

American Radio Relay League, Inc.®
South Texas Section
Amateur Radio Emergency Service®
Emergency Communications Plan
Revised December 22 2007, Version 1.4

1. **Authority:** The Amateur Radio Emergency Service® (ARES®)¹ is sponsored by the American Radio Relay League (ARRL) to fulfill the general responsibility of the Amateur Radio service to be prepared to provide communications in an emergency. ARES exists for the purpose of providing supplemental communications for the public, government and non-profit organizations involved in emergency and disaster response, preparedness, and recovery. The ARES field organization reaches all 50 states, as well as Puerto Rico and other island protectorates, and territories. In the ARRL South Texas Section, ARES groups serve all 97 counties including other agencies that serve those counties.

The Section Manager (SM) is elected by the American Radio Relay League (ARRL) members in the ARRL South Texas Section, as their representative. The SM delegates their responsibility for administering and directing the ARES within the section to an appointed Section Emergency Coordinator (SEC). In consultation with the SM, the SEC appoints District Emergency Coordinators (DEC) over multi-county districts, and Emergency Coordinators (EC) for counties or sub-divisions within counties. The SEC, DECs, and ECs are charged with developing, recruiting, training, leading and directing ARES members, developing emergency plans and relationships with served agencies within their geographic area as necessary to meet anticipated communications emergencies.

2. **Purpose:** This plan exists to provide general and specific guidance to the appointed leaders of the Amateur Radio Emergency Service (ARES) in meeting their responsibilities to develop, train, and direct ARES members in mitigating communications emergencies among public safety and disaster relief organizations within the ARRL South Texas Section.

3. **Situation and Threats**

- 3.1. Situation

- 3.1.1. General: The ARRL South Texas Section consists of 97 counties, covering nearly 96,000 square miles. It is approximately 525 miles east to west, and 450 miles north to south. It includes over 600 miles of coast line with the Gulf of Mexico, 450 miles of border with Mexico, and 60 miles of border with Louisiana. The geography includes thick forest, coastal plains, hill country, rivers and lakes. The population of over 11 million people is in large urban areas with high population density (Houston, San Antonio, Austin), and counties with little population and low density. It includes the state capitol in Austin, and the international ports of Houston and Galveston.

- 3.1.2. Climate: The climate across the section is a modified marine climate, classified subtropical, with four subheadings. A marine climate is caused by the predominant onshore flow of tropical maritime air from the Gulf of Mexico. The onshore flow is modified by a decrease in moisture content from east to west and by intermittent seasonal intrusions of continental air. The four Subtropical subheadings - Humid, Sub-humid, Semi-arid, and Arid - account for the changes in moisture content of the northward flow of Gulf air across the section. The eastern third of the section has a Subtropical Humid climate that is most noted for warm summers. The central third of the section has a subtropical, sub-humid climate that is characterized by hot summers and dry winters. The western most third of the section has a subtropical steppe climate that is typified by semi-arid to arid conditions.

- 3.2. Threats

- 3.2.1. The section can be affected by extreme seasonal weather conditions, including temperatures above 100 degrees during late summer, drought, abundant rainfall, high humidity, and mild winters with rare snowfall.
- 3.2.2. Weather threats include flooding and flash flooding, strong wind, ice storms, tropical storms and hurricanes, tornadoes, thunderstorms and severe thunderstorms, lightning, drought and extreme heat.
- 3.2.3. Technological threats include hazardous materials from both fixed facilities, such as the major petrochemical facilities in Pasadena, Corpus Christi and Port Arthur, and from transportation incidents on interstate and state highways, railroads, urban, rural and suburban roads. Radiological incidents are possible from the South Texas Nuclear Project near Bay City, as well as the many medical and industrial uses of radioactive materials. Structure fires and wildfires claim 20-30 deaths each year in the counties of the South Texas Section.
- 3.2.4. Hostile individuals or groups may engage in terrorist acts any place that large groups of people gather; against private or government buildings, petrochemical and other industrial sites; air, sea, rail, highway transportation and communications infrastructure. Materials employed can include conventional firearms, biological, nuclear, incendiary, chemicals, explosives, and improvised devices.

4. Concept of operations

- 4.1. When an agency asks the South Texas Section ARES for communications assistance, it gets the full benefit of the entire ARES organization. The ARES infrastructure includes privately-owned radios, antennas, ARES-dedicated and cooperating repeaters, and accessory equipment. Even more important than the equipment, the organizational structure includes numerous nets, training programs and exercises, and cooperative planning with the agencies to learn their needs, and the services of scores of trained operators, few of whom are visible at the disaster site.
- 4.2. The ARES field organization is designed to support as fully as possible, upon request, any and all emergency response and disaster relief organizations. In doing so, ARES retains its own identity and organizational structure, personnel and physical infrastructure while providing communications support. When ARES operators are assigned to a duty post anywhere, they remain an ARES operator for the full length of the ARES assignment. That operator is responsible directly to the EC (and Assistant ECs), and to no one outside of the ARES organization.

The officials of a served agency must never be permitted to take control of ARES operators assigned to them, or to absorb them into their own organization, though they may some times attempt that. ARES does not recruit and train operators for other groups to use for non-ARES purposes.

- 4.3. Officials of emergency and disaster response agencies who desire ARES assistance should contact any ARES Emergency Coordinator or District Emergency Coordinator. Their names, addresses and phone numbers can be obtained from ARRL HQ or from local Amateur Radio operators, or from Amateur Radio clubs.
- 4.4. Officials may also contact any of the following ARES representatives:

Section Emergency Coordinator
Mike Schwartz – KG5TL
8425 North Old Smithville Road
Muldoon TX 78949
Phone: 830-839-4777 (Evening)
512-303-3443 (Day)
Email: mikeschwartz@austin.rr.com

Section Manager
Ray Taylor N5NAV
688 S Comal Avenue
New Braunfels TX 78130-7631
Phone: 830-625-1683
Email: ataylor22611@satx.rr.com

ARRL Headquarters
225 Main Street
Newington CT 06111
Phone: 860-594-0200
FAX: 860-594-0259
Email: hq@arrl.org

- 4.5. All requests for ARES assistance should be directed first to the closest ARES leader to the incident or disaster, usually an Emergency Coordinator, or District EC. The EC, or their designated representative, are the only persons who may authorize the activation of the registered ARES members in their area. When any ARES member becomes aware of an actual or potential need for ARES, all effort should be made to contact the responsible EC or an Assistant EC. Only when an EC or delegated representative cannot be contacted in a reasonable time should the DEC or SEC be contacted. Once the EC, DEC, or SEC has been notified, ARES members should monitor their local resource repeater, or the Texas state ARES HF net, for more information and instructions.

Spontaneous volunteers are rarely protected by the liability insurance of emergency and disaster response organizations. Accordingly, ARES members are prohibited from traveling to the site of any emergency incident beyond their immediate area unless authorized to do so by an EC, DEC, SEC, or their designated representative, such as the net control station of a resource net. ARES members will only be authorized to go to the site of an emergency incident after the appropriate served agency requests ARES help at that site.

- 4.6. Communications emergencies take two general forms; systems either fail, or are otherwise inadequate for the immediate needs. System failure can be caused by hardware (physical equipment, electrical or interconnecting lines) or software. Inadequacy can mean the existing infrastructure is inadequate to handle the information volume, or the organizations responding to an incident have unanticipated communications needs, such as communicating with non-traditional services.
- 4.7. ARES leaders identify the communications needs and priorities of the served agencies, then assign and direct ARES resources to mitigate that need. ARES ECs and DECs should avoid accepting operating assignments, so they remain available to coordinate their ARES resources.
- 4.8. The staffing priority in any emergency incident will be given first to those who are registered with ARES. Second priority will be members of RACES groups. Third priority will be Amateur Radio operators not associated with any ARES or RACES group. Assignments will be given to minimize the travel distance.
- 4.9. If any requested action involves unacceptable risk, the person should NOT take the action. Upon refusal, the person should notify the net control station that they will not be performing the requested action, along with a brief statement of their risk assessment. There is not any ARES assignment which is so important that it cannot be done safely.

5. Organization

- 5.1. Districts:** The 97 counties in the South Texas Section are divided into fourteen (14) ARES districts as follows. The SEC may appoint District Emergency Coordinators (DEC) and Emergency Coordinators (EC) as needed to effectively organize ARES activities and groups within these districts and counties. Maximum effort should be made to appoint ECs for counties with over 50,000 in population. ARES members are under the direction of the EC, Assistant ECs, DECs, and the SEC.
- 5.1.1.** District 1: Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, Waller
 - 5.1.2.** District 2: Angelina, Houston, Polk, San Jacinto, Trinity, Walker
 - 5.1.3.** District 3: Brooks, Cameron, Hidalgo, Jim Hogg, Kenedy, Starr, Willacy, Zapata
 - 5.1.4.** District 4: Aransas, Bee, Jim Wells, Kleberg, Live Oak, Nueces, Refugio, San Patricio
 - 5.1.5.** District 5: Brazos, Burleson, Grimes, Leon, Madison, Milam, Robertson, Washington
 - 5.1.6.** District 6: Bandera, Edwards, Kerr, Kinney, Medina, Real, Uvalde, Val Verde
 - 5.1.7.** District 7: Bastrop, Blanco, Burnet, Caldwell, Hays, Lee, Travis, Williamson
 - 5.1.8.** District 8: Concho, Gillespie, Kimble, Llano, Mason, McCullough, Menard, San Saba
 - 5.1.9.** District 9: Jasper, Jefferson, Hardin, Newton, Orange, Sabine, San Augustine, Tyler
 - 5.1.10.** District 10: Calhoun, DeWitt, Goliad, Karnes, Victoria
 - 5.1.11.** District 11: Austin, Colorado, Fayette, Jackson, Lavaca, Matagorda, Wharton
 - 5.1.12.** District 12: Atascosa, Bexar, Comal, Gonzales, Guadalupe, Kendall, Wilson
 - 5.1.13.** District 13: Dimmit, Duval, Frio, LaSalle, Maverick, McMullen, Webb, Zavala
 - 5.1.14.** District 14: Harris
- 5.2. Training:** ARES leaders are expected to complete the following training classes, prior to or as soon after their appointment as possible.
- 5.2.1.** Emergency Coordinator: ARRL Amateur Radio Emergency Communications Level 1
 - 5.2.2.** District Emergency Coordinator: ARRL Amateur Radio Emergency Communications Level 1 and 2
 - 5.2.3.** Section Emergency Coordinator: ARRL Amateur Radio Emergency Communications Level 1, 2 and 3
- 5.3.** Emergency Coordinators may appoint, and cancel the appointment of, Assistant ECs as necessary. It is recommended these appointments be given the titles and duties as described by the Incident Command System for general staff positions.
- 5.4. Situation Report:**
 Upon activation of an ARES group by it's leaders, the EC or representative should send a short situation report to their DEC not less than once daily. DECs should consolidate EC reports and send one to the SEC no later than 1900 local time each day of the ARES activation. By citing only the line number (Line 1, Line 2, Line 3, Line 4a, Line 4b, etc), this can be passed in radiogram format.

ARES DAILY SITUATION REPORT

1. INCIDENT TYPE: brief description
2. REPORTING PERIOD:
3. SUPPORTED CLIENTS & LOCATIONS: brief description
4. NUMBER OF ARES OPERATORS
 - 4a. Currently committed:
 - 4b. Contacted:
 - 4c. Additional needed:
5. REPORT BY: name, callsign, county

5.5. Mutual Aid:

The population of the counties in the South Texas section varies greatly, from around 400 in Kenedy, to over 3.5 million in Harris. Regardless of the population, extensive, widespread, or extended operations may require additional ARES members from adjacent counties, ARES districts within the section, or from outside of the section.

5.5.1.Four ARES response levels are identified:

Level 1 Response – The primary responding ARES group has sufficient resources to meet the identified communications needs, using registered ARES or spontaneous volunteers.

Level 2 Response – The resources of the primary ARES group are insufficient, and additional resources are needed from the ARES groups in adjacent counties, or from within the ARES district. As soon as this need is reasonably anticipated, the EC should contact the ECs of adjacent counties, identify the needs, and then inform their DEC. If the DEC cannot be contacted after multiple attempts over a reasonable time, the EC should contact the SEC or SM.

Level 3 Response – The resources of the primary ARES group, adjacent counties and the ARES district are insufficient, and additional resources are needed. As soon as this need is reasonably anticipated, the DEC should contact the DEC of adjacent districts, identify the needs, and then inform the SEC. If the SEC cannot be contacted after multiple attempts over a reasonable time, the DEC should contact the SM.

Level 4 Response - The resources of the primary ARES group, adjacent counties, surrounding ARES Districts are insufficient, and additional resources are needed from outside the South Texas section. As soon as this need is reasonably anticipated, the DEC should contact the SEC and SM. The SEC and SM will normally coordinate resources from outside the section.

5.5.2. All requests for mutual assistance resources within the South Texas will follow the Amateur Radio Communications Teams (ARCT) resource types, ARCT 1 through 4; see Appendix A.

In-Section Response:

The members of pre-organized or ad hoc mutual assistance teams for response in the section will be designated as ARES Communications Response Teams (ARES CRTs), Type 1-4.

Out of Section Response:

The members of pre-organized or ad hoc mutual assistance teams for response outside of the South Texas section are designated as ARES Mutual Assistance Teams (ARES MATs), Type 1-4.

Type	Response Area	Duration	Recommended by	Approved by
ARES CRT	Within Section	5-7 days	EC	DEC
ARES MAT	Outside Section	7-14 days	DEC	SEC

- 6. Readiness conditions.** Most emergencies follow some recognizable build-up period during which actions can be taken to achieve a state of maximum readiness. These readiness conditions are used as a method of increasing the alert posture of ARES members.
- 6.1. Condition 4 –Normal.** Denotes that normally and routinely conditions are present.
- 6.1.1.** ARES leaders should maintain contact on the state ARES HF net at 7:30 PM each Monday evening; establish relationships with potential ARES clients; organize, recruit and train ARES members.
- 6.1.2.** ARES members should improve their knowledge and skills through ARECC training, participating in public service events, meetings, traffic and ARES training nets; program radios with ARES frequencies; verify the readiness of their equipment on a monthly basis; and enjoy Amateur Radio.
- 6.2. Condition 3 – Increased Readiness.** Condition 3 refers to a situation which presents an increased potential threat, but poses no immediate threat to life or property. This condition includes situations which could become hazardous. This includes severe weather such as hurricane watch, high wind (above 58 MPH) expected, tornado watch, flash flood watch, or winter storm watch.
- 6.2.1.** If activated, ARES leaders should maintain contact on the state ARES HF net at 7 PM each evening; review ARES emergency communications plan; contact potential ARES clients; notify ARES members that activation is possible but not expected.
- 6.2.2.** ARES members should review their family emergency plan; refresh food, water and clothes in go-kits; check or charge HT and storage batteries weekly; carry HT at all times; keep their vehicle fuel tank more than half full; and participate in weekly nets.
- 6.3. Condition 2 – Escalated Response Condition.** Condition 2 could be triggered by severe weather warnings, such as inland hurricane; high wind, high water, tornado, flash flood, or winter storm warnings.
- 6.3.1.** If activated, ARES leaders, or their representative, should maintain contact on the state ARES HF net at 7 PM each evening; prepare operator schedules for key clients, operations and resource nets; activate a resource net; conduct a daily meeting or conference call with ARES leaders; notify ARES members that activation is expected or imminent.
- 6.3.2.** ARES members should monitor their ARES repeaters; secure their home, family and emergency supplies; top off their vehicle fuel tank; place go-kits and batteries in car.
- 6.4. Condition 1 – Emergency Condition.** Condition 1 could be triggered by severe weather warnings or actual conditions, such as, high winds, tornado sighted close to or moving towards a populated area, or flooding.
- 6.4.1.** ARES leaders, or their representative, should maintain continuing contact on the state ARES HF net; activate local operations nets; and send a daily situation report to their DEC or the SEC.
- 6.4.2.** ARES members should follow the direction of their ARES leaders or delegated representatives, such as net control stations.

7. Section emergency frequencies

7.1. Emergency and tactical traffic day: 7285 kHz LSB night: 3873 kHz LSB

7.2. Health and welfare traffic day: 7290 kHz LSB night: 3935 kHz LSB

7.3. Digital Messaging

- 7.3.1.**The HF Digital National Traffic System is recommended for NTS type messages without E-mail addresses.
- 7.3.2.**Winlink 2000 system recommended for destinations with E-mail addresses. This may include HF and VHF with TelPac, Paclink, Airmail or Outpost utilization. The STX ARES section maintains 4 HF capable EMCOMM Winlink 2000 PMBOs: KB5HCD, N5TW, W0MAC, and W5TQ. These PMBOs, as well as other EMCOMM or public PMBOs, are preferred for HF digital traffic over point to point communications for the flexibility of communicating to multiple recipients, to minimize propagation limitations and to free up stations from fixed, pre-planned frequencies. A current list of EMCOMM PMBO frequencies and stations may be found at:

<http://digital.w3eoc.org/StatusLinks>

- 7.3.3.**Modes such as RTTY, PSK31 and others which do not have error correcting or error checking are not recommended due to their ability to receive errors without realizing the transmitted message has changed.
- 7.3.4.**Pactor is the preferred mode for point-to-point HF digital communications using Airmail. The simplex point-to-point frequencies will be 3590.0 and 7090.0 USB Mark (3591.5 and 7091.5 center) for utilization inside the section.
- 7.3.5.**ARES districts with populations over 250,000 (Districts 1, 2, 3, 4, 5, 7, 9, 12, 13, 14) should develop a minimum of two VHF or UHF TelPac Internet gateway stations to provide Packet to Internet E-mail capability. All counties in these districts with an ARES EC should have a minimum of one station with the ability to contact one or more Winlink HF, VHF or UHF TelPac, internet gateway stations.
- 7.3.6.**ARES districts with populations of over 1 million (Districts 1, 3, 7, 12, 14) should have a minimum of 4 Telpac stations and are encouraged to establish a full EMCOMM PMBO station, preferably in a hardened location with backup power. This allows hubbing local communications in the event of an Internet failure as well as providing an HF path for distant communications.
- 7.3.7.**Each ARES member should utilize Airmail for HF Winlink 2000, or Airmail, Paclink or Outpost for VHF / UHF Winlink 2000 for ARES training and emergency communications on a regular basis. This includes receiving messages for third party delivery as well as sending messages.
- 7.3.8.**All DECs should have HF Airmail capability.
- 7.3.9.**ARES groups with equipment installed in local facilities such as EOCs are encouraged to extend these to include Winlink capability for communication with local TelPac or remote HF Winlink facilities.
- 7.3.10.** APRSLink is a limited capacity option for those areas with active APRS IGates and no TelPac gateway stations.

NOTES:

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