



# **Alaska Land Mobile Radio Communications System**

## **Cooperative and Mutual Aid Agreement Appendix A**

### **Spectrum Sharing Memorandum of Agreement**

**MEMORANDUM OF AGREEMENT****BETWEEN****ASSISTANT SECRETARY OF DEFENSE FOR  
NETWORKS AND INFORMATION INTEGRATION****AND****COMMISSIONER PUBLIC SAFETY, STATE OF ALASKA**

**SUBJECT:** Memorandum of Agreement (MOA) concerning shared use of federal government allocated radio frequency resources on portable and mobile subscriber equipment operating on the Alaska Land Mobile Radio (ALMR) federal, state and local shared statewide wide-area trunked radio system.

**1. Purpose.** To establish the basic agreement between the above parties for the purpose of facilitating the shared use of federal DoD spectrum resources (by federal government entities, state government entities, and local government entities) within the State of Alaska exclusively associated with operation on the shared Alaska Land Mobile Radio infrastructure. This agreement will provide Federal, state and local government agencies interoperable communications capability.

**2. References.**

- a. Manual of Regulations and Procedures for Federal Radio Frequency Management (NTIA Manual)
- b. Code of Federal Regulations (CFR), Title 47, Telecommunications (FCC Rules and Regulations)
- c. Department of Defense (DOD) Directive 4650.1, Management and Use of the Radio Frequency Spectrum
- d. Memorandum of Understanding Between State of Alaska, Alaska Municipal League, Department of Defense Alaskan Command and Federal Executive Association of Alaska, April 4, 2001
- e. Alaska Statutes 44.41.010-020

**3. Definitions.**

- a. "Government" as used in the references above means the Federal government.
- b. "Non Government," as used in the reference above, means any user other than the Federal government and includes state and local government users.
- c. "Substantial Benefit" as defined in this MOA means when 50% or more of an agency's subscribers are deriving benefit from the shared ALMR system, and intend to continue use of the system.

**4. Applicable Authorities, Rules and Regulations.** All actions pursuant to the entities entering into this MOA shall be in accordance with the rules and regulations of the National Telecommunications and Information Administration (NTIA) and the Federal Communications Commission (FCC), or as waived by these authorities for unique and exclusive use on the shared Alaska Land Mobile Radio infrastructure in the State of Alaska by authorized cooperative partners.

a. The DoD has requested through the NTIA and the State of Alaska has submitted to the FCC the following requests for waiver of specified rules associated with licenses and applications in the Land Mobile Radio & Wireless Radio Service for use exclusively within the State of Alaska on the cooperatively shared Alaska Land Mobile Radio system infrastructure:

b. Waiver of 47 CFR 2.102(c) and 90.173 (c) to permit non-federal use of federal spectrum in the 138-144 MHz band (specific spectrum identified in attachment 1, for day-to-day<sup>1</sup> subscriber portable and mobile<sup>2</sup> operations in a shared federal, state and local government wide area trunk radio system<sup>3</sup>. The reciprocal of which the partnering federal government entities have obtained authorization through the NTIA, pursuant to waivers associated with NTIA Manual of Regulations & Procedures for Federal Radio Frequency Management Section 7.12 and Section 8.3, Para 8.3.3.

1. NTIA Manual 7.12 A. provides that “ A government radio station may use any frequency authorized to a non-government radio station under Part 90 of the Rules of the Federal Communications Commission where such utilization is necessary for intercommunication with non-government activities, provided a mutually-approved agreement has been concluded between the government agency concerned, the Federal Communications Commission, and the non-government licensee involved. FCC regulations provide that non-government stations licensed by the FCC may be authorized the use of frequencies assigned to government radio stations upon appropriate showing by the applicant that such assignment is necessary for intercommunications with Government stations or required for coordination with activities of the government.
2. CFR 2.102 (c) provides that “Non-Government”stations may be authorized to use Government frequencies in the bands above 25 MHz if the Commission finds, after consultation with the appropriate Government agency or agencies, that such use is necessary for coordination of Government and Non-Government activities provided however that:

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<sup>1</sup> Through-out this MOA the term day-to-day refers to the daily activities carried out by a public safety agency where communications is routinely made for intra-agency and inter-agency coordination and support.

<sup>2</sup> Mobile station. A station in the mobile service intended to be used while in motion or during halts at unspecified points. This includes hand carried transmitters; 47CFR Part 90.7 Definitions.

<sup>3</sup> Trunk Radio System. A radio system employing technology that provides the ability to search two or more available channels and automatically assign the user an open channel. 47CFR Part 90.7 Definitions.

Non-Government operation on Government frequencies shall conform with the conditions agreed upon by the Commission and the National Telecommunications and Information Administration (NTIA) (the more important of which are contained in paragraphs (c) (2), (3), and (4) of CFR 2.102 (c).

3. CFR 90.173 (c) provides that “Frequencies allocated for Federal Government radio stations under Executive Order of the President may be authorized for the use of stations in these services (subparts B, C, and F of Part 90.173, in this case public safety radio services) upon appropriate showing by the applicant that such assignment is necessary for inter-communications with government stations or required for coordination with activities of the federal Government, and where the Commission finds, after consultation with the appropriate government agency or agencies, that such assignment is necessary.”

c. Reason for waiver. The provision provided under the NTIA Manual Section 7.12, and the FCC rules, CFR 2.102 (c) and CFR 190.173 (c) provides the intent to facilitate inter-communications between Federal Government and Non-Federal Government entities and is conducive to conventional<sup>4</sup> radio technology communications, but does not address the procedure for use of radio frequency spectrum under a joint shared-use trunk radio<sup>5</sup> infrastructure. The FCC may authorize state and local government stations to use Federal Government frequencies in bands above 25 MHz. Pursuant to Section 2.102 (c) of the Commission’s Rules, the FCC must find, after consulting with the appropriate Federal Government agency that state and local use is necessary to coordinate with a Federal agency or agencies, or that state and local use is necessary to coordinate Federal Government and state and local activities<sup>5</sup>. After determining that the state and local use is necessary, the FCC must determine if this state and local operation on the Federal frequencies conforms to conditions agreed upon by the FCC and the NTIA.<sup>6</sup> Further, in accordance with Section 90.173 (C) of the Commissions Rules, the FCC may authorize the use of frequencies allocated to Federal Government Radio stations for use by private land mobile radio (PLMR) stations upon a showing by the applicant that such assignment is needed for inter-communication with Federal Government stations.<sup>7</sup> The FCC may authorize the use if frequencies allocated to Federal Government radio stations for PLMR stations when the station is authorized or required to coordinate with activities of the Federal Government, and where the FCC finds, after consulting with the appropriate Federal government agency or

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<sup>4</sup> Conventional. See 47 CFR 90.7 Conventional Radio System, “A method of operation in which one or more radio frequency channels are assigned to mobile and base stations but are not employed as a trunk group.”

<sup>5</sup> See Development of Operational, Technical and Spectrum requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010, *Notice of Proposed Rule Making*, WT Cocket No. 96-86, 11 FCC Rcd 12460, 12477 n.30 (1996) (*Public Safety First Notice*)

<sup>5</sup> See 47CFR 2.102 ( c ).

<sup>6</sup> The requirements and conditions for such authorization are set forth in 47CFR 2.102 ( c ) ( 1 ), 2.102 ( c ) ( 2 ), 2.102 ( c ) ( 3 ) and 2.102 ( c ) ( 4 ).

<sup>7</sup> These federal Government Frequencies are allocated under Executive Order of the President of the United States 47C.F.R. 90.173 ( c )

agencies, that such assignment is necessary.<sup>8</sup> In all of these instances, the non-Federal government station (i.e., state and local government) is using the Federal Governmental frequencies to coordinate or communicate with a Federal Government agency. The nature of trunk technology<sup>9</sup> when employed as a joint Federal Government and state and local Government shared use infrastructure, does not permit discrete use of Federal Government spectrum by state and local Government entities for intra-agency communications, while simultaneously permitting discrete autonomous intra-agency use of state and local Government spectrum by Federal Government entities. For this reason, the DoD and the State of Alaska have sought a waiver to permit the use of non-Federal frequencies paired with Federal Governmental frequencies for all of its public safety communications regardless of whether the use involves coordinating or communication with a Federal entity or vice versa.

**In essence:**

1. State and local day-to-day intra-agency operation would occur on Federal radio frequency resources used for portable and mobile subscriber assets operating on this joint use trunk radio infrastructure in the land mobile radio service.
2. Federal day-to-day intra-agency operation would occur on non-Federal government radio frequency resources used for base repeater assets operating in this joint use trunk radio infrastructure in the land mobile radio service public safety pool.
3. Together the non-Federal Government and Federal frequency resources as paired would be used for day-to-day intra-agency communications as well as cross-jurisdictional inter-agency communications by both state and local and Federal entities operating on the shared joint use trunk radio infrastructure.

**5. Requirements.**

- a. The Federal government has a requirement to establish interoperable interagency radio communications among federal, state and local government entities. Federal government entities' activities include functions such as fire, police, investigative services, EMS, medical, military support to civil authority services, protection services, emergency management services, and other types of activities performed in support of federal legislatively mandated missions. Further, the federal government will be sharing Project 25 trunked radio infrastructure with the State of Alaska, and will operate two-way trunk radio operations off of this shared infrastructure on a day-to-day basis for intra-agency communications.
- b. The State of Alaska, and local government public safety entities have a requirement to establish interagency interoperable radio communications among federal, state and local government entities. State and local government entities' activities include functions such as law enforcement, fire/emergency medical services, emergency management, government services, hazardous materials control, corrections administration, forestry,

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<sup>8</sup> See 47 CFR Part 90, Subpart H.

<sup>9</sup> See footnote 3 for definition of trunk radio technology.

fish and wildlife management, highway maintenance and safety services and public works. Further, the state and local governments will be sharing Project 25 trunked radio infrastructure with federal entities in a cooperative partnership and will operate two-way trunk radio operations off of this shared infrastructure on a day-to-day basis for intra-agency communications.

## **6. Scope.**

a. This MOA governs the policies and conditions of the federal government radio frequency resources and management of those resources in support of the shared Project 25 trunked Alaska land mobile radio system. The U.S. Army Network Enterprise Technology Command is the federal government's executive agent and is responsible for obtaining all necessary authorizations for frequency assignments from the NTIA. The State of Alaska Department of Public Safety, under the direction of the ALMR Executive Council (The State Interoperability Executive Committee (SIEC)) as defined in the ALMR Executive Council Charter and the State of Alaska Interoperability Plan, approved by the FCC, is the State of Alaska's executive agent and is responsible for obtaining all necessary licenses from the FCC for radio frequency resources for exclusive use on the shared Alaska land mobile radio system infrastructure.

b. The NTIA Associate Administrator for the Office of Spectrum Management may appoint a federal government representative to serve on the State's Interoperability Executive Committee, or any committee associated with or having joint or mutual management and administration of the radio frequency resources used in the shared Alaska Land Mobile Radio system.

## **7. Agreements.**

a. The Alaska Land Mobile radio system covered by this MOA shall be configured such that radio frequency spectrum resources used will be paired in a 50/50 fashion. To do this non-federal (FCC controlled) radio frequency resources in the 154.65-156.24 MHz band will be paired with, and equal in number to federal government (DoD) specified and authorized resources in the 138-144 MHz band to create 120 channel pairs (220 frequencies) channeling plan to be used and reused throughout the statewide, wide-area shared Project 25 trunked radio system infrastructure. The federal (DoD) spectrum resource will be employed in the "Mobile" class of station, while the non-federal (FCC) spectrum resource will be employed in the "Base" class of station. All entities operating on the shared statewide, wide-area Project 25 trunk radio infrastructure will have access to all spectrum resources employed in the system for daily intra-agency use as well as inter-agency/interoperability use during cross jurisdictional, mutual aid and task force incidents involving two or more participating federal, state and local public safety participating entities. All participating agencies on the Alaska Land Mobile Radio infrastructure will follow the State of Alaska Interoperability Plan for Incident Command communications protocols and operations.

b. The U.S. Army Spectrum Management Office (ASMO) shall coordinate, and submit to the NTIA for approval all requests for frequency assignments in the 138-144 MHz band required for implementation of the Alaska Land Mobile Radio system. The ASMO

will also coordinate, and submit to the NTIA all requests for waivers of rules and authorization for federal use of the M154.65-156.24 non-federal spectrum specified for use on the shared Alaska Land Mobile Radio system. The assignments authorized by the NTIA will be recorded in the Government Master File (GMF) and will carry Army serial numbers. The operating entity of record will be the Department of Defense Alaskan Command. The NTIA authorized frequencies for the Alaska Land Mobile Radio system will be renewed on a five-year basis from the date the resources were assigned.

c. The State of Alaska, State's Interoperability Executive Committee (SIEC), or its designated agent shall coordinate and submit to the FCC for approval all requests for frequency assignments in the M154.65-156.24 MHz band required for implementation of the Alaska Land Mobile Radio system. The SIEC or its agent will also coordinate, and submit to the FCC all requests for waivers of rules and authorization for non-federal use of the 138-144 MHz spectrum specified for use on the Alaska Land Mobile Radio system. The assignments authorized by the FCC will be recorded and assignments provided to the ASMO for record. The operating entity of record will be the State of Alaska. The FCC authorized frequencies for the Alaska Land Mobile Radio system will be renewed as required by applicable FCC rules and regulations.

d. Only federal, state and local government entities, or private entities that have a defined public safety mission and role will be authorized to operate using the shared spectrum resources on the Alaska Land Mobile Radio System. Requests to use the Alaska Land Mobile Radio system by federal, state and local government entities shall be granted subject to technical and/or operational compatibility.

e. The State of Alaska will strongly encourage all state and local entities to use the shared Alaska Land Mobile Radio infrastructure, wherever feasible, to satisfy their radio communications requirements. The NTIA Manual requires federal agencies with new land mobile radio requirements, and agencies operating non-trunked radio systems in areas where trunked systems are installed, should consider the advantages of obtaining service from the existing system where economically, technically and operationally feasible. Expansion of the shared trunk radio system beyond the 120 Channel pairs allocated and authorized for use on the Alaska Land Mobile Radio system is subject to approval by the NTIA Spectrum Planning Committee, and the FCC.

f. The Joint Frequency Office Alaska, in coordination with the Anchorage FCC Office, will serve as the Federal point of contact for resolving radio frequency interference problems among federal, state, and local entities for the Alaska Land Mobile Radio System. The FCC Anchorage office in coordination with the Joint Frequency management Office Alaska will serve as the State and Local point of contact for resolving radio frequency interference problems among federal, state and local entities.

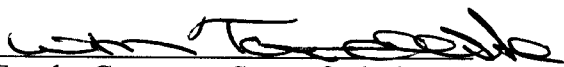
g. The NTIA and/or DoD, through the Office of the Secretary of Defense (OASD/NI2), the principal party to this MOA, may revoke the authority for use of the 138-144 MHz frequencies being used on any part of the Alaska Land Mobile Radio System, if there is no longer substantial benefit to the Federal government, or if higher national security

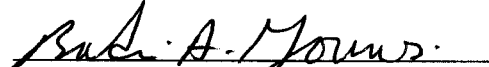
priority requirements develop for the DoD or other federal government entities that require the use of this spectrum. Such revocation of spectrum resources associated with public safety will be allotted no less than 6 months notice and a period of no longer than 1 year from the time of notice will be given to cease operation on the designated spectrum resource(s). Such termination or revocation shall be in writing and shall be provided to the Commissioner, Department of Public Safety, State of Alaska.

h. The FCC and/or the State of Alaska through the Commissioner, Department of Public Safety, the principal party to this MOA, may revoke the authority for use of the 154.56-156.24 MHz public safety poll frequencies being used on any part of the Alaska Land Mobile Radio System, if there is no longer substantial benefit to State and local government, or if higher State government priority requirements develop for state government entities that require the use of this spectrum. Such revocation of spectrum resources associated with public safety will be allotted no less than 6 months notice and a period of no longer than 1 year from the time of notice will be given to cease operation on the designated spectrum resource(s). Such termination or revocation shall be in writing and shall be provided to the Assistant Secretary of Defense for Networks and Information Integration.

i. This MOA does not constitute a contract and its entry into by the parties is voluntary. It may not constitute the basis for an actionable claim by the parties against each other in a court of law or otherwise in order to enforce its terms. This MOA is meant to assist the parties in delineating the roles and authorities of the parties for the limited purposes set out therein; and it does it create any right inuring to the benefit of any third party, real or potential.

**8. This MOA is effective when signed and dated by both parties.**

  
For the Governor, State of Alaska:  
Mr. William Tandeske  
Commissioner, Department of Public Safety  
State of Alaska

  
BADRI A. YOUNES  
Director, Spectrum Management  
Office of the Assistant Secretary of Defense  
for Networks and Information Integration

7-18-03  
Date

7/25/03  
Date

Attachment:  
Shared Frequency Plan