



Larry Hogan, Governor  
Boyd Rutherford, Lt. Governor  
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Allan Fisher, Deputy Secretary

**Maryland Department of Natural Resources  
Fiscal Year 2023 Capital Budget  
Response to Department of Legislative Services Analysis**

Senate Budget and Taxation Committee  
Senate Capital Budget Subcommittee  
Senator Craig J. Zucker  
March 1, 2022

House Appropriations Committee  
House Capital Budget Subcommittee  
Delegate Ben Barnes  
March 2, 2022

***PAYGO Recommended Actions (pp. 2 and 18)***

1. Delete the \$6,229,000 general fund appropriation, \$6,229,000 GF, for the Natural Resources Police – Replacement Helicopter. The Natural Resources Police aviation unit was abolished by the cost containment actions at the July 1, 2020 Board of Public Works meeting.  
The Department of Legislative Services (DLS) recommends that the Bell OH-58 helicopter be decommissioned.

**Agency Response: DNR respectfully disagrees with this recommendation.**

Regarding the cost containment actions taken on July 1, 2020 by the Board of Public Works, this decision was made in the middle of an unprecedented pandemic (COVID-19) when revenue estimates were projected to be much lower. Once greater revenues were realized, operations resumed in October 2021.

The primary use of the new helicopter will be the same as the current helicopter, which is to support the mission and responsibilities of the Natural Resources Police, including:

1. Maritime and rural search and rescue services;
2. Supporting the natural resources management by providing law enforcement services that encourage voluntary compliance with laws and regulations necessary to ensure sustainability of wildlife and aquatic resources, and apprehending those who choose to violate these laws and regulations;
3. Conducting patrols of Maryland waterways to ensure compliance with boating safety laws and regulations.
4. Providing primary law enforcement services for state parks, state forests, wildlife management areas, and public lands owned and managed by the Department; and
5. Serving as the lead agency for maritime homeland security on state waterways.

NRP operated an Aviation Unit for over 60 years until January 1, 2009. The Aviation Unit went back into service in November 2016. From 2016 to date, the unit has flown 570 missions and 900 flight hours. As outlined above, the Aviation Unit is utilized for conservation law enforcement, search and rescue, recovery, and homeland security. Conservation law enforcement includes monitoring for illegal fishing activities in oyster sanctuaries and prohibited fishing areas; illegal hunting, including spotlighting, out of season or endangered species; and illegal baiting of deer, bear, turkey, waterfowl and other species. Regarding

homeland security, NRP is Maryland's primary agency for maritime homeland security and the Aviation Unit is an active partner in the Chesapeake Bay Maritime Task Force (CBMTF). NRP's helicopter is the only air asset directly under the control of CBMTF partners.

Over half of the unit's missions are scheduled law enforcement flights across the entire State of Maryland. The other flights are unscheduled flights in support of NRP law enforcement efforts, search missions, and departmental support as well as allied agency support in law enforcement and searches. It is important to note that due to maintenance issues and the age of the aircraft, more missions were requested than were flown. The Aviation Unit routinely receives flight requests across the state that it is unable to fulfill.

The new aircraft will allow us to fly more missions per year because we will not be losing time due to our aircraft being out of service.

The agency currently operates a Bell OH-58A+, manufactured in 1970. The current age of the aircraft is 52 years. Bell no longer supports this airframe. The total flight time on the airframe is 7,361 hours.

Investment Justifications (IJ's) under the Port Security Grant Program are capped in federal statute (46 U.S. Code § 70107 – Grants) at \$1 million, which is far less than the cost of a helicopter; however, DNR has successfully obtained grant funding for equipping our helicopter and will continue to pursue those funding opportunities. For example in 2020, DNR was awarded a U.S. Department of Homeland Security Port Security Grant that included approximately \$493,500 for equipping our Aviation Unit. NRP was eligible for the grant because we are the primary maritime homeland security agency for Maryland. NRP is not aware of any other DHS grant programs applicable to the jurisdiction and mission of the agency.

In 2010, the Maryland General Assembly established specific responsibilities for the NRP (Ch. 367), which include "Serving as the lead agency for maritime homeland security on state waterways".

NRP's Superintendent is also a member of the Executive Steering Committee for the U.S. Coast Guard (USCG) Area Maritime Security Plan (AMSP) for Sector Maryland-NCR. In the AMSP, which is mandated by Congress, NRP is specifically identified as a key Law Enforcement and Search and Rescue partner for maritime security within Maryland. The AMSP Assessment Report, which provides information on the readiness of Sector Maryland-NCR to respond to a maritime security incident, is supported with data obtained from the use of NRP assets, including the use of aerial survey patrols. It is important to note that the closest organic USCG air assets are located at Air Station Atlantic City, NJ and Air Station Elizabeth City, NC.

The Chesapeake Bay Maritime Task Force (CBMTF) was conceived in 2018, when leadership from NRP, U.S. Customs and Border Protection, USCG, and Homeland Security Investigations met with the common goal of creating a baseline understanding of activity on the Chesapeake Bay. Formalized by an agreement in 2019, the CBMTF was modeled after a similar maritime domain awareness project in the Great Lakes region, to provide awareness of maritime patterns of life, as well as key data points for law enforcement leadership to drive future maritime security and interdiction operations on the Chesapeake Bay. The FBI, DEA and Maryland National Guard also participate as ad hoc members of the CBMTF.

The CBMTF operates in support of the following Joint Priority Intelligence Requirements (PIR):

PIR 1: What terrorist-related activity is occurring within the Maryland's maritime environment?

PIR 2: What criminal activity is occurring in Maryland's maritime environment?

PIR 3: What Foreign Intelligence Service (FIS)/Counterintelligence activities are occurring in Maryland's maritime environment?

PIR 4: What natural resource violations are occurring in Maryland's maritime environment?

During the leadership discussion that led to the formalization of the CBMTF, the core capabilities and resources that each charter member agency could contribute to the joint effort were identified. One gap that existed among the federal partners was aviation support and surveillance capabilities.

In addition to a dedicated helicopter, other core capabilities and resources that were identified for NRP were:

- Statewide jurisdiction - shore side and maritime.
- Large uniformed force and vessel fleet including tactical boats and personnel.
- Covert personnel and vessels
- Local knowledge of maritime environment
- Local information sources
- Maritime Law Enforcement Information Network (MLEIN) & Program Manager for analysis
- Access to vessel registration, commercial, and recreational licensing
- Intelligence collection capabilities
- Investigative capabilities

Attempts to incorporate air resources from the Maryland National Guard and CBP Air Marine Operations (Great Lakes) have been unsuccessful due to mission conflicts and the inability to respond on short notice, which is critical given that ships are not required to report their arrival until 96 hours beforehand. That 96-hour window for response is further reduced while investigative work is conducted and operational decisions are made. The effectiveness of the CBMTF is significantly inhibited when a dedicated aircraft, locally based and under the direct control of a member agency is not available to assist with these operations.

Given the vastness of NRP's jurisdiction, an aviation unit is the only effective way to patrol and search. NRP is responsible for patrolling over 7,700 miles of shoreline including the Chesapeake Bay, Maryland's Atlantic Coast and the Baltimore Inner Harbor. NRP also has responsibility for over 500,000 acres of state-owned land throughout Maryland, including state parks, state forests, Natural Resource Management Areas, Wildlife Management Areas, and Targeted Ecological Areas. Patrolling and searching this large territory with only 258 law enforcement officers would otherwise be a great challenge.

Finally, the helicopter is needed as a cost containment measure for the state. The Maryland State Police Aviation Command operates the AW139 for their statewide medevac program. The AW139 has an operational and maintenance cost per flight hour of \$5,880/flight hour. By comparison the NRP aircraft Bell OH-58 has an hourly operational and maintenance cost of \$483/flight hour - or 12 times less than the AW139. Excluding medevac calls, MSP screens flight support requests for both their agency and outside agencies to keep costs down. This screening process is fiscally prudent based on the operational cost and the management of their fleet (i.e., heavy maintenance down time and maintaining seven operational helicopters on a daily basis), but it does lead to a gap in service.

The Airbus H125 requested is a H125 civilian model aircraft. It is not a military grade aircraft. The Airbus model was chosen based on safety features, maintenance schedule, nose to tail power by the hour program for both the airframe and the engine, increased airspeed due to covering the entire State of Maryland, increased useful load and its reliability. Over 80% of law enforcement agencies in the United States operate this aircraft, which is a testament to its safety and reliability.

While the NRP Aviation Unit will not be able to honor every flight request, we will be able to honor more flight requests since we will have an operational aircraft. The range of activities described are of a seasonal nature, which facilitates the coverage of a broad range of activities with limited resources.

For example, in the summer NRP's primary law enforcement focus is on policing activity on DNR public lands to ensure a safe and quality environment for visitors, and activity on waterways, including boating, recreational fishing and crabbing, commercial fishing and crabbing.

Search and rescue can occur at any time, and always unexpectedly, due to the volume of boating activity at this time of year. Summer is also the time of year when most maritime search and rescue missions are conducted.

These missions are always the highest priority and always result in immediate diversion from a mission in progress, or cancellation of a scheduled mission.

From September through March, NRP's primary focus is on policing hunting activity on private and public lands, and policing the commercial harvest of oysters and tidal fish, including striped bass. NRP Aviation is a highly effective tool in supporting field units during this time to check hunting areas for evidence of baiting (bear and migratory birds), nighttime deer hunting, as well as the Chesapeake Bay and tributaries for illegally set fishing gear and poaching of oysters in sanctuaries and polluted areas. As spring approaches, Aviation supports NRP field officers with patrolling public and private lands for turkey activity, including baiting and closed season hunting, as well as the return of recreational fishing, followed again by crabbing and boating activity in April and May. When these activities/seasons overlap, NRP may be able to accommodate several requests during a single flight, or alternatively must prioritize missions based upon timing of the requests and availability of the helicopter. Maritime homeland security sites are monitored all year during the normal course of conducting conservation patrols or traveling to and from missions.

It is easy to see how the seasonal peaks and valleys of the many activities facilitates the use of a single helicopter to accomplish so much.

Between 1990 and 1995, when NRP's Aviation Unit was fully staffed and operational, records indicate that 1,048 citations and warnings were issued for hunting migratory birds over bait. Conversely, in the five years following the disbanding of the unit (2010 to 2015) a total of 118 citations and warnings were issued for the same violation. This represents a reduction in detected violations of nearly 90%. There have been a total of 133 citations and warnings issued for hunting migratory birds over bait during the 2016-2021 hunting seasons.

NRP operated an Aviation Unit for over 60 years until January 1, 2009. The agency relied heavily on the Aviation Unit as a force multiplier to cover the boating and commercial fishery activity along the Chesapeake Bay and its tributaries as well as providing law enforcement support and search and rescue for missing persons across the entire state. The Unit returned to service in 2015, and has been active since that time.

Having a law enforcement helicopter that is free of budgetary and jurisdictional restriction is necessary for the state to fully commit to both planned and unplanned (emergency) missions.

Additionally, MSP's focus is appropriately on the medevac mission. When the NRP Aviation Unit is operational, it is not only called upon to conduct missions for NRP and other DNR units, but also to support other federal, state and local police departments and drug task forces.

The NRP is a statewide public safety agency that works hand in hand daily with allied agencies to accomplish the broader mission of serving and protecting Maryland's citizens. This means regularly sharing resources, personnel and training opportunities to efficiently and effectively accomplish the broad mission. In particular, small, local police departments without aircraft and boats depend on NRP to provide these resources in times of need. For both planned events and unplanned incidents, these agencies must know that they can count on having the air assets they need to support them, which means having a dedicated statewide law enforcement helicopter.

It is impossible to know exactly how this has impacted agency operations or public safety, but in the most recent six month period, there were no conservation enforcement operations supported by aviation assets and DNR lacked the ability to conduct search and rescue operations.

The current Bell OH58A+ operated by the agency has already exceeded its life expectancy. Bell Helicopter no longer manufactures the OH58, nor does it produce replacement parts. When the current inventory of

parts in circulation is exhausted, this aircraft will be permanently grounded. In FY22 the maintenance cost of our current aviation unit will be about \$250,000 for annual maintenance costs and a scheduled turbine module overhaul, tension torsion strap replacement in the main rotor head assembly, and other normal maintenance requirements.

The Airbus H125 has a life expectancy of at least 30 years. The annual maintenance cost for this aircraft, based upon 300 flight hours per year, is estimated at \$176,000 annually, using the Airbus H-Care maintenance program.

Maryland State Police purchased AW139 aircraft which are classified as medium class, twin engine helicopters set up for medical evacuation and hoisting. This aircraft requires a pilot type rating because its gross takeoff weight is over 12,500 pounds and requires two pilots on board to fly missions. Because of its size and power requirements, this aircraft burns significantly more fuel (153 gal/hr) than the Airbus H125 requested by NRP (42 gal./hr). The Airbus H125 is classified as a light utility single-engine, single-pilot, helicopter with a max gross takeoff weight of 5,225 lbs.

The Airbus H125 DOC on average is \$640 per flight hour with the Airbus H-Care, power by the hour, costs factored in.

The Maryland State Police own and operate 10 AW139 aircraft. They maintain seven operational bases across the state. Their requirement for two pilots, equipment specific to the medevac mission, and the need for additional maintenance personnel also increased their costs.

The Natural Resources Police operate one aviation unit with one pilot from one base location. The current pilot is also a certified airframe and powerplant mechanic that performs some of the aircraft maintenance which helps contain costs.

While no formal cost benefit analysis has ever been undertaken by the agency with regard to the helicopter vs personnel, based upon an average cost per hour of \$84 (Officer First Class, Step 18) the average officer costs the agency \$174,000 per year (salary and benefits). Assuming a new helicopter would operate for the same length of time (25 years) as it takes for an officer to reach minimum retirement service time, and assuming personnel costs would remain constant, one officer would cost \$4,350,000 over a 25-year career. The helicopter and equipment requests total \$6,229,000, and the helicopter is capable of performing many critical tasks more efficiently and effectively than several NRP officers can. This would include covering multiple counties, undetected, during a single flight in search of illegally hunting, fishing, and oystering activity. It also includes the ability to cover large areas of the Chesapeake Bay or tributaries quickly using Forward Looking InfraRed technology to locate a sinking vessel or person in the water at great distance, even in complete darkness.

While the comparison above is overly simplified and does not account for maintenance costs or fuel for the helicopter, it also does not account for inevitable increases in employee costs.

When an aircraft leaves the manufacturers assembly line it is known as a green aircraft. The aircraft is painted in primer to protect it from atmospheric conditions to prevent corrosion. This green aircraft has the minimum electronic and navigation equipment to meet the FAA regulations to fly. The aircraft will then be flown to a completion center to be painted and outfitted to meet the contracted specifications of the customer. Each customer is different depending on how the aircraft will be used. When the manufacturer purchases equipment from outside vendors, or the completion center purchases the equipment to install to complete the aircraft to owner's specifications there is an additional markup in price per equipment purchased.

To meet the specific needs of the NRP, additional equipment would need to be added, which, along with labor costs, accounts for the equipment costs. The additional equipment includes:

1. A searchlight for nighttime searches, officer and scene safety.

2. Maryland First communication system
3. Emergency popout float system for overwater searches and law enforcement activities
4. A mapping system for responding to locations across the state.

2. Concur with Governor's allowance for Program Open Space (POS) funding, including funding for POS State land acquisitions, POS Local projects, Natural Resources Development Fund, Ocean City Beach Maintenance, Critical Maintenance Program, Ocean City Beach Maintenance, and Rural Legacy Program.

**Agency Response: DNR concurs with this recommendation.**

3. Concur with Governor's allowance of \$1,000,000 in special funds for Ocean City Beach Maintenance.

**Agency Response: DNR concurs with this recommendation.**

4. Concur with Governor's allowance of \$13,500,000 in special funds and \$2,500,000 in federal funds for the Waterway Improvement Program.

**Agency Response: DNR concurs with this recommendation.**

### ***GO Bond Recommended Actions (p. 3)***

1. Approve the \$5,000,000 general obligation bond authorization for the Community Parks and Playgrounds Program to provide funds for grants to local governments to design, construct, and equip capital-eligible park and playground improvements projects.

**Agency Response: DNR concurs with this recommendation.**

2. Approve the \$85,000,000 general obligation bond authorization for the Local Parks and Playgrounds Infrastructure program to provide funds for grants to the county administrative units managing local parks to acquire, design, construct, and capital equip indoor and outdoor park infrastructure and other capital-eligible projects that enhance recreational amenities, including but not limited to trails, playgrounds, and recreational facilities. No amount of these funds shall be used for projects that are inaccessible to the general public; require memberships; exclude the public because of higher user fees; or include office, residential, or elaborate lodging facilities. The Department of Natural Resources shall administer funds in a similar manner as Program Open Space local grants for development projects with the exception that the matching requirement is waived. Further provided that a portion of this authorization shall be allocated for specific projects.

**Agency Response: DNR concurs with this recommendation but may submit technical amendments for the Committee's consideration.**

3. Approve the \$1,970,000 general obligation bond authorization for the Resiliency Through Restoration Initiative Program to provide funds for the acquisition, design, and construction of shoreline restoration and other projects to protect coastal infrastructure and for post implementation monitoring and adaptive management.

**Agency Response: DNR concurs with this recommendation.**

4. Approve the \$13,620,000 general obligation bond authorization for the Oyster Restoration Program to provide funds to design and construct oyster habitat restoration projects.

**Agency Response: DNR concurs with this recommendation.**

**DLS recommends that DNR comment on its ability to eliminate the critical maintenance backlog by July 1, 2026, and the steps that it is taking toward improving its asset management.**

**Agency Response:** DNR Engineering and Construction (E&C) is filling vacancies and will be fully staffed by the fall of 2022. Significant effort has been made to reduce the Critical Maintenance (CM) backlog, but that progress will be accelerated once E&C is fully staffed. Given that new projects are constantly added to the Critical Maintenance list and given the uncertainty that can occur during procurement and construction, DNR cannot guarantee that the backlog will be eliminated by July 1, 2026 but DNR believes that it will be significantly reduced by then.

Implementation of the asset management project is in the planning stages with the Maryland Department of General Services (DGS). E&C will utilize a statewide contract for a Computerized Maintenance Management System (CMMS) that will create a detailed inventory of DNR facilities, their maintenance history, and future needs. The CMMS is a new cloud-based comprehensive work request and work order management tool, as well as a full-featured asset and maintenance management system that enables data-driven strategies to extend the life of assets. It will also serve as a tool to help DNR better forecast required funding.