



Interoffice Memorandum

To: Jennifer Poirrier, City Manager
From: Daniel Slaughter, Assistant City Manager
CC:
Date: March 5, 2025

Background

The City of Clearwater has maintained an independent Land Mobile Radio (LMR) system for several decades. Decades ago, a decision was made to build a radio system developed by GE Ericsson, which eventually evolved to become M/A-COM. This was a different brand and manufacturer than the LMR system implemented by Pinellas County. The Clearwater LMR system is used primarily by the Clearwater Police Department and other non-public safety city departments, while the Clearwater Fire Department currently utilizes the Pinellas County LMR.

At the time of implementation, the LMR systems did not have much, if any, interoperability. In the early stages of the radio system lifecycle the Clearwater Police Department had little to no ability to communicate with other law enforcement agencies or other public safety entities on the Pinellas County LMR system. However, the Clearwater LMR could provide some interoperability with the radio system used by Tampa Police Department, Hillsborough County Sheriff Office, and Pasco County Sheriffs Office, which were on independent M/A-COM systems at the time. Clearwater essentially took a regional approach to interoperability but at the expense of interoperability with Pinellas County.

As the radio systems evolved, the M/A-COM system changed ownership and corporate names to what is currently L3Harris, Inc. Additionally, due to regulatory requirements and improvements in technology, overall interoperability has dramatically improved. LMR systems can now communicate over different LMR systems. Currently, the Clearwater Police operating on the Clearwater LMR system,

can switch over and communicate on the Pinellas County LMR. However, it is not perfect. The Clearwater LMR is a P25 phase II system, and Pinellas County is a P25 phase I system. Both systems are good systems, however, it requires there to be a patch constantly running in the background to link the two systems, so the interoperability is available on demand. The current level of interoperability does not allow for the ability to scan multiple channels across different networks and the current process to switch radio equipment to different networks is not practical in the midst of an emergency.

Another indirect issue relevant to this conversation is current regulations requiring structures to address signal degradation, to ensure public safety personnel can communicate when responding to emergencies in structures. There are legislative requirements for structures, including high-rise condominiums, to test signal strength, and if signal strength does not meet minimum thresholds, the property owner(s) are required to install a Bi-Directional Amplifier (BDA), to boost the signal in the structure. If Clearwater operates a separate radio system, this can create an additional financial burden on the ownership of a structure or building, requiring them to purchase two BDA systems or pay for one BDA for the Clearwater LMR system if the tests show adequate strength for the Pinellas County LMR but inadequate signal strength for the Pinellas County LMR.

Financial Costs for Clearwater LMR

The City of Clearwater last made major investments in the Clearwater LMR in 2014, to implement and upgrade to the current P25 system at a cost of \$1,989,497. The system is upgraded approximately every 10 years. In July of 2024, L3Harris provided an upgrade proposal that included upgrades at a cost of \$957,000, and optional upgrades at an additional cost of \$436,943. In addition to the above-described upgrade proposal, in an effort to provide adequate radio coverage on Clearwater Beach, the City solicited a proposal in 2020 to add an additional repeater. The proposed cost to improve the signal issues were \$917,802 in 2020. The City did not decide to proceed with adding the additional repeater for Clearwater Beach at that time. The annual reoccurring maintenance cost to maintain the L3Harris product in FY 25 is \$350,599. Based on the above describe upgrade occurring every 10-years, it is prudent to plan for future upgrade costs in the amount of \$100,000 a year.

The Clearwater LMR system is approaching a crossroads that will require additional updating and potential enhancements to the system. These investments are sizeable, and would include updates to the LMR equipment/software and it is proper to evaluate if the City can continue to fund a stand-alone LMR system or if

migrating to the Pinellas County radio system is a viable option to address the City's funding constraints.

Migration to Pinellas County LMR

The Clearwater LMR currently utilizes a tower in the area of Lakeview Avenue and Missouri, and another tower in the area Clearwater Public Utilities Northeast Wastewater Treatment Plant. There are access agreements between the City and L3Harris to support our radio system and for L3Harris to support the State of Florida's SLERS radio network on these towers. L3Harris also leases cellular space on one of the LMR towers through a revenue sharing agreement with the City where the revenue is shared 50%/50%. This generates \$31,268 in revenue for the City annually. This revenue can continue to be received whether or not the City migrates to the Pinellas County LMR. The access agreements are due to expire in October 2027. Should the Council decide to approve this migration plan and not fund the L3Harris service fees in the future, L3Harris will still retain the right to access and manage the cellular leases and obligations to the State of Florida SLERS network. This will provide ample time between now and the expiration of the tower access agreements to negotiate new leases and ensure continuity of the State of Florida SLERS network and cellular tenant(s).

To migrate the Clearwater Police Department to the Pinellas County LMR, the significant expense of the migration will be to replace the Police Communications Center radio consoles to a Motorola product and the necessary backbone to support working on the Motorola system. This cost to purchase the necessary equipment to migrate to the Pinellas County LMR is \$1,303,879. There will be annual maintenance costs associated with the new consoles. The maintenance costs are included for the first two years, but the current cost for the maintenance of the consoles is \$118,879 (adjusts annually) a year. The maintenance costs will be less expensive than the annual maintenance costs paid to L3Harris for the Clearwater LMR system.

The interoperable nature of the current portables and mobile radios will allow our current radio portable and mobile hardware to be used seamlessly on the Pinellas County LMR system. This will require an expense to set up the current portables and mobiles to work on the Pinellas County LMR, and program the new profiles (channel configuration) that would cost \$52,792. This equipment can be used on the Pinellas County LMR until it reaches end of life.

The following lists show the current costs associated with the Clearwater LMR system and the costs associated if the City were to migrate to the Pinellas County LMR system.

Migration to Pinellas LMR		<u>Maintain Clearwater LMR</u>	
Motorola Consoles	\$1,303,879	Perform upgrade/expand repeater	\$1,874,802
Reprogramming	\$52,792	Annual Service Maintenance	\$350,599
Annual Service	\$118,879		

Based on the above expenses, migrating to the Pinellas County LMR will reduce capital expenses in the amount of \$518,131. Additionally, annual service costs would be reduced by \$231,720 a year. The City of Clearwater would not be required to pay Pinellas County to utilize the Pinellas County LMR for public safety personnel. The City would be required to maintain our hardware. Future expenses would include updating and replacing consoles once they reach end of life. However, those expenses exist with both systems, and it would be wise to plan for an expense of approximately \$1,000,000 every 10-years for equipment upgrades for the Communications Center. The significant value in this migration is reflected in the reduction in annual maintenance costs of \$231,720 a year.

If the City were to fully migrate to the Pinellas County LMR, there would be costs for non-public safety departments (mostly Enterprise Funds) to operate on the Pinellas County LMR system, which has yet to be negotiated. Currently, city departments are charged an interfund charge for each departments prorated share of the Clearwater LMR system. The costs are anticipated to be comparable to the current interfund charges, and the City intends to mitigate exposure to these costs by migrating staff off of LMR systems when other more cost-effective technologies, such as line-of-sight radios or cell phones.

Recommendation

Based on a careful analysis, the financial savings will help the City meet its fiscal strategy. Additionally, there are operational benefits of all public safety entities in Pinellas County being on the same LMR system. The police department supports the transition for operational reasons. Therefore, staff recommends migrating to the Pinellas County LMR to remain within our financial constraints of the City of Clearwater, provide for improved interagency communication between Clearwater PD and other law enforcement agencies in Pinellas County, and an annual reoccurring savings of \$231,720 (subject to annual increases). DWS