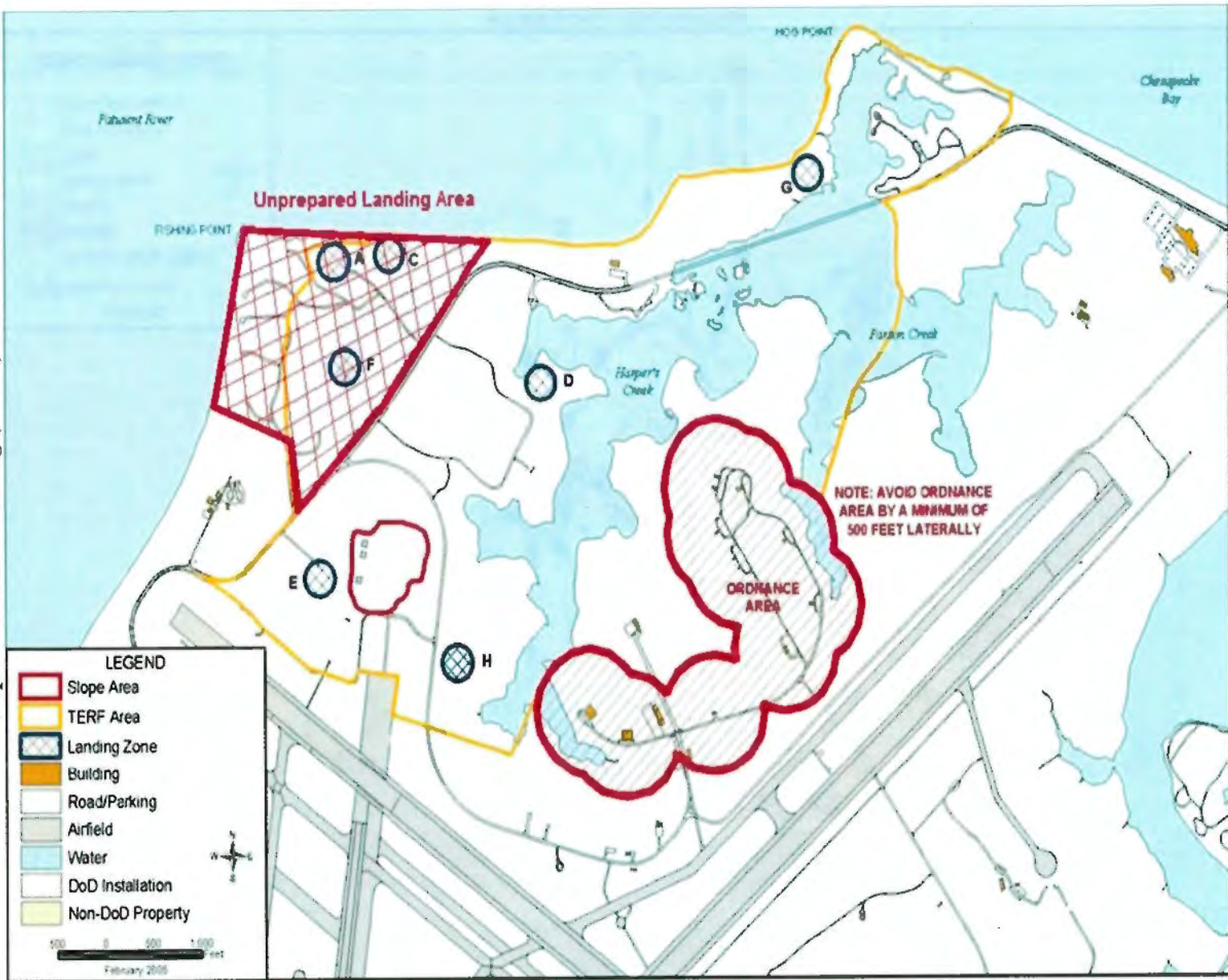


NOT FOR NAVIGATIONAL PURPOSES

Illustration 4
North Helicopter Pattern



Illustration 5
Slope / Terrain Following (TERF) Area



NOT FOR NAVIGATIONAL PURPOSES

Illustration 6
Special VFR Local Helicopter Routes

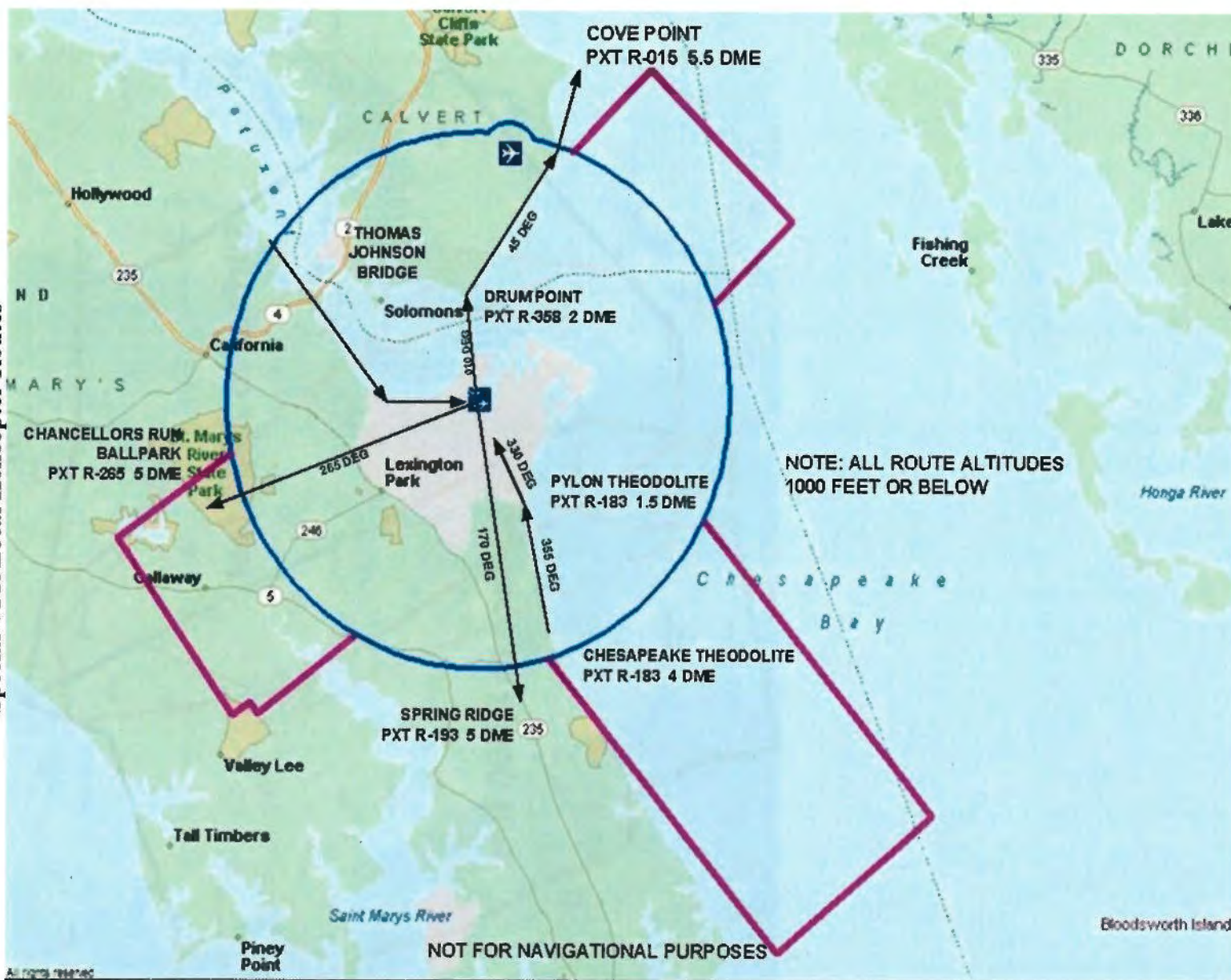


Illustration 7

Patuxent Approach Control Area

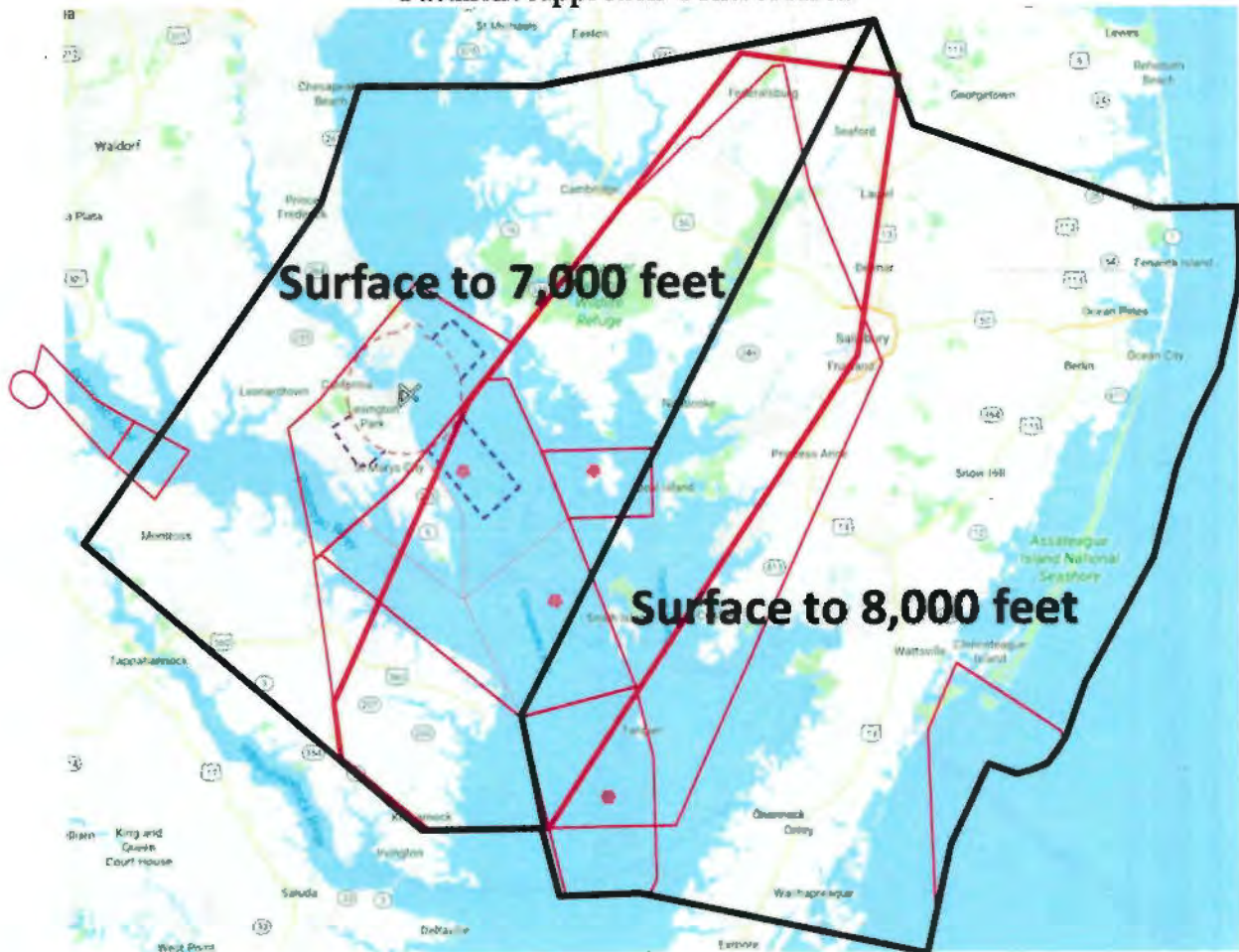


Illustration 8
Patuxent Restricted Areas

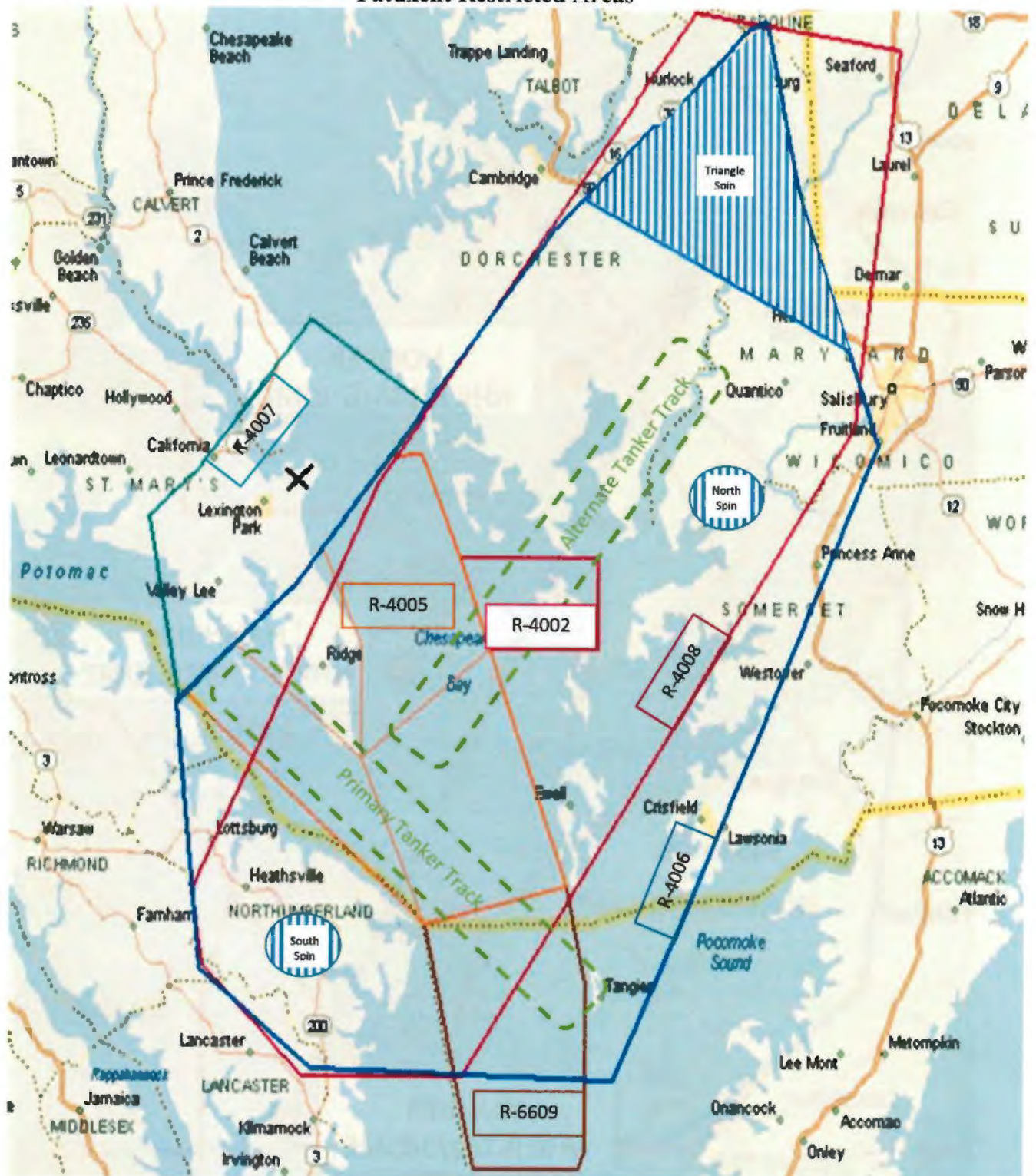


Illustration 9
Firing Range / Targets

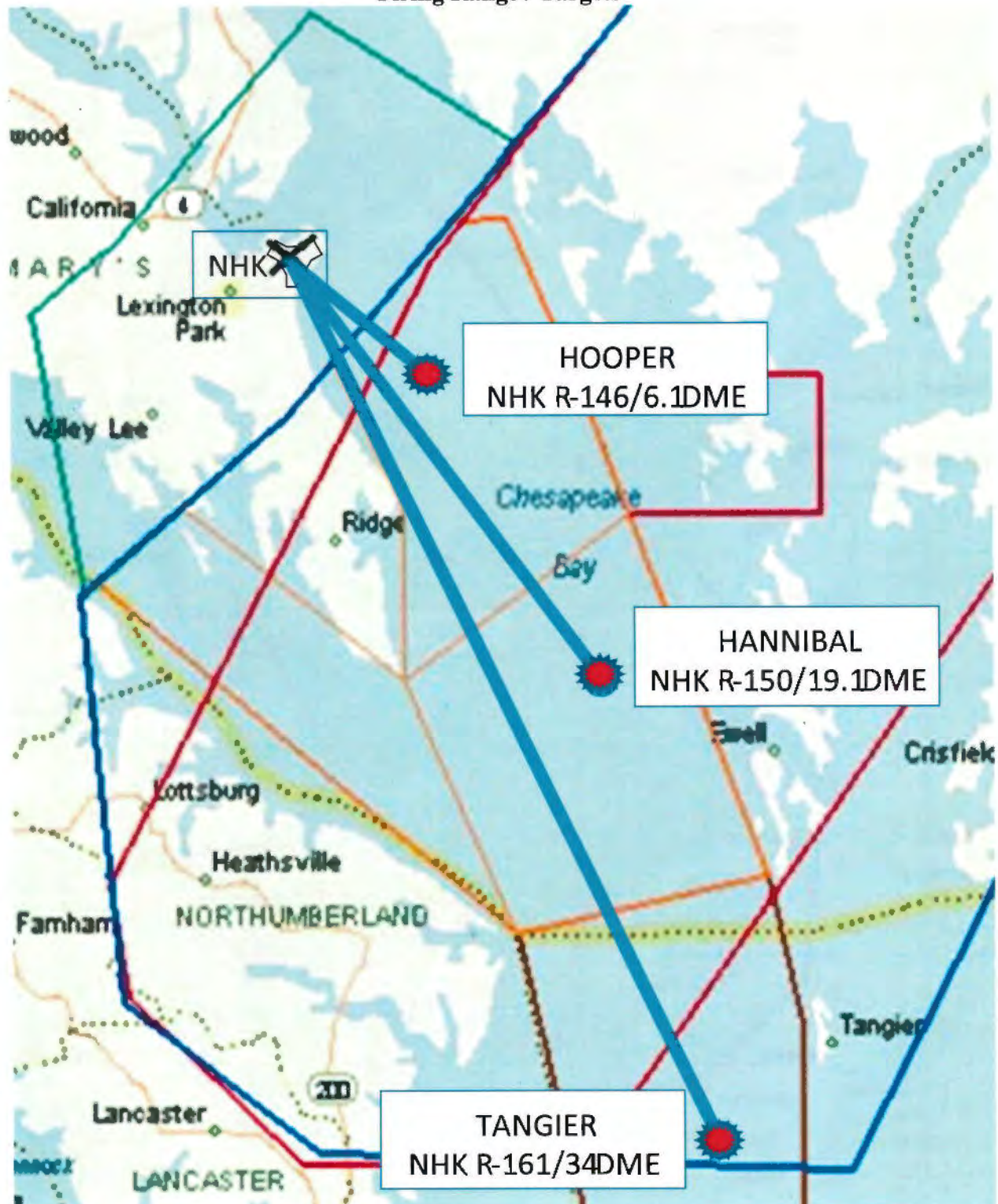


Illustration 10
ATC Assigned Airspace (ATCAA) CHESSIE A/B/C

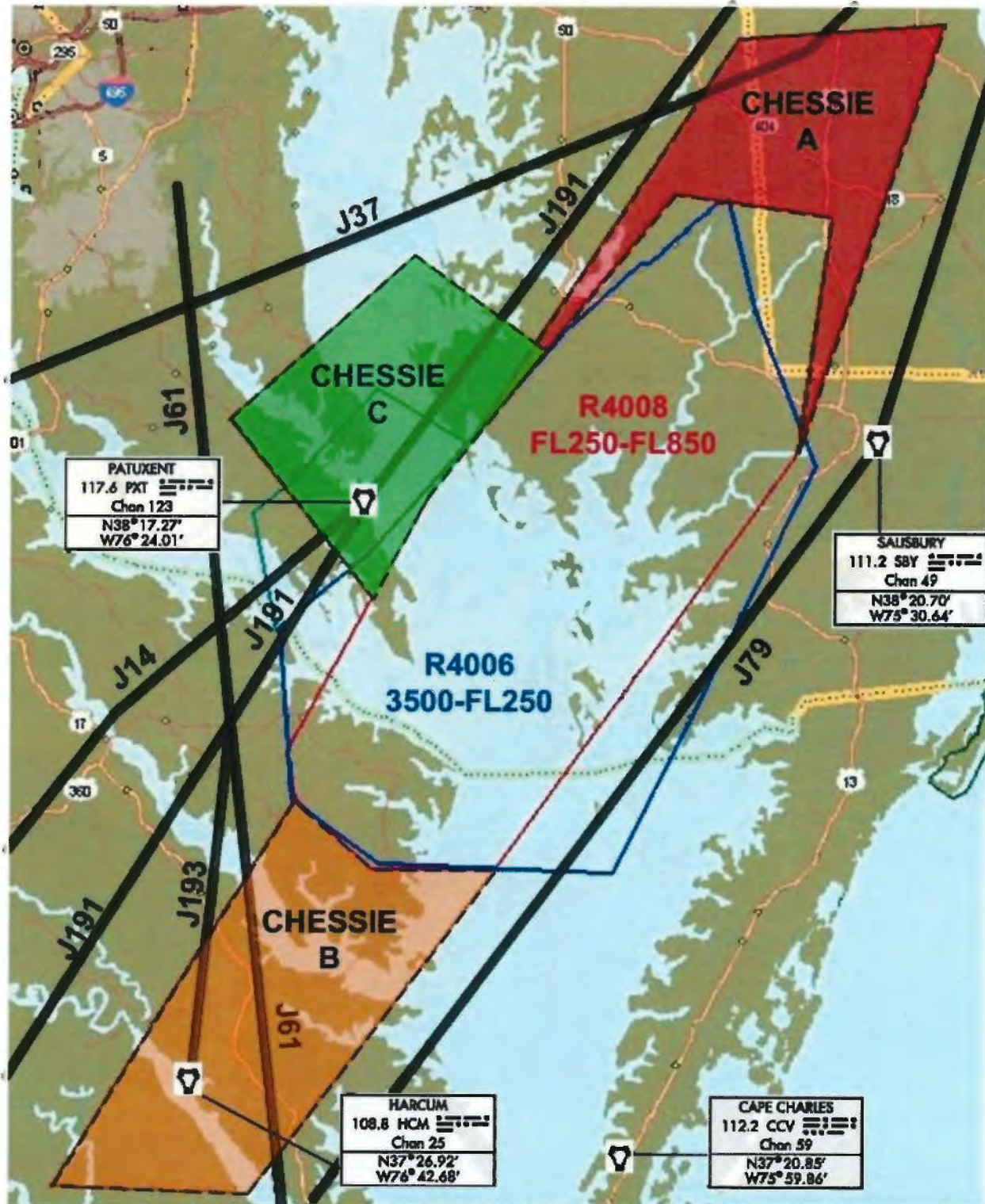


Illustration 11
Warning Areas (W-386)

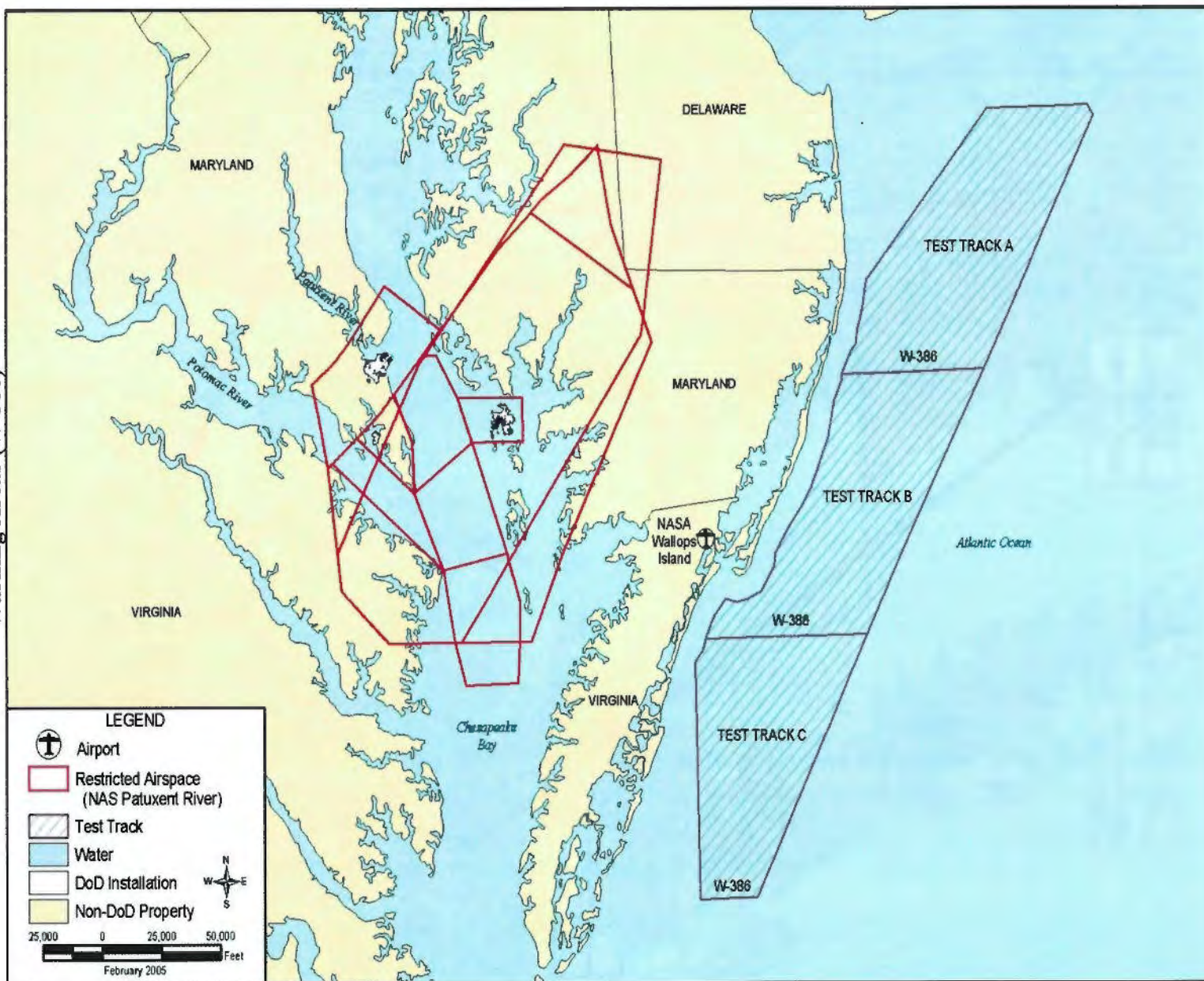


Illustration 12
Local Airports / VFR Corridors



Illustration 13
Helicopter Operating Areas

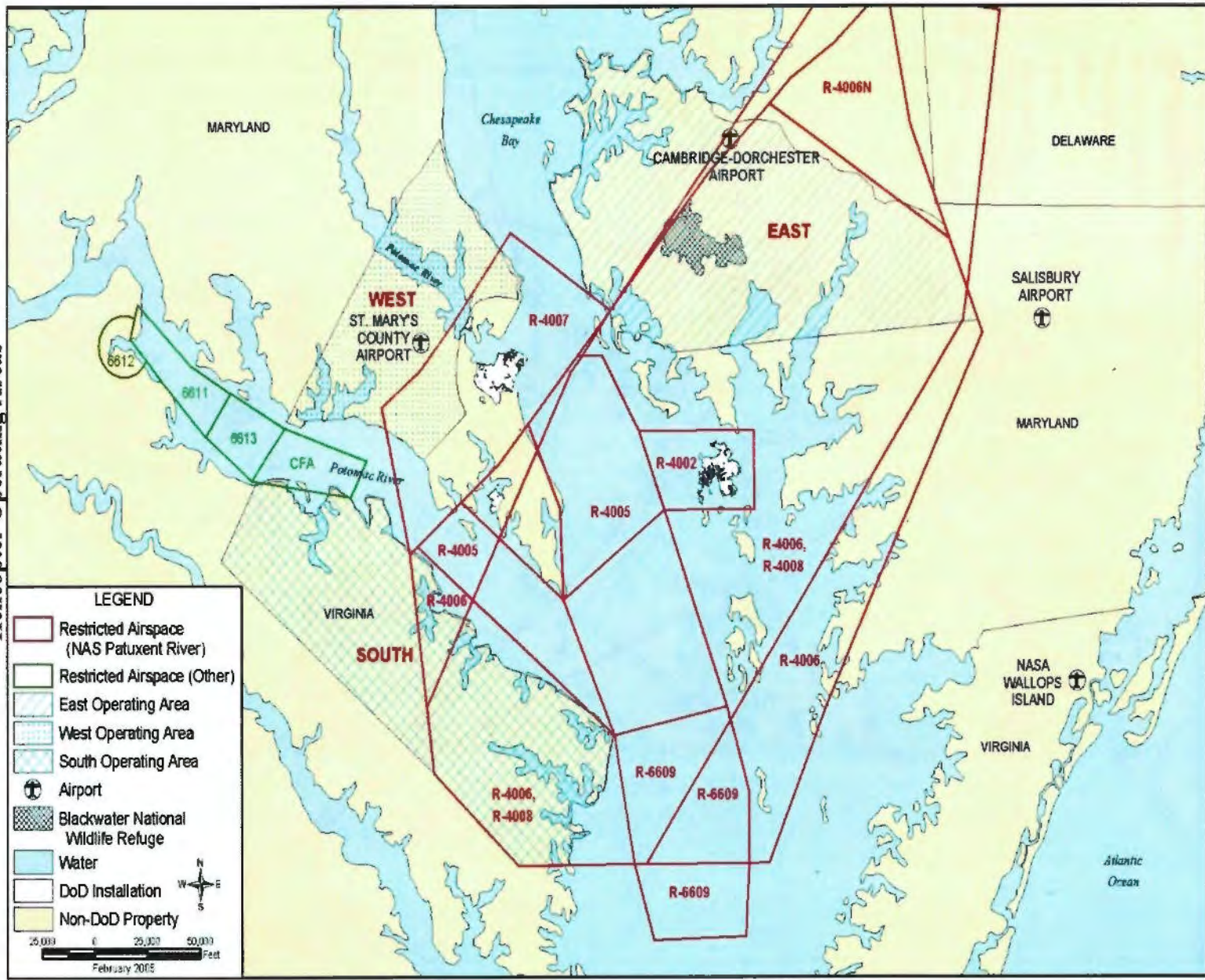


Illustration 14
Northwest Glider Operation Area



Illustration 15
Southwest Glider Operation Area



Illustration 16
Southeast Glider Operation Area

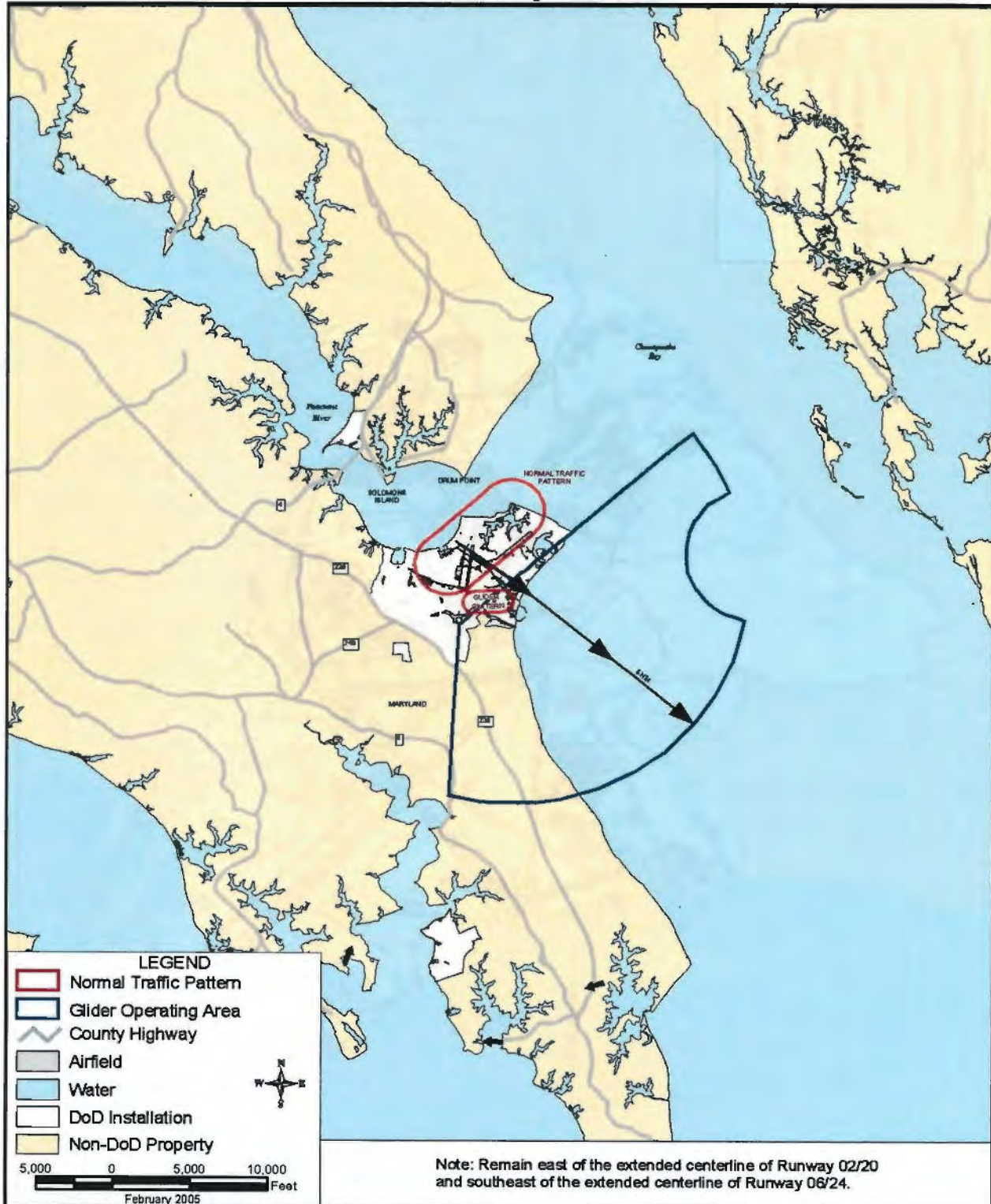


Illustration 17
Glider Entry and Release Points

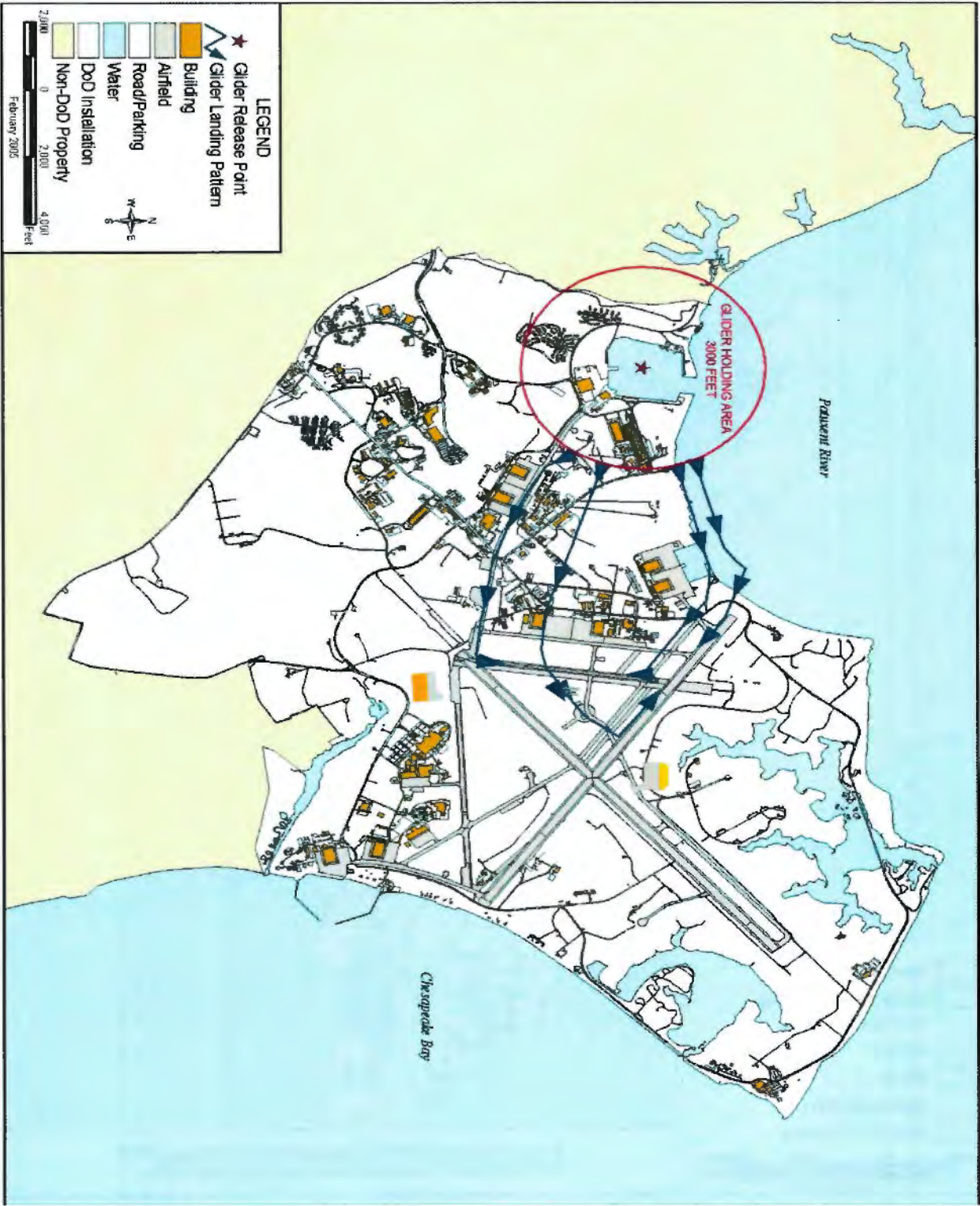


Illustration 18
WOLF Airfield Traffic Patterns

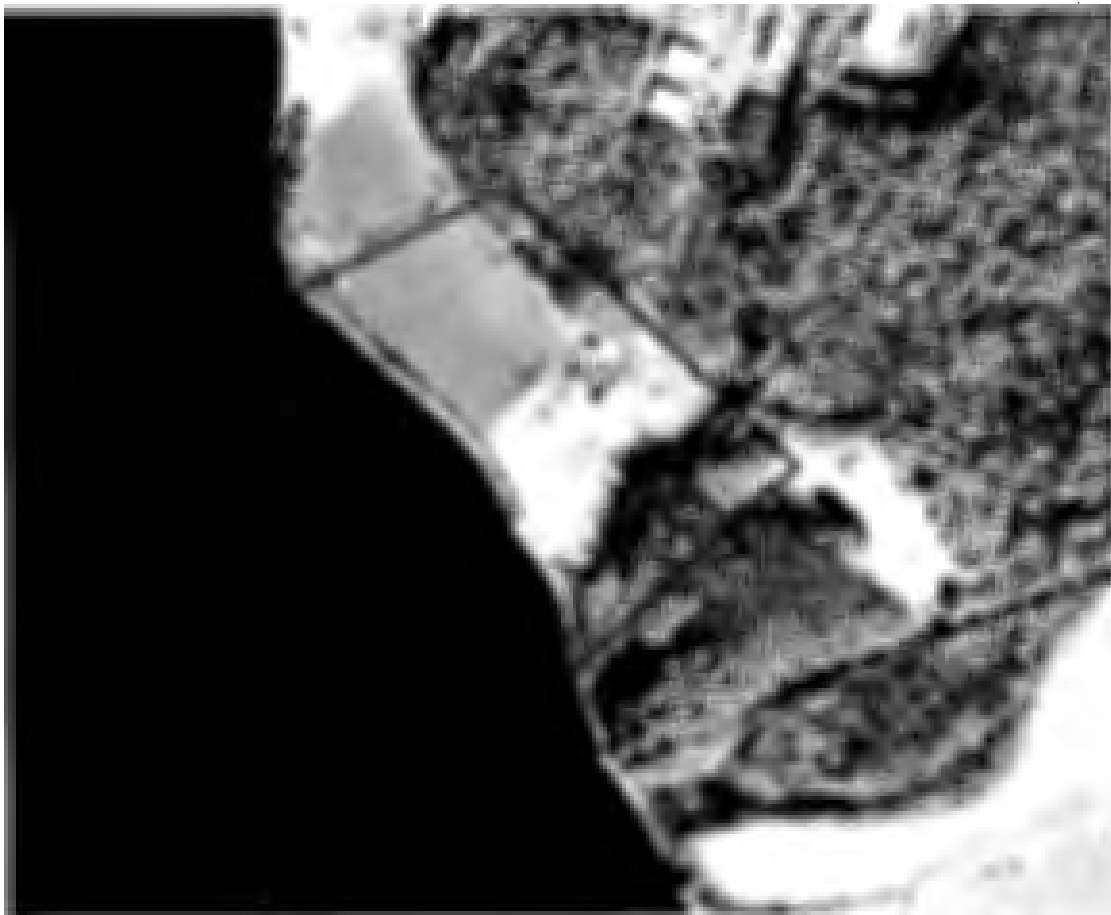


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Illustration 19
WOLF Field Small UA Box

WGS-84 coordinates

Point	Lat/Long	Point	Lat/Long
NW Corner	N 38° 08' 03.00"	NE Corner	N 38° 08' 06.00"
	W076° 26' 16.00"		W076° 26' 02.00"
SW Corner	N 38° 07' 55.00"	SE Corner	N 38° 08' 00.00"
	W076° 26' 07.00"		W076° 26' 00.00"



1 meter CIB

Illustration 20
WOLF Airspace

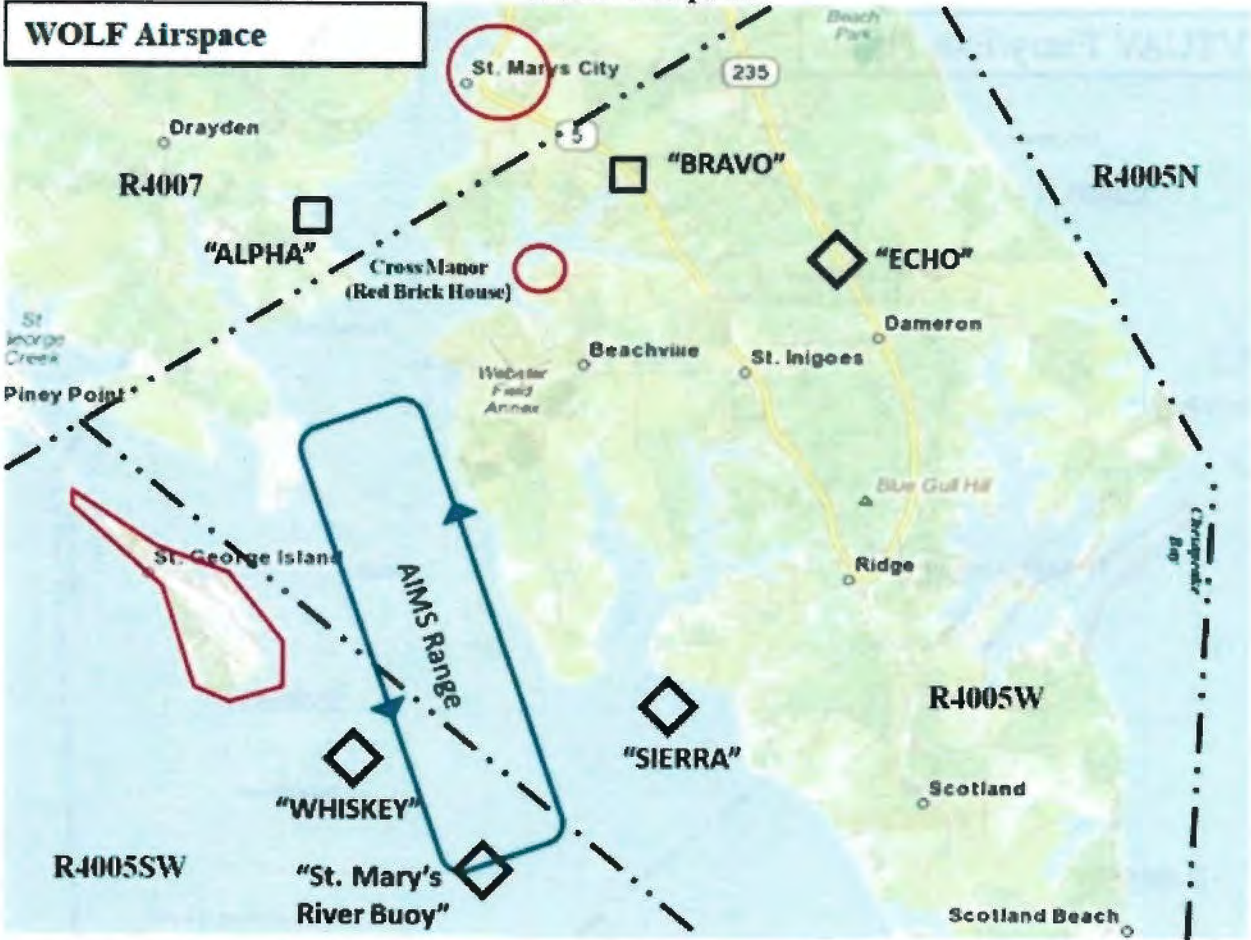


Illustration 21
VTUAV Entry / Exit Routes

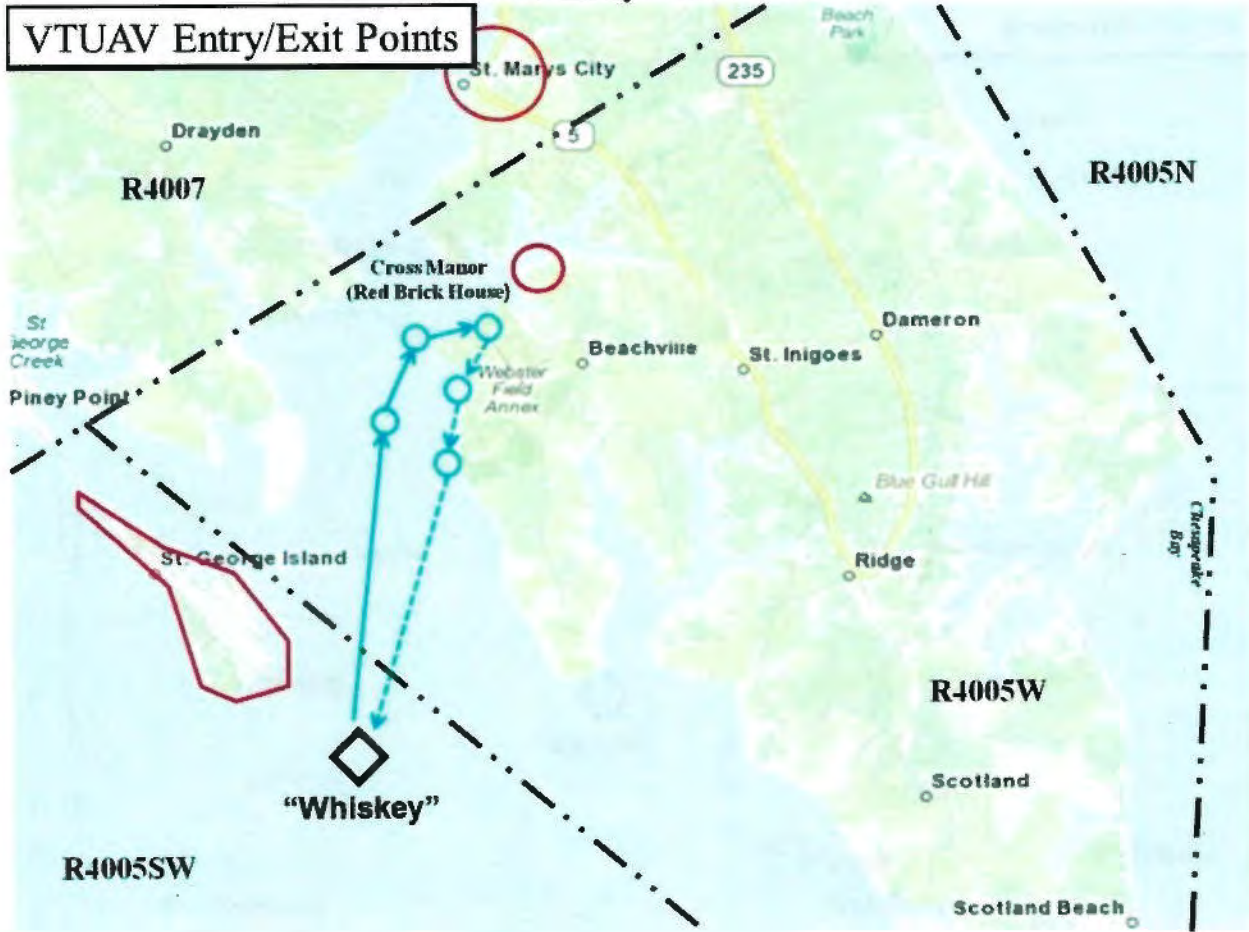


Illustration 22
UA Routes

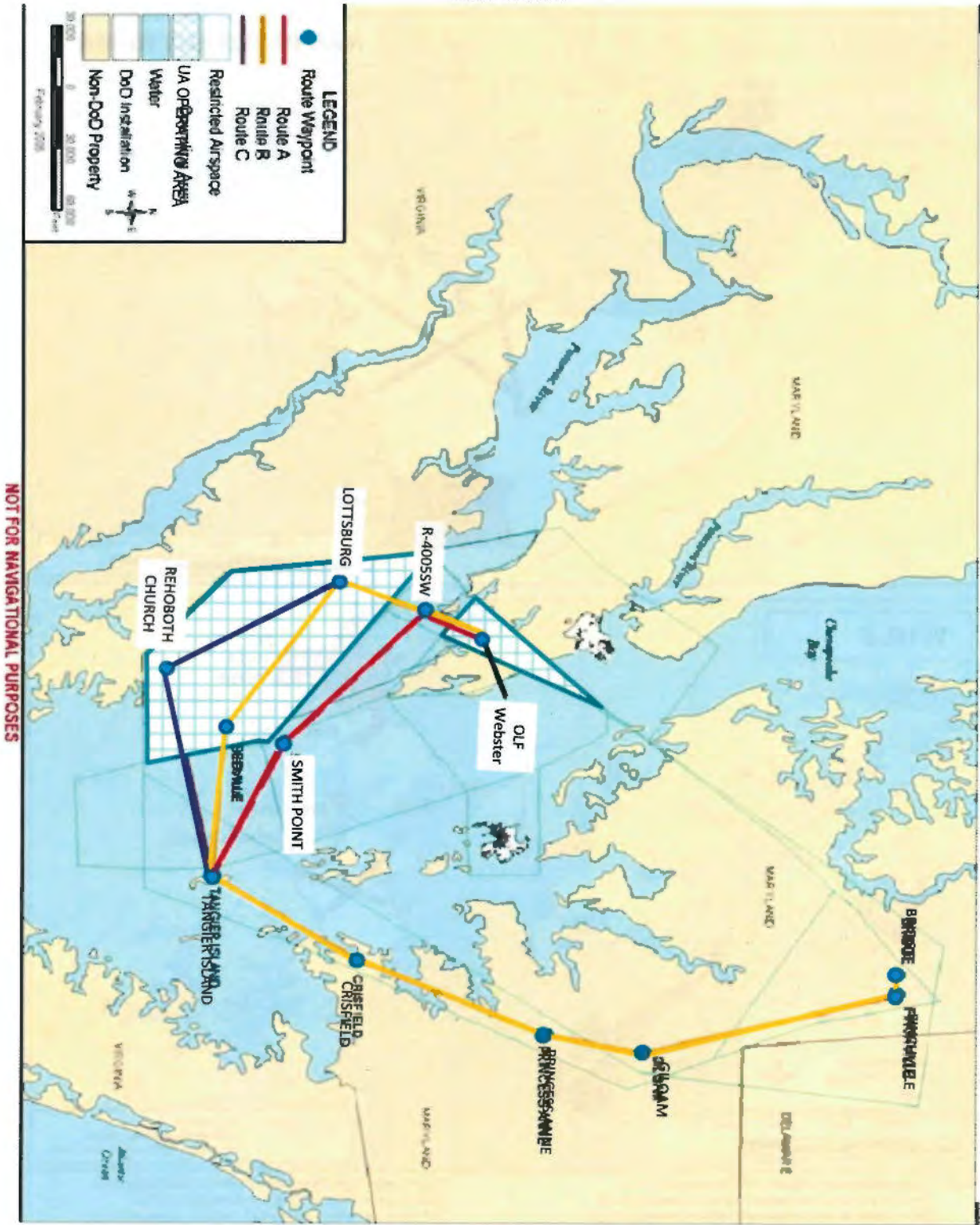
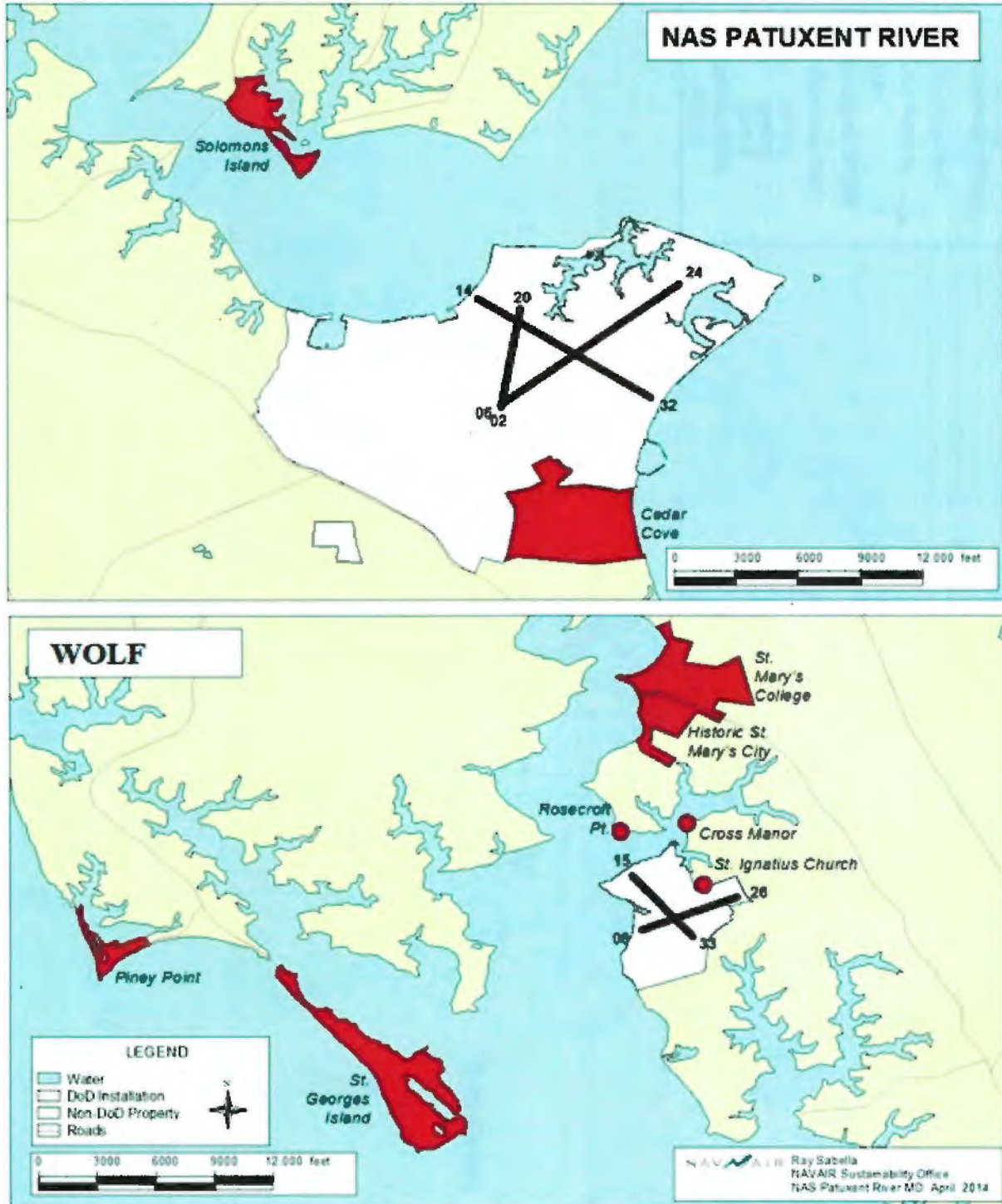


Illustration 23
Noise Abatement Areas



NOTE Noise abatement policies, refer to paragraph 1.2
Fixed Wing noise abatement, refer to paragraph 4.2
Rotary Wing noise abatement, refer to paragraph 5.2

Supersonic Flight Operations, refer to paragraph 6.9
UAS noise abatement, refer to paragraph 6.10.2
OLF Webster noise abatement, refer to paragraph 9.2

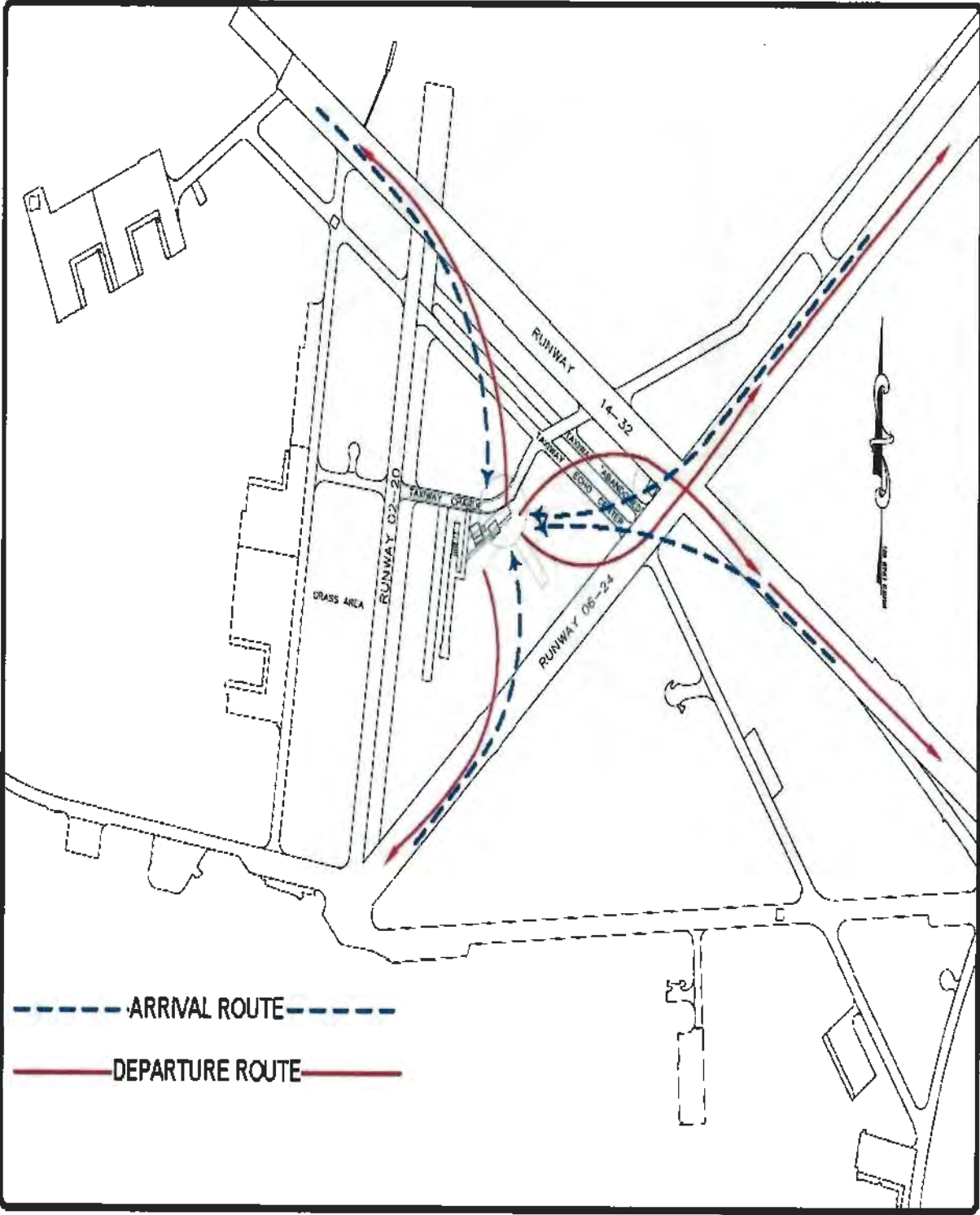
STOVL / Centerfield Arrivals / Departures

Illustration 25
Centerfield Facilities

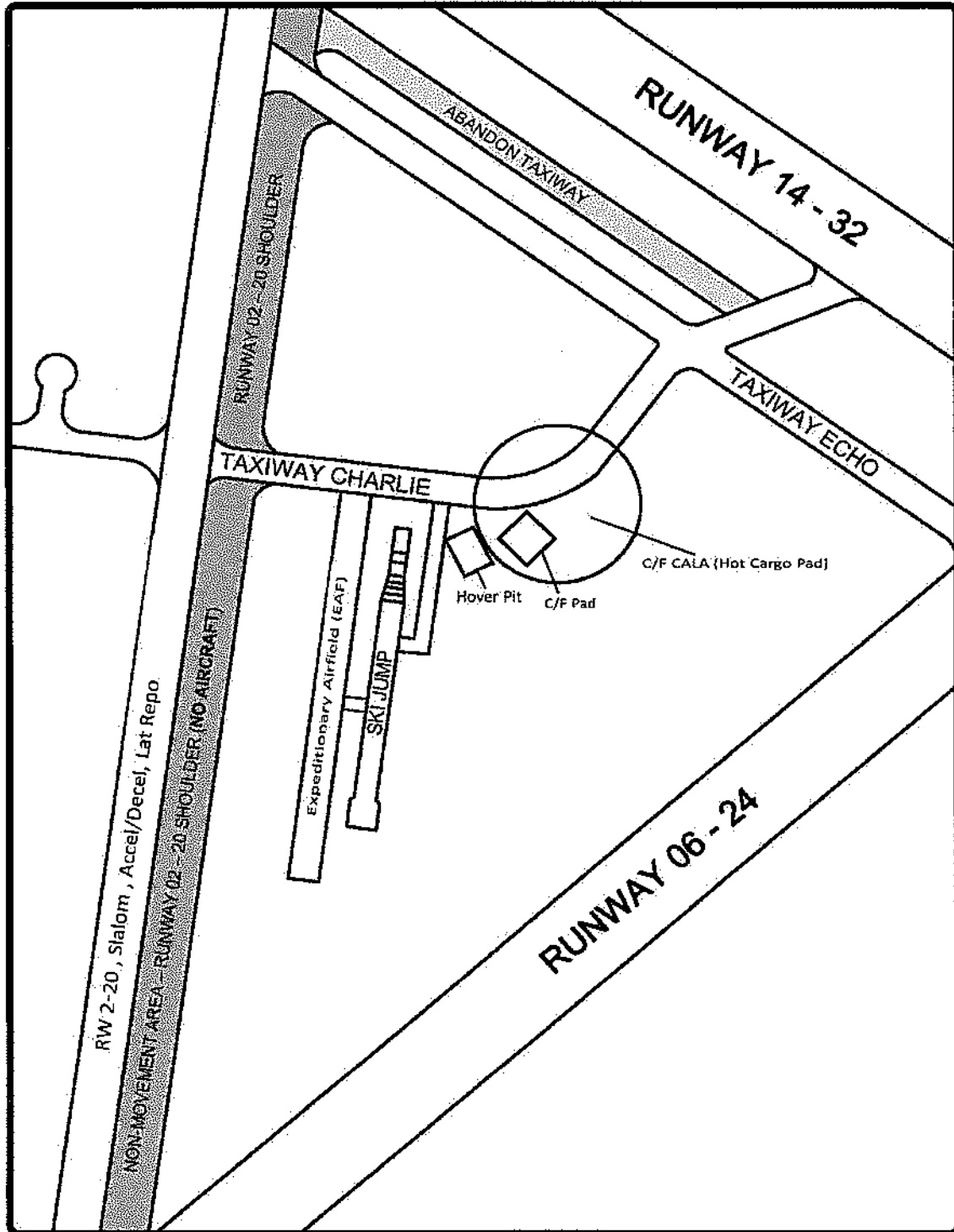
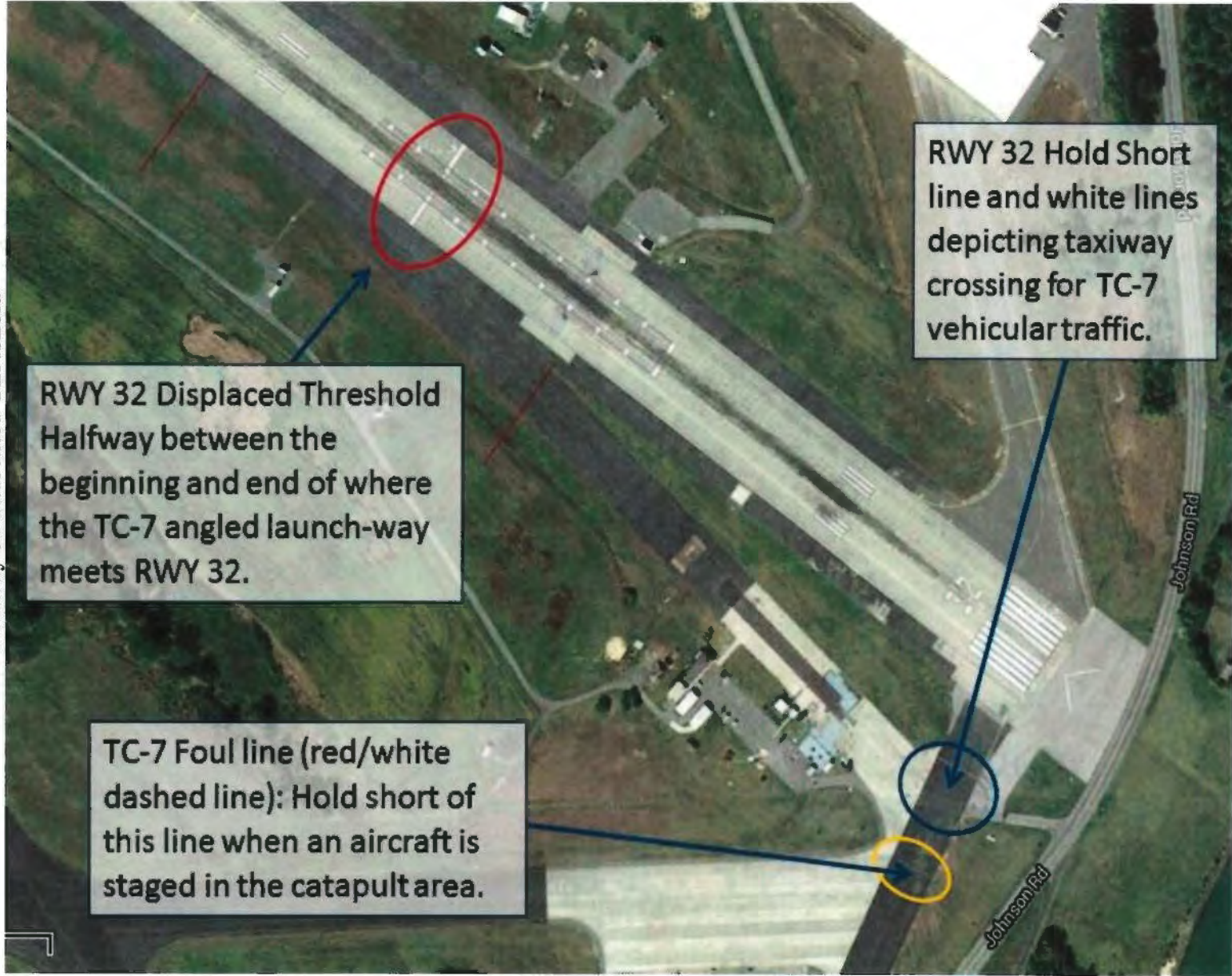


Illustration 26
Runway 32 Relocated Threshold



VFR Procedures – PINEY Departures / Arrivals

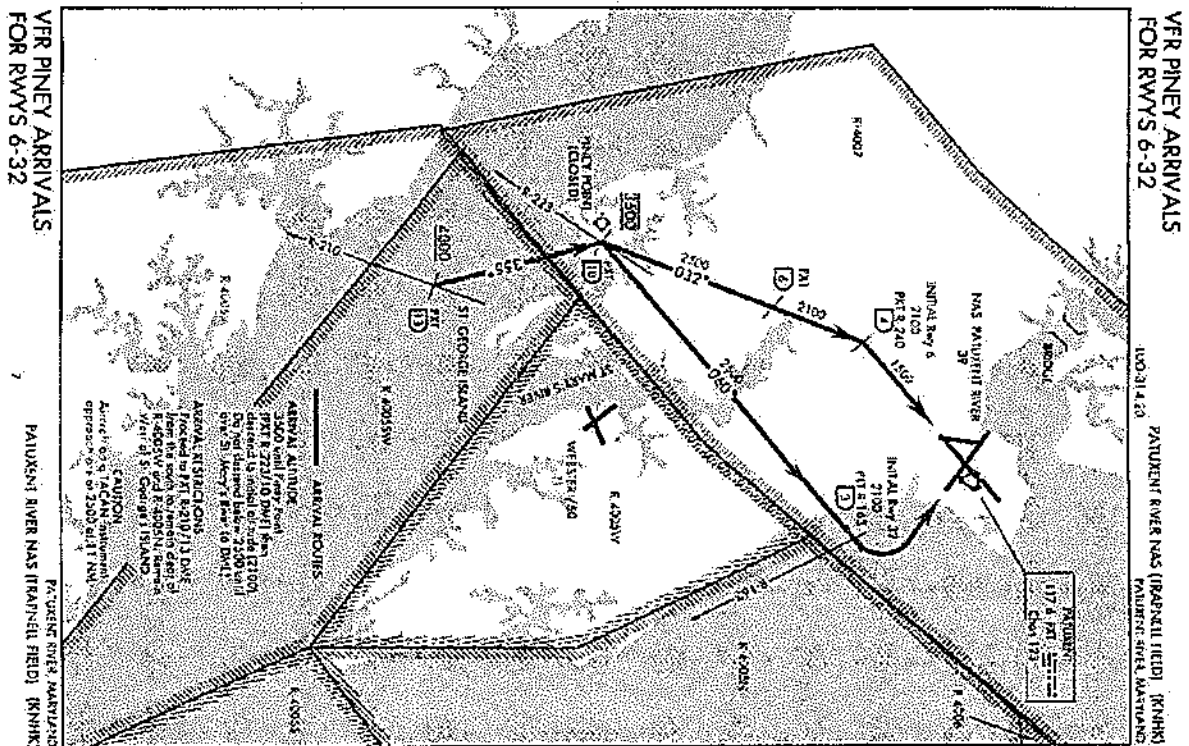
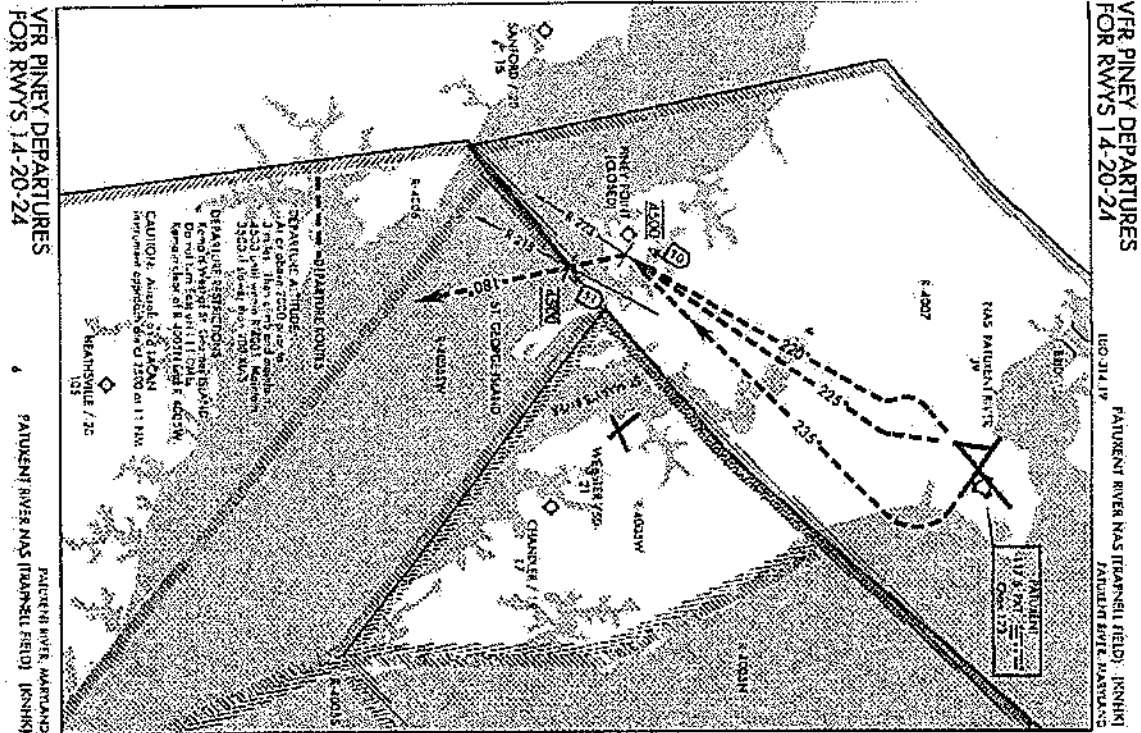


Illustration 28
VFR Procedures – BARREN Departures / Arrivals

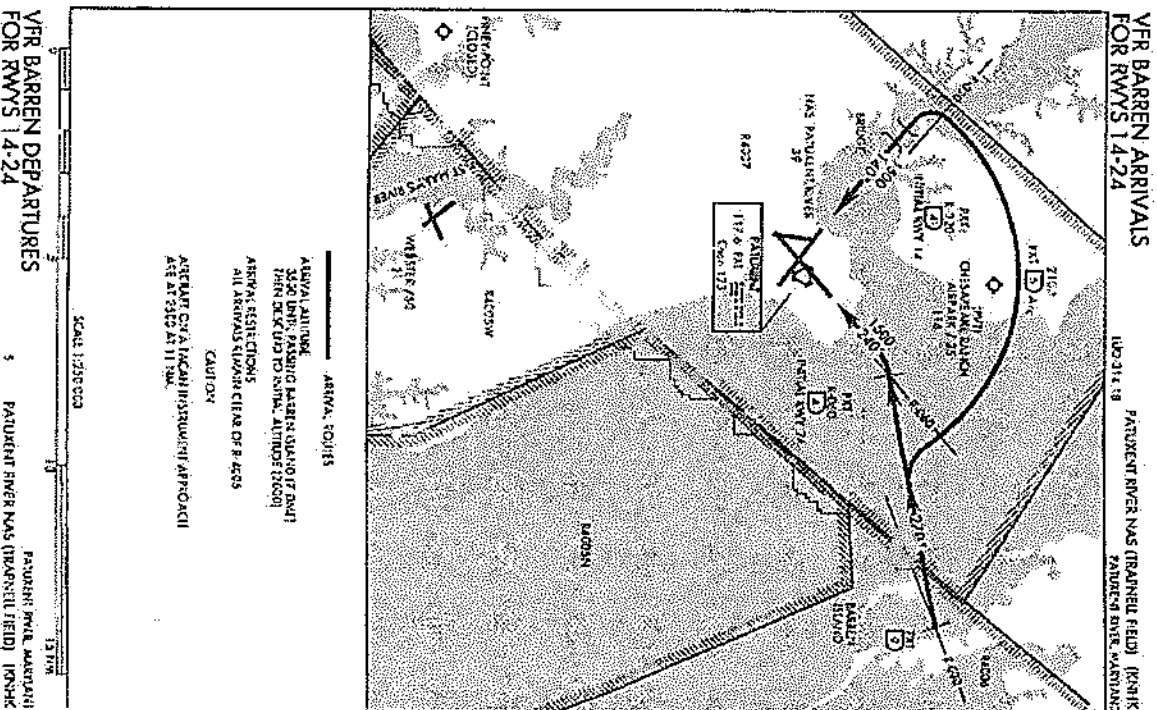
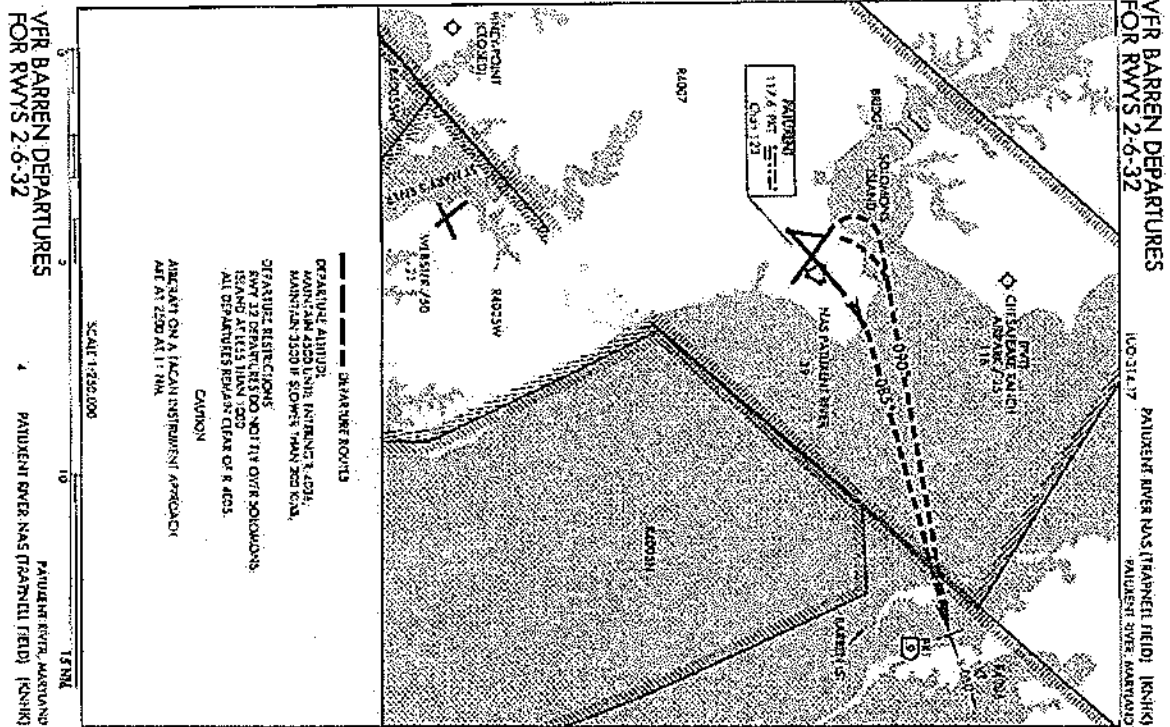
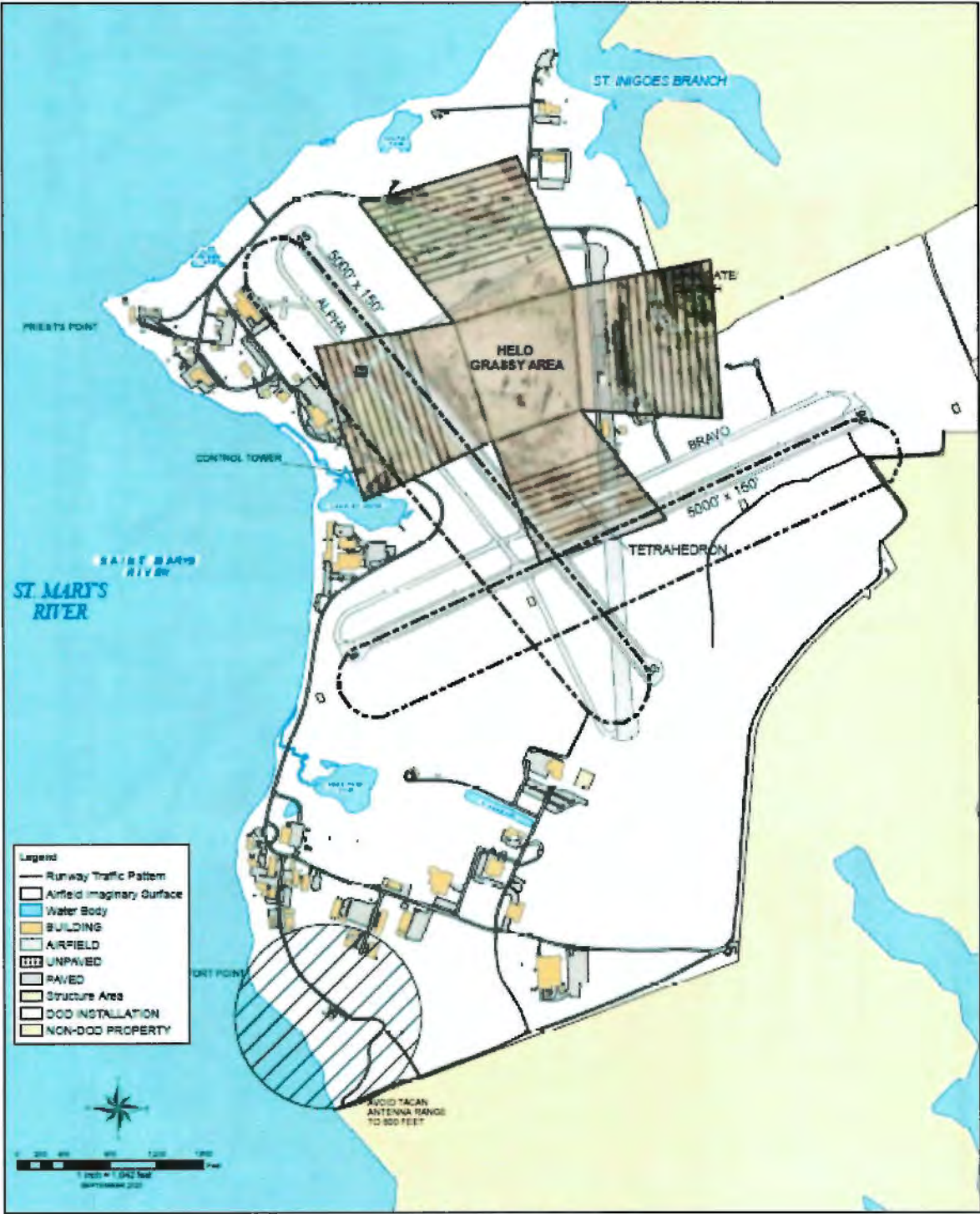


Illustration 29
WOLF Airfield Diagram



NOT FOR NAVIGATIONAL PURPOSES

NASPAXRIVINST 3710.5Y
14 May 2021

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**APPENDIX A
REFERENCES**

#	DOCUMENT NUMBER	DOCUMENT TITLE	LOCATION
a	CNAF M-3710.7	NATOPS GENERAL FLIGHT & OPERATING INSTRUCTIONS	https://g2.cnmc.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
b	NAVAIR 00-80T-124	NATOPS U.S. NAVY AIRFIELD OPERATIONS MANUAL	https://g2.cnmc.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
c	NAVAIR 00-80T-114	NATOPS AIR TRAFFIC CONTROL MANUAL	https://g2.cnmc.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
d	OPNAVINST 3770.2L	DON AIRSPACE PROCEDURES & PLANNING	https://doni.documentservices.dla.mil/opnav.aspx
e	OPNAVINST 3722.33 / FAA JO 7610.4	FEDERAL AVIATION ADMINISTRATION ORDER JO 7610.4 SPECIAL OPERATIONS / SPECIAL OPERATIONS	https://doni.documentservices.dla.mil/opnav.aspx/ https://g2.cnmc.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
f	NASPAXRIVINST 13720.1C	FOREIGN OBJECT DAMAGE (FOD) PREVENTION PROGRAM	https://directives.navair.navy.mil/
g	NASPAXRIVINST 10341.1C	HOT REFUELING OF AIRCRAFT	https://directives.navair.navy.mil
h	NAVTESTWINGLANT/ NASPAXRIVINST 13690.2D	PROCEDURES FOR SURVEY AND USE OF COMPASS ROSE	https://directives.navair.navy.mil/
i	OPNAVINST 5090.1D	ENVIRONMENTAL READINESS PROGRAM	https://doni.documentservices.dla.mil/opnav.aspx
j	NASPAX Storm Water Pollution Prevention Plan (SWP3)	NASPAX Storm Water Pollution Prevention Plan (SWP3)	https://g2.cnmc.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
k	NASPAXRIVINST 2200.1S	VOICE CALL SIGNS	https://directives.navair.navy.mil/

14 May 2021

l	Aeronautical Information Manual/Federal Aviation Regulations (AIM/FAR)	AERONAUTICAL INFORMATION MANUAL / CODE OF FEDERAL REGULATIONS TITLE 14	https://www.faa.gov/air_traffic/publications/ https://www.ecfr.gov/cgi-bin/textidx?c=ecfr&tpl=/ecfrbrowse/Title14/14tab_02.tpl
m	CNIC BIRD/ANIMAL AIRCRAFT STRIKE HAZARD (BASH) MANUAL	CNIC BIRD/ANIMAL AIRCRAFT STRIKE HAZARD (BASH) MANUAL	http://www.public.navy.mil/NAVSAFECEN/Pages/aviation/AirfieldOperations.aspx http://www.public.navy.mil/NAVSAFECEN/Pages/aviation/AirfieldOperations.aspx
n	OPNAVINST 3750.6S	NAVAL AVIATION SAFETY MANAGEMENT PROGRAM	https://doni.documentservices.dla.mil/opnav.aspx
o	NASPAXRIVINST 3750.5H	BIRD/ANIMAL AIRCRAFT STRIKE HAZARD (BASH) PROGRAM	https://directives.navair.navy.mil/
p	SECNAVINST 3770.1A	JOINT MILITARY AND CIVIL USE OF NAVY AND MARINE CORPS AVIATION INSTALLATIONS	https://doni.documentservices.dla.mil/secnav.aspx
q	FAA JO 7110.65 (Series)	AIR TRAFFIC CONTROL	https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/1028576
r	NASPAXRIVINST 5100.30H	HAZARDS OF ELECTROMAGNETIC RADIATION TO ORDNANCE (HERO)	https://directives.navair.navy.mil/
s	NASPAXRIVINST 3722.1B	PRECISION APPROACH LANDING SYSTEM (PALS) PROCEDURES FOR FLEET SQUADRONS AT NAVAL AIR STATION (NAS)	https://directives.navair.navy.mil/

		PATUXENT RIVER, MD	
t	FAA JO 8260.3C	TERMINAL INSTRUMENT PROCEDURES	https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/1029266
u	FAA JO 7400.2L	PROCEDURES HANDLING AIRSPACE MATTERS	https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.information/documentID/1031010
v	NAVAIRWARCENACDIVINST 5450.5D	PATUXENT CENTRAL SCHEDULING OFFICE	https://directives.navair.navy.mil/
w	COMUSFLTFORCOMINST 3120.26	FLEET OPERATING AREAS	https://usff.navy.deps.mil/sites/hq/n00/stfadmin/Shared%20Documents/Forms/Staff%20Admin.aspx?RootFolder=%2fsites%2fhq%2fn00%2fstfadmin%2fShared%20Documents%2fDirectives%2fFleet%20Instructions%2f3000%20Operations%20and%20Readiness&FolderCTID=0x01200074BE2C77B051B141A1A801CC6D6F5EBF *NOTE USE EMAIL CAC CERTIFICATE*
x	NAVAIR INST 3700.3	RANGE SAFETY POLICY	https://directives.navair.navy.mil/ *NOTE UNDER NAVAIR HQ INSTRUCTIONS*
y	NAVAIRWARCENACDIVINST 3710.1A	RANGE SAFETY MANUAL	https://directives.navair.navy.mil/
z	FACSFACVACAPEINST 3710.1B	NAVY DARE BOMBING RANGE COMPLEX OPERATIONS MANUAL	https://g2.cnmc.navy.mil/tscnrndw/NASPATUXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
aa	OPNAVINST 4630.25D	GOVERNMENT AIR TRANSPORTATION ELIGIBILITY	https://doni.documentservices.dla.mil/opnav.aspx
bb	OPNAVINST 4660.3A	DEPARTMENT OF THE NAVY AIR TERMINAL PROCEDURES	https://doni.documentservices.dla.mil/opnav.aspx

cc	OPNAVINST 3700.19E	FOREIGN MIL. LANDING CLEARANCE PROCEDURES	https://doni.documentservices.dla.mil/opnav.aspx
dd	NAVAIR 00-80R-14	NAVY AIRCRAFT EMERGENCY RESCUE	https://g2.cnlic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
ee	NASPAXRIVINST 3130.2F	SEARCH AND RESCUE (SAR)/MEDEVAC BILL	https://directives.navair.navy.mil/
ff	NAVTESTWINGLANTINST 3710.7A	NAVAL TEST WING ATLANTIC GENERAL FLIGHT AND OPERATING INSTRUCTIONS	https://directives.navair.navy.mil/
gg	NASPAXRIVINST 3750.2A	AVIATION SAFETY MANAGEMENT / AVIATION PRE- MISHAP PLAN AND REPORTING SYSTEM (SMS)	https://directives.navair.navy.mil/
hh	NAVSEA OP5, Vol. 1	AMMUNITION AND EXPLOSIVES SAFETY ASHORE	https://g2.cnlic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
ii	Airfield Pavement Condition (PCI) Survey Oct 2006	AIRFIELD PAVEMENT CONDITION SURVEY NAVAL AIR STATION PATUXENT RIVER LEXINGTON PARK, MARYLAND	https://g2.cnlic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
jj	EIS, NAS Patuxent River, MD, DEC 1998	FINAL ENVIRONMENTAL IMPACT STATEMENT PATUXENT RIVER	https://g2.cnlic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
kk	Preventative Control LOA	PREVENTATIVE CONTROL LOA	https://g2.cnlic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx

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ll	OPNAVINST 3721.5L	NAALS Program Manual	https://g2.cnic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
mm	NASPAXRIVINST 5100.30H	Hazards Of Electromagnetic Radiation To Ordnance (HERO)	https://g2.cnic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
nn	NAVFACINST 11010.45	Regional Planning Instruction – Site Approval Process	https://g2.cnic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
oo	NWP 1-03.1	Operational Reports (NOTAL)	https://g2.cnic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx
pp	UFC 4-133-01N	Unified Facilities Criteria (UFC) Navy Air Traffic Control Facilities	https://g2.cnic.navy.mil/tscnrndw/NASPAT UXENTRIVERMD/N3/N322%20Documents/Forms/AllItems.aspx

APPENDIX B
LIST OF ABBREVIATIONS/ACRONYMS

A

ADIZ. Air Defense Identification Zone
ADS. Aeronautical Design Standard-33
AFM. Airfield Management
AFS. Airfield Services
AGL. Above Ground Level
AIM. Aeronautical Information Manual
AIMS. Altitude Identification and Measuring System
AODO. Air Operations Duty Officer
ARFF. Aircraft Rescue and Firefighting
ARTCC. Air Route Traffic Control Center
ASOS. Automated Surface Observing Systems
ASR. Air Surveillance Radar
ASWEP. Anti-Submarine Warfare Environ-Mental Product
ATC. Air Traffic Control.
ATCAA. Air Traffic Control Assigned Airspace.
ATCF. Air Traffic Control Facility
ATCFO. Air Traffic Control Facility Officer
ATIS. Automatic Terminal Information System
ATR. Atlantic Test Range
AVO. Air Vehicle Operator
AVOIC. Airfield Vehicle Operator Instructor Course

B

BASH. Bird/Animal Aircraft Strike Hazard

C

CAL. Confined Area Landing
CALA. Combat Aircraft Loading Area
CATM. Captive Air Training Missile
CBQ. Combined Bachelor Quarters
CBU. Cluster Bomb Unit
CDO. Command Duty Officer
CDP. Cross-deck Pendant
CFR. Code of Federal Regulations
CGE. Cambridge-Dorchester
CNO. Chief of Naval Operations
CNMOC. Commander, Naval Meteorology and
Oceanography Command
CO. Commanding Officer

COA. Certificate of Authorization
COMM. Commercial Phone
COMNAVAIRLANT. Commander, Naval Air Force Atlantic
COMNAVAIRSYSCOM. Commander, Naval Air Systems Command
COMNAVAIRWARCENACDIV. Commander, Naval Air Warfare Center, Aircraft Division

D

DF. Direction Finding
DINS. Defense Internet NOTAM Services
DLA. Defense Logistics Agency
DMA. Defense Mapping Agency
DME. Distance Measuring Equipment
DOD. Department of Defense
DP. Departure Procedure
DSN. Defense Switch Network
DV. Distinguished Visitor

E

EAF. Expeditionary Airfield
EDT. Eastern Daylight Time **ELMR.** Enterprise Land Mobile Radio **ELT.** Emergency Locator Transmitter.
EPA. Environmental Protection Agency
EST. Eastern Standard Time
ETA. Estimated Time of Arrival
ETD. Estimated Time of Departure
ETE. Estimated Time Enroute

F

FAA. Federal Aviation Administration
FACSFAC. Fleet Area Control and Surveillance Facility
FAR. Federal Aviation Regulations
FCLP. Field Carrier Landing Practice
FFVC. See FACSFAC and VACAPES
FIH. Flight Information Handbook
FIST. Flight Information Scheduling and Tracking
FL. Flight Level
FLIP. Flight Information Publication
FOD. Foreign Object Damage
FRG. Fleet Readiness Center Mid Atlantic Site

Patuxent River
FSS. Flight Service Station
FWB. Flight Weather
FWS. Facility Watch Supervisor

G

GCA. Ground Controlled Approach
GEM. General Electronics Maintenance
GPS. Global Positioning System
HEI. High Explosive Incendiary
HELO. Helicopter
HERO. Hazards of Electromagnetic Radiation to Ordnance
HX-21. Air Test and Evaluation Squadron TWOONE

I

IAW. In Accordance With
ICAO. International Civil Aviation Organization
IFF. Identification Friend or Foe
IFR. Instrument Flight Rules
ILS. Instrument Landing System
IMC. Instrument Meteorological Conditions
IR. IFR Military Training Route

J

JSF. Joint Strike Fighter

K

KIAS. Knots Indicated Airspeed
KNUI. Webster Airfield
KWAL. Wallops Flight Facility

L

L. Local Time
LLWAS. Low Level Windshear Alert System
LOA. Letter of Agreement
LOI. Letter of Instruction
LSO. Landing Signal Officer
LZ. Landing Zone

M

MARSA. Military Assumes Responsibility for Separation of Aircraft
MCAS. Marine Corps Air Station
MD. Maryland

MEDEVAC. Medical Emergency Evacuation
MRU. Military Radar Unit
MSL. Mean Sea Level
MTR. Military Training Route

N

N2L. Navy Foreign Liaison Office
NAFC. Naval Aviation Forecast Center
NAS. Naval Air Station
NASA. National Aeronautics and Space Administration
NATOPS. Naval Air Training and Operating
Procedures Standardization **NAVAID.** Navigation Aid
NAWCAD. Naval Air Warfare Center, Aircraft Division
NDB. Non-Directional Radio Beacon
NHK. NAS Patuxent River three letter identifier
NLMOD. Naval Atlantic Meteorology and
Oceanography Detachment
NM. Nautical Mile
NOTAM(s). Notice(s) to Airmen
NTWL. Navy Test Wing Atlantic
NUI. OLF Webster Three Letter Identifier
NVD. Night Vision Device

O

OLF. Outlying Field
OLS. Optical Landing System
OPARS. Optimal Path Aircraft Routing System
OTP. VFR-ON-TOP
OTT. Nottingham VORTAC

P

PA. Public Address
PALS. Precision Approach Landing System
PAR. Precision Approach Radar **PCL.** Pilot Controlled Lighting
PIC. Pilot in Command
PPA. Practiced Precautionary Approaches
PPEL. Practice Precautionary Emergency Landing
PPR. Prior Permission Required
PW. Public Works
PXOA. Patuxent River Operating Area (Restricted Areas)
PXT. Patuxent VORTAC three letter identifier

Q

R

RAL. Requested Altitude
RDC. Regional Dispatch Center
RDT&E. Research, Development, Test, and Evaluation
RHP. Return Home Point
ROICC. Resident Officer in Charge of Construction
RSRS. Reduced Same Runway Separation
RS-SOP. Range Safety Standard Operating Procedures
RTB. Return to Base

S

SAR. Search and Rescue
SATO. Scheduled Airline Travel Office
SFO. Simulated Flameout Approach
SFRA. Special Flight Ruses Area
SIF. Selective Identification Feature
SID. Standard Instrument Departure
SM. Statute Mile
SO. Sustainability Office
SOP. Standard Operating Procedure
STOL. Short Takeoff and Landing
STOVL. Short Takeoff Vertical Landing
SUA. Special Use Airspace
SUS. Sounding Underwater Sensor
SVFR. Special Visual Flight Rules

T

TACAMO. Take Charge and Move Out
TACAN. Tactical Air Navigation
TELEFAX. Telephone facsimile
TERF. Terrain Area Flight/Route
TERPS. Terminal instrument procedures
TFOA. Things falling off aircraft
TP. Target Practice
TPS. Test Pilot School
TRACON. Terminal Radar Approach Control

U

UA. Unmanned Aircraft
UHF. Ultrahigh frequency

UAS. Unmanned Aircraft System
USAF. United States Air Force
USN. United States Navy
UTC. Coordinated Universal Time

V

VACAPES. Virginia Capes Operating Area
VFR. Visual Flight Rules
VMC. Visual Meteorological Conditions
VOR. VHF Omni-Directional Range
VORTAC. See VOR and TACAN
VR. VFR Military
VTO. Vertical Take Off
VTOL. Vertical Takeoff and Landing
VTUA. Rotary Wing UA
VX-20. Air Test and Evaluation Squadron TWOZERO
VX-23. Air Test and Evaluation Squadron TWOTHREE

W

WOLF. Webster Outlying Field

X

Y

Z