



PATUXENT RIVER COMPLEX

Testing and Training Activities Environmental Impact Statement (EIS)

Draft EIS Public Comment Period Guide



Virtual Public Meeting Schedule (All local times)

May 18, 2021 6-7 pm

May 19, 2021 12-1 pm

Please Provide Comments.

Substantive public comments on the proposed action, alternatives, and potential impacts on resource areas will be considered in the Patuxent River Complex (PRC) Final EIS.

The Navy appreciates your time and interest.

Please visit the project website at www.PRCEIS.com

How to Provide Comments:

Electronically via the project website:

www.PRCEIS.com

By mail:

Naval Air Warfare Center Aircraft Division
Range Sustainability Office
Atlantic Ranges and Targets Department
Attn: EIS Project Manager
23013 Cedar Point Road, Building 2118
Patuxent River, MD 20670-1183

The comment period is from April 30, 2021 to June 15, 2021. If you have questions or would like more information about the PRC EIS process, please contact the Naval Air Warfare Center Aircraft Division Range Sustainability Office at (301) 342-9902. Note, comments will not be accepted via the telephone.

The Draft EIS is available on the project website and at the following libraries:

St. Mary's County Library, Lexington Park Branch

21677 FDR Blvd.
Lexington Park, MD 20653

St. Mary's County Library, Charlotte Hall Branch

37600 New Market Rd.
Charlotte Hall, MD 20622

Calvert Library Southern Branch

13920 H G Trueman Rd.
Solomons, MD 20688

Lancaster Community Library

16 Town Centre Dr.
Kilmarnock, VA 22482

Northumberland Public Library

7204 Northumberland Hwy.
Heathsville, VA 22473

Dorchester County Central Library

303 Gay St.
Cambridge, MD 21613

Somerset County Library, Princess Anne Branch

11767 Beechwood St.
Princess Anne, MD 21853

Welcome

Thank you for your interest in the Patuxent River Complex (PRC) Testing and Training Activities Draft Environmental Impact Statement (EIS). The Navy prepared a Draft EIS to assess the potential impacts on the community and environment from conducting ongoing and new research, development, test, and evaluation (“testing”), and training activities in the PRC.

This booklet provides an overview of the PRC EIS and specifically the draft findings. The fact sheets included in this booklet are also available online at www.PRCEIS.com.

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NEPA

What is NEPA?

The National Environmental Policy Act (NEPA) of 1969 is environmental legislation that requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. The public is invited to participate in the process.

What is an EIS?

An Environmental Impact Statement (EIS) is a detailed public document providing an assessment of the potential effects a major federal action may have on the human, natural, and cultural environment. An EIS:

- Is a report prepared by a multidisciplinary team
- Considers alternative ways to accomplish the proposed action
- Includes an evaluation of existing resources
- Assesses the impact of the proposed action and alternatives on the environment
- Evaluates best management practices and mitigation measures to reduce environmental impacts

The Draft EIS contains the following sections:

1. Purpose and Need – project objectives and why the proposed action is needed
2. Proposed Action and Alternatives – what the Navy wants to do and alternatives that can meet their needs
3. Affected Environment and Environmental Consequences – description of the existing environment or baseline conditions and analysis of potential impacts on resource areas associated with implementation of each alternative
4. Cumulative Impacts – effects of the proposed action considered along with other projects occurring in the same area



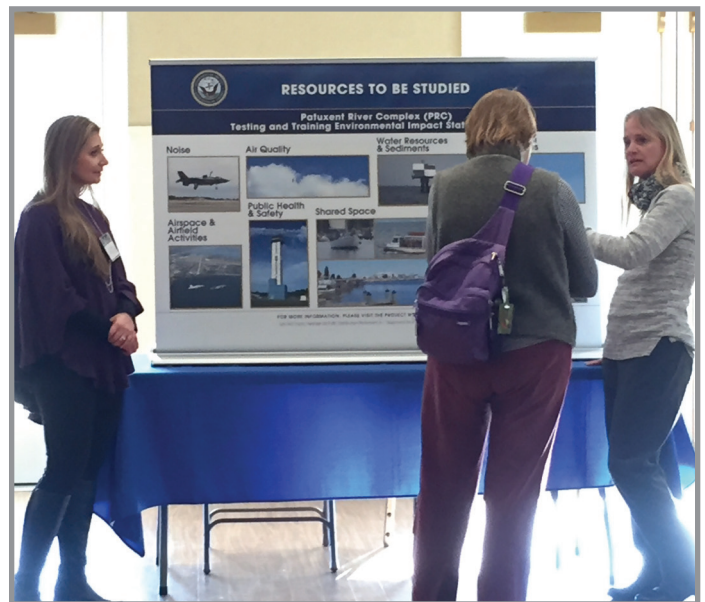
**Gold ovals represent public involvement opportunities*

Get INVOLVED

The Navy invites you to participate in the Environmental Impact Statement process.



The schedule highlights in gold the steps where you can get involved. The Navy invites the public to review and comment on the analysis. The release of the Draft EIS and the opening of the Draft EIS comment period was announced in the *Federal Register*, local newspapers, press releases, and stakeholder mailings. Virtual public meetings will be held to inform the public of our Draft EIS findings. The meetings will offer an opportunity for the public to engage with members of the project team and ask questions. The Navy then prepares a Final EIS, considering the comments received on the Draft EIS. Once the Final EIS is complete, a Notice of Availability is published in the *Federal Register* and local newspapers. This is followed by a 30-day waiting period. The final decision will then be published in the *Federal Register* as a Record of Decision.



The Importance of Testing and Training

Testing ensures that aircraft, systems, and equipment meet the needs of our Sailors and Marines. Training prepares Sailors and Marines to operate and maintain the systems and equipment they use to conduct their missions.

Importance of the Patuxent River Complex (PRC)



The Patuxent River Complex or PRC is a national asset for aircraft testing and training for all branches of the U.S. military. Testing and training at the PRC has been occurring since 1943. All Navy aircraft types are tested in the PRC, including fixed-wing jet and propeller aircraft, helicopters, and unmanned aircraft.

Research and development of new technologies occurs continuously to counter new and emerging threats. Testing ensures that aircraft, systems, and equipment meet the needs of our Sailors and Marines. Testing is conducted for new aircraft, as well as upgrades to aircraft currently operating in the Fleet. Testing is performed safely under highly controlled conditions, allowing for collection of data to evaluate performance.

The PRC is the Navy's principal location for testing due to its unique combination of:

- Airspace
- Facilities
- Environment
- Instrumentation, and
- Personnel with technical expertise.

Proposed Navy testing and training activities are similar to the types of activities that have been occurring in the PRC for decades.

The U.S. Naval Test Pilot School, located at the Naval Air Station, trains new test pilots, aircrew, and engineers to safely perform testing.

Training flights are also conducted in the PRC to keep Navy test pilots proficient in their jobs. Other military groups use the range for essential training.





PRC testing and training activities include:

- **Aircraft Flight Activities** - test flights, training flights, and other flights
 - » Test flights - evaluate the performance, reliability, and safety of new, modified, or upgraded aircraft or aircraft systems and are categorized as:
 - › Air Vehicle Testing – tests during flights to expose the aircraft and aircrew to varying altitude, speed, load factor, weight, and other conditions.
 - › Carrier and Shipboard Suitability Testing – tests conducted using ground-based facilities designed to simulate a ship
 - › Mission Systems Testing – tests to evaluate the performance and operability of electronic, computer, communications, and control systems including, black boxes, avionics, and aircraft electronics
 - › Electronic Warfare Testing – tests to evaluate electronic systems designed to interrupt enemy electronic systems
 - › Weapons Integration Testing – tests to evaluate the integration of non-explosive weapons with aircraft and associated systems
 - » Training Flights – training of Naval Air Station Patuxent River tenant squadrons and other military aircrew in proficiency and unit level skills including:
 - › U.S. Naval Test Pilot School training for new test pilots
 - › Aircrew proficiency and Field Carrier Landing Practice
 - › Air Force, Army, and National Guard training in support of national defense
 - » Other Flights – flights conducted by tenant squadrons that have a support and/or operational function such as functional checks, strategic communications, and search and rescue flights.
- **Ground Activities** – ground-based activities related to aircraft flights. Some tests are conducted in specialized ground test facilities and laboratories.
- **Surface Activities** – range boat services (range clearance and target placement and recovery) to support testing and training activities. Also includes training on and testing of water vessels.

Proposed Action and Alternatives

What is the Navy Proposing to Do?



The Navy proposes to continue conducting military testing and training activities within the Patuxent River Complex (PRC) to meet current and projected military readiness requirements. What the Navy is proposing to do is called the Proposed Action, and the ways to accomplish the Proposed Action are called “alternatives.”

The Navy’s Proposed Action includes adjustments to current testing and training activities, and combines the testing and training activities from the 1998 PRC Final Environmental Impact Statement and subsequent Environmental Assessments into one comprehensive, updated document. Proposed adjustments to the current type and tempo of activities would support projected Navy military readiness requirements into the foreseeable future.

Purpose

At Naval Air Station Patuxent River, the Navy tests and trains on newly developed aircraft, weapons, and technologies before they are put into service across the Navy. The Proposed Action to continue these critical testing and training activities within the PRC is of utmost importance in providing Sailors and Marines with equipment and technology that operate effectively and safely.

Need

The Proposed Action would meet the Navy’s requirement to maintain military readiness of naval forces to win wars, deter aggression, and maintain freedom of the seas, now and into the future.

U.S. Sailors and Marines:

- Protect and defend the United States against enemies
- Protect rights to move freely on the oceans
- Provide humanitarian assistance



The Navy conducts testing and training on aircraft and weapons systems to ensure service members are equipped to be successful in their mission of national defense.

Alternatives

The Council on Environmental Quality regulations require Environmental Impact Statements (EISs) to have a range of alternatives, including a No Action Alternative, to provide options for the decision maker and the public (40 Code of Federal Regulations 1502.14). The Navy developed a range of alternatives that take into consideration the Navy’s operational needs for the foreseeable future, as well as public input received during the public scoping phase of this project in 2019. Table 1 compares air, land, and water activities by alternative. The following is a description of the alternatives.

No Action Alternative. Under the No Action Alternative, the Navy would continue testing and training activities within the PRC at the same annual flight hours and mix of aircraft, non-explosive munitions, and systems as is currently being conducted. This baseline includes testing and training activities analyzed in the 1998 PRC EIS and subsequent EAs.

The No Action Alternative does not meet the purpose of and need for the Proposed Action and does not ensure readiness of naval forces, since it does not accommodate projected military readiness requirements. As required by NEPA, the No Action Alternative is carried forward for analysis in the EIS even though it does not meet the purpose and need. It is included as a baseline to compare the effects of the other action alternatives.

Alternative 1. Under Alternative 1, the Navy would conduct the same types of testing and training activities within the PRC as the No Action Alternative but with higher annual flight hours and adjustments to current aircraft mix, non-explosive munitions numbers, and systems to accommodate projected testing and training requirements identified by the Navy for the foreseeable future. This alternative is based on the annual level of increased operational tempo projected by the Navy to maintain readiness of naval forces for the foreseeable future but not the readiness level needed during increased global conflicts. Under this alternative, the Navy would be able to meet the typical, but not the highest, level of military readiness.

Considerations in Developing Alternatives

- Provide safe and realistic testing and training year round
- Meet current and future military readiness requirements
- Meet emergent military readiness requirements in response to increased global conflict
- Maintain capabilities at a single location and provide cradle-to-grave aircraft programs

Table 1: Comparison of Air, Land, and Water Activities by Alternative

Activity	No Action Alternative	Alternative 1	Alternative 2
Air			
Aircraft Flight Activities (# of Flight Hours)	20,100	23,400	26,000
Supersonic (# of Events)*	247	180	198
Land			
Aircraft Ground-Based Activities (# of hours)	3,693	4,299	4,729
Static Engine Runs (# Events Events/Hour)	92	92	101
Ground Support Equipment (# of Hours)	47,894	54,646	58,763
Water			
Vessels (#)	644	765	842
* The slight decrease in the number of supersonic events within the PRC reflects a trend toward supersonic operations being conducted in offshore Warning Areas.			

Alternative 2 (Preferred Alternative). Under Alternative 2, the Navy would conduct the same types of testing and training activities within the PRC as Alternative 1 but with the ability to increase annual number of flight hours and adjustments to current aircraft mix, non-explosive munitions numbers, and systems to accommodate projected testing and training requirements needed by the Navy in the event of increased global conflict. Under this alternative, the Navy would be able to meet the highest level of military readiness.

Both Alternatives 1 and 2 include:

- Higher annual average of aircraft flight hours, adjustments in aircraft mix, increased use of PRC waters to accommodate surface vessel and underwater vehicle testing and training (the full list of activities can be found in the Draft EIS, Table 2.3-1)
- Increases in most non-explosive munitions and other military expended materials (MEM)
- The testing of new technologies to address new and emerging threats
- Adjustments in types of mission systems being integrated and tested in aircraft and surface and subsurface vessels
- Expanded use of the Patuxent River Seaplane Area to enhance Search and Rescue training
- The addition of active sonobuoy testing in conjunction with helicopter dipping sonar tests



Alternative 2 is the Preferred Alternative because it meets the purpose of and need for the Proposed Action and allows the Navy the greatest capacity to maintain readiness of naval forces at maximum levels in the event of increased global conflict.

About Munitions Use at the PRC

All munitions used within the PRC are non-explosive, meaning they do not contain a functional warhead and are not composed of explosive material.

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Primary types of non-explosive munitions used at PRC include bombs, mines, missiles, rockets, torpedoes, and gun ammunitions. Other MEM (e.g., chaff, flares, marine markers, sonobuoys) may be used as required for certain types of testing or training. Table 2 shows the types of munitions and MEM used by alternative. Small and medium-caliber gun ammunition is shown in Table 3. The full list of munitions can be found in the Draft EIS, Table 2.3-2.

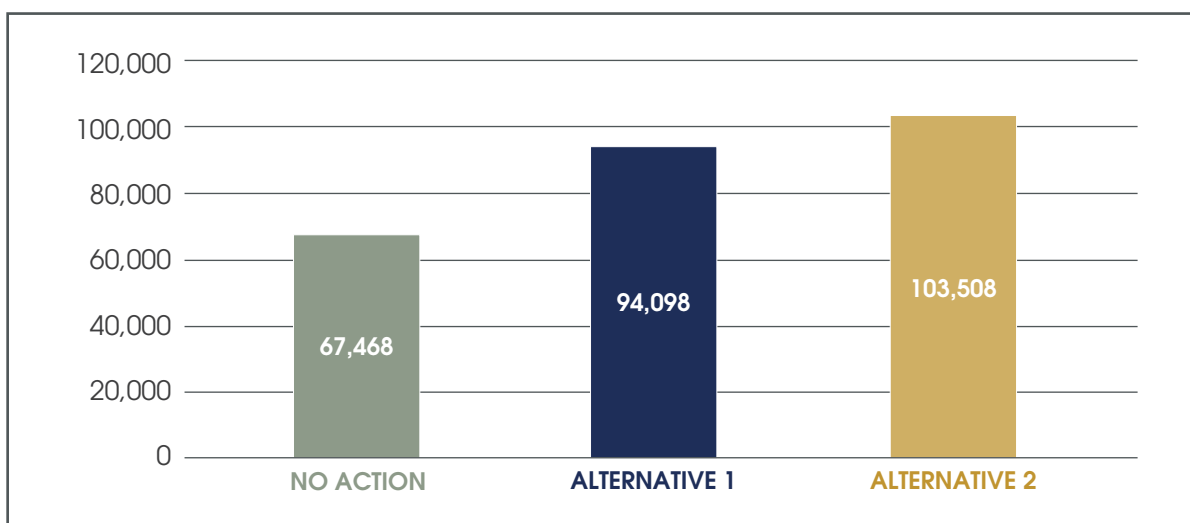
The majority of munitions and other MEM are expended during weapons separation tests which check the ability of a weapon to safely and reliably separate from an aircraft. The non-explosive munitions replicate the shapes, appearance, size, and weight of explosive munitions. They contain steel, concrete, vermiculite, or other non-explosive materials. Some may contain propellant (e.g., live rocket or missile motors), fuse sensors, signal cartridges, or other energetic materials but are non-explosive.

While the majority of munitions within the PRC are dropped from aircraft, gun ammunitions (non-explosive rounds) and rockets may be live-fired from aircraft or combatant and patrol craft. Rockets, missiles, and gun ammunition are also live-fired from and within the Armament Test Area.

Table 2: Munitions Use by Alternative

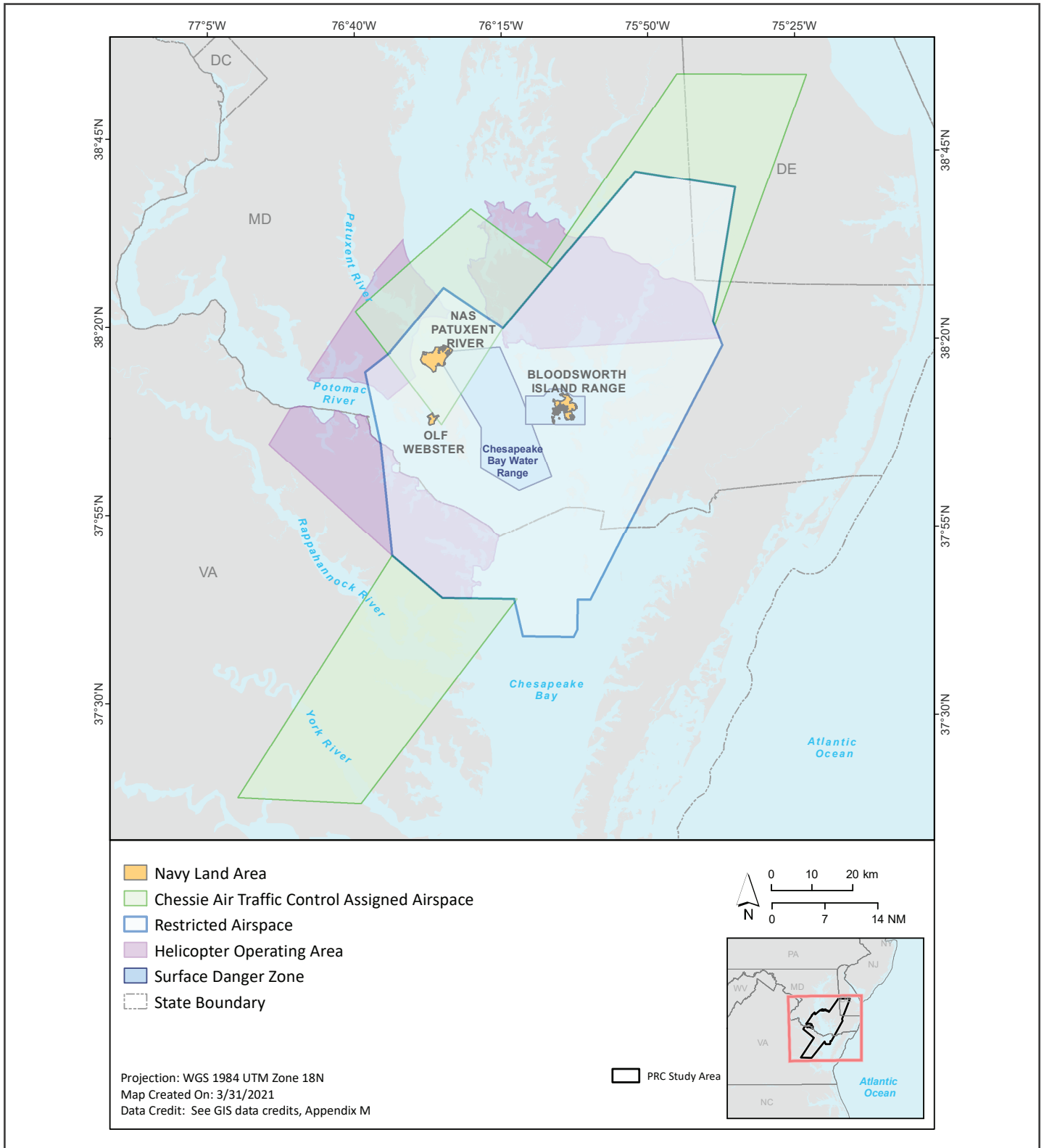
Munitions	No Action Alternative	Alternative 1	Alternative 2
Missiles/Rockets	440	641	705
Bomb/Mine/Torpedoes	249	494	543
Chaff/Flares/Other	644	709	781
Sonobuoys	122	146	160
Directed Energy (Events)	0	170	170
Miscellaneous	18	44	50

Table 3: Gun Ammunition by Alternative



Study Area

Figure 1: Study Area Map



The PRC is based at Naval Air Station (NAS) Patuxent River, located in Southern Maryland approximately 60 miles southeast of Washington, D.C. The study area includes military restricted and surrounding airspace that overlies portions of Maryland, Virginia, and Delaware, as well as land areas and water areas where the Navy conducts testing and training activities.

Land Areas

- **Naval Air Station (NAS) Patuxent River:** Covers 6,379 acres in St. Mary's County, Maryland and contains the main airfield, three runways, control tower, and the majority of aircraft and aircraft systems testing facilities.
- **Outlying Field (OLF) Webster:** An annex to NAS Patuxent River, OLF Webster covers 852 acres along the eastern shore of the St. Mary's River. OLF Webster contains two runways, and is primarily used for unmanned aircraft research, development, test, and evaluation.
- **Bloodsworth Island Range:** The range covers 4,738 acres, located 25 miles southeast of NAS Patuxent River in the Chesapeake Bay. The Navy conducts aviation-related testing activities within the military restricted airspace that overlies the Bloodsworth Island Range.

Water Areas

- **Chesapeake Bay Water Range:** Located in the middle Chesapeake Bay between the mouth of the Patuxent River and the mouth of the Potomac River, this range supports testing and training activities, including the release of non-explosive weapons from aircraft and surface vessels.
- **Patuxent River Seaplane Area:** A designated area historically used for seaplane takeoffs and landings and currently used for search and rescue training.
- **Potomac and St. Mary's Rivers surrounding OLF Webster:** These waters are used for non-impact testing activities, including aircraft overflights, surface vessels, and unmanned underwater vehicles.

Airspace

- **Military Restricted Airspace:** Designated airspace that provides a safe and controlled area for aircraft testing and evaluation.
- **Helicopter Operating Area:** Adjacent airspace shared with private and commercial aircraft, used by helicopter and small, fixed-wing propeller aircraft to conduct lower altitude operations.
- **Chessie Air Traffic Control Assigned Airspace (ATCAA):** Airspace that can be assigned to the military when needed to accommodate flight activities that require additional space beyond the boundaries of the military restricted airspace.

Atlantic Test Ranges (ATR) Assets

- **Fixed Targets, Aim Points, and Recovery Areas:** Used as reference points for non-explosive weapons and mission systems testing and training.
- **Instrumentation Sites:** ATR is a fully instrumented range with shore-based radars, remote data gathering equipment, optical (e.g., cameras), and communication systems.

Resources Studied in the EIS

The Navy conducted a comprehensive analysis of potential impacts on different environmental resource areas as shown below. Navy testing and training activities can cause: noise impacts to people, animals, or structures; physical disturbance/strike to animals, plants, or structures; release of pollutants; impacts to people, animals, or plants from energy emissions; and animal entanglement or ingestion of materials.



Noise



Air Quality



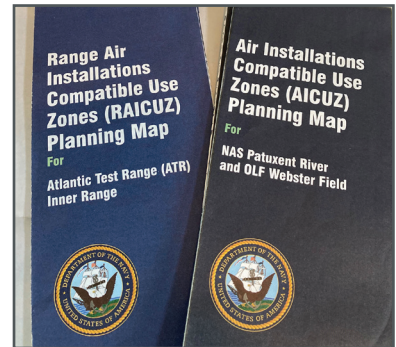
Water Resources
and Sediments



Biological
Resources



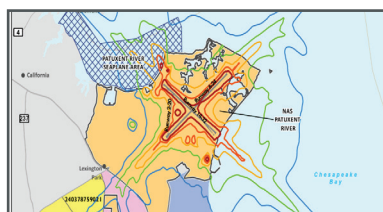
Public Health
and Safety



Land Use



Socioeconomics



Environmental
Justice



Cultural
Resources

Noise

What are the Potential Noise Impacts?

The Environmental Impact Statement (EIS) analyzed noise impacts associated with testing and training activities in the Patuxent River Complex (PRC) under each alternative. A noise study including aircraft and other operational noise sources was prepared as part of the Draft EIS. Under the action alternatives, the loudest aircraft noise levels heard would be similar to current conditions but the number of certain noise events would increase from the No Action baseline. This means that near the airfield, more land area and residents would be exposed to elevated noise levels. Proposed changes in testing and training activities in the range would also increase noise levels.

Under Alternatives 1 and 2, some communities near the airfield would experience increased noise levels at residences and schools and subsequently, additional speech interference. The potential for hearing loss or sleep disturbance would remain low under all alternatives.

For more information on noise impacts associated with the action alternatives, please see section 3.1 of the Draft EIS.



What is Noise?

Noise is any sound that is unwanted, interferes with normal activities, or otherwise diminishes the quality of the environment. Aircraft are the predominant noise source at the PRC, but other operational noise sources (e.g., munitions firing) also contribute to the noise environment.

People's response to similar noise events is diverse and is influenced by many factors including: the type of noise, interference with activity, time of day, how long the noise lasts, how many times it occurs, background or ambient noise levels, previous experiences within the community, and individual sensitivity to noise.

How is Noise Assessed?

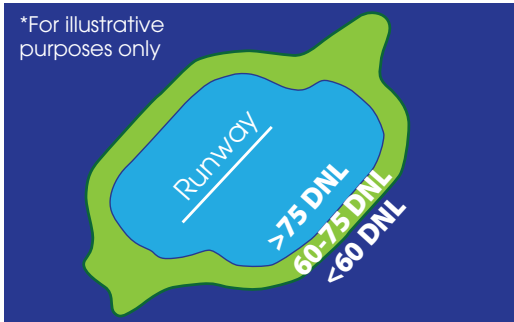
The Navy conducted noise modeling using day-night average sound level as the primary metric to quantify long-term noise exposure to the community. This metric is used by the Department of Defense and other federal agencies.

The decibel (dB)

is a logarithmic scale used to represent sound level

DNL represents the average sound energy of events over a 24-hour period, with a 10-dB adjustment added to late-night events between 10 p.m. and 7 a.m. This 10-dB adjustment accounts for the added intrusiveness of noise when background noise levels are low and when most people are sleeping. DNL is

depicted as noise contours, which are a continuous line around a noise source (e.g., 65 dB DNL, 70 dB DNL), connecting points of equal noise levels. DNL takes into account the factors that influence the perception of noise by people (loudness, number and duration of events, and time of day) and includes them in one metric to identify compatible land uses with specific noise levels.



Less than 60 dB DNL is generally considered an area of low exposure.

60 to 75 dB DNL needs some land use controls due to noise levels depending on land uses; residential land uses may not be compatible at greater than 65 dB DNL.

Greater than 75 dB DNL needs the greatest degree of land use controls due to noise levels.

Other noise metrics were also used to assess speech interference, sleep disturbance, and potential hearing loss. The following noise metrics are included in the Draft EIS:

Table 4: Noise Metrics Analyzed in the Draft EIS

A-Weighted Day-Night Average Sound Level (ADNL)	<ul style="list-style-type: none"> Used for evaluating community response to aircraft noise and land use compatibility 24-hour cumulative noise metric 10 dB added to events occurring between 10 p.m. and 7 a.m. to account for nighttime noise disturbance A-weighted dB levels are used to represent human hearing frequency
C-Weighted DNL (CDNL)	<ul style="list-style-type: none"> Used to describe sonic boom and impulsive noise C-weighted dB levels best describe noise that can be felt, as well as heard
A-Weighted Monthly Onset Rate DNL (Ldnmr)	<ul style="list-style-type: none"> Used for evaluating community response to aircraft noise and land use compatibility A monthly average calculated based on the number of daily flights and the number of flying days in a month with the highest tempo
A-Weighted Sound Exposure Level (SEL)	<ul style="list-style-type: none"> Used to compare relative noise levels of various flights Used to estimate the potential for sleep disturbance Noise exposure of a single event (e.g., flyover) as if it occurs in 1 second
Maximum A-Weighted Sound Level (Lmax)	<ul style="list-style-type: none"> Used to estimate the potential for task interference and classroom interruptions Maximum sound level that humans can hear during an overflight event
Unweighted Peak Sound Level (dBp)	<ul style="list-style-type: none"> Used to estimate the likelihood of complaints associated with large-arms firing Highest instantaneous sound level generated by weapon firing

How is Noise Modeled?

The DoD uses environmental noise models to predict and compare noise levels of current conditions and future activities. The output of noise models is presented on land-use maps in the form of noise contours. For this Draft EIS, noise levels are also presented at several selected locations including schools, churches, parks, and residential areas.

Summary of Impacts by Alternative

Installation Noise Environment

No Action Alternative. Under the No Action Alternative, impacts to the community would be the same as current conditions.

Alternative 1. Under Alternative 1, the land area in the 65 dB DNL or greater noise contour increases by 564 acres and 1,350 residents above current conditions.

Alternative 2 (Preferred Alternative). Under Alternative 2, the land area in the 65 dB DNL or greater noise contour increases by 776 acres and 1,782 residents above current conditions.

Figure 2 presents the 65 DNL noise contours and acreage and population within each alternative. The figure also shows locations selected for additional noise analysis. Under Alternatives 1 and 2, no residents within the 65 dB DNL and greater noise contour would experience aircraft noise louder than current levels, although the noise may be heard more frequently. Table 5 compares the potential noise impacts at selected locations for each alternative.

Very few late-night flying events (i.e., between 10 p.m. and 7 a.m.) are conducted in the PRC. Under the No Action Alternative approximately 1% of flights at NAS Patuxent River and 0.1% of flights at OLF Webster are late-night events.



Under Alternatives 1 and 2, the number of late-night flying events at NAS Patuxent River would remain at 1%. At OLF Webster, late-night flying events would increase from 0.1 to 0.2%.

Figure 2: Comparison of 65 DNL Noise Contours by Alternative and Selected Locations Analyzed

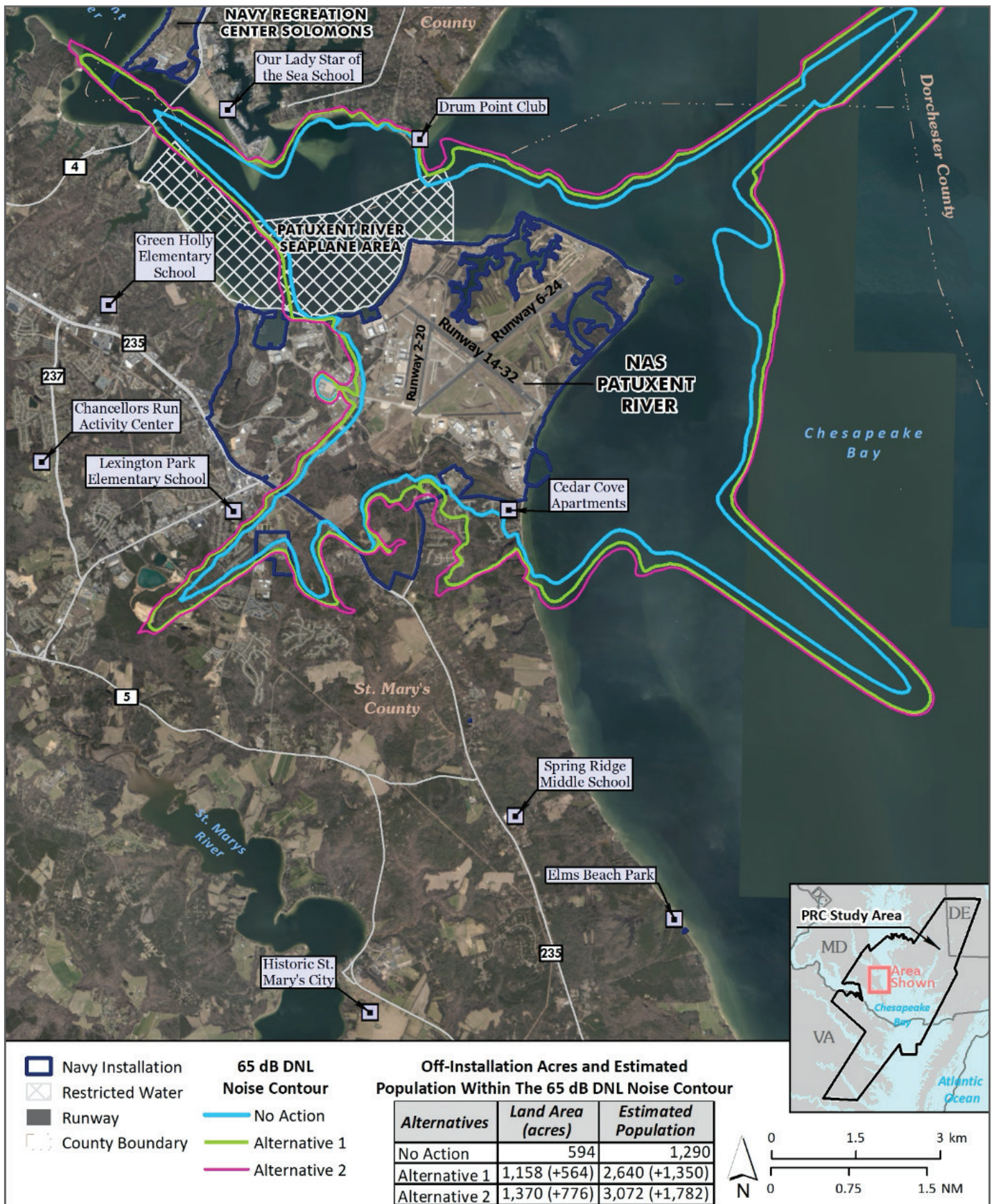


Table 5: Potential Noise Impacts at Selected Locations

Potential Noise Impacts at Representative Locations	No Action Alternative	Alternative 1	Alternative 2
Highest DNL	66 dBA or less	Increase up to 2 dBA	Increase up to 2 dBA
Outdoor Speech Interference (Average # of events per daytime hour)	6 or less	Increase by 1 at four locations	Increase by 1 at six locations
Indoor Speech Interference (Average # of events per daytime hour)	3 or less	Increase by less than 1	Increase by 1 at two locations
Highest Leq(8 hr)	60 dBA or less	Increase up to 2 dBA	Increase up to 2 dBA
Classroom Speech Interference (# per hour)	2 or fewer	Increase by less than 1	Increase by less than 1
Probability of Sleep Disturbance (probability of being awakened once per night)	1% or less	Increase by 1% at 1 location	Increase by 1% at 3 locations
Risk of Hearing Loss	Low	Low	Low

Range Noise Environment



No Action Alternative. The loudest aircraft overflight noise levels outside the installation noise contours would continue to be up to 110 dBA Lmax. Subsonic and supersonic flight, as well as munitions time-averaged noise, are well below levels at which land uses would be considered incompatible. Sonic boom intensity would remain the same, and munitions noise would remain at levels associated with a low-risk of complaints (below 115 dBP) on land.

Alternative 1. Aircraft overflight noise levels would remain the same as under the No Action Alternative; time-averaged noise levels would increase by less than 2 dB slightly increasing the likelihood of annoyance, but remaining well below levels considered incompatible with land uses. Sonic boom intensity would remain the same as under the No Action Alternatives. Munitions noise would remain at levels associated with a low-risk of complaints (below 115 dBP) on land.

Alternative 2 (Preferred Alternative). Aircraft overflight noise levels would remain the same as under the No Action Alternative; time-averaged noise levels would increase by less than 3 dB slightly increasing the likelihood of annoyance, but remaining well below levels considered incompatible with land uses. Sonic boom intensity would remain the same as under the No Action Alternatives. Munitions noise would remain at levels associated with a low-risk of complaints (below 115 dBP) on land.

Guidance to Aircrews:

**“Be Safe, Be Smart,
and Be Sensitive”**

What is the Navy doing to Manage Noise?

Under all alternatives, the Navy will continue its comprehensive noise management program for the PRC including:

- Noise response system with a toll-free noise hotline to report noise disturbances
- Sonic boom monitors throughout the PRC
- Annual aircrew awareness briefings and noise management instructions to reduce noise impacts
- Monitoring and tracking of activities
- Community noise advisories
- Real estate disclosure clause to notify prospective buyers of potential impacts from nearby military installations
- Noise zones to promote compatible development

Noise Hotline 866-819-9028



Air Quality

Air quality impacts and emissions, including regulated pollutants and greenhouse gases, from the Navy's testing and training activities would result in a minor increase over current conditions. The Navy has conducted similar operations in this area for many years, and the increase in emissions under all alternatives would be minimal in the context of the annual emissions in the PRC Study Area.

The U.S. Environmental Protection Agency (EPA) establishes geographic areas and determines if the areas are in compliance with the National Ambient Air Quality Standards. The EPA General Conformity Rule applies to federal actions occurring in nonattainment or maintenance areas when the total emissions of nonattainment pollutants (or their precursors) exceed specified thresholds. Pollutant emissions under all alternatives are below the de minimis levels. As a result, a General Conformity determination is not applicable to the Proposed Action.

No Action Alternative. There would be no change to baseline levels of air pollutants and greenhouse gases.

Alternative 1. Pollutant emissions would increase by 5% but air quality standards would not be exceeded. The Navy-generated air emissions represent a small portion of the annual emissions that contribute to the regional air quality.

Alternative 2 (Preferred Alternative). Pollutant emissions would be slightly higher than under Alternative 1 (7%) but would still be lower than regulatory thresholds and would continue to represent a small portion of the annual emissions that contribute to the regional air quality.



National Ambient Air Quality Standards

for air pollutants are established by EPA to protect human health and the environment. Standards exist for: carbon monoxide, sulfur dioxide (SO₂), nitrogen dioxide (NO₂), ozone, suspended particulate matter less than or equal to 10 microns in diameter, fine particulate matter less than or equal to 2.5 microns in diameter, and lead.



Water Resources and Sediments

What are the Potential Impacts to Surface Waters and Sediments?

The Environmental Impact Statement (EIS) analyzes the potential effects to water and sediment quality resulting from the No Action Alternative and Alternatives 1 and 2. Physical disturbance and pollutants from testing and training could impact the chemical and physical composition of water and sediments in the Chesapeake Bay. The impacts would be localized and temporary. No water quality or sediment standards would be expected to be exceeded due to the proposed testing and training activities.

Due to the nature and location of testing and training activities, there would be no impacts to groundwater, freshwater resources, wetlands, or floodplains.

Physical Disturbance. Physical disturbance to surface waters and sediments would primarily result from the initial impact and some limited recovery of munitions and other military expended materials (MEM) on the floor of the Chesapeake Bay (Bay). Almost all munitions and other MEM are unrecovered. Other disturbances could include:

- Anchor placements
- Propeller wash
- Any other action that results in contact with or disturbance of the Bay floor

In softer substrates (e.g., sand, mud, silt, clay, and composites), the impact of the expended material coming into contact with the bottom of the Bay, depending on the size and force, could result in a depression and a localized redistribution of sediments as they are temporarily suspended in the water column.



Most MEM that settle on soft-bottom habitats, while not damaging the actual substrate, would effectively convert the substrate from a soft surface to a hard structure, potentially making it suitable for organisms associated with hard surface environments. However, depending on currents and sedimentation rates, these effects would not likely be permanent as the MEM may be covered by sediment over time.

Pollutants. Pollutants would result from the physical/chemical decomposition/degradation of munitions and MEM. Degradation products of munitions and MEM could include:

- Metals (e.g., lead, copper, iron, aluminum, magnesium)
- Other constituents such as phosphorus (a major component of flares and marine markers), lithium, and sulfur dioxide (used in sonobuoy batteries)
- Some munitions and MEM contain small amounts of plastic; however, testing and training activities represent a negligible contribution when compared to other non-Navy sources

None of the munitions or MEM contain perchlorate, a chemical used in some solid rocket propellants. Residual constituents would be expected to gradually dissolve and/or become diluted by Bay tides and currents. No violations of any water quality or sediment standards from MEM constituents would be expected to occur.



Summary of Impacts by Alternative

No Action Alternative. Impacts would include minor, localized, and short-term increases in turbidity and decreases in dissolved oxygen due to resuspension of bottom sediments related to physical disturbances.

Alternative 1. Impacts would be similar to but slightly greater than the No Action Alternative because there would be slightly greater physical disturbance footprints.

Alternative 2 (Preferred Alternative). Increased testing and training activities and slightly greater physical disturbance footprints would result in slightly greater changes to water quality and sediments compared to the No Action Alternative and Alternative 1, but would remain short term and localized.



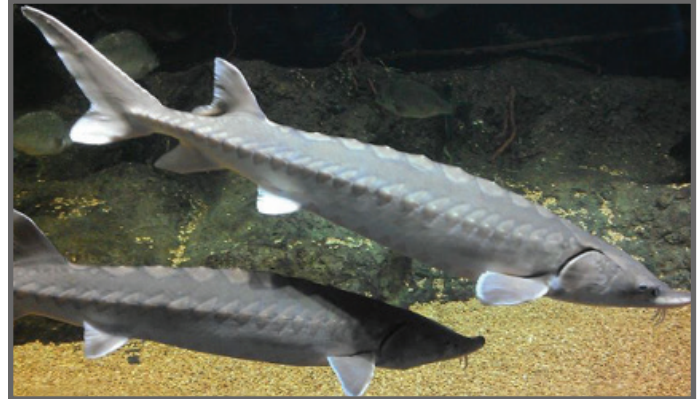
Biological Resources

What are the Potential Impacts to Biological Resources?

The EIS analyzed the potential impacts to biological resources. Stress factors were identified and are common to all alternatives as described below.

Acoustic. The acoustic stress factor (noise) could result in hearing loss, masking (sound that obscures other potentially important sounds), physiological stress, and behavioral reactions.

- Invertebrate, fish, reptiles, and amphibians are relatively insensitive to distant sounds and would be unlikely to encounter more intense close-range sounds from aircraft in flight.
- Birds and mammals are more sensitive to distant sounds but unlikely to encounter more intense close-range sounds from aircraft except for at the airfield or the Chesapeake Bay Water Range. Birds and animals often adjust to elevated noise levels to some degree over time. Occasional low-altitude sonic booms, weapons firing, and active sonar (dipping sonar) in the Chesapeake Bay Water Range could cause temporary behavioral or stress responses for affected animals (e.g., sturgeon, sea turtles, water birds, and marine mammals).



Physical Disturbance/Strike. Although unlikely, physical disturbance/strike could result from testing and training activities with non-explosive munitions, and other military expended materials (MEM). Standard operating procedures and mitigation measures will reduce the potential aircraft and vessel strikes during critical periods (e.g., migration, nesting) and locations (e.g., nearshore habitats, Bloodsworth Island). For rare aquatic species inhabiting the Chesapeake Bay Water Range, it would be unlikely that occasional non-explosive munitions or MEM would strike individuals. For common species, a strike would be more likely but would not be expected to result in a population-level effect.

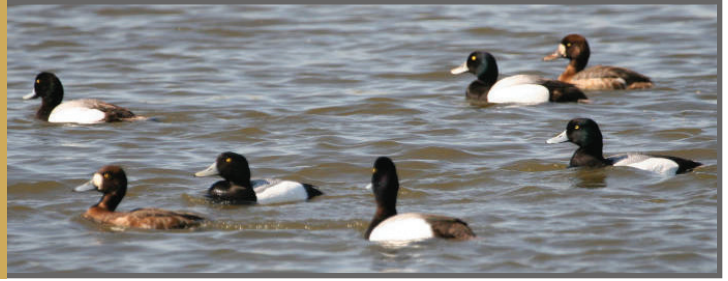
Pollutants. Pollutants primarily include fuel burning emissions and some materials that make up MEM (e.g., lead, copper, phosphorus). Regulatory standards are established and required for most substances to ensure the safety of both humans and terrestrial and aquatic life (e.g., lead, copper, phosphorus).

Energy. Most animals are relatively insensitive to distant electromagnetic energies and unlikely to encounter more intense close-range energies from primarily mobile/high-altitude sources.

Entanglement. Most MEM used would not present an entanglement risk due to the absence of features such as netting, as well as the sparse distribution of both potentially entangling materials and species that are vulnerable to entanglement.

Ingestion. Most MEM used does not look like food so there would be minimal risk of ingestion. For potentially ingestible materials, the risk would be low due to the sparse distribution of both potentially ingestible materials and species that may ingest the material.

There are no long-term/population-level impacts on any biological resources expected under any of the alternatives.



Summary of Impacts by Alternative

No Action Alternative. The type of impacts would be similar to Action Alternatives 1 and 2, but the level of impact would be lower due to maintaining current activities and not increasing the level of testing and training. The current level of activity under the No Action Alternative has not resulted in long-term/population-level impacts for any biological resource.

For context, current aircraft flights have resulted in an average of 10 birds struck per year. The impacts typically occur in and around the airfield environment where aircraft are taking off and landing.

Alternative 1. The type of impacts would be essentially the same as under the No Action Alternative but the level of impact would be greater due the increased level of current and additional activities. The additional activities feature the same stress factors, representative assets, and locations as under the No Action Alternative. Alternative 1 would add active sonobuoys in the same location as dipping sonar and directed energy weapon systems testing. The additional events and activities would not result in long-term/population-level impacts for any biological resource.

For context, under Alternative 1, increased aircraft flights could result in a potential average of 4 to 5 additional birds struck per year.

Alternative 2 (Preferred Alternative). The type of impacts would be essentially the same as under the No Action Alternative, but the level of impact would be greater due to a maximum level of current and additional activities. The additional events feature the same stress factors, representative assets, and locations as under the No Action Alternative. Alternative 2 would add active sonobuoys in the same location as dipping sonar and directed energy weapon systems testing. The additional events and activities would not result in long-term/population-level impacts for any biological resource, in accordance with the analysis summarized below.

For context, under Alternative 2, increased aircraft flights could result in a potential average of 6 additional birds struck per year.

Estuarine Environment. Estuarine vegetation (e.g., marsh plants, seagrass beds) could be affected by physical disturbance/strike and pollutants, primarily in the water. The effect of these localized and infrequent or temporary stress factors would not result in any long-term/population-level impacts on estuarine plant species.



Estuarine animals including sturgeon, sea turtles, water birds, and marine mammals could be affected by noise, physical disturbance/strike, pollutants, energy, entanglement, and ingestion from aircraft, vessels, and equipment and associated weapons firing/MEM. The likelihood of actually striking an estuarine animal would be low. The behavioral response to these localized and infrequent or temporary stress factors would not be expected to result in any long-term/population-level impacts on estuarine animal species.

Additional Activity Types

Due to the nature of the disturbances, estuarine vegetation could be minimally impacted by directed energy weapon systems testing and associated Unmanned Aerial System targets expended in the Chesapeake Bay Water Range and Bloodsworth Island Surface Danger Zones. Directed energy weapons systems testing over estuarine waters could impact plant tissue at or above the surface but the effect would be unlikely and/or insignificant. No long-term/population-level effects would be expected on estuarine plant species.

Most invertebrates, fishes, and reptiles, including shellfish beds, sturgeon, and sea turtles, are not sensitive to mid-frequency sounds from dipping sonar and active sonobuoys. Marine mammals are sensitive to mid-frequency sonar but impacts would be avoided with the required application of established avoidance and mitigation measures. It would be unlikely that directed energy weapon systems testing and associated Unmanned Aerial System targets expended in the Chesapeake Bay Water Range and Bloodsworth Island Surface Danger Zones would overlap with the presence of a rare species (e.g., sturgeon, sea turtles, and marine mammals), and these large and resilient animals would likely be unaffected in the unlikely event of an exposure. Smaller estuarine animals could be impacted, but it would be both unlikely and insignificant in terms of long-term/population-level effects.

Aerial, Terrestrial, and Freshwater Environments.

Terrestrial vegetation in previously disturbed land areas (e.g., mowed areas) could be affected by physical disturbance/strike and pollutants from land-based testing and training activities.

No long-term/population-level impacts on terrestrial vegetation would be expected, and freshwater vegetation would not be affected.



Aerial and terrestrial animals including rare tiger beetles, shore birds, and wading birds, could be affected by noise, physical disturbance/strike, pollutants, and energy from primarily air- and land-based testing and training activities. Freshwater animals could be affected by noise when above water. The likelihood of actually striking an aerial or terrestrial animal would be low. The behavioral response to these localized and infrequent or temporary stress factors would not be expected to result in long-term/population-level impacts on aerial, terrestrial, or freshwater animal species.

Special Status Species and Habitats

Endangered Species Act (ESA)

ESA listed species under the jurisdiction of the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) may occur in the Study Area. The Navy determined that:

- Six marine/estuarine species *may be adversely affected* by the Proposed Action (the shortnose and Atlantic sturgeon and green, Kemp's ridley, leatherback, and loggerhead sea turtles), and
- Five aerial, terrestrial, and freshwater species *may be affected but not likely adversely affected* by the Proposed Action (eastern black rail, northeastern beach tiger beetle, puritan tiger beetle, red knot, and West Indian manatee).



The Navy is consulting with the NMFS and the USFWS regarding these affected species. The finding (*may be adversely affected*) for rare sturgeons and sea turtles is predominantly due to the potential for occasional disturbance/strike from high speed vessels.

Marine Mammal Protection Act

Five marine mammal species may occur in the PRC Study Area: bottlenose dolphin, harbor porpoise, harbor seal, humpback whale, and West Indian manatee. The Navy determined that:

- The Proposed Activities would not result in the reasonably foreseeable harassment or harm of any marine mammals due to the seasonal absence of the only species commonly encountered in the area (bottlenose dolphin) and mitigation measures currently in place during testing and training activities to identify and avoid the species (Table 6).



Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The Navy has determined that:

- The Proposed Activities may result in the incidental harassment or harm of migratory birds; however, no adverse population-level effects are anticipated. Per USFWS screening criteria, eagles are not likely to be harassed or harmed by proposed activities.
- The Navy uses standard operating procedures and mitigation measures that minimize effects on birds.



Magnuson-Stevens Fishery Conservation and Management Act

The Navy has determined that:

- The Proposed Activities may adversely affect Essential Fish Habitat although impacts would be minimal and short-term.
- The primary impacts would be from the physical disturbance of primarily inert MEM on deeper soft-bottom habitats in the Chesapeake Bay Water Range.
- MEM may also affect shallower soft-bottom habitats in the range that are more exposed and subject to short-term effects before burial of heavier materials.
- Other estuarine habitats (e.g., seagrass beds, oyster reefs) would be relatively unaffected by the proposed action due to distance from activities involving MEM or vessel movement.



Because there would be adverse effects, although minimal, the Navy is consulting with NMFS on the findings.

¹ May affect, likely to adversely affect is a regulatory term meaning a significant impact cannot be discounted

² May affect, not likely to adversely affect is a regulatory term meaning a significant impact can be discounted

Table 6 presents the impact avoidance and minimization measures for biological resources. The Navy will continue to implement all current mitigation under all alternatives. The Navy will also apply the Standard Operating Procedures incorporated into the proposed action.

Table 6: Impact Avoidance and Minimization Measures for Biological Resources

Measure	Anticipated Benefit	Implementing and Monitoring
Monitor for marine species prior to mid-frequency active sonar system event	Mitigate impacts to marine species due to mid-frequency active sonar transmissions	<ul style="list-style-type: none"> Visually survey for marine mammals and sea turtles within a radius of 1 nautical mile centered on the dip point prior to a mid-frequency active sonar event Halt or delay the event if a marine mammal or sea turtle is observed until the animal has moved outside the survey area
Maintain altitude restrictions over Bloodsworth Island Range	Mitigate impacts to waterfowl during migratory season	<ul style="list-style-type: none"> Avoid overflight of Bloodsworth Island Range below 3,000 feet for fixed-wing aircraft and 1,000 feet for rotary-wing aircraft during migratory waterfowl season (typically November 15 to March 31)
Monitor for marine species prior to mine countermeasure testing events	Mitigate impacts to marine species due to in-water electromagnetic devices towed at high speed	<ul style="list-style-type: none"> Visually survey for marine mammals and sea turtles within the test area Halt or delay the event if a marine mammal or sea turtle is observed until the animal has moved outside the survey area
Close one TERF area landing zone during northern diamondback terrapin nesting season ¹	Protect northern diamondback terrapin nests within the TERF area helicopter landing zones	<ul style="list-style-type: none"> Close and use only one of two beach landing zones during northern diamondback terrapin nesting and hatching season (May to September) Place fencing around the active landing zone to prevent terrapins from nesting in the area Conduct terrapin nest surveys within landing zones each season
Aircraft flight restrictions over the Hannibal Target during the peregrine nesting season (February 15 – August 15) ¹	Avoid/reduce potential environmental impacts to nesting peregrine falcons	<ul style="list-style-type: none"> Aircraft maintain 0.5-mile buffer from the Hannibal Target from February 15 through August to avoid disturbance of peregrine falcon nesting activities
Continue test plan environmental review process	Ensure all testing and training activities conducted within the PRC are adequately assessed under NEPA	<ul style="list-style-type: none"> Review all project test plans for compliance with the PRC EIS and other NEPA documents as applicable

Key: EIS = Environmental Impact Statement; NEPA = National Environmental Policy Act; PRC = Patuxent River Complex; TERF = terrain flight.

¹ Voluntary mitigation

Stewardship

Programs

The Navy's stewardship programs contribute to both the success of the mission and the protection of the Chesapeake Bay for future generations.

Naval Air Station (NAS) Patuxent River manages robust resource compliance, community service, and environmental stewardship programs. Multiple partnerships with the private sector and other governmental agencies have been successful in advancing environmental compliance, conservation, and education. Initiatives include:

- Wildlife habitat protection and enhancement
- Rare, threatened, and endangered species monitoring and protection
- Archaeological surveys and site preservation

For example, the Navy works with the College of William and Mary to study bald eagle nesting success on NAS Patuxent River properties (above photo) and archaeologists have excavated a test pit showing a brick foundation dating to the 1800s (photo to right).



NAS Patuxent River did the first test flight of the Green Hornet, a bio-fueled F/A-18 jet.

Partnering

- The Navy partners with nonprofit organizations and local, state, and federal agencies to manage lands for uses such as agriculture, recreation, and natural habitat. Over 11,000 acres of land have been protected as conservation areas or easements.
- NAS Patuxent River partners with the University of Maryland to develop creative solutions to protect native terrapin (above photo). Natural resources experts found that prime terrapin nesting sites overlapped with an established helicopter landing zone. Working with the pilots, an acceptable alternative landing zone site was identified. Through an agricultural outlease, farmers cleared excess vegetation on the new site, and a terrapin exclusion fence was installed.
- Navy experts built and maintained heron nesting platforms at Bloodsworth Island Range (photo below).
- The Navy participates in the North American Waterfowl Management Plan along with the U.S. Fish and Wildlife Service and Maryland Department of Natural Resources.



Public Health and Safety

In compliance with Executive Order 13045, Environmental Health Risks and Safety Risks to Children, potential disproportionate risks to children were evaluated in the Draft EIS. The Proposed Action would increase overall aircraft and vessel activities within the PRC Study Area. Potential impacts to public health and safety include noise and physical disturbance/strike. For children, any percentage of the affected area greater than the community as a whole, in this case St. Mary's County, is considered disproportionate.

St. Mary's County	% Population
Children	24.8%

In addition, when conducting testing and training activities in shared waterways, the potential exists for increased interactions.

No Action Alternative. There would be no change to impacts over baseline conditions. An estimated 337 children reside in areas affected by noise greater than 65 dBA DNL. Release of non-explosive munitions and other MEM in the Chesapeake Bay Water Range near munition concentration areas would continue to limit the potential for public impact. No changes in airfield use, aircraft mix, or flight hours would occur. No resulting increase in aircraft mishaps or bird/animal aircraft strike hazard (BASH) incidents (currently 10 per year) would occur.

Alternative 1. An estimated 658 children would reside in areas affected by noise greater than 65 dBA DNL. This would be an increase of 321 children disproportionately impacted compared to the No Action Alternative. Increased activities would also increase potential for physical disturbance/strike and public interaction impacts (including vessel or MEM strike, and aircraft mishaps or BASH incidents); however, impacts would be similar to the No Action Alternative with continued implementation of standard operating procedures (SOPs).

Alternative 2 (Preferred Alternative). An estimated 751 children would reside in areas affected by noise greater than 65 dBA DNL. This would be an increase of 414 children disproportionately impacted compared to the No Action Alternative. Increased activities would also increase potential for physical disturbance/strike and public interaction impacts; however, impacts would be similar to the No Action Alternative with continued implementation of SOPs.

Under all alternatives, the Navy would continue to implement procedures that protect public health and safety. The potential for flight mishap and bird/animal-aircraft strike hazard incidents would continue to be managed through established programs.

The Navy ensures public safety during testing and training activities by:

- Making sure any watermen or recreational users are clear of impact areas and targets before testing begins
- Canceling or delaying activities if public or personnel safety is a concern
- Communicating via radio to local watermen and recreational users of the location, date, and time of range closures
- Implementing temporary access restrictions to testing and training areas
- Designating restricted airspace for multiple, high-speed military aircraft
- Limiting the number of aircraft within restricted airspace
- Using a Military Radar Unit, named BayWatch, for surveillance when the restricted area is activated

PUBLIC NOTIFICATION

Noise advisories are posted to inform the public of dates and times when noise-generating activities are scheduled.

Land Use

The impacts of the proposed testing and training activities on land use in the PRC Study Area/surrounding the installation was analyzed as part of the Draft EIS.

The Navy has several policies that provide recommendations for compatible land use. The Air Installations Compatible Use Zones (AICUZ) program recommends land uses that are compatible with noise levels, accident potential, and obstruction clearance criteria for military airfield operations. The Range AICUZ program includes range safety and noise analyses and provides land use recommendations compatible with range compatibility zones and noise levels associated with military range operations.

State coastal programs coordinate with the federal consistency review process as authorized under the Coastal Zone Management Act. This provision allows states to review federal actions that may affect coastal uses and/or resources. As a federal agency, the Navy is required to determine whether its proposed activities would affect the coastal zone. Under all alternatives, testing and training activities would be consistent, to the maximum extent practicable, with state coastal zone management enforceable policies. The Navy is coordinating with Virginia, Maryland, and Delaware pursuant to the Coastal Zone Management Act.

Off Installation Acres and Estimated Population within the 65 dB and Greater Noise Contour		
Alternative	Land Area (acres)	Population
No Action	594	1,290
1	1,158 (+564)	2,640 (+1,350)
2	1,370 (+776)	3,072 (+1,782)

No Action Alternative. There would be no changes to regional land use; however, a continuation of marginally incompatible noise exposure to a small area of residential land off the installation would occur. Flights under the No Action Alternative would not expose any new surrounding areas to incompatible noise levels compared to the current conditions.

Alternative 1. There would be an increase in land area exposed to noise levels of 65 dBA DNL or greater. Noise levels in parks underlying restricted airspace near the installation would increase by 1.1 dBA Ldnmr. This impact would be minor and would not cause a noticeable change.

Alternative 2 (Preferred Alternative). There would also be an increase in land area exposed to noise levels of 65 dBA DNL and greater. Noise levels in parks underlying restricted airspace near the installation would increase up to 2.3 dBA Ldnmr. This increase would not change land use patterns.

Socioeconomics

The socioeconomics analysis in the Draft EIS focused on commercial and private air traffic, vessel transportation, commercial and recreational fishing within the Chesapeake Bay Water Range, and other recreational activities throughout the PRC Study Area.

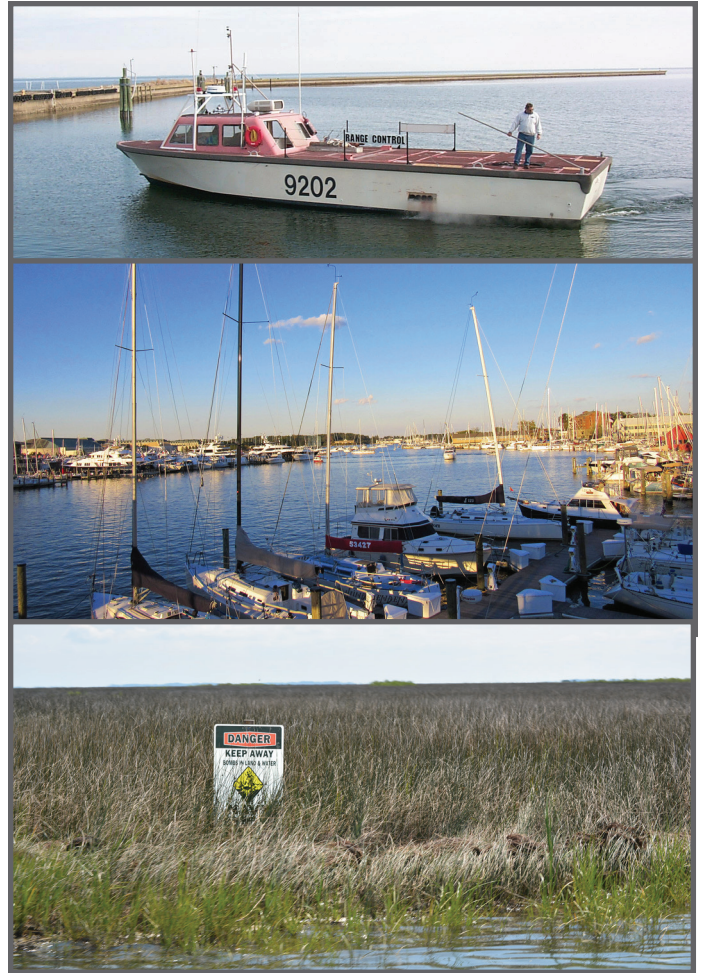
The water and airspace within the Patuxent River Complex (PRC) are used by many people for commercial and recreational purposes. The Navy shares the water and airspace with the community and recognizes the importance of public access.

Temporary access limitations (usually lasting several hours) can occur during testing and training activities for the safety of commercial and recreational users.

The safety measures implemented before and during testing and training, along with the cooperation of the public, commercial, and recreational users of the air and sea spaces, enable safe testing and training.

Communication is Key

The Navy uses marine very high frequency (VHF) Channels 81 and 82



No Action Alternative. Recreational users (e.g., divers, swimmers) and commercial and recreational boaters may experience annoyance and disturbance related to aircraft noise, weapons firing, and non-explosive munitions expenditure. Navy vessel movement is consistent with other vessel movement in waterways, and range clearance events and hours would occur at baseline levels.

Alternatives 1 and 2. Noise impacts would be similar to the No Action Alternative, but more frequent. Navy vessel movement would increase, as well as numbers of range clearance events and hours. Existing Standard Operating Procedures would continue to minimize potential public interaction with Navy aircraft and vessels.

Target Area Clearances by Alternative

Alternative	# of Events	Hours Cleared	Average # of Events	Average # of Hours Cleared per Event
No Action	68	196	5.7	2.9
1	250	750	20.8	3.0
2	275	825	22.9	3.0

Environmental Justice

The Draft EIS analysis focused on identifying minority and low-income populations in the PRC Study Area that would be disproportionately affected by the proposed action.

Consistent with Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 16, 1994), the Navy’s policy is to identify and address any disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.

For low-income populations, any percentage of the affected area greater than the community as a whole, in this case St. Mary’s County, is considered disproportionate. For minorities, more than a 15% difference than the community as a whole is considered meaningfully greater and therefore disproportionate.

The EPA defines environmental justice as, “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (EPA, 2019)

St. Mary’s County	% Population
Minority	24.9%
Low Income	8.2%

Estimated Total, Minority, and Low-Income Population within the 65 dBA DNL and Greater Noise Contour by Alternative			
Alternative	Population	Minority	Low Income
No Action	1,290	579 (44.8%)	155 (12%)
1	2,640	1,143 (43.3%)	303 (11.5%)
2	3,072	1,301 (42.4%)	345 (11.2%)

No Action Alternative. Under the No Action Alternative, impacts to the community would be the same as current conditions. Under existing conditions, there is the potential for disproportionately high and adverse impacts to minority and low-income populations due to noise.

Alternative 1. There would be an increase in the frequency of aircraft activities that would expose a larger area and, therefore, more residents (including minority and low-income populations), to noise levels of 65 decibels DNL or greater.

Alternative 2 (Preferred Alternative). There would also be an increase in the frequency of aircraft activities that would expose a larger area and, therefore, more residents (including minority and low-income populations) exposed to noise levels of 65 decibels DNL or greater. However, these average noise levels would only be up to 2 dBA DNL greater than the No Action Alternative and Alternative 1 (i.e., a maximum increase from 66 dB DNL to 68 dB DNL).

Under all alternatives, the Navy has developed noise mitigation and monitoring measures, including public outreach and communications designed to address impacts to the public.

Cultural Resources

Cultural resources includes prehistoric and historic archaeological sites; historic buildings, structures, and districts; and human-made or natural features important to a culture, a subculture, or a community for traditional, religious, or other reasons.



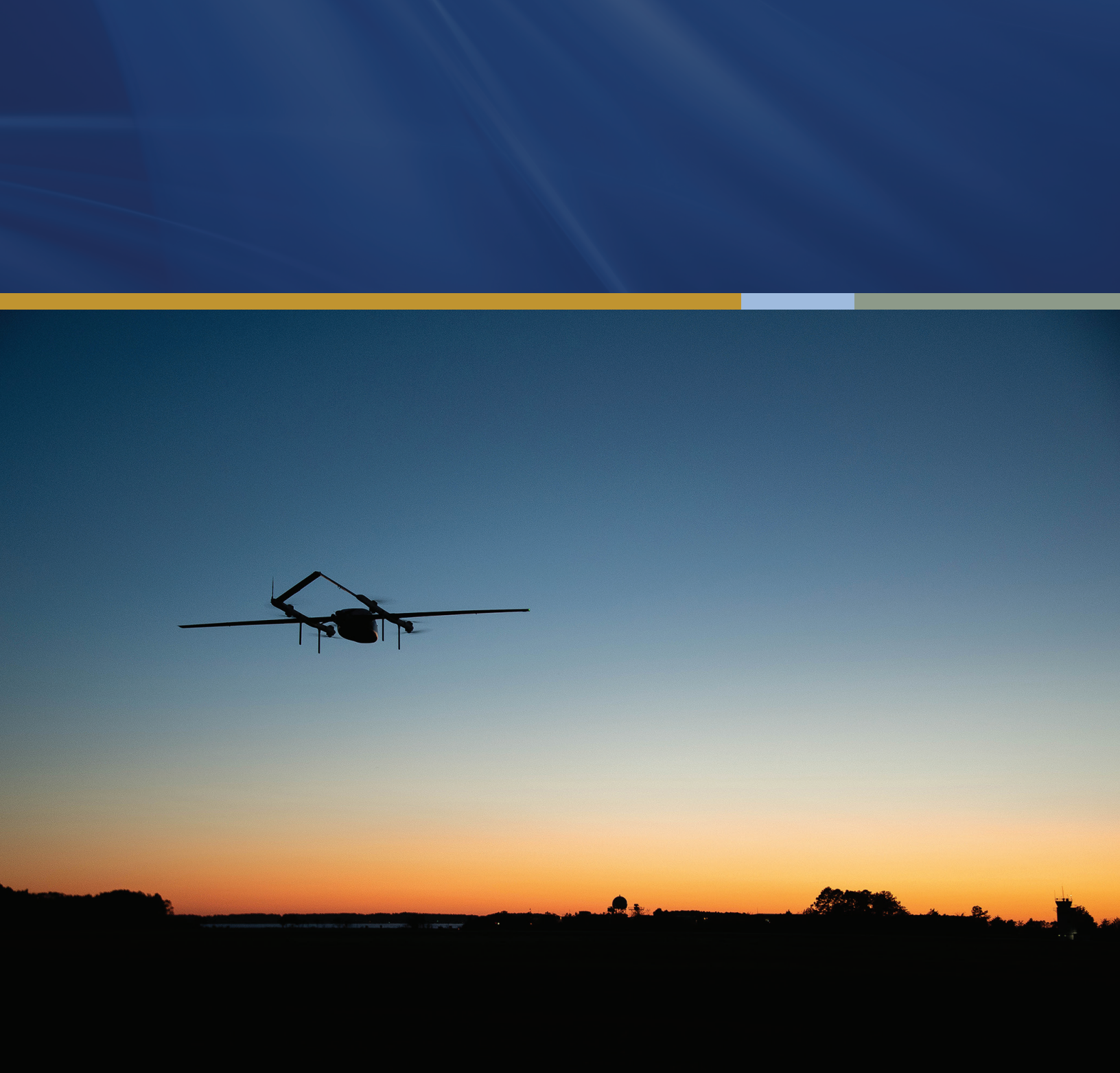
Cultural Resources are Governed by Federal Laws and Regulations:

- National Historic Preservation Act (NHPA)
- Archeological and Historic Preservation Act
- American Indian Religious Freedom Act, Archaeological Resources Protection Act of 1979
- Native American Graves Protection and Repatriation Act of 1990
- Cultural resources also may be covered by state, local, and territorial laws

No Action Alternative. The subsonic noise and sonic booms associated with continuation of existing testing and training activities would not be of sufficient magnitude to impact historic properties under the PRC airspace. Furthermore, the continued use of the PRC Study Area would not affect underwater historic properties in the Chesapeake Bay.

Alternatives 1 or 2. The proposed increase in testing and training activities under either Alternative 1 or 2 would not result in an adverse effect to cultural resources in the PRC Study Area.

The increase in flights over individual historic resources, and the associated sight and sound of aircraft, would be infrequent and of short duration and would not diminish the characteristics that make the resources eligible for the National Register of Historic Places. The minor change to the historic setting would not change the character or use of the historic properties. The State Historic Preservation Offices in the study area are reviewing the Navy's findings.



The Navy appreciates your time and interest.

