



**Program #78304B - Radio System Replacement (Phase 1)** FY 2024 Department Requested

**Department:** County Assets **Program Contact:** Rodney Chin  
**Program Offer Type:** Existing **Program Offer Stage:** Department Requested  
**Related Programs:** 78304A/C  
**Program Characteristics:** In Target

**Executive Summary**

This program is phase one of a two phase project to replace and modernize the current VHF radio system. Phase one will replace the existing 25-year-old radio system that has exceeded its end of product lifecycle, upgrade the tower/repeater sites to provide redundancy, eliminate the single point of failure and improve coverage areas. Phase two will be a separate request for funding to replace the 200 radio subscriber units.

**Program Description**

This is a two-phase project. \$1,600,000 year one, and \$1,420,000 year two. Multnomah County currently has a 25-year-old VHF radio system used by various departments for daily operations and primarily maintained as backup communications in the event of a disaster. Replacement parts are no longer available commercially, forcing county radio technicians to purchase used parts on the internet. During the 2017 Eagle Creek Fire evacuation, a number of VHF radio dead spots were noted near the eastern edge of the county as the fire spread rapidly. Roads Department crews responsible for evacuation routing had difficulties communicating, which delayed some evacuation and sheltering operations. This request is to replace and modernize the current system, improve coverage area, add redundancy and mobile capability.

Reviewing IGA's and discussions started with the City of Portland for adding new antennas to several towers, changing out some equipment on other towers and utilizing the City of Portland microwave backhaul network to provide redundancy, eliminate the single point of failure and improve coverage areas. Researching new antenna models, identification of Motorola contracts to project lead times for project planning purposes. Current estimated lead times for equipment is 6-9 months. Expect completion of phase one by June 2024.

**Performance Measures**

Measure Type	Primary Measure	FY22 Actual	FY23 Budgeted	FY23 Estimate	FY24 Offer
Output	Tower sites upgraded, new radio system is purchased and operational.	N/A	100%	50%	100%
Outcome	New radio system working with existing radio subscriber units	N/A	100%	50%	100%

**Performance Measures Descriptions**

PM#1 Equipment purchased, upgraded and installed. Tower site coverage, redundancy and single point of failure resolved.  
 PM#2 New Radio system implemented into production, existing radio subscriber units able to connect and function for daily usage.

Revenue/Expense Detail

	Adopted General Fund	Adopted Other Funds	Department Requested General Fund	Department Requested Other Funds
<b>Program Expenses</b>	<b>2023</b>	<b>2023</b>	<b>2024</b>	<b>2024</b>
Contractual Services	\$0	\$1,505,000	\$0	\$1,350,000
Capital Outlay	\$0	\$95,000	\$0	\$0
<b>Total GF/non-GF</b>	<b>\$0</b>	<b>\$1,600,000</b>	<b>\$0</b>	<b>\$1,350,000</b>
<b>Program Total:</b>	<b>\$1,600,000</b>		<b>\$1,350,000</b>	
<b>Program FTE</b>	0.00	0.00	0.00	0.00

<b>Program Revenues</b>				
Financing Sources	\$0	\$1,600,000	\$0	\$0
Beginning Working Capital	\$0	\$0	\$0	\$1,350,000
<b>Total Revenue</b>	<b>\$0</b>	<b>\$1,600,000</b>	<b>\$0</b>	<b>\$1,350,000</b>

Explanation of Revenues

Funded with Beginning Working Capital (BWC).

Significant Program Changes

Last Year this program was: FY 2023: 78304B Radio System Replacement