



Land Mobile Radio System Semiannual Report



SUMMARY

The Washington State Patrol (WSP) was appropriated \$7,962,000 from the State Patrol Highway Account (SPHA) in the 2021-2023 biennium for Land Mobile Radio (LMR) system replacement, upgrade, and other related activities. Substitute Senate Bill 5165 requires the WSP to provide semiannual reports, beginning January 1, 2022, on progress related to the projects and activities associated with the LMR system, to include governance structure, outcomes achieved in the prior six month time period, and how the activities are being managed. This report is the first report for the 2021-2023 Biennium and covers the time period of July 1, 2021 through December 31, 2021.

The \$7,962,000 appropriated to WSP for the LMR system is consolidated from four separate decision packages. These four decision packages are distinct projects and do not have interdependencies; however, each fall into the scope of the WSP LMR program. The funding distribution (including General Fund) for the four decision packages is as follows:

Decision Package	Budget
LMR System Upgrade	\$1,488,000
Communications Infrastructure	\$2,626,000
LMR System Strategic Plan	\$491,000
LMR Standard Radio Replacement	\$3,673,000
Total	\$8,278,000

During the past six months, the WSP Electronic Services Division (ESD) has focused on establishing LMR program governance, project management frameworks, and initiating, executing, and monitoring each project. This report will outline the WSP LMR governance model and provide the current status, with achievements for each project.

As of December 31, 2021, three of the four projects have been initiated. \$720,825.07 (8.7% total) of the \$8,278,000 total budget has been expended as of December 16, 2021.

The LMR Standard Radio Replacement project is the only project that has encountered significant risks in meeting the intended scope outlined in the decision package. The risk is driven by the COVID-19 Vaccine Mandate and unanticipated personnel losses. The vacancies have stressed an already stretched workforce. At current staffing levels, WSP is at high risk of not being able to receive, install, configure, and deploy the radios to maximize the life of the new radios. To mitigate this risk, WSP will proceed with the replacement of portable radios and delay the mobile radio portion of the funding until the 2023-2025 biennium.

LMR PROGRAM GOVERNANCE

Overview

Provide program governance over the WSP Public Safety Land Mobile Radio (LMR) system which is a vital statewide communications network that provides real-time communications to support Public Safety response throughout the state of Washington.

Structure



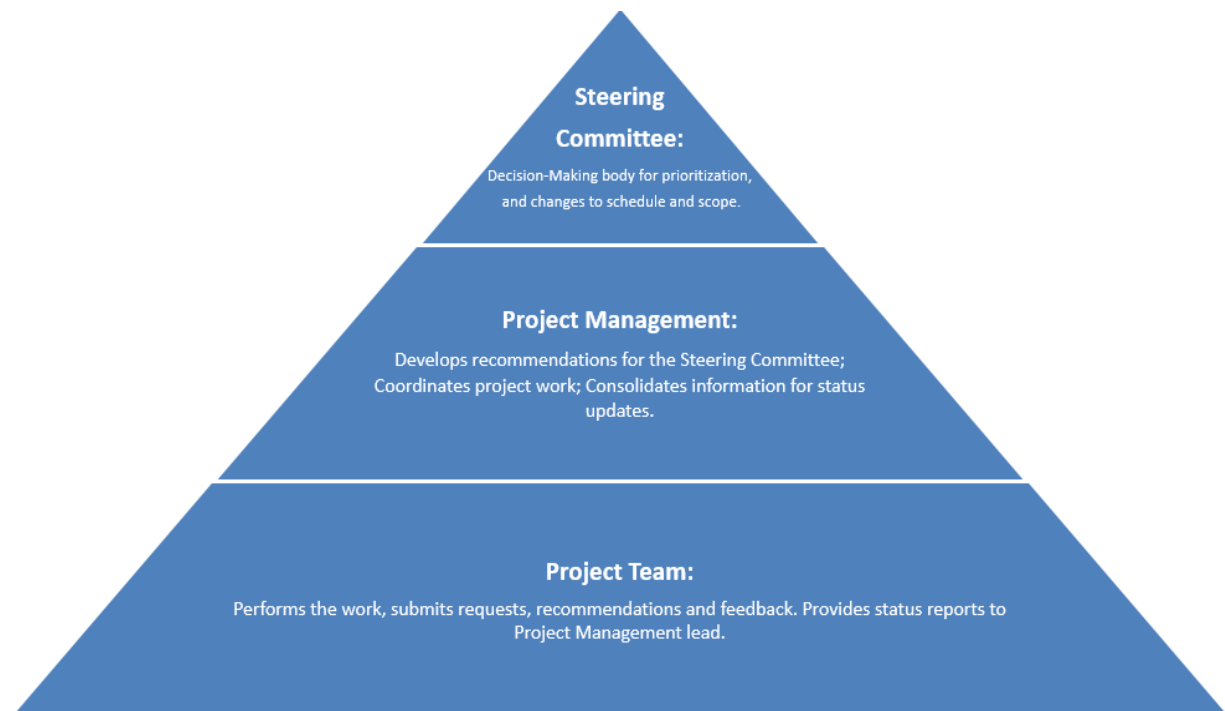
Roles and Decision Making Process

Governance (Steering) Committee Roles:

- Approve project deliverables.
- Make decisions on matters pertaining to scope and schedule.
- Attend steering committee meetings to address questions, issues, risks, and concerns identified by the project.
- Set priorities and resolve issues.
- Represent the interests and concerns of WSP stakeholders.
- Track issues that may affect stakeholders and their organizations.
- Identify, secure, and assign project resources.
- Provide governance structure for prioritization of rollout.

Decision Making Process: Decisions will be made based upon a majority approval or via consensus with each area represented. Governance/Steering committee meetings are used to address concerns and reservations before moving forward with recommendations.

In cases where a full consensus or majority cannot be agreed upon, the concerns or reservations will be provided to each respective Bureau Commander for guidance and/or determination. Ultimately, the Chief of the WSP will make the final decision.



Project Updates

LMR System Upgrade

WSP received \$1,488,000. This funding enabled WSP to enter into an agreement with Motorola for upgraded land mobile software, hardware, and equipment. The system upgrade agreement is a six-year agreement that provides three full system upgrades during those six years at a significantly reduced cost compared to one time upgrades. The first upgrade began in the fall of 2021.

Highlights:

- Successfully completed on-site LMR system upgrades in November 2021 in accordance with planned scope, schedule, and budget.
- The 911 call-logging and recording software upgrades are scheduled to be completed in January 2022.
- \$696,480.42 of the \$1,488,000 has been spent; the next system upgrade installment payment will occur in September 2022.

Communications Infrastructure

WSP received \$2,626,000 to continue replacement and upgrade of its aging public safety communications system hardware. This includes replacing one third of the WSP LMR base stations, repeaters, microwave radios and associated support equipment, like network routers and switches over three biennia. This funding also addresses the replacement of one third of the WSP alternative power units (site batteries), which are related equipment for the public safety communications system and are at risk of failure statewide.

Highlights:

- ESD has identified the system requirements to replace end-of-life and cybersecurity-vulnerable microwave network routers and switches supporting the LMR microwave network; procurement is estimated to be around \$528,836 and will be initiated in early 2022.
- Obtained quote from Motorola to procure 42 LMR base stations at a cost of \$759,360; procurement will be initiated in January 2022.
- Quotes for site batteries at 11 communications site locations have been awarded to contractors for a total of \$148,659.22. One site has been upgraded and the remaining 10 sites are awaiting equipment delivery or have been delayed by winter weather. The cost for the site batteries to be replaced in Fiscal Year 2023 will be at least \$132,000. The total for this biennium will be approximately \$281,000.

- An ongoing constraint with site battery replacement is a 90-day lead time to receive equipment due to supply chain delays; however, the delays should not impact expending funds and receiving equipment before the end of the biennium.
- \$24,344.65 of the \$2,626,000 has been expended for this project as of December 16, 2021.

LMR System Strategic Plan

WSP received \$491,000 for the 2021-2023 biennium. This funding will enable WSP to partner with a vendor to develop a comprehensive strategic plan for the WSP Land Mobile Radio (LMR) system. This project is in response to a recommendation provided as a result of a performance audit by the State Auditor's Office in December 2016 and subsequent engineering study completed with a private consultant in 2018, which assessed the condition and coverage of the WSP LMR system.

Highlights:

- The Request for Proposal (RFP) for vendor selection was drafted and posted on November 1, 2021.
- A Pre-Bid Conference was completed on November 16, 2021.
- Bidder proposals will be received on February 10, 2022 and the anticipated announcement for the successful bidder is April 2022.
- Strategic Plan development is expected to be completed by December 31, 2022.
- No funds have been expended for this project as of December 16, 2021.

LMR Radio Standard Replacement

WSP received \$3,673,000 in the 2021-2023 biennium to replace 2,671 mobile and portable land mobile radios that are nearing end of life. This request was submitted due to the fact that 96 percent of the WSP mobile and portable radio fleet has aged beyond seven years (OFM defined useful life), and the current radio models are out of support after December 31, 2023.

Highlights:

- Over the past six months, ESD, along with other key WSP stakeholder entities (Property Management Division's Supply and Fleet, along with the Field Operations Bureau), experienced a significant loss in personnel due to unforeseen retirements and the COVID-19 Vaccine Mandate. These staffing shortages have created significant risk that WSP cannot successfully complete the requirements related to mobile radio configuration and deployment within the biennium.

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- WSP will proceed with replacing the 1,388 portable radios during the 2021-2023 biennium, and will return the funding for the mobile radio portion. WSP intends to request funding for the replacement of the mobile radios in the 2023-2025 biennium.
 - WSP is testing and intends to move forward with procuring the latest portable radio model from Motorola, the APX Next. The APX Next portable radio provides a longer serviceable life span from the vendor. The APX Next also provides the opportunity to take advantage of new technological capabilities, to include transitioning from the LMR network over to the Long-Term Evolution (LTE) cellular network to enhance coverage for portable radio users. ESD is currently procuring 10 APX Next radios, using operational funds, to conduct pilot testing of this new capability.
 - No funds have been expended for this project as of December 31, 2021. ESD has been working with Motorola on updated proposals for procurement and manufacturing lead times to receive the APX Next portable radios and required network infrastructure.