

The Department has expended approximately \$300,000 to \$500,000 per year on the existing helicopters since FY2016/17 for routine and unscheduled maintenance. Routine maintenance for FY2021/22 and FY2022/23 is estimated to be \$535,542 and \$395,867, respectively. Any unscheduled maintenance during the next two fiscal years would increase these estimates. The fair market value for each helicopter is estimated to be between \$350,000 and \$450,000 and is dependent upon the number of flight hours and services conducted on the helicopters at the time of the sale.

MD Helicopters has struggled to stay current in the aviation industry, especially related to the Public Safety arena. They have struggled to maintain efficient sales, service and stock necessary parts for timely aircraft repairs.

The transition to an updated rotorcraft platform is necessary to continue operating a safe, effective, and efficient Air Support Unit.

DISCUSSION:

Hughes/McDonnell Douglas (MD)

The MD 500's currently used by the Riverside Police Department (RPD) lack the power and size to effectively and safely support RPD's current air support missions. Due to advances in technology over the last 30 years, the amount of mission equipment has increased. With increased equipment comes increased weight. As weight increases, the performance (available power) of the aircraft decreases. When operating in Riverside's hot climate, these performance issues are compounded. With the added weight, RPD routinely operates close to or at the aircraft's engine performance limitations. This results in aircrew safety concerns and hinders the effectiveness of flying the aircraft. Additionally, if the aircrew is either forced to or accidentally exceeds the aircraft's performance limitations, the exceedance can potentially equate to thousands of dollars in unscheduled maintenance costs.

As equipment has evolved and increased in size/quantity, the MD 500 lacks both the interior and exterior space to support it. The MD 500 has no auxiliary storage compartments, so most supporting electrical equipment and avionics are stored underneath the pilot and co-pilot seats. These areas are fully utilized to the point where no additional equipment can fit into the space. In the event of a hard landing, these areas were designed by the manufacturer to be empty and act as "crush boxes," providing up to 20g shock resistance. Regarding exterior equipment placement, specifically antennas, the MD 500 lacks the suggested surface area to adequately space its multiple-band antennas. This creates interference issues, which results in constant static and ultimately diminishes both receiving and broadcasting clarity. This lack of clarity has and will continue to cause miscommunications, as well as be a contributing factor to aircrew fatigue.

Over the past 20 years or more, MD Helicopters (manufacturer of the MD 500) has lost its foothold in the airborne law enforcement marketplace. MD Helicopters has attempted to catch up with the marketplace by introducing the slightly more powerful MD 500F model (same airframe as RPD's aircraft). This version is advertised as a "hot/high" performance helicopter. It offers a slightly higher-performing engine, which in return provides the opportunity for additional weight; however, the engine has a higher fuel burn rate, which decreases available flight time (- ½ hour from RPD's current model). To address this, MD has added the option of an auxiliary fuel tank. This option increases the flight time back to that of its predecessor (2 hours); however, its added weight negates the additional available power.

In addition, MD Helicopters has still not addressed the size/space issues of the MD 500 platform, as it would require a full redesign of the airframe. Recognizing this, MD Helicopters has instead focused their MD 500 sales on military contracts. This move has come at a cost to the civilian/law enforcement consumers, as MD's customer service has been negatively affected and is considered one of the lowest rated in the industry. In addition to the poor customer service, MD struggles to meet the supply replacement part demand from its non-military consumers. RPD has experienced this issue on multiple occasions, and as a result, aircraft have been grounded for months on end while waiting for parts.

Airbus H125

RPD's critical operations call for a helicopter that is mission-capable, safe, cost-effective, and competitively priced. The Airbus H125 helicopter is the solution to these requirements. The H125 comes with the newest features and support to fulfill RPD's key requirements. It is uniquely suited for airborne law enforcement operations as it offers excellent visibility and allows law enforcement operators to spend more time in the air. The H125 has the multi-mission flexibility to conduct patrol operations, surveillance, tactical operations, fire suppression, and passenger transport/utility missions, all at low operating costs.

The H125 offers excellent visibility for any police mission, a pilot-friendly ergonomic cockpit, and exceptional endurance and speed without the use of auxiliary fuel tanks. In addition, the H125 offers a maximum internal gross weight of 5,225 pounds to accommodate RPD's current and future mission equipment. With the most configurable instrument panel in its class and the incorporation of state-of-the-art technology, situational awareness and safety is significantly enhanced. In addition to its instrumentation, the Full Authority Digital Engine Control (FADEC) and dual hydraulic flight control system are added redundancy, ultimately increasing the safety of both the flight crews as well as the densely populated areas the aircraft supports.

Since its introduction in 1975, the H125 has become the most popular light, single-engine helicopter in the world. This is due to the value this aircraft has provided and continues to provide operators worldwide. With continuous evolutions to address customer requirements for greater safety, power, and performance, the H125 combines best-in-class performance with a lower cost of acquisition and operation than alternatives in the market. Airbus has excellent customer service and maintains parts that are readily available to ensure operational readiness. This is essential to fulfill the public safety expectations with a call volume and type of alternative needs for a city the size of Riverside.

Proudly made in the U.S.A., the H125 is the North American Market Leader with more than 70 law enforcement agencies operating more than 330 H125 variants. This accounts for approximately 71% of all intermediate single-engine law enforcement helicopters delivered in North America since 2007. As a testament to its capabilities, the following local agencies operate H125's or their variants: Riverside County Sheriff's Department, Ontario Police Department, Anaheim Police Department, San Diego Police Department, LA City Police Department, Long Beach Police Department, California Highway Patrol, San Bernardino County Sheriff's Department, and Orange County Sheriff's Department. These agencies range in size in both their geographical areas, population, and demographics; however, they all require a reliable, cost-effective, and safe platform that supports their various missions and today's airborne law enforcement equipment, which they have found in the Airbus H125 helicopter.

Additionally, the Airbus made helicopters are certified to run with a blend of as much of 50% Sustainable Aviation Fuel. For more information on the Airbus and their helicopters, please visit

the following link: <https://www.airbus.com>

MD 500 vs. H125

Mission Specifications and Capabilities

	RPD MD 500's	H125
Available Power	375 HP	847 HP
Useful Load	1,200	2,200
Passengers	3	6
Open Cockpit	No	Yes
Flight Time	2 hours	4 hours
Glass Cockpit/Avionics	No	Yes
FADEC (Digital Engine Control)	No	Yes
Rupture Resistant Fuel Tanks	No	Yes
Ergonomic / Crash Resistant Seats	No	Yes
NVG Compatible	No	Yes
Tactical Insertion	1-2 operators	2-4 operators
<i>RFD Asset</i>		
Fully Med-Evac Capable	No	Yes
Fire Suppression Capability	No	Yes
Hoist/Rescue Capability	No	Yes

Safety Capabilities / Enhancements:

- **Glass cockpit/avionics** incorporate the latest state-of-the-art synthetic vision, which includes real-time weather, terrain/obstacle/aircraft avoidance, digital navigation (to include GPS), and digital engine instrumentation. All are standard features in new aircraft.
- **FADEC (Full Authority Digital Engine Control)** – operates and monitors critical engine functions, including the start procedures of the aircraft’s engine. This significantly reduces the chances of a costly engine “hot start” or engine exceedance. Throughout the years, these exceedances have occurred in RPD’s MD 500’s, at times resulting in costly repairs in excess of \$30k.
- **Rupture Resistant Fuel Tanks** – Most helicopter accidents are survivable; it is the post-crash fire that accounts for many helicopter accident fatalities.
- **Ergonomic / Crash Resistant Seats** – Seats designed for both comfort and protection. Ergonomically designed to help prevent long-term developing back issues and crash-resistant to help protect against high g-forces associated with a hard landing/crash.
- **NVG Compatible** – The aircraft is night vision compatible, providing aircrews the ability to see obstacles/terrain in near dark conditions. This is a standard feature in areas where mixed terrain is encountered.

Mission Capabilities:

- **Tactical Missions** – Ability to quickly and effectively transport and deliver fully equipped tactical personnel. Monitor First Amendment Activities and direct resources as needed to any civil disturbance/or civil unrest.
- **Fully Med-Evac Capable** means having the ability to conduct officer/citizen rescues and transport a patient and EMS personnel with adequate cabin room for treatment.

- **Drug and Firearm Interdiction** – Extended flight times allow for locating, surveilling, and assisting in the apprehension of drug and firearms being transported into and out of the City.
- **Quality of Life** – Providing accurate information to City and Police Department resource teams regarding quality of life issues in parks, the river bottom area, and other remote areas of the City.
- **Fire Suppression** – Ability to quickly fight fires with “bambi bucket.”

These specific mission capabilities are outside the general Patrol Operations and other Police services provided.

Multi-Departmental Support

Between 2017 and 2019, the Riverside Fire Department (RFD) requested assistance from RPD ASU support on approximately 35 incidents, 17 of these were fire related calls (fire mapping, scouting, directing resources and potential for fire suppression). Over the past two years, 45 rescues were conducted in the Santa Ana River by either swift water boats, or outside agency helicopters. The proposed Airbus H125 will allow RPD to provide additional Fire assistance, including but not limited to, rescuing lost hikers, acting as a liaison between police and fire assets, and firework enforcement.

In past years RPD ASU has assisted Riverside Public Utilities (RPU). Extra patrol has been provided to critical infrastructure assets of RPU by conducting regular flyovers and checking for unusual heat signatures on substations, transformers and other equipment. With reliable airships, updated equipment, and longer flight times, these services can be provided on a regular basis.

The RPD ASU is capable of providing additional services related to unsanitary pool detection, abandoned vehicles, illegal dumping and other Code Enforcement related concerns. Additionally, the RPU ASU can assist other Divisions of Community and Economic Development with site surveys, mapping and flights to provide aerial views of a project area and has been a continuous staple in community engage events as well as youth programs.

Parks, Recreation, and Community Services can also benefit from the services provided by the RPD ASU. Monitoring of the Santa Ana River and the Santa Ana River Bike Trail, parks and swimming pools throughout the City and other assets of the Parks, Recreation, and Community Services Department become possible with the replacement of the RPD ASU helicopter fleet.

Multi-Agency Support

RPU ASU has an ongoing contract with the Department of Justice (DOJ)/Bureau of Narcotic Enforcement (BNE). DOJ/BNE provides \$50,000 per year to assist with personnel costs related to requested surveillance activity. Additional funds from DOJ also assist with the costs for fuel and maintenance for the helicopters. Any monetary seizures result in a portion of Asset Forfeiture funds being directed to the Riverside Police Department. The Asset Forfeiture funds could potentially be used to set aside funds for the future helicopter replacements.

Additionally, the RPD ASU has been engaged in regular agreements for over the past five years with the City of Corona. An updated agreement for 2021-2022 in the amount of \$120,000 is in the final stages of execution. The contract is for a 120 flight hours to primarily assist with their patrol operations and covers the cost of the pilot's hours, as well as, fuel and maintenance for the helicopters.

Another potential agreement may be available with the Riverside County Transportation Corridor (RCTC). This would require regular spot checks of specific facilities in the City and just outside the City limits.

As the opportunities arise, RPD ASU will explore the expansion of these types of relationships in the future.

Cost Summary

Each Airbus H125 helicopter is quoted at \$5,068,535, for a total of \$10,137,070. There are additional costs for the conversion from the MD500 platform to the Airbus H125 platform. The additional costs include, but are not limited to, a startup-spare part supply, tooling, an updated Forward Looking Infrared (FLIR) camera, Night Vision Goggles (NVG's), and necessary training for firefighting capabilities. The estimated cost for these items is \$640,000. The overall cost for the purchase of two (2) Airbus H125 Helicopters is estimated to be \$10,777,070.

As previously stated in the report, the fair market value for each existing (MD500) helicopter is estimated to be between \$350,000 and \$450,000 and is dependent upon the number of flight hours and services conducted on the helicopters at the time of sale. This revenue could potentially offset the cost of the requested helicopter purchase or be placed in an account to begin a helicopter replacement program for future helicopter replacements.

Financing Options:

There are several financial options available to purchase the helicopters. One is a pay-as-you-go approach whereby the City will pay for the entire acquisition cost upfront from the available Measure Z fund balance rather than finance the acquisition over a set period which would include an annual interest expense. Supporting capital acquisition on a "pay-as-you-go" basis from the current available funds balance encourages the City to "live within its income." It minimizes premature commitments of funds and conserves credit for times of emergency when ample credit may be vital. Pay-as-you-go financing also avoids the added cost of interest payments, and therefore it is less costly than borrowing.

On the other hand, the pay-as-you-go approach may result in an undue burden being placed on present taxpayers to finance some future needs from which they may not fully benefit. Achieving user-benefit equity may require financing an asset acquisition so that the burden is spread over the life of the asset.

Excessive commitment to pay-as-you-go may prevent the City from doing things that need to be done because the projects are too costly to be carried out using only annual operating funds. In point of fact, few governments today have the capability to finance vital public facilities and asset acquisition strictly on a "pay-as-you-go" basis. Therefore, the power to borrow is one of the most important assets of government.

In this current historically low-interest-rate environment, the cost of capital is inexpensive. Another financing optional is through capital leases of which the City currently has several on the books. The City has recently acquired 17 Fire apparatus under a \$14.5 million capital lease. The City owns and retains ownership rights of the vehicles which are used as collateral for the lease. In today's financial environment, the City could enter a 10 or 15-year lease for the acquisition of the helicopters that would result in a reduction of cash outflow versus the pay-as-you-go approach,

but at the cost of interest expense in the amount of \$928,000 and \$1.6 million, respectively, over the life of the lease. The benefit of this approach is that a significant amount of funding is left untouched in the available Measure Z fund balance to be used for other projects and critical needs. It also spreads the cost of the asset over the useful life and is considered more equitable to all current and future beneficiaries of the asset.

Should the acquisition be approved, the Chief Financial Officer recommends the use of a capital lease financing mechanism as this minimizes the annual fiscal impact of a significant capital outlay with a relatively low cost of capital.

If the financing option is selected, the Department will go through the competitive bid process to determine and negotiate exact financing terms.

The Chief Financial Officer concurs with the recommendations of this report.

STRATEGIC PLAN ALIGNMENT:

This item contributes to Strategic Priority No. 2 Community Well-Being and the following three Goals:

- 2.4 – Support programs and innovations that enhance community safety, encourage neighborhood engagement, and build public trust.
- 2.5 – Foster relationships between community members, partner organizations, and public safety professionals to define, prioritize, and address community safety and social service needs.
- 2.6 – Strengthen community preparedness for emergencies to ensure effective response and recovery.

It also contributes to Strategic Priority No. 4 Environmental Stewardship and the following Goal:

- 4.6 - Implement the requisite measures to achieve citywide carbon neutrality no later than 2040.

Lastly, it contributes to Strategic Priority No. 6 Infrastructure, Mobility & Connectivity and the following Goal:

- 6.3 – Identify and pursue new and unique funding opportunities to develop, operate, maintain, and renew infrastructure and programs that meet the community's needs.

This item aligns with EACH of the five Cross-Cutting Threads as follows:

1. **Community Trust** – The proposed purchase of two Airbus H125 helicopters supports the RPD Aviation Units primary purpose to provide aerial support for ground operations in observing, preventing, and interdicting criminal activity. It will provide a more reliable aerial support and will serve the public interest, benefit the City's diverse community, and result in greater public good.
2. **Equity** – The RPD endeavors to provide public safety services to all residents in the City of Riverside with support of the Aviation Unit. The proposed helicopter purchase will

provide more timely and reliable aerial support to ensure every member of the community shares in the benefits.

3. **Fiscal Responsibility** – The proposed purchase of two Airbus H125 helicopters is a fiscally responsible decision for the City as the helicopters currently used by the RPD will continue to incur significant maintenance expenditures. These expenditures far exceed the overall monetary value of each aircraft and will not benefit/increase their overall value when completed. Additionally, a capital lease will minimize the annual fiscal impact of a significant capital outlay with a relatively low cost of capital.
4. **Innovation** – Two new helicopters will allow RPD to be inventive and timely in meeting the community’s changing needs by providing the Aviation Unit with more reliable aerial support. The new helicopters will provide the RPD with additional features that will make the Aviation Unit more versatile and able to engage in collaborative partnerships within the City and potentially the region.
5. **Sustainability & Resiliency** – The proposed purchase of two new helicopters will allow RPD to better meet the needs of the present without compromising the needs of the future. The Airbus made helicopters are sustainable and have been certified to run with a blend of as much of 50% Sustainable Aviation Fuel.

FISCAL IMPACT:

The total fiscal impact to the City is estimated to be \$10,777,070, plus interest if a financing option is selected. Total interest costs are dependent upon negotiated terms and the length of the financing period estimated to be between \$928,000 and \$1.6 million for a capital lease term of 10 to 15 years. Depending on financing terms, annual payments may range from \$842,000 to \$1.15 million.

As presented to the Budget Engagement Commission on June 10, 2021 during the presentation of the final Fiscal Year 2022 Annual Budget, Measure Z reserves are estimated to reach \$21.2 million by June 30, 2021 (Attachment 5). Under the current 2021-2026 Spending Plan, Measure Z Reserves are estimated to remain nearly level for the next two fiscal years and potentially achieve annual growth of \$2 to \$4 million in fiscal years 2023-2026, depending on actual revenue performance as well as the rising costs of Measure Z funded personnel which is not built into the Spending Plan.

Prepared by: Larry V. Gonzalez, Chief of Police
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availability of funds: Edward Enriquez, Chief Financial Officer/Treasurer
Approved by: Lea Deesing, Assistant City Manager
Approved as to form: Phaedra A. Norton, City Attorney

Attachments:

1. Quote from Airbus
2. Cost Summary
3. Measure Z Spending Plan
4. Presentation

