

Denver ARES



Guidelines

V2.1

Effective Date: 01Sept2021

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1 Introduction:

The Amateur Radio Emergency Service® (ARES®) consists of Amateur Radio licensees who have voluntarily registered their qualifications and equipment for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization, is eligible to apply for membership in ARES. Training may be required to participate fully in ARES. (See ARES Manual 2015 pg. 6)

ARES can be called upon to supply communication services where no established links exist or to supplement existing systems when they become disabled or overloaded. The communication systems of public safety organizations are designed to routinely handle emergency situations. It is not feasible for them to continuously maintain the resources required to meet peak demands of major disasters. In those instances, radio amateurs serve to complement existing government and disaster agency communications resources.

ARES members bring additional value to the services we render by the additional skills we individually have. For example, our abilities to troubleshoot and repair, first aid training and experience, public agency communications dispatch experience, and so forth. These added skills allow us to flex to meet the needs of fluid situations.

Through training, individual understanding of the ARES mission, structure and organization, we are effective, proficient and professional operators providing competent emergency communications to our served agencies.

1.1 Purpose:

The purpose of this Amateur Radio Emergency Service - Region 10 District 4 (ARES - R10D4) Guidelines is to define an approach for the Denver ARES R10D4 to implement communications coordination and rapid response communications for incident support. This plan also identifies actions to be taken by the ARES R10 D4 Officers and Members, in support of supported agencies to prepare for and deploy to an incident.

1.2 Scope and applicability:

These ARES - R10D4 Guidelines provide guidance to support communications continuity and is applicable to all R10D4 ARES communications personnel who provide support during a disaster. It establishes a framework for the coordinated delivery of communications before, during, and after an incident in the Colorado ARES Region 10 District 4 area.

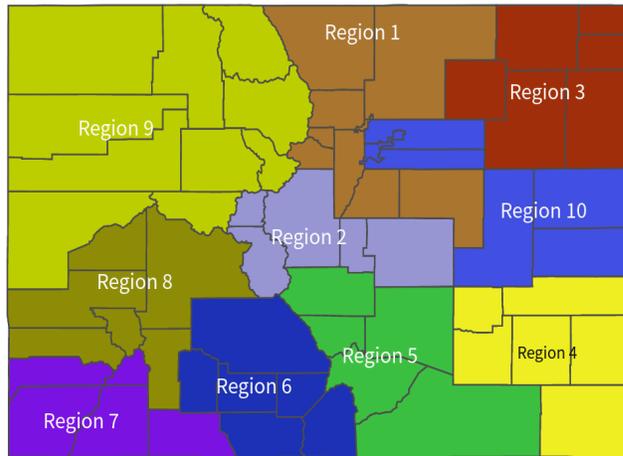


Illustration 1: Current ARES Colorado Section broken down by region. Denver ARES is in Region 10, District 4

2 Communication Strategies:

ARES R10D4 will implement a comprehensive communications strategy to prepare for disasters and provide disaster emergency communications during incidents where a served agency has requested assistance. Natural disasters that can activate ARES - R10D4 can include but are not limited to:

- Flood-related: heavy rain, dam failure, river and roadway storm water;
- Wind-related: tornado and severe thunderstorms;
- Winter-related: heavy snow, ice damage, blizzard conditions, extreme cold, and ice jams;
- Fire-related: wildfire, structure fires, conflagrations, and drought;
- Geologic-related: earthquakes and landslides;
- Chemical Spills: railroad and trucks; and,
- Technological and terrorist attacks

The key to effective disaster emergency communications in an incident is the building of relationships with served agencies. Establishing a working relationship can help pre-identify and develop solutions for existing communications vulnerabilities in the communities of the ARES - R10D4 area.

To effectively respond and provide communications capabilities, ARES - R10D4's communications strategy encompasses three stages of activity: preparations leading up to disasters (Section 3); Training (Section 4) and activation once an incident has been identified (Section 5), and assistance has been requested.

A large part of the preparation is establishing a strong infrastructure for Colorado. Physical equipment identification and the Colorado ARES organizational structure has been put into place so when an incident occurs immediate action can be taken.

3 Regional Organization:

3.1 Colorado ARES

Colorado ARES has one Section Emergency Coordinator to oversee all nine Regions. Colorado ARES is divided up into 9 Regions to cover the large geographical area of the state. Each Region has one Regional Emergency Coordinator. Each Region is then divided up into Districts, generally using county lines as boundaries although some Districts cover multiple counties. Each District has one District Emergency Coordinator that reports to their Regional Emergency Coordinator. Each District Emergency Coordinator leads the District ARES Team members.

3.2 Colorado ARES North Central Region

Region 10 is called the ARES Eastern Region. It is made up of 4 Districts and covers 6 Colorado Counties.

- District 1 (ADAMS) Adams County [R10D1]
- District 2 (ACARES) Arapahoe County [R10D2]
- District 3 (BigSandy ARES) Lincoln, Kit Carson, Cheyenne [R10D3]
- District 4 (D-ARES) Denver City and County [R10D4]

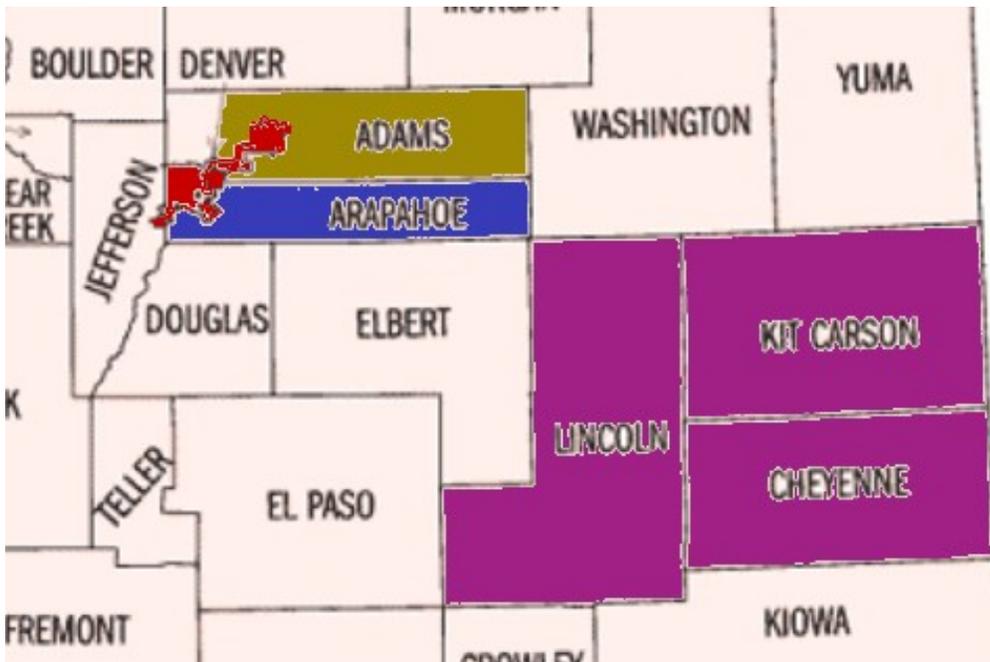


Illustration 2: CO-Region 10 - There are four districts covering six Counties. District 4 covers the City and County of Denver

3.3 Denver ARES Organization (Colorado Region 10, District 4)

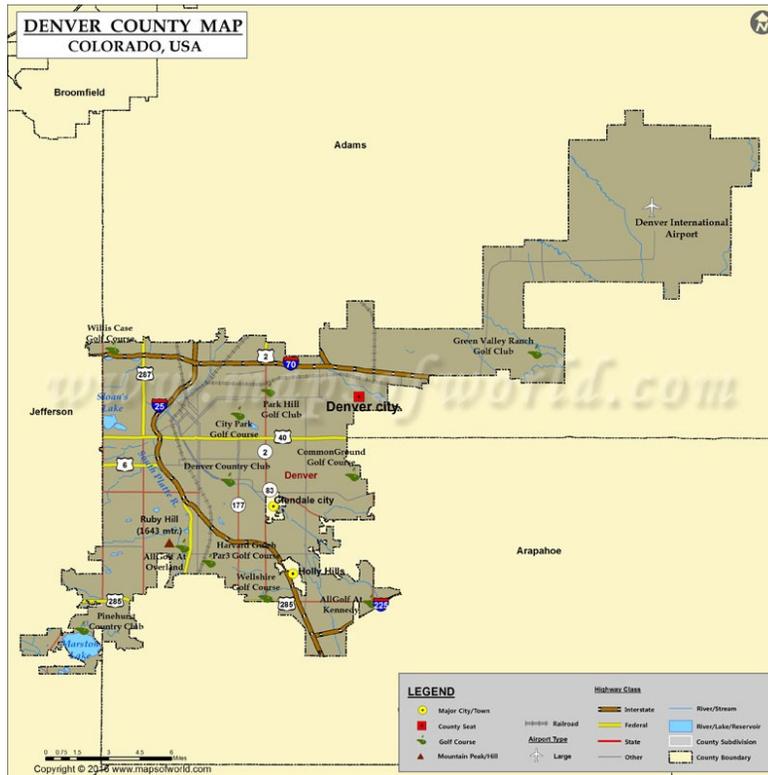


Illustration 3: Map of the City and County of Denver

The City and County of Denver covers 155 square miles and had a population of approximately 716,000 people in 2018. This makes Denver the 19th most populated city in the US, which has increased by approximately 20% since 2010.

Denver includes Denver International Airport which is the 20th busiest airport in the world.

3.3.1 ARES Organization

3.3.1.1 Introduction

The Organizational structure for Denver ARES follows the ICS structure which has the Emergency Coordinator (EC) at the top, a number of Assistant Emergency Coordinators (AEC) , and officers under such positions as Operations, Logistics, Planning, Etc.

3.3.1.2 Emergency Coordinator

The ARRL Emergency Coordinator is the person responsible for the ARES group at the local level. Working with local community officials, the Section Emergency Coordinator (SEC), and other field appointees, the EC leads his or her local ARES group through the planning, preparedness, and response phases. The primary role of the Emergency Coordinator is to coordinate, both with external agencies and within the ARES group. That being said - the EC has the responsibility of building and maintaining the local ARES organization. Those tasks that are not delegated to others are job of the EC. For a complete list of the EC's job refer to the ARRL Emergency Coordinator's Manual <https://www.arrl.org/files/file/Public%2520Service/ECMANUAL.PDF>

Some of these tasks include:

- Promote and enhance the activities of the Amateur Radio Emergency Service (ARES) for the benefit of the public as a voluntary, non-commercial communications service.
- Manage and coordinate the training, organization, and emergency participation of interested amateurs working in support of the communities, agencies, or functions designated by the Section Emergency Coordinator (SEC)/Section Manager (SM).
- Establish viable working partnerships with federal, state, county, city governmental and/or private agencies in the ARES jurisdictional area that needs the services of ARES in emergencies.
- Identify and work collaboratively with local partners to assess how ARES can assist them with their mission, ensuring partners are aware of the limitations and capabilities of ARES.
- Develop detailed local operational plans, with partner agency officials in the jurisdiction that set forth precisely what expectations are during an ARES activation. Work jointly with partners to establish relationships based on mutual trust and respect. All matters involving recruitment and utilization of ARES participants are directed by the EC, in response to the needs assessed by the agency officials. Technical issues involving message format, security of message transmission, disaster welfare inquiry policies, and others, should be reviewed and expounded upon in the ARES detailed local operations plans.
- Establish local communications networks that run on a regular basis, and periodically test those networks by conducting realistic drills.
- Work with the SEC and District Emergency Coordinators (DECs) to identify potential local shortcomings and define resources that may need to be drawn from adjacent ARES groups in support of a local emergency or disaster.
- Establish an emergency communications plan, with welfare traffic inclusive, utilizing the National Traffic System (NTS) as one active component for traffic handling. Establish an operational liaison with local and section nets, particularly for handling welfare traffic in an emergency situation.
- Work with other Amateur Radio public service groups, organizations or programs to establish relationships of mutual trust and respect, and a

coordination mechanism for the good of the public and Amateur Radio. The goal is to foster an efficient and effective Amateur Radio response overall.

- Work for growth in the local ARES program, making it a stronger, more valuable resource and hence able to meet more of the agencies' local needs.

3.3.1.3 Assistant Emergency Coordinator

- The responsibilities of the AEC are as defined and assigned by the EC in support of the EC's responsibilities described above.

3.3.1.4 Public Information Officer

- Spokesperson for Denver ARES

3.3.1.5 Liaison Officer

The Liaison officer is responsible for:

- Communicate with other organizations;
- Compile and disseminate the Weekly Neighborhood News;
- Provide our announcements to other groups;
- Attend weekly state ARES nets; and,
- Attend monthly regional meetings.

3.3.1.6 Operations Officer

The Operations Officer is responsible for:

- Maintain current roster of members;
- Maintain current list of equipment available;
- Coordinate with Radio Net Coordinator for
 - Local Nets and
 - State Nets;
- Establish activation procedures for Denver ARES;
- Develop Incident Action Briefings and Objectives for ARES activation including
 - ICS 201 and
 - ICS 202;
- Work closely with Planning team to develop Incident Action Plans; and,
- Works closely with Training and Net Operations to assure member readiness for potential call outs.

3.3.1.7 Planning Officer

The Planning Officer is responsible for:

- Collect, evaluate, disseminate and use of information;
- Create, maintain and update the Guidelines;
- Write the Initial Action Plan or the Denver ARES ICS-201;

- Develop After Action Report/improvement plan;
- Coordinate with Training; and,
- Maintain calendar and forms on the Denver ARES web site.

3.3.1.8 Logistics Officer

The Logistics Officer is responsible for:

- Procurement, supply and maintenance of resources.

3.3.1.9 Administration / Finance Officer

The Admin/Finance officer is responsible for:

- All financial and administrative matters for Denver ARES

3.3.1.10 Training Officer

The Training Officer is responsible for:

- The training and evaluation of Denver ARES members and
- The creation and development of training exercises and events.

4 Denver ARES Membership

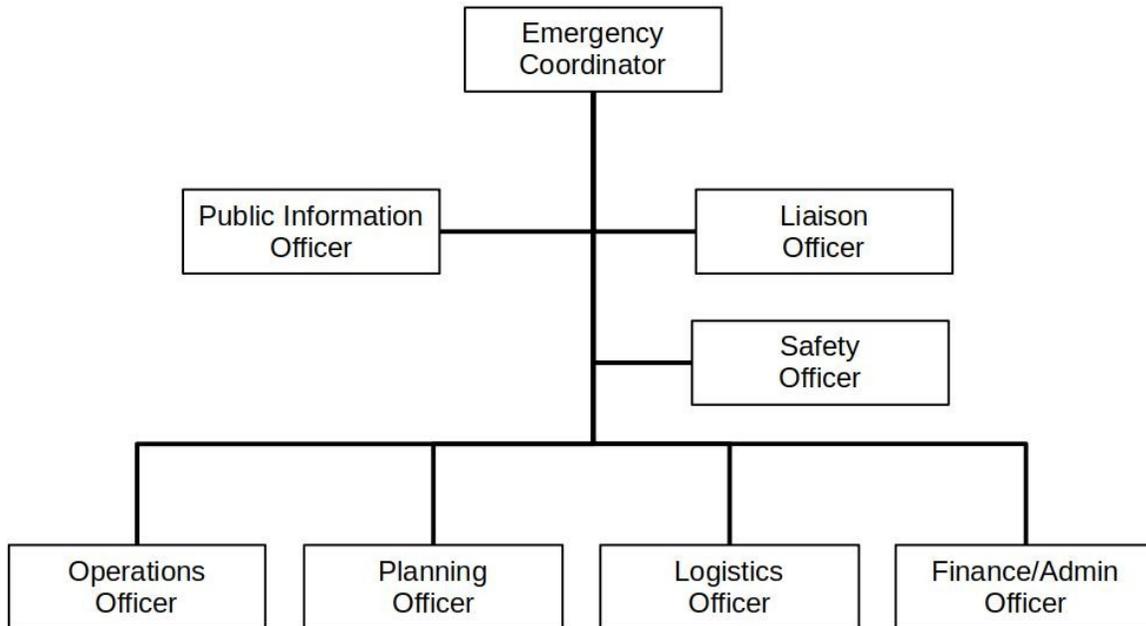


Illustration 4: Officer structure of Denver ARES

4.1 Membership Classes

Denver ARES has two membership classes:

- **Provisional Membership**
 - The application for Denver ARES membership has been approved
 - The ARRL Taskbook has been started
- **Full Membership** (ARES Level 1 and above)
 - The Colorado Volunteer Mobilizer (CVM) application has been submitted and approved. Note that CVM only accepts members who are 18 or older.
 - The Initial classes (ISC-100 and ISC-200) have been passed

4.2 Membership requirements

- All participants shall have a valid Amateur Radio license issued by the Federal Communications Commission.
- A written Denver ARES application and successful completion of the credentialing program conducted by the Colorado Volunteer Mobilizer **are required**.
- Denver ARES members must have an ongoing willingness and availability to provide radio communications support in an emergency and during training programs and exercises.
- Denver ARES members must be members in good standing.
- Must follow the Code of Conduct (See below).
- Must attend at least one face to face / hybrid meeting per quarter.
- Must check into the weekly net at least 12 times in a year.
- Must be Net Control at least twice in a year.
- Must attend 3 training/exercises per year.
- Must have the ARES uniform available consisting of:
 - Khaki polo, long-sleeved, or short-sleeved shirt with Denver ARES logo,
 - Navy blue cargo pants, and
 - Black shoes/boots.

Exceptions to these requirements must be approved by the EC.

4.3 Code of Conduct

As Denver ARES grows and expands its role in Emergency Communications we will need to evolve from a fairly informal organization. This will make it easier for us to bring in new members who will need to build their skills and experience as part of the team.

To facilitate that growth, we are creating some basic ground rules to help us have a common set of expectations and understanding of what we are all committing to as part of Denver ARES.

These are adapted from the IS-235 Ground Rules for Effective Planning.

1. Confidentiality

I agree to not repeat what other group members have said outside of the meeting without their permission, even to other collaborative group members.

2. Play or Pass

I agree to help maintain forward progress by making decisions in meetings (announced reasonably in advance of meetings to all collaborative group members) with the group members present. Also, I agree that group members in attendance at a meeting have the right to pass in a discussion or decision, as long as they still do their part to make the group function.

3. Openness

I agree to remain open to other points of view, to all group members, and to the group process and its outcomes.

4. Listening

I agree to focus on each speaker rather than prepare my response, as well as not interrupting when others are speaking.

5. Fairness

I agree to be committed to equal access and participation in the group.

6. Respect and Conflict

I agree to prepare for and attend meetings, training sessions, and events. We agree that we will begin and end meetings on time. If I cannot attend, I will take steps to get briefed on what was missed.

7. Commitment to the Group

I agree to disagree (when needed) without being disagreeable. Whenever there is conflict that interferes with the group's forward progress or performance. As group members we will cooperate to address the conflict.

8. Resources and Competition

I agree to make resource contributions to the group's success, including individually (e.g., my skills and talents), organizationally (e.g., participating and helping others), and collectively (e.g., working together to obtain resources for the group's work).

9. Commitment to Results

I agree to maintain a commitment to achieving results by working together and working hard.

10. Assume Good Intent

I agree to assume good intent when interacting in the group and to clarify meaning before jumping to conclusions.

4.4 Member Credentialing

Credentialing is the process of establishing the qualifications of ARES® communicators and assessing their background and legitimacy. Denver ARES relies on three types of credentialing processes: It is described briefly here and in more detail in Section

- Background checks provided by the Colorado Volunteer Mobilizer.
- Training and testing provided by ARRL and CO-Train.
- Internal training and testing.

4.4.1 Colorado Volunteer Mobilizer

The Colorado Department of Health and Environment (CDPHE) administers the Colorado Volunteer Mobilizer (CVM) system. All ARES districts in the state participate in this program. The CVM includes personal background checks on all members every two years, provides photo ID badges, and a system for emergency notifications. NOTE: Members should expect to have background checks performed by other organizations.

CVM volunteers are required to have completed and submit certificates for ICS-100 and ICS-700 courses.

CVM volunteers are required to provide a copy of their driver's license and social security number for the background check. The SS# and Driver's License information are needed to complete the criminal background check and the information will not be disseminated.

The link to begin CVM registration is: <https://covolunteers.state.co.us/>

Notify the Denver ARES Emergency Coordinator or a designee upon completion.

NO ONE will be included in a Denver ARES activation without having completed the CVM credentialing process.

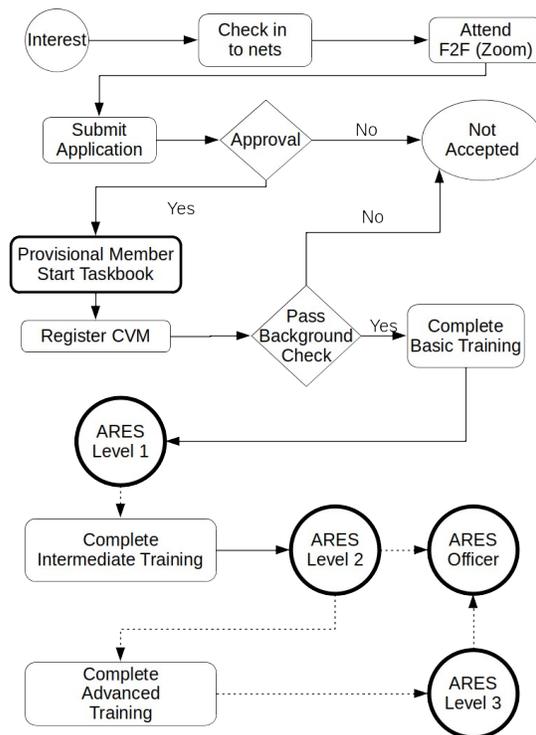


Illustration 5: ARES Membership Process

4.4.2 Tracking Member Skills and Credentials

The goal is to know and document each of its member’s knowledge and capabilities in order to send the "Right" member, to the "Right" place, to fill a critical need - as well as keeping our volunteer responders safe. This means that ARES tracks the credentials that certify the skills of the operator. These skills are classified into Resource Types and are described in Section 4.6

Denver ARES (R10D4) uses CVM as a training certification depository to track most of members training attendance.

Once your CVM entry is completed, you will be issued a Colorado Volunteer Mobilizer Photo ID badge, which will also function as the Statewide Salamander Accountability card.

Three levels of training will allow ARES participants to enter the program and migrate to higher levels of qualification and service.

- Provisional Member
 - The only requirements for this level are: Obtain a Technician class or higher Amateur Radio license. Join an ARES group and Obtain the Task Book.

- **NOTE: This is a non-deployable level.** However, Provisional members are expected to participate in exercises and training events to achieve full member status as quickly.
- Level 1
 - This is the primary level for those who choose a non-leadership role as well as those new to Amateur Radio or emergency communications. This introductory training is conducted by the local ARES group to meet their needs and those of their served agency or partners. This training introduces the ARES participant to the fundamentals of emergency communications and provides instruction on how participants are to conduct themselves while serving in the field or otherwise activated. Participants may elect to remain at this level, or any level, based upon the extent of their desired ARES involvement.
- Level 2
 - This is the primary level for those who choose a team/group leadership position. Participants are also encouraged to take advantage of training opportunities available through partners to enhance their knowledge and skill set.
- Level 3
 - This level of training prepares ARES participants to take on leadership positions and provide training for other members. Continuing personal training is encouraged.
- Emergency Coordinator
 - Participants are required to complete ARRL's EC-016, Emergency Communications for Management, when available along with FEMA Professional Development Series of courses IS-120, IS-230, IS-235, IS-240, IS-241, IS-242, IS-244, IS-288 and IS-2200. Participants also are encouraged to complete the FEMA courses IS-300, and IS-400 should they be available locally.

Served agencies may have additional credentialing requirements above and beyond what Denver ARES requires/recommends.

4.5 Communications

4.5.1 Nets and Frequencies

The Denver ARES organization has a Memorandum of Understanding with the Castle Rock Repeater Group to use their repeaters for primary communications with a verbal agreement with Denver Water to use their repeater as a backup solution.

For a list of frequencies in use by Denver ARES, please see Appendix L: Emergency Response Frequencies. In this appendix there is also a list of frequencies in use by the North Central Region.

Denver ARES has weekly nets utilizing the primary frequency listed on the ICS205 in Appendix L. These nets occur on Tuesday nights at 1900 hours local time with the exception of the last Tuesday of the month when we have our face to face meeting.

4.5.2 Face to Face Meetings

Our face to face meeting is held at the:

Denver Water Administration Campus
1600 West 12 th Ave
Denver, CO 80204
Room: 11 Mile Conference Room – 3 Stone Building
Time: 19:00 Mountain Time

The meetings are also available as a Zoom video conference.

4.5.3 Web site and Social media information

Denver ARES has a web page at DenverARES.org, a Facebook page at Facebook.com/ARESDenver, and a Twitter account at @DenverARES. These sites are used to keep our members and the public aware of our activities and upcoming events.

Also, on the web site, there is a members only area where you can find many confidential documents including this procedure.

4.6 Member Resource Typing

The purpose of Resource typing is to provide a standardized ‘catalog’ of resources available to our partner agencies. The resource typing system is designed to be compliant with the NIMS (National Incident Management System) and ICS (Incident Command System) resource typing specifications.

Amateur radio operators also have varying types of equipment. **ARES is a completely voluntary organization so no one is required to purchase any equipment they do not want to own to participate.** Usually Amateur Radio operators purchase equipment they are interested in operating. This is one of ARES biggest assets to an incident site. Operators come to an incident with their own equipment, which they can operate and can configure in the manner needed to get the job done.

The other side of that coin is that when ARES members show up to an incident, they may have a handheld radio or a fully equipped command post trailer. At an incident, there is a requirement for both - so everyone is needed. Denver ARES has documented the major capabilities of its members. By knowing this in advance the

Operations Officer can send the "Right" person (Credentialing), with the "Right" equipment (Resource Typing) to the "Right" place. This is critical information for Pre-disaster planning.

There is a basic assumption that all equipment declared in your inventory includes the basic accessories for emergency operation. This includes, but is not limited to, proper antenna(s), power source, headset/earphones, and other ancillary equipment required for the mode of operation you are providing.

- **Base Operation** is a semi-permanently installed transceiver or transmitter/receiver. If your radio is installed at your home but can be moved to your motorized vehicle, and also to an offsite location, you would be classified as having base, mobile, and portable operations.
- **Mobile Operation** is a transceiver with power greater than 5 watts operating from a motorized vehicle. If the transceiver can be removed from the vehicle and operating in a different location, the classification is then changed to portable. For example, if you remove your radio from your car/truck/SUV and set it up at a shelter, you would be considered having both mobile and portable operations.
- **Portable Operation** can be considered a transceiver, with power greater than 5 watts, which can be set up at any location using commercial power with a power supply or a battery, generator, solar panel, or other source of off-grid power.
- **Handheld Operation** consists of a low power, 10 watts or less, handheld transceiver commonly referred to as an HT.

4.6.1 Resource Roles

All of our members receive a common base of training, and offer a common skill set and capabilities. However, specific roles require more focused training and practice to provide advanced capabilities.

We offer resources for five specialized roles:

- **Field Operator:** these resources have additional training, equipment, and skills for field dispatch to shelters, incident command posts, and observation posts (race check points, weather spotting, etc.) Field operators make up the core of the radio communications provided by Denver ARES to our partner agencies.
- **Net Control Operator:** these resources have the skills and training to act as a centralized hub for radio operations. They are proficient in managing radio traffic, prioritizing traffic requests, and tracking the status and location of mobile radio operators.

- **Shadow Operator:** these operators provide an individual radio operator to an incident commander, strike team leader, or other supervisory personnel who need direct communications to the radio net. They work closely with their contact to provide get and deliver critical information that is needed by the incident commander to meet mission goals. These operators receive training in public information requirements, and personal communications skills needed when working with an official during a stressful operation.
- **Packet/Winlink Operator:** as more and more communications shift to the delivery and routing of detailed, formatted data, the need for radio resources trained and able to relay ICS and Red Cross forms (213, 213RR, etc) digitally to a centralized clearing house in an EOC or to a regional or department operations center is growing. These resources can operate, set-up and design digital networks for emergency operations.
- **HF Operator:** While much of the tactical radio traffic during events and emergencies is relatively short range, some responses can require longer range communications offered by HF radio bands. Hurricanes, wildfires, earthquakes, and wide-area emergencies such as blizzards and windstorms can affect hundreds of square miles. HF resources are licensed, trained, and practiced in delivering mission critical messages across the region relying on HF radio.

4.6.2 Resource Types

As part of the ARRL (Amateur Radio Relay League) Amateur Radio Emergency Services (ARES), Denver ARES offers four types (or levels) of radio resources representing differing expertise and capabilities. These resources have five roles (specializations) that focus on mission specific skills and capabilities.

This breakdown enables our partner agencies to be able to request the precise specialization and capabilities that they need to achieve their goals, whether they are running the Emergency Operations Center (EOC) during a crisis, or running a walk-a-thon for a charity fund raiser.

- **Type V Operator**
 - Denver ARES does not offer this type of operator for deployment.
- **Type IV Operator**
 - This corresponds to the ARRL ARES Task Book Level 1. This credential level indicates basic operating capabilities. It is not role specific.
 - The Type IV operator has the basic skills, standard equipment, and a moderate amount of experience, all of which enables him/her to operate safely in an assignment, perhaps with coaching. This includes:
 - Technician's or higher License,

- IS-100
- IS-700
- Typical assignments include basic information gathering and status reporting or supporting a more experienced operator.
- **Type III Operator**
 - This corresponds to the ARRL ARES Task Book Level 2. This credential level indicates the ability to operate independently in a specific role. This operator has all the capabilities of a Type IV operator, with the additional requirements listed below. This includes:
 - IS-200
 - IS-800
 - ARRL EC-001
 - Plus is skilled at
 - Net participation (once per quarter) See Annex 16
 - Programming HTs
 - Programming radios for repeater operations
 - 3rd party message handling including ICS 213 forms
 - and has role-specific capabilities (knowledge, skills, equipment) that enables them to perform the indicated role efficiently and effectively, without the need for coaching or assistance.
 - Typical assignments include:
 - Field: Hospitals, shelters, smaller Department Operations Centers (DOC)
 - Net Control: Smaller DOCs, smaller Emergency Operations Centers (EOC)
 - Packet: Hospitals, shelters, smaller DOCs, smaller EOCs
 - Shadow: Event officials at smaller events/incidents
- **Type II Operator**
 - This corresponds to part of the requirements for the ARRL ARES Task Book Level 3. This credential level indicates the ability to operate in a role at an advanced level
 - This operator has all the capabilities of a Type III operator, plus advanced, role-specific capabilities (knowledge, skills, equipment) that enable them

to operate in higher traffic levels, on multiple nets, and in more complicated environments. In particular:

- Experience in participating in public service events
- Participation in the annual Simulated Emergency Test or other Exercises
- Serve as a net controller
- Send digital messaging via Winlink
- At this level there are specializations, which are described in ARES Task Book, which can be found on the Denver ARES website
- Typical assignments include:
 - Field: Larger DOCs
 - Net Control: Larger DOCs, Larger EOCs
 - Packet: Larger DOCs, larger EOCs
 - Shadow: Event officials at larger events
- **Type I Operator**
 - This corresponds to the remaining requirements for the ARRL ARES Task Book Level 3. This credential level indicates a specialty in the role and the ability to be the lead operator
 - This operator has all the capabilities of a Type II operator, plus the added capability (knowledge, skills, equipment) to plan and lead a multi-operator, multi-net, multi-operational period response.
 - Typical assignments include planning, designing, deploying and operating complex, multi-radio, multi-antenna equipment configurations for larger events and incidents.
 - Additional details can be found in the ARES Task Book, which can be found on the Denver ARES website

4.6.3 Resource typing chart

Below is the resource typing chart for Denver ARES.

Expertise	Role				
	Field	Net Control	Shadow	Packet/Winlink	HF
Type I Specialist	Field I	Net Control I	Shadow I	Packet I	HF I
Type II Advanced	Field II	Net Control II	Shadow II	Packet II	HF II
Type III Independent	Field III	Net Control III	Shadow III	Packet III	HF III
Type IV Basic	Communicator IV				
Type V Unknown	Licensed Amateur Radio Operator, Not Credentialed				

Table 1: Resource typing and roles breakdown

4.7 Member Additional Capabilities

Amateur radio operators usually have more equipment that may not fit into the chart above. It is useful to capture this information in that no disaster ever fits neatly in a chart either. When additional capabilities are helpful, members may just have that one skill or piece of equipment that may fit the bill! Some examples may be:

- Family Radio Service (FRS)?
- Citizen's Band (CB)?
- APRS?: Mobile? Portable?
- General Mobile Radio Service (GMRS)?
- Portable Amateur Band Repeater?: VHF? UHF?
- Are you capable of setting up a cross band repeater?: Base? Mobile? Portable?
- GPS Device? Mobile? Portable?
- Generator (willing to loan for R10D1 usage)? Wattage?
- Desktop Computer? Laptop? Portable Printer?
- Mobile Internet?
- Wi-Fi?
- 4-wheel Drive vehicle? Make/Model?
- First Aid Kit? Basic? Home? Advanced?
- Personal Go Kit?

5 Denver ARES Training

This section is just included as a guideline of what training is out there and what is available. This is not meant to be a training guide for members. For detailed guidance on training required for ARES members, please see the ARES R10D4 Training Guide. There may be additional training required for specific positions within ARES.

5.1 FEMA

- URL: <https://training.fema.gov/is/>
- Required
 - This training is required training for performing any deployment functions within ARES.
 - IS-100, IS-200, IS-700, IS-800
- Recommended
 - IS-300 and IS-400
- Additional Opportunities
 - There are MANY additional online classes available at no cost and can be beneficial to every person.

5.2 ARRL

- URL: <http://www.arrl.org/courses-training>
- Required
 - EC-001 Intro to Emergency Communications
- Recommended
 - EC-015 - Public Relations 101 for Radio Amateurs
 - EC-016 Public Service & Emergency Communications Mgmt.

5.3 Served Agencies

- Red Cross
 - Recommended
 - CPR/AED
 - First Aid
 - Sheltering
- Denver OEM (Denver Office of Emergency Management)
 - Required (to be a radio operator in the EOC)
 - There is required training to be deployed as a radio operator within the EOC. For that required training, please see the ARES R10D4 Training Guide.
- Denver Water
 - Required

- Safety Training
 - Radio Equipment training
- DEN (Denver International Airport)
 - Required
- The program for their procedures is still in the development stages.

5.4 Internal

- Required
 - There will be several training exercises throughout the year that will be able to be claimed as the required attendance.
- Recommended
 - There are several training opportunities available from in meeting training. For specifics, please see the ARES R10D4 Training Guide.
- Additional Opportunities
 - Partner agency training such as Regional Ares groups and CERT groups.
- Training Record
 - Complete Denver ARES Training Guide as found at:
- [ARRL Task Book](#)

5.5 Additional Opportunities

- NWS (National Weather Service)
 - URL: https://www.weather.gov/bou/spot_training
 - SKYWARN Spotter Basic Training.
- Cotrain
 - URL: <https://www.train.org/cdctrain/login>
 - Interoperability I, II & III
- AUXCOM
 - Colorado State AUXCOM training.

6 Concept of Operation

Denver ARES provides radio communicators to our partner agencies to enable them to expand their communications capabilities and to establish communications in the event that traditional systems are unavailable or overloaded. These **incident deployments** are staffed by full members of Denver ARES who have the proper training, credentials, and (in some cases) equipment.

In order to maintain our skills, D-ARES also participates in community events, training exercises, and other opportunities to practice, learn, and improve our capabilities. These **participation events** are open to all D-ARES communicators, both Full Members and Provisional Members. In fact this is one of the primary ways

for provisional members to get the training and credentialing needed to become **“deployable”**

6.1 General Operations (these apply to incidents, events, and exercises)

The ARES Region 10 District 4 is primarily an Emergency Support Function 2 (ESF-2) communications group. Our primary mission is to provide emergency communications to locations that have none and reconnect critical information links for responders in areas who have lost it. ARES is usually a backup communication system in case commercial infrastructure fails. ARES is independent from commercial networks, power and internet. Operational needs can range from providing communications to Shelters, Emergency Operation Centers (EOC), Disaster Recovery Centers (DRC), Disaster Assessment Teams (DAT), Search and Rescue Teams (SAR), Community Emergency Response Teams (CERT), American Red Cross and many more.

6.2 Proper Radio Operation

1. Observe the “pause” procedure between exchanges.
2. Listen much, transmit little.
3. Think before you talk.
4. Be accurate and efficient.
5. At start of transmission, first state the party you are calling, followed by your identification.
6. Articulate, don’t slur.
7. Keep communications brief, do not editorialize.
8. Use Pro-words (see Appendix).
9. Tactical in, call-sign out.
10. Keep a communication exchange to one topic only. If there is a second topic to discuss it should be a separate exchange.
11. Do not use slang terms or jargon.
12. If needed, use ITU phonetics to spell out words. Numbers should be stated as single digits only such as “six-zero” rather than “sixty”
13. Speak across the microphone, not into it.
14. Use a headset if available/possible.

15. Do not use a VOX (voice activation) feature.

16. Follow HIPAA Requirements, do not disclose personal medical information over the air.

6.3 Activation

An incident can be for a planned event, an exercise, or for deployment to an incident.

Denver ARES Members will not self-activate!

Members will be activated through one of the methods below. For most events, members will be activated by the EC, or the AEC. In some instances, members will be activated directly by the served agencies. The requestor will provide situational awareness and specific communication needs (Know Before You Go <http://denverares.org/wp-content/uploads/2020/01/KnowBeforeYouGo.pdf>). Make sure you have a hard copy of course certificates when activated.

We use a three stage activation process: Ready, Set, Go!

6.3.1 Ready

The Ready stage is often 24 to 48 hours in advance of an activation. This can be triggered by a scheduled exercise, a planned event, or a 'heads up' from a served agency. Notification is done via email or during a regularly scheduled net. This may only be a 'stand-by' notification and may not result in an activation.

Upon receiving a Ready Activation the members should:

- Review equipment needs and expected activity
- Confirm their Go Kit status, gather any expected forms.
- Charge backup batteries, replenish any consumables.
- Confirm correct programming of radios.

6.3.2 Set

The 'SET' stage is typically 4 to 24 hours in advance of the activation. This can be triggered by expected weather conditions (Storm Prediction Center of Weather Watches), scheduled stage for pre-planned events or exercises, or expected needs from a partner agency. This indicates that there is a high probability of full activation.

Activities should include:

- Notify school, work, etc. of possible absence.
- Charge primary batteries
- Review (practice) skills, confirm capabilities.

- As much as possible, monitor primary radio frequencies for updates.

6.3.3 Go!

The Go stage notification is typically done 0 to 1 hour before activation via CVM notification service. In the case that there are communications disruptions, phone trees or direct radio notification may be used instead.

This notification will include specific information about when and where to expect an Incident Briefing, and may include specific task assignments.

Specific activities include:

- Arrange travel, gas up the car.
- Load your Go Kit.
- Complete (if possible) the Know before you go form.
- Check into the Resource / Command Net.
- Dispatch to Incident Briefing location or to assigned station.

Ready*

Typically 24 to 48 hours advanced notice

Set*

4 to 24 hours advanced notice

Go

0 to 1 hour advanced notice

Notification	Preparation and Action
Email or regular net notification.	Review needs and expected activity. Confirm Go kit status, update forms, charge backup batteries. Confirm radio programming
Email and SMS, possible phone tree if other methods are unavailable	Notify work, school, etc. of possible absence, if appropriate Refresh any consumables in the Go Kit, charge primary batteries. Review skills, capabilities
CVM activation. Net check in. Specific task assignments, Incident Briefing	Arrange travel, gas up the car, load Go Kit. Complete "Know before you go", Check into resource net, dispatch to assigned station

*Note- in the case of an emergency activation the Ready and Set stages may be skipped

Illustration 6: General Order of Activation

Below is a functional breakdown of the various activation methods. They are broken down bases on the activation agency: ARES, Denver (including DIA), Weather Service, and the American Red Cross. Each one uses their own internal activation process, which then extends to activate Denver ARES.

6.4 D-ARES Activation

One pathway for an activation of Denver ARES is from the Regional Emergency Coordinator. This would be a case where other ARES groups in the region are requesting aid, or an activation request passed down from the Colorado Section or from National ARES headquarters. Typically, the North Central region will send a text message to the Denver ARES EC. The EC will then use the D-ARES activation protocol to notify the members.

Denver ARES Activation Protocol:

- CVM (Colorado Volunteer Mobilizer) uses a combined methodology of notification making use of both phone calls and SMS text messaging directly to the volunteer. Each member is responsible for setting up their preferred

activation method on their CVM account, and keeping the contact information current. There are two types of activations via CVM:

- Denver ARES will use CVM to activate members for specific ARES activations.
- CVM will occasionally issue a request for general volunteers, possibly including ARES members. In this case, **do not commit to the Activation until you have checked with The Denver ARES EC or designated contact.**
- For less time critical activations (such as a planned event, or an general exercise, Denver ARES will use **email** as a notification process.
- SMS Messaging will be used for time critical activations if CVM is unavailable.
- Phone Tree will be used if niether email or SMS is available.
- In the event that all other methods are compromised, we will use radio on In order of availability: our primary VHF frequency, our secondary VHF frequency or, in the event that the repeaters are down, we will set up a Simplex net to relay information via our primary VHF Simplex Frequency. See D-ARES Radio Communications Plan for specific frequencies and configuration.
- Denver
 - Denver OEM
 - Denver OEM will activate members of the appropriate shift directly. Upon being activated by the OEM, members need to notify the EC by phone they have been activated by phone.
 - If you are unable to respond, contact the EC by phone call.
 - DEN (Denver Airport) OEM
 - Still in the development stages.
- Denver Water
 - TBD
- American Red Cross
 - TBD
- National Weather Service requests the activation of D-ARES communicators using the SkyWarn program. However, all D-ARES members are encouraged to check the NWS Hazardous Weather Statements for indications of possible Spotter Activation. The SkyWarn officer will send text messages to the D-ARES

Weather Coordinator, who will then use D-ARES methods (above) to notify the members. Typically this will follow the ready - set - go process.

6.5 Activation and Coordination

6.5.1 Introduction

Much depends on the size of the event. The requesting agency will notify the R10D4 Emergency Coordinator as specified in section on Activation. The EC will then notify members as described in the Activation section and create an availability list. He will then notify the ARES Regional Emergency Coordinator of the activation notice.

- **Large Scale Incidents:** Large scale incidents that span over several regions or districts may require the State Emergency Operations Center (EOC) to activate. In such cases the ARES State Emergency Coordinator will deploy to the State EOC to coordinate regional assets and teams. Such events will require the R10D4 team to primarily serve our local agencies but in addition help augment other ARES district teams as possible. The R10D4 - EC will report to our Regional Emergency Coordinator status, short falls, and available assets which he will pass on to the State - EC for review.
- **Multi-District Incidents:** Incidents that may span over a couple of ARES Districts and do not require the State Emergency Operations Center (EOC) to activate will be coordinated by the Regional Emergency Coordinator. Such events will require the R10D4 team to primarily serve our local agencies. If the incident is not in the city and county of Denver, the R10D4 - EC will report to our Regional Emergency Coordinator availability of team members to support those districts in need.
- **R10D4 District Incident:** Such events will require the R10D4 team to serve our local agencies. The R10D4 - EC will report to our Regional Emergency Coordinator Status, short falls and progress on the incident.

Communication Protocols

- VHF/UHF
 - Frequencies will be those specified in the appropriate document (ICS205 Denver or ICS217 NCR) based on the impacted area if possible unless otherwise specified.
- HF
 - HF frequencies will be specified by a higher authority to communicate with that organization.
- Digital

- Frequencies and protocol will be specified by a higher authority to communicate with that organization.
- APRS
 - APRS, if used, is already documented for the region.

Booth Protocol

- Booth workers will wear ARES uniform.
- Booth workers will be prepared to speak to public.
- If speaking to non-technical people, workers should be prepared to speak in plain language.
- Before the event, the booth workers will coordinate to:
 - Decide on schedules and/or shifts,
 - Find the location of the booth,
 - Get any required contacts, such as organizers, and
 - Verify who is bringing supplies and performing setup.

6.6 HIPAA Requirements

6.6.1 Purpose

This Standard Operating Procedure (SOP) establishes the Denver Amateur Radio Emergency Services (D-ARES) role in the risk communication process involving mass patient care when no other means of secure communication such as phone, mobile phone, or secure messaging are available. This SOP addresses messages containing patient or medical details only and does not encompass all message types.

6.6.2 Policy

A D-ARES representative will coordinate communication with served and partner agencies and facilitate dissemination of information during emergencies involving mass patient care.

6.6.3 Background

6.6.3.1 Privacy of Radio Messages

Encoding and encryption of Amateur Radio messages for the purpose of obscuring their content is not permitted by Rule 97. There is no expectation of privacy for any message sent via Amateur Radio frequencies, even when utilizing digital transmission methods such as Winlink. While legally encoded, these messages are not secretly encrypted and could be decoded using the appropriate equipment.

6.6.3.2 Standard Operating Procedure

During a mass patient care emergency, D-ARES members may be asked to facilitate the transmission of messages which contain medical details of a patient or group of

patients impacted by the emergency. The D-ARES member, if asked by a medical representative to transmit Protected Health Information (PHI), will alert that representative that privacy cannot be guaranteed. The medical professionals take the responsibility for the content of the messages understanding this lack of privacy. The requesting agency/facility/provider will weigh the risk of breach vs. the urgency of the message.

6.6.3.3 Amateur Radio Transmission Protocol

- Voice communication: when possible, the use of simplex transmissions on frequencies with minimal activity should be utilized.
- Station operator must use the lowest transmit power required to complete the message to reduce the chance of PHI-related information being overheard.
- Peer-to-Peer digital transmission using Winlink is preferred over both voice and Winlink via gateway transmissions to reduce the likelihood of message interception and decryption.
- Winlink templates such as “IHS Patient Form” (aka “Field Patient Report”) may be used to decrease transmission content.
- During an EOC activation, D-ARES will use the EOC templates as needed.
- If an EOC template is not available, and ICS form may be utilized.

6.6.4 Written Records

The D-ARES member should record on the ICS/EOC form the least amount of PHI required to complete the details. A log entry of “message delivered from Denver Health paramedic unit 12 to Denver Health ER via Winlink” and the time will suffice. In this example, the Denver Health ER staff will log the message details and time. This process will reduce or eliminate any written PHI on the log.

6.6.5 Closure

HIPAA and other government regulations should not be considered a hindrance in any communications failure. Mass care events must be coordinated with the cooperation of medical professionals and hospital organizers, and government lawmakers have allowed for these exceptions to HIPAA rules. D-ARES must attempt to reduce or eliminate the transmission of PHI, but not at the expense of negatively impacting the greater public health or even the care of one patient.

7 Annex A: Operational Procedures for Members

7.1 Introduction:

This Annex provides general guidance for disaster support. While disasters vary in types and scopes, the basic member response is the same. What you bring or tasks

assigned to you will vary. The intention is a general overview for deploying to a natural or man made disaster: an All-hazards approach. Checklists and strategies will give members a great starting point for pre disaster preparation and insight to expectations at the disaster site. Kits and equipment are individualized by each member's interest and desire. **This is not a requirements list.** Members may pick, choose and enhance items listed in this annex as needed. This is merely a jumping off point.

ARES Members during non-disaster time need to prepare in order to respond in a timely manner. Preparation of go kits is important because it is much easier to grab a pack than work from a list to gather items up. *It is very easy to overlook something you really need out in the field when you are rushing to meet at the rally point.*

7.2 General Instructions

First and most important:

Members shall not self-deploy.

Self-deploying to a site without a specific mission only adds to congestion and confusion to the scene. Our greatest support is by filling gaps generated in the overall disaster response plan created and orchestrated by the Incident Commander with his support staff.

When a disaster strikes the Emergency Coordinator (EC) will be notified (and possibly other members) by the requesting agency. The EC will send out an activation notice to all members per the notification plan in Section 5.a. You will need to respond to the notification stating your availability (Available, Delayed [time] or Unavailable). The Operations officer (or designated IC) will compile the availability list.

This would be a good time to begin monitoring the Primary Frequency of 146.670 MHz as it will be setup for the Operations Net. The Operations Officer or designated IC will be conducting the incident operations on this net. ***If the incident is of large enough scale, the Backup Frequency of 147.210 will be setup for the Resource/Logistics Net.*** The net control station will be checking in the ARES members and issuing assignments on this net.

The only action taken by you at this moment is reporting your availability. The Operations officer (or IC) needs to assess the incoming request for services and weigh them against the availability of ARES members. He will be considering the next 2 (12 hour) operational periods. Your service may be needed immediately -or- may not be needed until the next operational period. **It is important to wait until you are notified of your mission assignment before you take action.** The Operations officer or his support staff will notify you with that information.

Once you are contacted with a mission assignment grab your go kits, personal gear and report to the rally point ready to roll. **Notify the Net Control on the Resource/Logistics Net of your actions in route.**

It is essential that you are vigilant about your surroundings and dangers. No matter your mission assignment

REMEMBER, SAFETY FIRST! YOU MUST BE YOUR OWN ADVOCATE FIRST!

If something appears or feels unsafe DO NOT DO IT. Just report back to command your concerns and get to a safe place.

Once you have arrived at your mission assignment and are operational - report to the AEC / Operations Officer your status and update reports on the Operations Net.

Once your mission is complete and you have been released by the agency, make the final report to the Operations Officer on the Operations Net then notify the Net Control Station of your release / availability on the Resource/Logistics Net.

7.3 Participation in Community Events, Training, and Exercises

Participation in scheduled events is open to all D-ARES members. In fact, it is one of the best ways for Provisional members to get the training and experience needed to become full members.

Note: If a Provisional Member is a minor, they must be accompanied by their parent or guardian to participate in Community events, training, or exercises.

These events are generally scheduled in advance, and will have specific training or skills practice sessions before the actual event, so that everyone is comfortable with their roles.

7.4 Incident Deployment

When a partner agency requests D-ARES' support on an incident, they typically specify the number and types of resources that are needed, along with estimates of the duration and any special equipment or supplies that the communicator should provide. Any special equipment will be drawn from the D-ARES cache, but the members need to have practice and be credentialed to meet the partners needs.

7.4.1 Deployment Preparation

Deployment could be just down the street to a Red Cross Shelter, or it could be several states away to provide support to an earthquake, a wildfire, or a hurricane.

Or, it could be in your own Ham shack – providing message traffic support for a severe storm response on the other side of town.

Regardless of the actual location, the preparation is the same: Know what you need, where you are going and to whom you are reporting. To help with this we rely on standardized form that organize the information you need, and helps prevent showing up only to discover that you forgot a key piece of equipment.

7.4.2 Information and Forms

7.4.2.1 Know Before You Go

The “Know before you go” form is used to ensure that the operator has enough information to proceed in a safe and effective manner.

The Know-Before-You-Go form can be found at:

<http://denverares.org/wp-content/uploads/2020/01/KnowBeforeYouGo.pdf>

You should know all information indicated on this for prior to departing to a site.

7.4.2.2 Course Certificates

Hard copy of all course certificates such as ICS-100, ICS-200, ICS-700, ICS-800 and EC-001.

These should be kept in a weather resistant container.

Common Responsibilities for Activations (as listed at the end of the ARRL ARES Emergency Communicator Individual Task Book)

7.4.2.3 Other

It is the responsibility of each ARES Communicator to be prepared with the proper dress, equipment, knowledge, and demeanor to support the assigned task. If you are unable to perform or uncomfortable with your assignment, let your Team Leader or requesting agency know so that you may be assigned appropriately.

7.4.3 Deployment to a Partner Agency

- Pre-event
 - Be qualified to deploy
 - Provisional members can not be deployed
 - Members can only be deployed with the appropriate certification
 - Have a go kit prepared (See Annex O)
 - Have all radios that may be used in a deployment programmed with the R10D4 frequency list
- At Staging
 - Complete and turn in forms and check in at Staging Area

- Obtain briefing from Agency Lead or Resource Team Leader regarding incident/event
- Receive Job assignment, reporting location and travel instructions
- Verify equipment needed for assignment
- Obtain Frequency Plan (ARES □ Frequency Plan or ICS Form 205)
- Access personal readiness for incident and climate (physical, clothing, medications, money, equipment guides, etc.)
- Maintain a check list of your equipment and personal “Go-Kit” (See “**Pre-event**” above)
- Inform others as to where you are going and how to contact you
- Review your Operations and Procedures Notebook/Documentation
- At Assignment
 - Check in with the on-site leader or agency official
 - Check in with Net Control to inform you are on site
 - Determine location to set up equipment
 - Set up your equipment with safety in mind
 - Establish radio contact with net control per frequency plan
 - Prepare and maintain reports and forms for your task
 - Use clear text and ICS terminology in all radio communications (no codes)
 - Be mindful of HIPAA concerns
 - Carry out assignments as directed
- At end of shift or demobilization
 - Brief relief communicator on ongoing operations when relieved
 - Retrieve all personal gear and return your area to pre-arrival condition
 - Check out with net control or return to staging area
 - Report to Staging Area for R&R, reassignment or deactivation
 - Participate in after action activities as directed
 - Communicators may want to maintain personal log of actions and events

7.4.4 Team Leader Responsibilities

- Review common responsibilities
- Participate in incident meetings and briefings as required
- Determine status of unit activities
- Determine resource needs
- Order additional resources as needed
- Provide unit with status updates and reports
- Assign specific duties
- Maintain personnel accountability status
- Monitor safety and security of unit

- Supervise demobilization
- Collect and maintain all unit records and forms

8 Annex B: Emergency Coordinator Disaster Procedures

External Document

9 Annex C: Assistant Emergency Coordinator Disaster Procedures

External Document

10 Annex D: Operations Disaster Procedures

External Document

11 Annex E: Planning Disaster Procedures

External Document

12 Annex F: Logistics Disaster Procedures

External Document

13 Annex G: Administration / Finance Disaster procedures

External Document

14 Annex H: Public Information Disaster Procedures

External Document

15 Annex I: Training Disaster Procedures

External Document

16 Annex J: Net Control Procedures

External Document

17 Annex K: Weather Net Procedures

External Document

18 Annex M: Pro-word list and ITU Phonetics

External Document

19 Annex N: Contact Information

External Document

20 Annex O: Go Kits

External Document – See Website