

# Land Mobile Radio System Semi-Annual REPORT



Reporting Period: January 2022 – June 2022

## SUMMARY

The Washington State Patrol (WSP) was originally 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. With the 2022 Supplemental Transportation Budget, the appropriation was reduced by \$1,540,000 to \$6,422,000; refer to the LMR Standard Radio Replacement project status section for additional details.

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 second report for the 2021-2023 Biennium and covers the time period of January 1, 2022 through June 30, 2022.

The current appropriation provided 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:

Project	Budget
LMR System Upgrade	\$1,488,000
Communications Infrastructure	\$2,626,000
LMR System Strategic Plan	\$491,000
LMR Standard Radio Replacement	\$2,133,000
<b>Current Total</b>	<b>\$6,738,000</b>

Available funding resulting from 2022 Supplemental Transportation Budget reduction.

As of May 2022, three of the four projects have been initiated. Below is a summary of the total appropriated budget and expenditures to date:

Project	Budget	Spent to date
LMR System Upgrade	\$1,488,000	\$719,730
Communications Infrastructure	\$2,626,000	\$553,347
LMR System Strategic Plan	\$491,000	\$4,539
LMR Standard Radio Replacement	\$2,133,000	\$0.00
<b>Total</b>	<b>\$6,738,000</b>	<b>\$1,277,616</b>

# 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 respected Bureau Commander for guidance and/or determination. Ultimately, the Chief, will have final decision.

**Accomplishments:** Charter has been approved that defines roles and responsibilities for each stakeholder. ESD has established a technical committee that provides support for/or clarification to the governance committee.



## Project Updates

### LMR System Upgrade – Project on track

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 updates during those six years at a significantly reduced cost compared to one time upgrades. Upgrade activities commenced in the fall of 2021 and were completed January 2022.

#### Highlights:

- Successfully completed on-site LMR system upgrades in November 2021 in accordance with planned scope, schedule, and budget.
- Successfully completed 911 call logging and recording software upgrades in January 2022.
- Final requirement for biennium is to complete the scheduled milestone payment in September 2022.

### Communications Infrastructure – On Schedule, In Scope

WSP received \$2,626,000 to continue replacement and upgrade of aging public safety communications system hardware. This includes replacing 1/3 of the WSP LMR base stations, replace repeaters, microwave radios, site batteries, and associated support equipment, such as network routers and switches, over three biennia.

#### Highlights:

- ESD has set system requirements to replace end-of-life and cybersecurity vulnerable microwave network routers and switches supporting the LMR microwave network.
- Procured site batteries for 11 radio communications locations. One site has completed installation with the remaining 10 sites awaiting equipment delivery.
  - An ongoing challenge with site battery replacement is the 120-day lead time to receive equipment due to supply chain delays; however, these delays should not impact the expenditure of funds and receiving equipment before the end of the biennium.
- The table below shows encumbrances for equipment that has not been received during this reporting period or is in the approval process.

Communications Infrastructure	Total
Microwave radio replacement	\$362,500
LMR Base station replacement	\$820,109
Microwave cards	\$52,076
<b>Total</b>	<b>\$1,234,685</b>

## LMR System Strategic Plan – On Schedule, In Scope

WSP received \$491,000 for the 2021-2023 Biennium. This funding enabled 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 a 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 Proposals (RFP) was drafted and posted on November 1, 2021. – **Complete**
- A Pre-Bid Conference was completed on November 16, 2021. – **Complete**
- Proposals were received on February 10, 2022 and the successful bidder, Federal Engineering, was announced April 05, 2022. – **Complete**
- Contract in the amount of \$419,322.20 was fully executed between Federal Engineering and WSP on April 29, 2022 – **Complete**
- Federal Engineering and WSP stakeholders held a kick off meeting on May 20, 2022. – **Complete**
- Finalized Project Management Plan, which was approved by WSP on June 14, 2022. – **Complete**
- Federal Engineering conducted onsite interviews - June 21 – June 23, 2022. – **Complete**
- Federal Engineering will provide memo with findings following staffing/organizational analysis – August 3, 2022
- Federal Engineering will provide memo with findings following process/procedures analysis – September 12, 2022

- Federal Engineering will provide memo with findings following system, interconnections, and coverage analysis. – October 20, 2022
- Federal Engineering will provide draft report of Analysis and Near-Term recommendations – December 30, 2022

## 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 as 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 no longer supported by the vendor as of December 31, 2023.

- Mobile Radio: Per the January 2022 Land Mobile Radio System Semiannual Report, WSP communicated the delay of the mobile radio portion of the LMR standard radio replacement project until the 2023-25 biennium. Accordingly, the 2022 Supplemental Transportation Budget was reduced by \$1,540,000.
  - WSP plans to submit a 2023-25 decision package requesting funding to conduct the mobile radio replacements.
  - In lieu of physical equipment replacement, ESD has:
    - Finalized the scope of work for retrofits and new vehicle installations.
    - Determined retrofitting each new mobile radio in the field will take 1.5 hours to complete.
    - Completed diagrams to support mobile radio installation and ancillary support equipment.
- Portable Radio: ESD is deferring the replacement of the WSP's portable radios until the 2023-2025 biennium. This is primarily due to unexpected staffing challenges over the past six months. ESD experienced the loss of two key personnel within the division. The two positions managed the Land Mobile Radio (LMR) system and were heavily involved in this replacement effort.
  - WSP plans to submit a 2023-25 decision package requesting funding to conduct the portable radio replacements.

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- In lieu of physical equipment replacement, ESD has:
    - Collaborated with Motorola to configure the Radio Network Core in preparation for testing the APX Next portable radio.
      - The APX Next offers the opportunity to take advantage of new technological capabilities, including the ability to transition from the LMR network to the Long-Term Evolution (LTE) cellular network. ESD is verifying if this technology will enhance coverage for portable radio users in areas that have limited LMR network coverage.
    - Identified AT&T FirstNet as the LTE public safety cellular carrier partner during the testing phase of the APX Next portable radio.
  - ESD will receive LMR Administrative training for APX Next system management and configuration from Motorola.
  - ESD has engaged with other State Law Enforcement agencies utilizing the technologies identified above.
    - Arizona Department of Public Safety and the California Highway Patrol have been providing implementation strategies, system requirements, and “Lessons Learned” with WSP through their deployments.