Alaska Land Mobile Radio Communications System

Concept of Operation (CONOP)

Version 17

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Acronyms and Definitions

Alaska Federal Executive Association (AFEA): federal government entities, agencies, and organizations, other than the Department of Defense, that operate on the shared ALMR system infrastructure.

Alaska Land Mobile Radio (ALMR) Communications System: the ALMR Communications System, as established in the Cooperative and Mutual Aid Agreement.

Alaska Municipal League: a voluntary non-profit organization in Alaska that represents 165 cities, boroughs, and unified municipalities.

Alaska Public Safety Communication Services (APSCS): a State of Alaska (SOA) office in the Department of Public Safety (DPS) that operates and maintains the SOA Telecommunications System (SATS) supporting ALMR and providing public safety communication services and support to state agencies.

APCO Project 25 (P25): is a set of standards produced through the joint efforts of the Association of Public Safety Communications Officials International (APCO), the National Association of State Telecommunications Directors (NASTD), selected Federal Agencies and the National Communications System (NCS), and standardized under the Telecommunications Industry Association (TIA). The P25 suite of standards involves digital Land Mobile Radio (LMR) services for local, tribal, state/provincial, and national (federal) public safety organizations and agencies.

Anchorage Wide Area Network (AWARN): the 700/800 MHz Anchorage node of ALMR. AWARN makes up Zone 4 of the system.

Department of Defense (DoD) – Alaska: Alaskan Command, US Air Force and US Army component services, operating under United States Pacific Command and United States Northern Command.

Department of Public Safety (DPS): a State of Alaska (SOA) department where the SOA Telecommunications System (SATS) and ALMR programs reside.

Executive Council: governing body made up of three voting members and two associate members representing the original four constituency groups: the State of Alaska, the Department of Defense, Federal Non-DoD agencies (represented by the Alaska Federal Executive Association), and local municipal/government (represented by the Alaska Municipal League and the Municipality of Anchorage).

Gateway: a device that allows a disparate radio to communicate in real time, overcoming spectrum, formatting, and other technical challenges.

Incident Command System (**ICS):** the ICS is a management system used to organize emergency responses. ICS offers a scalable response to an emergency (incident) of any magnitude and provides a common framework within which people can work together. These people (resources) may be drawn from multiple agencies that do not routinely work together. The system is designed to grow and shrink along with the incident, allowing more resources to be smoothly added into the system when needed and released when no longer needed.

Interoperable Communications: the ability of public safety, including emergency and other first responders, to talk to one another via radio and other communication systems, and to exchange voice and/or data with one another on demand in real time.

Local Governments: those Alaska political subdivisions defined as municipalities in AS 29.71.800(14).

Member: a public safety agency including, but not limited to, a general government agency (local, state, tribal, or federal), its authorized employees and personnel (paid or volunteer), and its service provider, participating in and using the system under a membership agreement.

Membership Agreement: the agreement entered into between the ALMR Operations Management Office, as the designated agent for the Executive Council, and the user agency, which sets forth the terms and conditions under which the system provides services to the user agency and the user agency's responsibilities while operating the system. Also referred to as a user agreement.

Mobile Radio: a radio that is installed in a vehicle and has a medium to high power output.

Municipality of Anchorage (MOA): the MOA covers 1,951 square miles with a population of over 300,000. The MOA stretches from Portage, at the southern border, to Knik River at the northern border, and encompasses the communities of Girdwood, Indian, Anchorage, Eagle River, Chugiak/Birchwood, and the native village of Eklutna.

National Incident Management System (NIMS): a unified approach to incident management, standard command, and management structures with emphasis on preparedness, mutual aid, and resource management.

Operations Manager: represents the User Council interests and makes decisions on issues related to the day-to-day operation of the system and any urgent or emergency operational or repair decisions; establishes policies, procedures, contracts,

organizations, and agreements that provide the service levels as defined in the ALMR Service Level Agreement in coordination with the User Council.

Operations Management Office (OMO): develops recommendations for policies, procedures, and guidelines; identifies technologies and standards; and coordinates intergovernmental resources to facilitate communications interoperability with emphasis on improving public safety and emergency response communications.

P25 Radio: a Project 25 compliant control station, consolette, mobile or portable radio assigned to the system that has a unique identification number.

Portable Radio: a hand-held, low-power, two-way radio.

Service Level Agreement (SLA): outlines the operations and maintenance services as required by the User Council for the sustainment and operations of the ALMR infrastructure. The performance metrics contained in the SLA describe the maintenance standards for the ALMR system infrastructure. ALMR cost share services are also outlined in the SLA.

State of Alaska (SOA): the primary maintainer of the State's infrastructure system, and shared owner of the system. The State of Alaska sponsors local/municipal agencies onto the system.

State of Alaska Telecommunications Systems (SATS): the State of Alaska statewide telecommunications system microwave network.

Subscriber: an individual, organization, or company that is uniquely identified within the system as a user of services.

Subscriber Equipment: portable, mobile, and console equipment that is intended to operate on the ALMR infrastructure for day-to-day intra-agency communications and/or inter-agency cross-jurisdictional interoperability purposes. Subscriber equipment can also include network management terminals, key management facility equipment, gateway, and other assets which are determined not to be a burden cost share in applicable Memoranda of Agreement (MoAs).

System: the ALMR Communications System, as established in the Cooperative and Mutual Aid Agreement, and any and all System Design/System Analysis (SD/SA) and System Design/System Implementation (SD/SI) documents.

System Management Office (SMO): the team of specialists responsible for management of maintenance and operations of the system.

Tactical Interoperable Communications Plan (TICP): document which provides communications processes, procedures, and protocols and identifies agency assets for responding to regional public safety events.

Talkgroup: the electronic equivalent of a channel on a trunked system; a unique group of radio users that can communicate with each other.

Transportable Unit: a fully self-sustaining portable ALMR communications site that can be used as a standalone site anywhere in the state, as a replacement site if an existing site fails or is destroyed, or to add channel capacity to an existing site during an incident or special event.

Trunking: because of the limited nature of the radio spectrum, trunking technology allows the most efficient use of radio channels. Trunking technology is similar to the technology that telephone companies use. In trunked radio communications, all available user channels are placed into one pool. When a person needs to transmit, a channel is automatically selected from the available pool and used for transmission. When the person is finished with the transmission, the channel is placed back in the pool for another individual to use. The result is a more efficient use of the radio spectrum with a minimal probability of not having access to a channel.

User: an agency, person, group, organization, or other entity which has an existing written membership agreement to operate on ALMR with one of the parties to the Cooperative and Mutual Aid Agreement. The terms user and member are synonymous and interchangeable. All terms and conditions of the Cooperative and Mutual Aid Agreement defined apply to local/municipal government agencies that are sponsored/represented by the State of Alaska.

User Council: governing body responsible for recommending all operational and maintenance decisions affecting the system. Under the direction and supervision of the Executive Council, the User Council has the responsibility for management, oversight, and operation of the system. The User Council oversees the development of system operations plans, procedures, and policies.

1.0 Introduction

The best available two-way radio technology, superior design, and innovative construction techniques quickly become immaterial if quality, on-going operational policies, and guidelines are not addressed early on and maintained throughout a system's lifecycle. The accessibility of critical resources, a high level of system availability, functional interoperability, reduced operations and maintenance costs, on-going training, along with an emergency response capability, are paramount for success.

The Alaska Land Mobile Radio (ALMR) Communications System partnership was formed to address the challenges of providing seamless, effective, and coordinated response to all types of incidents from day-to-day operations, natural/manmade disasters, special events, and homeland defense operations within Alaska. The partners include the State of Alaska (SOA), Department of Defense (DoD), Federal Non-DoD agencies, local and tribal government entities, and non-governmental organizations (NGOs).

ALMR was the first LMR system in the United States to use shared very-high frequency (VHF) channel pairs authorized for use by both the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration (NTIA). It provides an improved level of communications interoperability for those agencies that have chosen to transfer their operational communication requirements from their conventional systems to the ALMR system.

This Concept of Operation (CONOP) provides high-level guidance on effectively managing ALMR on a day-to-day basis and providing and ensuring standardized communications protocols during incidents involving single agency/single jurisdiction and/or multi-agency/multi-jurisdiction responses at the local, regional, and statewide levels.

ALMR follows the National Framework for Interoperability by addressing the five critical success areas identified in the SAFECOM Continuum: Governance, Standard Operating Procedures, Technology, Training and Exercises, and Usage. This CONOP is modeled after these five areas in the following paragraphs.

2.0 Governance Structure

The ALMR system provides a radio infrastructure that enables state, federal, local agencies, and tribal entities to communicate for their routine day-to-day governmental functions, as well as public safety response to emergencies and disaster incidents. Agencies share in one wide-area system providing radio coverage for a substantial portion of Alaska, primarily along the major highways, but also including portions of the Alaska Marine Highway System. The ALMR system also includes transportable

communications resources to temporarily extend ALMR to more remote areas of the state or supplement the existing infrastructure, when approved.

ALMR is operated under the Cooperative and Mutual Aid Agreement, which sets out the terms and conditions by which the system will be governed, managed, operated, and modified.

2.1 Executive Council

The executive level governance body representing the parties to the Cooperative and Mutual Aid Agreement for the ALMR system is referred to as the Executive Council (EC). The EC has three primary members: Federal Non-DoD, whose agencies are represented by Alaska Federal Executive Association (AFEA); the Department of Defense (DoD); and the State of Alaska (SOA), as well as two associate members: the Alaska Municipal League (AML), which represents tribal entities and local agency interests and the Municipality of Anchorage (MOA). Each member represents their level of government and/or jurisdictional area.

The EC provides management and oversight of system planning, strategy development, engineering, and design.

This formal governance structure allows for development of interoperability policies, processes, and procedures that enhance communications, coordination, and cooperation among ALMR users.

2.2 User Council

The User Council (UC) was established by the Cooperative and Mutual Aid Agreement and works in conjunction with the Operations Management Office (OMO) and the System Management Office (SMO) to oversee day-to-day system operations, provide input into system expansion potential, and provide a voice for the participating agencies on ALMR.

2.3 Cost Share Agreement

On August 21, 2008, the EC accepted an approach and method for determining the cost share strategy for the system. It was agreed: 1) that the stakeholders would pay for maintenance of their owned infrastructure via shared outsourced maintenance contracts; 2) the cost for the OMO and SMO would be shared by all users equally (calculated, at the time, using the cost per month per subscriber unit based on total number of subscriber units on the system at the end of each calendar year); and 3) the Municipality of Anchorage pays to maintain its Anchorage Wide Area Radio Network (AWARN) and trades circuit costs equally between itself and ALMR.

In late 2011, the EC appointed a Cost Share Working Group (CSWG) to review the cost share methodology regarding the changes in infrastructure ownership that were driven by the divestiture of radio frequency (RF) equipment owned by the U.S. Army - Alaska (USARAK) at 41 sites. The CSWG came to an agreement that the owners of the infrastructure were still responsible for the maintenance of their infrastructure and shared costs would be apportioned based on the percentage of infrastructure owned. This method was deemed the 88/12 method based on the SOA owning 88 percent of ALMR infrastructure and the DoD owning 12 percent.

The non-infrastructure owning agency's cost share portion is based on their agency airtime usage as a percentage of the total system airtime for the prior calendar year.

In 2016 under a new contract, it was agreed that for Master Site maintenance, 50 percent would be paid by the State of Alaska, and 50 percent would be paid by DoD Alaska, or in other words, each paying 100 percent of their owned site controller costs.

The Operations Management Office contract costs are split equally between the DoD and the State of Alaska.

2.4 Membership Agreement

Per the Cooperative and Mutual Aid Agreement, agencies must sign and have on file with the OMO, a signed membership agreement.[1] Agreements will be reviewed annually, along with the cost share, prior to each new State fiscal year. Nothing in the Membership Agreement shall be construed as binding for the member agency to be obligated to expend in any one fiscal year any sum in excess of appropriations authorized by their respective funding entity.

3.0 Standards-Based Shared System

As previously noted, LMR systems are the primary means of first responder communications. The inability to seamlessly communicate with one another during inter-agency responses has long been recognized as a national problem, as well as a problem during past incident command mutual aid responses within Alaska.

In the past, federal, state, local, and tribal public safety communities in Alaska used a variety of radio communication systems. These were the primary systems, which supported mutual aid, incident command, and task force/homeland defense missions. As these systems aged and became obsolete, the high maintenance costs and lack of replacement parts made them difficult to sustain. Additionally, a greater emphasis was placed on the increasing need for interagency interoperability. Concurrently, competition between public safety agencies and commercial users for spectrum resources increased dramatically over the years.

[1] Cooperative and Mutual Agreement, Article 11, Section 6, September 29, 2017

The ALMR partnership is committed to providing operations and maintenance support and autonomous day-to-day interoperable communications. It provides expanded interoperability for all levels of government, additional capacity using trunked digital voice channels, and seamless, secure, on-demand and in-real-time communications for Joint Task Force (JTF) events using NIMS.

The ALMR system consists of the respective physical assets, including spectrum resources, infrastructure, hardware, software, and other equipment, which are dedicated in whole, or in part, by the parties solely for the purpose of their use and integration, as provided under the Cooperative and Mutual Aid Agreement.

The goals of ALMR are:

- Cooperative sharing of a common radio infrastructure.
- Enhanced personnel safety and operational capabilities.
- Improved Incident Command response capabilities.
- Support for the National Response Plan and National Incident Management System (NIMS) implementation.

3.1 Features

The system supports wide-area connectivity through three integrated zone controllers; the South Zone Controller (Zone 1) in Anchorage, which also functions as the Master Zone Controller. The other two zone controllers are the North Zone Controller (Zone 2) in Fairbanks and the Municipality of Anchorage (MOA) Zone Controller (Zone 4) servicing the 700/800 MHz Anchorage Wide Area Radio Network (AWARN) [2]. Zone 4 provides interoperability between VHF and 700/800 MHz digital trunked talkgroups.

Communications connectivity exists with other systems in Alaska, such as 700/800 MHz analog talkgroups, ultra-high frequency (UHF) conventional channels, various identified conventional channels, and air-to-ground communications, or through programming of conventional frequencies into ALMR radios.

All subscriber radio units can roam throughout the coverage area without user intervention. Automatically switching between sites allows the user to maintain continuous communications.

A full description of system features and functions can be found in the Cooperative and Mutual Aid Agreement Appendix B, System Description. (https://alaskalandmobileradio.org/governing-documents/cooperative-and-mutual-aid-agreement-appendices/)

[2] Zone 3 is reserved for possible future expansion in Southeast Alaska.

3.2 Coverage

The goal of ALMR is to provide interoperable communications service for state, federal, local, and tribal government entities which support public safety operations in the most populated areas within Alaska, through a statewide network of communications assets along the major highway systems.

ALMR provides 90 percent, tested mobile radio communication coverage to the member agencies.[3]

Portable radio coverage is not guaranteed and will vary from location to location but is estimated to be approximately 90 percent of the state's most populated areas. Each user agency is encouraged to conduct their own portable radio communications coverage tests to determine actual coverage levels in its geographic jurisdiction.

3.3 Integration

3.3.1 Transportable System

Two deployable self-contained transportable communications systems, Transportable Area North (TAN) and Transportable Area South (TAS), can be utilized (when authorized) to provide coverage and reach back in areas outside of the current ALMR coverage footprint, to increase the loading capacity at a site or location during an emergency, or to supplement a downed radio site until restoral is achieved. These resources are the property of the DoD, and their use must be requested and approved.

The transportable systems provide:

- Deployable/backup emergency interoperable communications.
- P25 compliant, five-channel intellisite trunked repeater system.
- Digital circuit interface equipment (microwave radio, multiplexer and digital access connect DAC0 system).
- Satellite communications (X-, C- or Ku-Band)
- Media Converters (fiber/copper)
- Two dispatch operator positions.
- MotoBridge® gateway interoperability equipped with civil and military air-to-ground and VHF/FM Marine-band radios.
- External telephone and internet capability
- Secure MESH™ (local and wide area data network with remote video control)
- Tactical video teleconferencing capability

[3] Subject to agency compliance with recommended optimal performance standards for equipment, antenna installation and subscriber maintenance.

3.3.2 ALMR Interoperability Network (AIN) Gateways

MotoBridge® is an interface device that requires minimum system modification and offers maximum interoperability. MotoBridge® offers a cost-effective means of short-term or permanent connectivity between disparate radio systems, networks, agencies, and jurisdictions. Installation and implementation are quick and seamless across the frequency spectrum and various manufacturers' radio systems can be supported with a gateway system. Some of these units continue to exist within the system; however, the MotoBridge® gateways are no longer actively supported by Motorola and are being phased out from the system.

Workstation Gateway Units (WSGU) and/or Radio Gateway Units (RGU) are currently installed at the following locations:

DoD Sponsored:
- Fort Richardson
- Joint Base Elmendorf-Richardson
- TAN
- TAS

SOA Sponsored:
- Byers - RGU
- Glennallen - RGU
- Tok - RGU

4.0 System Usage

Agencies operate on the ALMR system to meet their everyday needs. This same system is also used to communicate and interoperate during emergency/medical responses and JTF operations locally, regionally, and statewide. As knowledge of ALMR capabilities increases, and coverage expands, more public safety agencies are likely to join the system, further enhancing interoperability.

4.1 Department of Defense

The DoD utilizes ALMR 365 days a year for day-to-day operations, exercises, and to perform their Defense Support to Civil Authorities (DSCA) missions, should they be called up.

DoD user agencies:
- 13th Space Warning Squadron (Clear AFS)
- 354th Fighter Wing (Eielson AFB)
- Joint Base Elmendorf-Richardson

  - 673rd Air Base Wing
  - Fort Richardson
  - Alaskan Command
- U.S. Army-Alaska
  - Fort Wainwright
  - Fort Greely
- U.S. Army Corps of Engineers-Alaska District
- USMC Detachment, MP Company D, 4th Law Enforcement Battalion

4.2 State of Alaska

The State of Alaska utilizes ALMR to accomplish their daily missions and to fulfill their responsibility for the safety of the general public and the welfare of all its citizens.

SOA agencies:

- 49th Brigade
- 103rd Weapons of Mass Destruction – Civil Support Team
- 168th Wing
- 176th Wing
- Alaska Army National Guard
- Alaska Railroad Corporation
- Alcohol and Marijuana Control Office
- Civil Air Patrol – Alaska Wing
- Department of Corrections
  - Probation and Parole
  - Institutions
- Department of Environmental Conservation
  - Environmental Crimes Unit
  - Environmental Health Laboratory
  - Spill Prevention, Preparedness and Response Program
- Department of Health and Social Services
  - Division of Juvenile Justice
- Division of Public Health, Health Emergency Response Operations
- Department of Natural Resources
  - Division of Forestry and Fire Protection
  - Division of Parks & Outdoor Recreation
  - Salcha-Delta Soil & Water Conservation District
- Department of Public Safety
    - Alaska State Troopers
    - Alaska Wildlife Troopers
    - Fire and Life Safety
- Department of Transportation and Public Facilities
  - Commercial Vehicle Enforcement
  - Fairbanks International Airport
- Division of Homeland Security & Emergency Management

- Division of Pioneer Homes
- Office of Information Technology
- University of Alaska-Fairbanks
  - Police Department
  - Fire Department

4.3 Federal Non-DoD Agencies

Federal Non-DoD agencies support a variety of missions utilizing ALMR and are represented by the AFEA.

Federal Non-DoD agencies:

- Department of Agriculture
  - U.S. Forest Service – Combined Fire and Aviation Management
  - U.S. Forest Service - Law Enforcement and Investigations
- Department of Commerce
  - National Oceanic and Atmospheric Administration - Fisheries Enforcement
- Department of Homeland Security
  - Federal Emergency Management Agency
  - ICE Homeland Security Investigations
  - ICE Enforcement and Removal Operations
  - Federal Protective Service
  - Transportation Security Administration
  - U.S. Coast Guard Investigative Service
  - U.S. Customs and Border Protection
- Department of the Interior
  - Bureau of Land Management
  - National Park Service - Denali Park
  - U.S. Fish and Wildlife Service
- Department of Justice
  - Drug Enforcement Agency
  - Federal Bureau of Investigation
  - U.S. Marshal Service
- Department of the Treasury
  - Bureau of Alcohol, Tobacco, Firearms, and Explosives
  - Internal Revenue Service Criminal Investigations
- U.S. Postal Service
  - U.S. Postal Inspection Service
  - U.S. Postal Service – Office of the Inspector General

4.4 Local Agencies

Local and tribal government entities and volunteer agency numbers play a pivotal public safety role across the State. They pick up the burden in areas where SOA does not provide personnel to perform vital public safety services, and in the case of volunteers, without compensation.

4.4.1 Local Governments/Non-Governmental agencies:

- Alaska Professional Volunteers
- Amateur Radio Emergency Services
- Anchorage Amateur Radio Club - Radio Science and Operations Center
- Anderson Volunteer Fire Department and Emergency Medical Service
- Anton Anderson Memorial Tunnel Fire Department
- Bear Creek Fire Service Area
  - Eastern Peninsula Highway Emergency Service Area
- Cantwell Volunteer Fire Department
- Capital City Fire/Rescue
- Capital Transit
- Central Emergency Services
- Chena Goldstream Fire Department
- Chickaloon Community Volunteer Fire Department
- Chickaloon Village Traditional Council Police Department
- City of Delta Junction Volunteer Fire Department
- City of Fairbanks
  - Emergency Communications Center
  - Fire Department
  - Police Department
- City of Ketchikan
- City of Kodiak
- City of North Pole
- City of Seldovia
- City of Seward
- City of Valdez
- Cooper Landing Emergency Services
- Copper River Emergency Medical Services
- Copper River Native Association
  - Copper Center Clinic
  - Gakona Clinic
  - Gulkana Clinic
  - Tazlina Clinic
- Cordova Police Department
- Craig Police Department
- Cross Road Medical Center
- Delta Medical Transport
- Ester Volunteer Fire Department
- Fairbanks Memorial Hospital
- Fairbanks North Star Borough
- Gakona Fire Department
- Girdwood Volunteer Fire Department
- GlennRich Fire and Rescue
  - Copper Center Volunteer Fire Department
  - Glennallen Volunteer Fire Department

    - Silver Springs Volunteer Fire Department
    - Tazlina Volunteer Fire Department
    - Tolsona Volunteer Fire Department
- Guardian Flight
- Haines Borough Police Department
- Homer Police Department
- Homer Volunteer Fire Department
- Hope/Sunrise Emergency Services
- Houston Fire Department
- Juneau Police Department
- Kachemak Emergency Services
- Kenai Fire Department
- Kenai Peninsula Borough
    - Central Peninsula Hospital
    - Southern Peninsula Hospital
- Kenai Peninsula Borough School District
- Kenai Fire Department
- Kenai Police Department
- Kenaitze Indian Tribe Tribal Safety and Corrections
- Kennicott/McCarthy Volunteer Fire Department
- Kenny Lake Volunteer Fire Department
- Klawock Police Department
- LifeMed Alaska
- Lowell Point Volunteer Fire Department
- Matanuska-Susitna Borough
    - Central Mat-Su Fire Department
- Matanuska-Susitna School District
- Matanuska-Susitna Regional Medical Center
- McKinley Volunteer Fire Department
- Metlakatla Indian Community
- Moose Pass Volunteer Fire Company and Emergency Medical Service
- Mt Sanford Tribal Consortium
- Municipality of Skagway
- Naukati Bay Volunteer Fire Department and Emergency Medical Service
- Nenana Volunteer Fire Department
- Nikiski Fire Department
- North Star Volunteer Fire Department
- North Tongass Volunteer Fire Department
- Palmer Department of Public Works
- Palmer Fire and Rescue
- Palmer Police Department
- Providence Kodiak Island Medical Center
- Providence Seward Medical & Care Center
- Rural Deltana Volunteer Fire Department
- Salcha Fire Rescue

- Sand Point Department of Public Safety
- Seward Volunteer Ambulance Corps
- Soldotna Police Department
- Steese Area Volunteer Fire Department
- Tok Area Emergency Medical Service
- Tok Volunteer Fire Department
- Tri-Valley Volunteer Fire Department
- Valdez Fire Department
- Valdez Police Department
- Wasilla Police Department
- Western Emergency Service
- Whitestone Emergency Medical Services
- Whittier Police Department

4.4.2 Municipality of Anchorage agencies:

- Anchorage Emergency Medical Services
- Anchorage Facilities Maintenance
- Anchorage Fire Department
- Anchorage Libraries
- Anchorage Museum
- Anchorage Parks and Recreation
- Anchorage Police Department
- Anchorage Public Transportation
- Anchorage School District
- Anchorage Solid Waste Services
- Anchorage Street Maintenance
- Anchorage Water and Wastewater Utility
- Chugiak Volunteer Fire
- Emergency Operations Center
- Girdwood Volunteer Fire Department
- Health/Human Services
- Juvenile Probation and Parole
- Merrill Field
- MOA Communications Division
- MOA Public Works
- MOA Right-of-Way
- Municipal Manager
- Port of Alaska
- Sullivan Arena
- Ted Stevens Anchorage International Airport
- University of Alaska-Anchorage Police
- US Veterans Administration Hospital
- US Veterans Administration Police
- Wasilla Police Department

5.0 Incident Command/Emergency Response Communications - Standard Operating Procedures and Protocols

The National Response Plan establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. It incorporates best practices and procedures from incident management disciplines (homeland security, DoD emergency management, law enforcement, firefighting, public works, public health, responder and recovery worker health and safety, emergency medical services, and the private sector) and integrates them into a unified command structure.

It forms the basis of how federal departments and agencies will work together and how the federal government will coordinate with state and local governments, tribal entities, and the private sector during incidents to help protect the nation from terrorist attacks and other natural and manmade hazards.

Incident communications are facilitated through the deliberative development and use of common communications plans and interoperable communications protocols, processes, and procedures. This integrated approach links operational and support units of various agencies and is necessary to maintain communications connectivity, as well as enable common situational awareness and interaction. Preparedness planning must address the equipment, systems, and protocols necessary to achieve voice and data incident management communications.

5.1 Integrated Communications Protocol

ALMR was designed and implemented to establish and maintain communications connectivity for interoperable, secure, on-demand and in-real-time communications supporting NIMS. This designed protocol uses trunked radio technology and employs a gateway approach for the integration of conventional and other disparate voice and data systems.

ALMR communications protocols are scalable to support the exact composition of a unified command organizational structure. The protocol was developed to support either a single incident in a multi-jurisdictional response, or multiple incidents with multi-agency, multi-jurisdictional responses. The communications protocol programmed into ALMR radios also supports unified command administrative communications needs.

5.1.1 Statewide Admin Zone

The admin talkgroups are provided to minimize any confusion between “forward incident operations” and “rear area” support, as well as to maintain chain of command and assist with continuity of incident operations.

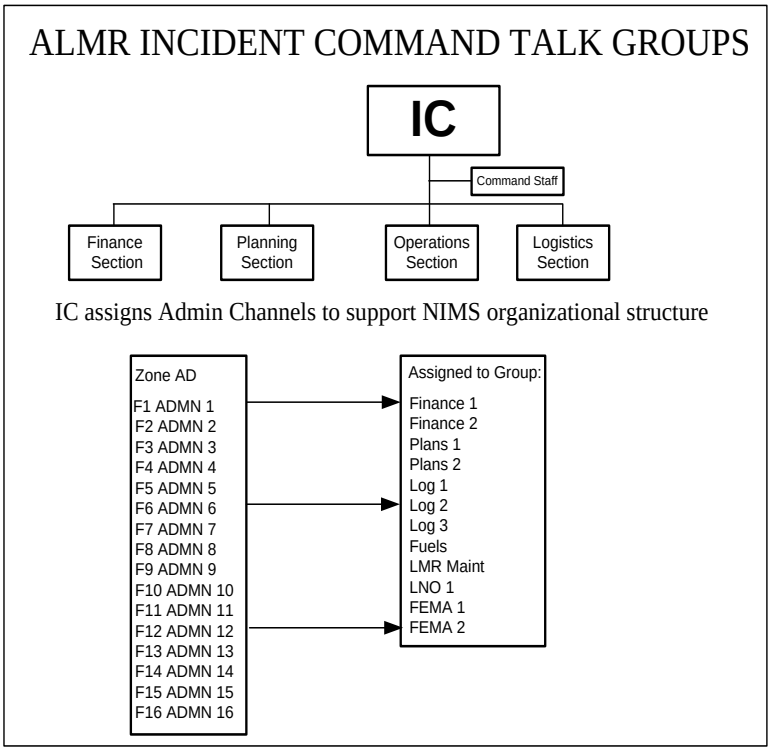
The Statewide Admin Zone should be programmed into ALMR radios for use by agencies that provide support functions such as logistics, finance, and administration during incidents.

In most cases, the admin talkgroups can be used by EOC personnel or those deployed to an Incident Command Post, when assigned. During many incidents, the standard means of incident support communications within an EOC are wire line telephone, cellular phones, and e-mail and should always be used when available to maximize the effective and efficient use of the ALMR system by first responders and on-scene support personnel.

Available Admin Talkgroups are:

Statewide Admin Zone		
ADMN1	IC Administrative Ch 1	Assigned by IC Commander The North Dispatcher is the authority to use these channels
ADMN2	IC Admin Ch 2	
ADMN3	IC Admin Ch 3	
ADMN4	IC Admin Ch 4	
ADMN5	IC Admin Ch 5	
ADMN6	IC Admin Ch 6	
ADMN7	IC Admin Ch 7	
ADMN8	IC Admin Ch 8	
ADMN9	IC Admin Ch 9	
ADMN10	IC Admin Ch 10	
ADMN11	IC Admin Ch 11	
ADMN12	IC Admin Ch 12	
ADMN13	IC Admin Ch 13	
ADMN14	IC Admin Ch 14	
ADMN15	IC Admin Ch 15	
ADMN16	IC Admin Ch 16	

The Incident Commander assigns the IC administrative channels. The following is an example of what the channel plan might look like.

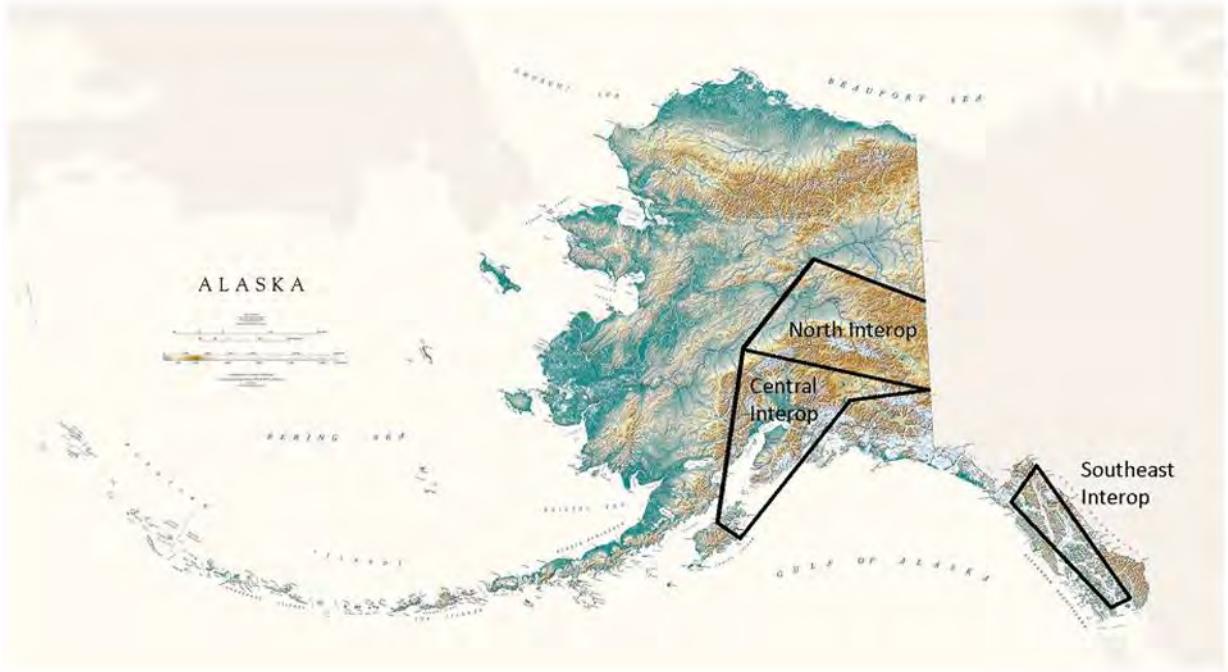


5.1.2 Interoperability Channels

The Regional IC Zones were previously divided along the Alaska State Trooper detachment boundaries and area of responsibility with corresponding dispatch centers assigned to monitor the HAIL channels.

The User Council Talkgroup and Codeplug Subcommittee took on the task to realign the zones, which were too complicated with not enough flexibility. They wanted to reduce them from the seven regional zones and the statewide zone to three total zones, not including the ADMIN zone. The new zones would be the North Zone, the Central Zone, and the Southeast Zone.

In October 2019, the proposed change to the zones was presented to the ALMR Executive Council (EC). The plan was to simplify the zones and make them more condensed, simple, and useful to incident commanders and incident personnel. The EC endorsed the zone changes but requested a transition plan be put in place until all radios on the system could be re-programmed.



The system is a multiple-zone design that is divided into four zones. All sites south of the Denali Highway are in Zone 1, while those sites north of the Denali Highway are in Zone 2. The Municipality of Anchorage (MOA) encompasses Zone 4 with a 700/800MHz subsystem. Zone 3 is reserved for possible expansion in Southeast Alaska. The geographical Interoperability Zones follow these boundaries.

NOTE: ALMR is mainly located along the major road systems and portions of the Alaska Marine Highway. The enclosed areas best represent expected coverage areas.

Interoperable HAIL/All Call talkgroups will be monitored by all dispatch centers.

The following figures represent the transition plan.

Current								New						
Name	Interior Region D and IOP							Name	North Interop					
CH	Description	Display	Rx Freq	Rx Tone	Tx Freq	Tx Tone		CH	Description	Display	Rx Freq	Rx Tone	Tx Freq	Tx Tone
1	Regional Hail	**D Hail**	(ALMR Talkgroup)		-	-		1	North Dispatch Hail/ All Call	**North CALL**	(ALMR Talkgroup)		-	-
2	Regional IC	**D IC 2**	(ALMR Talkgroup)		-	-		2	North Command 2	**N CMD 2**	(ALMR Talkgroup)		-	-
3	Regional IC	**D IC 3**	(ALMR Talkgroup)		-	-		3	North Command 3	**N CMD 3**	(ALMR Talkgroup)		-	-
4	Regional IC	**D IC 4**	(ALMR Talkgroup)		-	-		4	North Command 4	**N CMD 4**	(ALMR Talkgroup)		-	-
5	Regional IC	**D IC 5**	(ALMR Talkgroup)		-	-		5	North Command 5	**N CMD 5**	(ALMR Talkgroup)		-	-
6	Regional IC	**D IC 6**	(ALMR Talkgroup)		-	-		6	North Command 6	**N CMD 6**	(ALMR Talkgroup)		-	-
16	Regional IC Multigroup	**D MG**	(ALMR Talkgroup)		-	-		7	North Multigroup	**N Multi**	(ALMR Talkgroup)		-	-
IOP 3	National Search&Rescue	**NSAR**	155.1600	-	155.1600	156.7		8	National Search&Rescue	**NSAR**	155.1600	-	155.1600	156.7
IOP 2	State Conventional	**EMS S**	159.2100	-	159.2100	156.7		9	State Conventional	**State 2**	159.2100	-	159.2100	156.7
IOP 8	National Calling	**VCALL10**	155.7525	-	155.7525	156.7		10	National Calling	**VCALL10**	155.7525	-	155.7525	156.7
IOP 9	National Tac 1	**VTAC11**	151.1375	-	151.1375	156.7		11	National Tac 1	**VTAC11**	151.1375	-	151.1375	156.7
IOP 10	National Tac 2	**VTAC12**	154.4525	-	154.4525	156.7		12	National Tac 2	**VTAC12**	154.4525	-	154.4525	156.7
IOP 11	National Tac 3	**VTAC13**	158.7375	-	158.7375	156.7		13	National Tac 3	**VTAC13**	158.7375	-	158.7375	156.7
IOP 12	National Tac 4	**VTAC14**	159.4725	-	159.4725	156.7		14	National Tac 4	**VTAC14**	159.4725	-	159.4725	156.7
-	IOP Repeater	**VTAC36**	151.1375	-	159.4725	136.5		15	IOP Repeater	**VTAC36**	151.1375	-	159.4725	136.5
IOP 1	State Conventional	**LE SX**	155.2500	-	155.2500	156.7		16	State Conventional	**State 1**	155.2500	-	155.2500	156.7

Current								New						
Name	**Valley Region B and IOP**							**Name**	**Central Interop**					
CH	**Description**	**Display**	**Rx Freq**	**Rx Tone**	**Tx Freq**	**Tx Tone**		**CH**	**Description**	**Display**	**Rx Freq**	**Rx Tone**	**Tx Freq**	**Tx Tone**
1	Regional Hail	**B Hail**	(ALMR Talkgroup)		-	-		1	Central Dispatch Hail/ All Call	**Central CALL**	(ALMR Talkgroup)		-	-
2	Regional IC	**B IC 2**	(ALMR Talkgroup)		-	-		2	Central Command 2	**C CMD 2**	(ALMR Talkgroup)		-	-
3	Regional IC	**B IC 3**	(ALMR Talkgroup)		-	-		3	Central Command 3	**C CMD 3**	(ALMR Talkgroup)		-	-
4	Regional IC	**B IC 4**	(ALMR Talkgroup)		-	-		4	Central Command 4	**C CMD 4**	(ALMR Talkgroup)		-	-
5	Regional IC	**B IC 5**	(ALMR Talkgroup)		-	-		5	Central Command 5	**C CMD 5**	(ALMR Talkgroup)		-	-
6	Regional IC	**B IC 6**	(ALMR Talkgroup)		-	-		6	Central Command 6	**C CMD 6**	(ALMR Talkgroup)		-	-
7	Regional IC Multigroup	**B MG**	(ALMR Talkgroup)		-	-		7	Central Multigroup	**C Multi**	(ALMR Talkgroup)		-	-
IOP 3	National Search&Rescue	**NSAR**	155.1600	-	155.1600	156.7		8	National Search&Rescue	**NSAR**	155.1600	-	155.1600	156.7
IOP 2	State Conventional	**EMS S**	159.2100	-	159.2100	156.7		9	State Conventional	**State 2**	159.2100	-	159.2100	156.7
IOP 8	National Calling	**VCALL10**	155.7525	-	155.7525	156.7		10	National Calling	**VCALL10**	155.7525	-	155.7525	156.7
IOP 9	National Tac 1	**VTAC11**	151.1375	-	151.1375	156.7		11	National Tac 1	**VTAC11**	151.1375	-	151.1375	156.7
IOP 10	National Tac 2	**VTAC12**	154.4525	-	154.4525	156.7		12	National Tac 2	**VTAC12**	154.4525	-	154.4525	156.7
IOP 11	National Tac 3	**VTAC13**	158.7375	-	158.7375	156.7		13	National Tac 3	**VTAC13**	158.7375	-	158.7375	156.7
IOP 12	National Tac 4	**VTAC14**	159.4725	-	159.4725	156.7		14	National Tac 4	**VTAC14**	159.4725	-	159.4725	156.7
-	IOP Repeater	**VTAC36**	151.1375	-	159.4725	136.5		15	IOP Repeater	**VTAC36**	151.1375	-	159.4725	136.5
IOP 1	State Conventional	**LE SX**	155.2500	-	155.2500	156.7		16	State Conventional	**State 1**	155.2500	-	155.2500	156.7

Current								New						
Name	**SE Region A and IOP**							**Name**	**SouthEast Interop**					
CH	**Description**	**Display**	**Rx Freq**	**Rx Tone**	**Tx Freq**	**Tx Tone**		**CH**	**Description**	**Display**	**Rx Freq**	**Rx Tone**	**Tx Freq**	**Tx Tone**
1	Regional Hail	**A Hail**	(ALMR Talkgroup)		-	-		1	SE Dispatch Hail/All Call	**SE CALL**	(ALMR Talkgroup)		-	-
2	Regional IC	**A IC 2**	(ALMR Talkgroup)		-	-		2	SE Command 2	**SE CMD 2**	(ALMR Talkgroup)		-	-
3	Regional IC	**A IC 3**	(ALMR Talkgroup)		-	-		3	SE Command 3	**SE CMD 3**	(ALMR Talkgroup)		-	-
4	Regional IC	**A IC 4**	(ALMR Talkgroup)		-	-		4	SE Command 4	**SE CMD 4**	(ALMR Talkgroup)		-	-
5	Regional IC	**A IC 5**	(ALMR Talkgroup)		-	-		5	SE Command 5	**SE CMD 5**	(ALMR Talkgroup)		-	-
6	Regional IC	**A IC 6**	(ALMR Talkgroup)		-	-		6	SE Command 6	**SE CMD 6**	(ALMR Talkgroup)		-	-
16	Regional IC Multigroup	**A MG**	(ALMR Talkgroup)		-	-		7	SE Multigroup	**SE Multi**	(ALMR Talkgroup)		-	-
IOP 3	National Search&Rescue	**NSAR**	155.1600	-	155.1600	156.7		8	National Search&Rescue	**NSAR**	155.1600	-	155.1600	156.7
IOP 2	State Conventional	**EMS S**	159.2100	-	159.2100	156.7		9	State Conventional	**State 2**	159.2100	-	159.2100	156.7
IOP 8	National Calling	**VCALL10**	155.7525	-	155.7525	156.7		10	National Calling	**VCALL10**	155.7525	-	155.7525	156.7
IOP 9	National Tac 1	**VTAC11**	151.1375	-	151.1375	156.7		11	National Tac 1	**VTAC11**	151.1375	-	151.1375	156.7
IOP 10	National Tac 2	**VTAC12**	154.4525	-	154.4525	156.7		12	National Tac 2	**VTAC12**	154.4525	-	154.4525	156.7
IOP 11	National Tac 3	**VTAC13**	158.7375	-	158.7375	156.7		13	National Tac 3	**VTAC13**	158.7375	-	158.7375	156.7
IOP 12	National Tac 4	**VTAC14**	159.4725	-	159.4725	156.7		14	National Tac 4	**VTAC14**	159.4725	-	159.4725	156.7
-	IOP Repeater	**VTAC36**	151.1375	-	159.4725	136.5		15	IOP Repeater	**VTAC36**	151.1375	-	159.4725	136.5
IOP 1	State Conventional	**LE SX**	155.2500	-	155.2500	156.7		16	State Conventional	**State 1**	155.2500	-	155.2500	156.7

The Municipality of Anchorage will use the NIFOG 800Mhz frequencies, as they are repurposing 800Mhz repeaters to be NIFOG 800Mhz repeaters within the city.

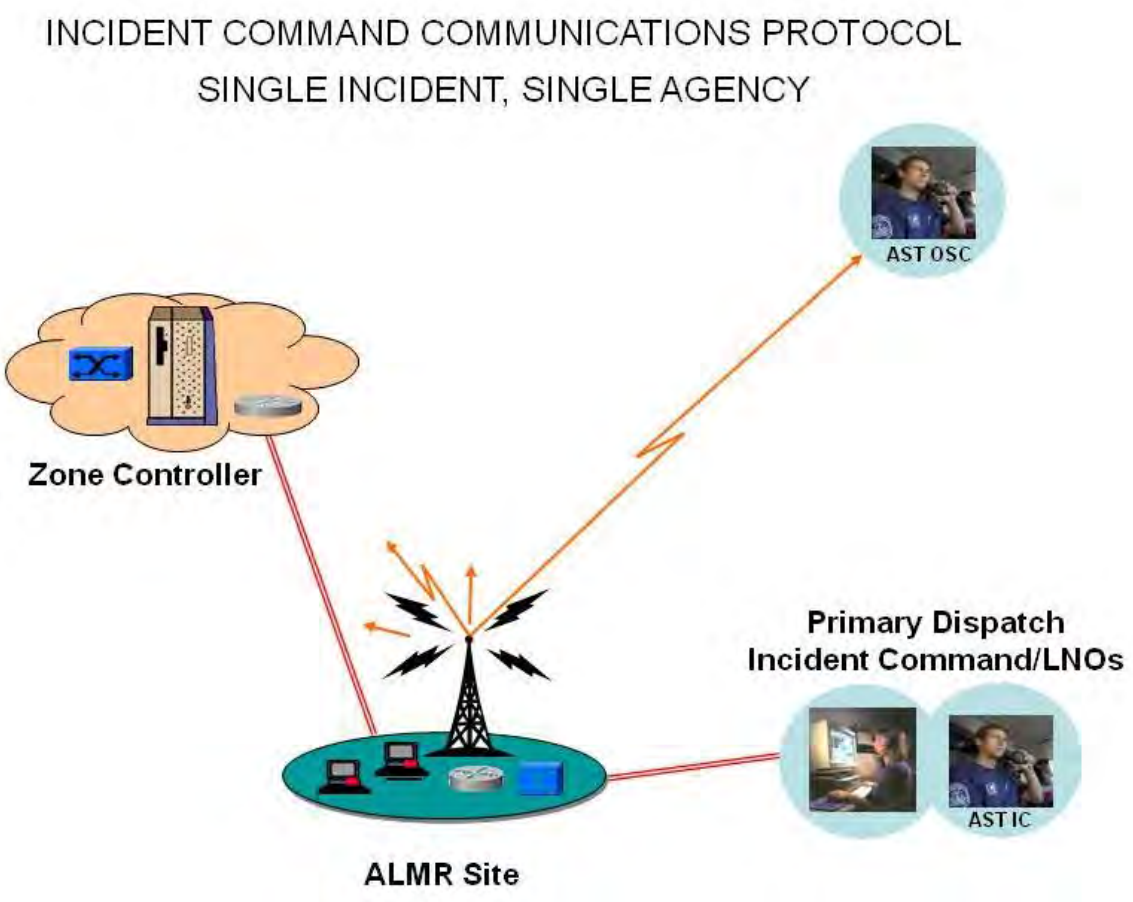
Current							New						
Name	**Central Interop 700/800**						**Name**	**Central Interop 700/800**					
CH	**Description**	**Display**	**Rx Freq**	**Rx CG**	**Tx Freq**	**Tx CG**	**CH**	**Description**	**Display**	**Rx Freq**	**Rx CG**	**Tx Freq**	**Tx CG**
1	Regional Hail	**B Hail**	(ALMR Talkgroup)		-	-	1	Central Dispatch Hail/All Call	**Central CALL**	(ALMR Talkgroup)		-	-
2	Regional IC	**B IC 2**	(ALMR Talkgroup)		-	-	2	Central Command 2	**C CMD 2**	(ALMR Talkgroup)		-	-
3	Regional IC	**B IC 3**	(ALMR Talkgroup)		-	-	3	Central Command 3	**C CMD 3**	(ALMR Talkgroup)		-	-
4	Regional IC	**B IC 4**	(ALMR Talkgroup)		-	-	4	Central Command 4	**C CMD 4**	(ALMR Talkgroup)		-	-
5	Regional IC	**B IC 5**	(ALMR Talkgroup)		-	-	5	Central Command 5	**C CMD 5**	(ALMR Talkgroup)		-	-
6	Regional IC	**B IC 6**	(ALMR Talkgroup)		-	-	6	Central Command 6	**C CMD 6**	(ALMR Talkgroup)		-	-
16	Regional IC Multigroup	**B MG**	(ALMR Talkgroup)		-	-	7	Central Multigroup	**C Multi**	(ALMR Talkgroup)		-	-
							8	NiFog Calling	**8CALL90**	851.0125	-	806.0125	156.7
							9	Calling-Direct	**8CALL90D**	851.0125	-	851.0125	156.7
							10	Tactical	**8TAC91**	851.5125	-	806.5125	156.7
							11	Tactical-Direct	**8TAC91D**	851.5125	-	851.5125	156.7
							12	Tactical	**8TAC92**	852.0125	-	807.0125	156.7
							13	Tactical-Direct	**8TAC92D**	852.0125	-	852.0125	156.7
							14	Tactical	**8TAC93**	852.5125	-	807.5125	156.7
							15	Tactical-Direct	**8TAC93D**	852.5125	-	852.5125	156.7
							16	Tactical	**8TAC94**	853.0125	-	808.0125	156.7

5.1.5 Incident Command Scenarios

The following paragraphs and figures depict an operational concept of ALMR interoperable channels communications protocols. Examples of single and multiple incident management situations under a single Incident Commander are provided to assist you in understanding the established protocol. Additional examples are also shown to address those situations where ALMR is not available.

Agencies are strongly encouraged to regularly exercise the use of the Interoperable Zones, both internally and with other ALMR users, to ensure they are prepared to participate in multi-agency/multi-jurisdictional responses.

Incidents will occur outside of the ALMR coverage area and users are encouraged to follow similar response guidelines as shown in the following scenarios. Agencies should contact the ALMR Help Desk for assistance when contacting individuals responsible for local systems outside of the ALMR network.



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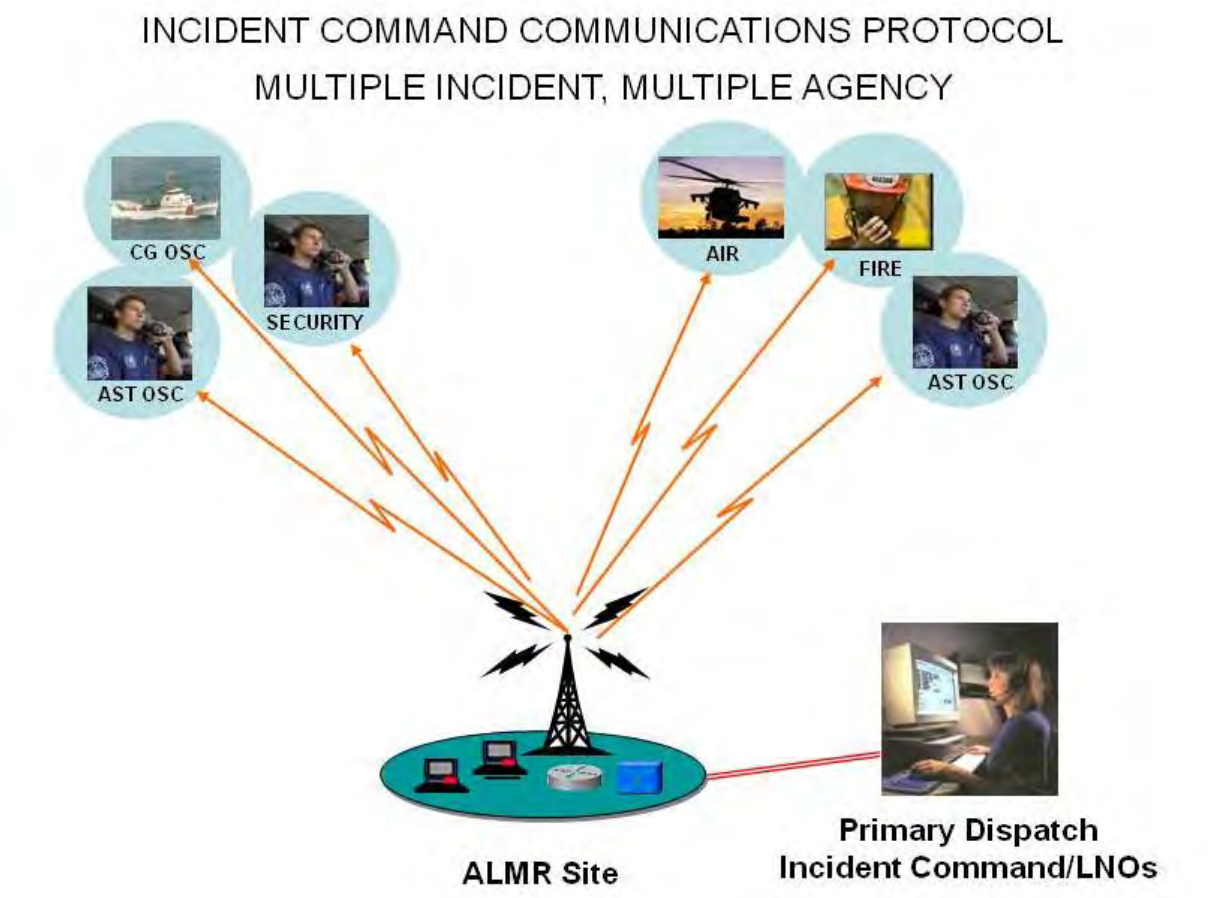
- Single Incident, Single Agency, Single Jurisdiction Scenario
  - Incident Commander (IC)/Liaison Officer (LNO) contacts Dispatch.
  - Incident Commander/LNO provides description of incident and requests support from specific agency.
  - Dispatch assigns a local talkgroup or simplex OP channel for the operation.
  - The agency dispatches a team and notifies Incident Commander.
  - The team and Incident Commander monitor the assigned talkgroup/simplex OP channel to incident completion.
  - Incident Commander/LNO "knocks down" the assigned channel(s) with Dispatch at incident conclusion.



- Multiple Incident, Multiple Agency, Multiple Jurisdiction Scenario
  - On-Scene Commander contacts Incident Command/LNO and reports suspicious activity.
  - Incident Command coordinates with agency; Incident Command Dispatch assigns the command and tactical channel from the geographic Region Interoperable Zone, notifies On-Scene Commander.

- Dispatch notifies assigned agency to conduct "Command" operations on CMD 2 and "Tactical" operations on V TAC 11, 12 and 13.
- Dispatch and Incident Command will monitor CMD 2.
- A second incident occurs during the initial incident; the second On-Scene Commander contacts Incident Command and requests a one "Command" and two "Tactical" channels for the second incident.
- Incident Command coordinates with the second On-Scene Commander and assigns "Command" to CMD 3 and "Tactical" to State 2 and V TAC 4.
- Dispatch and Incident Command monitor assigned "Command" channels CMD 2 and 3 to the incident's completion.
- Incident Commander/LNO "knocks down" the assigned channel(s) with Dispatch at incident conclusion.

NOTE: To connect agencies operating on disparate radio systems, a donor radio and established Part 90 Agreement must be in place. If an outside agency does not have their radio integrated to the ALMR interoperability network, simplex conventional channels must be used.

5.2 Radio Transmission Protocols

The following radio transmission protocols were established for ALMR and should be followed to ensure coordinated and understandable instructions (also see Radio Usage and Transmission Protocols Policy and Procedure 300-6):

- Speak clearly/directly into the microphone from approximately 3 - 5 inches away,
- Be concise and to the point,
- Avoid the use of jargon; no use of ten-codes or military call signs,
- Common/plain language should be used by agencies for day-to-day use and during IC responses and exercises,
- Common/plain language is required during multi-agency, multi-jurisdictional events, or exercises to avoid confusion among responders or exercise participants and controllers, and
- Be professional and courteous, and only use the system for official business.

5.3 Tactical Interoperable Communications Plans

Tactical interoperable communications are defined as the rapid provision of on-scene, incident-based, mission critical voice communications among all first responder agencies (i.e., EMS, fire, law enforcement) as appropriate for the incident, and in support of ICS as defined in the NIMS model.

The Department of Homeland Security provides guidance and a template for the development of Tactical Interoperable Communications Plans (TICPs). The SOA Division of Homeland Security and Emergency Management is responsible for maintenance and update of the Regional TICPs.

TICPs are located at https://alaskalandmobileradio.org/governing-documents/plans-and-strategies/statewide-ticps/. TICPs are password protected and available to ALMR member agencies. You must contact the Operations Management Office to obtain the password.

6.0 Organization for Day-to-Day Operations and Maintenance

The OMO provides oversight of the day-to-day ALMR operational functions on behalf of all system users. The SMO ensures the system is consistently operating at peak efficiency.

6.1 Operations Management Office

The OMO has oversight of the operation and maintenance of ALMR. As the designated agent for the EC, the Operations Manager has the authority to represent EC and UC interests and make decisions on issues related to the routine operations, as well as any urgent or emergency system operational issues or repair decisions.

Specific responsibilities are outlined in the OMO Customer Support Plan located at https://alaskalandmobileradio.org/governing-documents/plans-and-strategies/.

6.2 System Management Office

The SMO oversees the day-to-day technical management, operation and oversight of the System and ensures that ALMR meets the users' needs.

Specific responsibilities are outlined in the SMO Customer Support Plan located at https://alaskalandmobileradio.org/governing-documents/plans-and-strategies/.

6.3 System Partners/Users

SOA, DoD, Federal Non-DoD, and MOA/local/NGO/tribal users should staff their agencies according to their specific mission requirements and level of ALMR system involvement.

Member agencies are responsible for ensuring their subscriber units are maintained according to the manufacturer's specifications.

7.0 Exercises and Training

ALMR stakeholders/user agencies should conduct regular, comprehensive, statewide, and regional training exercises, which serve as proofs of concept and validation of their standardized protocols, operating procedures, and processes.

Recommended intra-agency training activities should also include:

- Recurring training of end users on mobiles and portables utilizing a standardized training plan,
- Recurring training of dispatchers on console operations using ALMR and on doomsday portables, as appropriate,
- Training with partnering organizations on a regular basis, and
- Training of technicians in maintenance and repair of agency-owned equipment.

8.0 Conclusion

The philosophy behind interoperable communications and the cornerstone of ALMR is to "train the way we fight." By using a standardized system for day-to-day operations and a defined set of procedures, transitioning during an emergency incident becomes a seamless effort for participating agencies.

This CONOP gives a high-level view of many of the areas to be addressed to see the big picture for Alaskan first responders. It is not an all-inclusive document and will be reviewed annually and updated as needed.

The UC shall be responsible for the formal approval of the ALMR CONOP document and any substantial revisions hereafter.