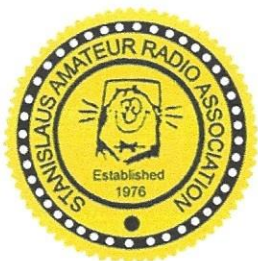


THE **Readout**

STANISLAUS AMATEUR RADIO ASSOCIATION

S.A.R.A.



WD6EJF

WWW.SARACLUB.NET

145.390 – PL 136.5



June 2019 Newsletter

Next general meeting is:

Tuesday June 18, 2019 at 3705 Oakdale Road
Modesto, CA 95357. Meeting begins at 7:00PM.

There is an informal meet and greet at Perko's
3500 Oakdale Road Modesto, CA 95357

Club members begin to arrive between 5:30pm and
6:00pm and usually sit in the back-dining room. All are
welcome to attend.



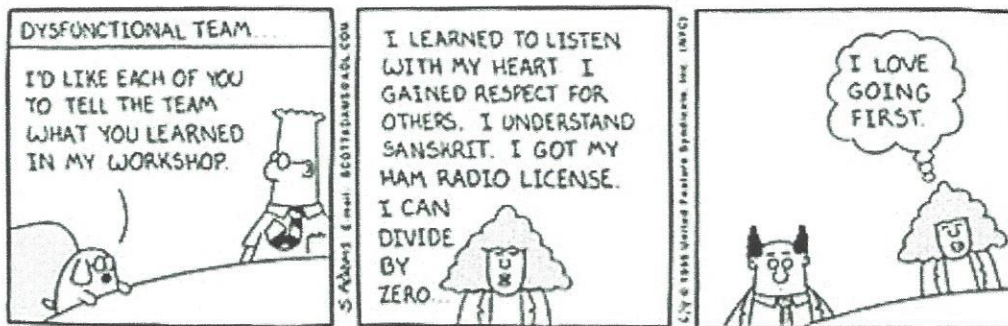
From the desk of the Readout editor:

It is hard to believe another month has passed us by and it is time for another edition of THE READOUT. I hope everyone enjoys the informative articles and the photographs from the Ride for Mom, Modesto Criterium and the Modesto Road Race. It has been another busy month for community events.

The repeater and TNC seem to have been working with minimal issues this past month. There has been some continuing maintenance and testing of the SARA high level repeater on Mt. Oso.

If you are interested in emergency communications and public service please check out the Stanislaus ARES section of the newsletter.

If anyone has information that they want included in the Readout please submit to the editor at kf6npg@aol.com. Please try and have the information or articles to the editor by the 5th of each month.



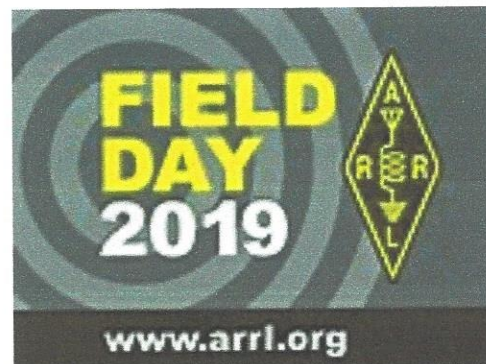
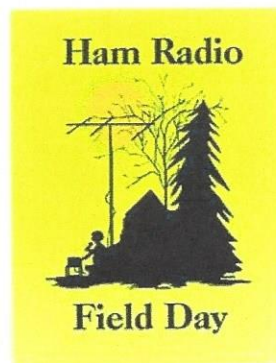
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Message from the Club President Wally KK6CPN

The club has been very busy with community events this month. I want to thank all of the operators who worked the events. This is a great opportunity to make ham radio visible to the community and everyone can see what ham radio can do.

Field day is this weekend June 21-23, 2019. Field Day will be held in the Sierra Nevada Mountains near Arnold in the Dorrington/Cottage Springs area. ([Click here for a google map](#)). Talk in Frequency will be on the SARA Repeater 145.390 or Simplex 147.540. Set up begins on Friday the 24th, so come up for the weekend, come up for the day, or come up for the BBQ on Saturday night. Just as long as you are there, that's all that matters.



Stanislaus Amateur Radio Association

May 21, 2019

(conducted at OES 3705 Oakdale Rd)

MINUTES

Vice President Jason, KA6TIO called the meeting to order at 7:04 p.m.

Sergeant at Arms Danny, W6DMC led the Pledge of Allegiance

Vice President Jason, KA6TIO led the round of introductions

The minutes from April 16, 2019 were read moved by **Mark, WB6BJN** and **Scott, N6CIC** seconded to accept the minutes.

Vice President **Jason, KA6TIO** gave the treasurer's report. New bank account has been set up with Tri Counties Bank. As of **May 21, 2019**, our account balance is **\$6,996.78** of which **\$1,014.22** is the **Field Day Fund**. **Bills paid:** Returned check US Bank closure, Moeller Mt. Oso (Repeater Site Rent), Bureau of Reclamation, John Otte (Ham Cram supplies & ARRL) PG&E (Mt. Oso Utilities), Jason Peitz (Reimbursement for Apr. PG&E Rent & bank fee) total of **\$596.66**. **Income:** Ham Cram, Split the Pot, total **\$131.00** (Bill **AE6J**, donated back \$65), **Donations:** Turlock Lake Rd. Race & Patty Bohling, W6PV, total of **\$981.00** **Deposits:** US Bank closure, Tri Counties Bank report moved **Bill, AE6J** and **Mark WB6BJN**, seconded to accept the treasurer's report.

Sergeant at Arms **Danny, W6DMC** will be raffling off an antenna and Gary's **WA6UXA** hot sauce he has raffle tickets for Field Day fund, one ticket for a \$1 or (6) tickets for \$5, cookies, banana bread and coffee was provided.

Board Members: **Bill, AE6J**, and **Brendon, NK6M** had no report

Equipment/Mt Oso: **Patrick, KG6AZZ** reported the tower on the hill was showing its age, efforts in resolution are being made, Events on the repeater has been sounding better.

ARES: **Bill, AE6J** reported June 8 is next meeting, website has been up since May 1.

Weather: **Mark, WB6BJN** reported active month and unsettled weather until the end of the month.

Community Events: **Patrick, KG6AZZ** reported Livermore Club (LARK.org) was putting on their Mt. Hamilton Classic.

Break/Raffle: 50/50 raffle **\$151.00** total **\$75.00** won by **Mark, N6ARP** donated back to Field Day fund. Mag mount antenna was raffled winner was **Mark, WB6BJN**, Hot Sauce winner was **Mark N6ARP**.

Ham Cram/Field Day: **Bill, AE6J** reported 62 days left until Field Day, order form for Field Day shirt, hat and etc. needs to be turned in tonight and will be given to **John, K6JRO**. Saturday dinner provided by the SARA club, Tri-tip, corn, green salad, and rolls. A list for Saturday dinner and Lockeford sausages was passed around for anyone that didn't sign up at the last meeting.

Un-Finished Business: None reported.

New Business: No report.

Meeting Adjourned: 8:08 P.M.

Joining S.A.R.A.: We are currently taking membership applications for 2019.

One-year membership dues are \$30.00 for individuals, or \$45.00 for a Family.

To join S.A.R.A., fill out this registration form and bring to any S.A.R.A. meeting or mail to: P.O. Box 4601, Modesto, Ca., 95352-4601.



STANISLAUS AMATEUR RADIO ASSOC. MEMBERSHIP FORM

Check One: New Member Renewing Member Family Membership

NAME: _____ CALLSIGN: _____

ARRL Member:(Yes) (No)

ADDRESS: _____ CITY: _____

ZIP: _____ PHONE: Home _____ Cell: _____

E-Mail: _____

ADDITIONAL FAMILY MEMBERS AT SAME ADDRESS:

NAME: _____ CALL SIGN: _____

ARRL: (Yes) (No)

NAME: _____ CALL SIGN: _____

ARRL:(Yes) (No)

TOTAL DUES PAID: _____ Date: _____

One-year membership dues are \$30.00, Family Dues are \$45

Note: Bring membership form to SARA Meeting or Mail to: SARA Club, P.O. Box 4601, Modesto, CA 95352-4601

Ham Cram Information

Study for new amateur radio license or upgrade your current license
Sponsored by SARA and Stanislaus County ARES



When and Where?

August 17, 2019

3705 Oakdale Road, Modesto, CA

Registration opens at 7:45AM and the study session begins promptly at 8:30AM

Test begins at 4:00 PM

Please bring the following:

- A valid identification, preferably CDL (California Driver's License)
- Cash or check for \$25 for the Ham Cram study and testing session, check preferred and payable to Stanislaus Amateur Radio Association (SARA).
 - If you are attending the test only session at 4:00pm the cost is \$15.00
- If you are upgrading your license, please bring a copy of your current license as well as the ORIGINAL.

Sign Up

Please send the following information to hamcram@stanares.org

Full name, Address, Phone, Call Sign if you have one

If you're interested in the all-day Cram (study session) or Test only? Any other comments.



The Stanislaus ARES Report

www.stanares.org

The Stanislaus County Amateur Radio Emergency Service is composed of FCC licensed Amateur Radio operators who have voluntarily registered their capabilities and equipment for public service communications duty under Federal regulations, Amateur Radio public service communications are furnished without any compensation of any kind. ARES® personnel are prepared to respond during emergencies by a continual training program, and by maintaining their radio equipment and other response items in excellent condition. The team consists only of those who want to help, and who are dedicated to staying prepared to render radio-communications assistance during emergency conditions.

ARES® operates under the authority of the Stanislaus County Office of Emergency Services (OES), and the Stanislaus County Assistant Director for OES. ARES® is organized under the auspices of the American Radio Relay League, the San Joaquin Valley Section Manager, and the San Joaquin Valley Section District Emergency Coordinator. Operational control is under the Stanislaus county OES.

If you are interested in joining Stanislaus ARES go to the Stanislaus ARES website (www.stanares.org) and click on the Join ARES tab. There is formation on how to join and the membership forms to complete are available there. Please check in on the ARES radio net very Wednesday at 7:30 pm on the 145.390 – pl. 136.5 S.A.R.A. repeater and attend the monthly training meeting at 10:00am on the first Saturday of the month at 3705 Oakdale Road Modesto, CA. Meeting dates and times can change due to operational needs. Please check the web site for updates.

The next Stanislaus County ARES meeting will be Saturday July 13, 2019 at 3705 Oakdale Road Modesto, CA. We will be working with our packet equipment and with the winlink program in preparation for our packet field exercise in August.

ARRL EC-001 Emergency Communications Course

If you need to take the ARRL Emergency Communications Course (EC-001) Stanislaus ARES can help. The EC-001 workbook is out of print, however The Indian River County ARES has all of the study information (including test and answers) posted on their web site. Recent amateurs

who have taken the test have printed out the test questions and answers and have studied like they would for a ham cram. Pass rate has been about 100 percent.

Here is the web site for the ARRL Introduction to Emergency Communications Course (EC-001):

Go to www.ircares.org This is the web site for the Indian River County ARES. Once you are on the web site click on the training and reference tab. Then click on the ARRL Introduction to Emergency Communications (EC-001) tab. That will take you to the course information.

Once you complete the on-line study you can arrange with Stanislaus ARES to take the ARRL test. We generally give the test at a ham cram session or before or after the monthly ARES meeting. Please e-mail Pat KG6JXZ at kg6jxz@charter.net, or Lucian KF6NPG at kf6npg@aol.com or John K6JRO at k6jro@arrl.net to arrange to take the test. ***There is a \$15.00 test administration fee payable to ARRL.***



COMMUNITY EVENTS



June

Friday through Sunday (21, 22, 23) Field Day

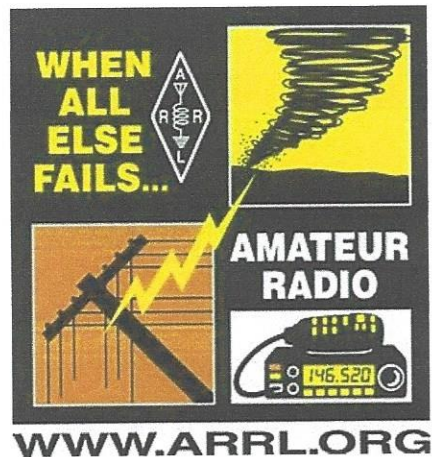
July

Saturday 13th ARES meeting 10a-12p

August

Saturday 3rd ARES Packet Field Exercise 10a-1p

Saturday 17th Ham Cram 8a to 5p 3705 Oakdale Road Modesto, CA



Batteries and the Airlines

Reprinted from ARRL ARES newsletter May 2019

Pilot Tom Mills, AF4NC, travels frequently to QRP operating and hiking locations around the world. He has completed the Appalachian Trail, the John Muir Trail and summited 11 peaks over 14,000 feet in Colorado. Mills uses an Elecraft KX-1 or KX-3 with a simple MFJ vertical antenna and a 12 V 7 Ah battery. He carries his gear in a Tamerack Expedition 10 camera backpack, which has enough padding, pockets, and external holders for two water bottles. It has plenty of room for accessories including the small antenna tuner and Begali key.

When traveling, some amateurs have simply purchased a new battery at their destination rather than deal with the perceived hassle of transporting a battery. (Using AAA or AA batteries is just not enough power if you are out for a few days).

Mills is often asked what kinds of batteries can be transported on a plane. After research, he has determined that non-spillable wet batteries (absorbed electrolyte) up to 12 V and 100 Watt-hours are permitted to be carried aboard planes. Absorbed electrolyte battery types include gel cells, AGM, etc. Batteries must be kept in a strong outer case with the terminals protected from shorting out with non-conductive caps, tape, etc. Mills says his 7 Ah batteries can be carried in "carry on" or checked baggage.

Passengers are limited to carrying two batteries. Watt/hours are calculated: 12 V times the rated capacity in Ah of the battery. In Mills' case, his battery is permissible on board: 12 X 7 is 84 watts, less than the 100 Watt-hours maximum permitted.

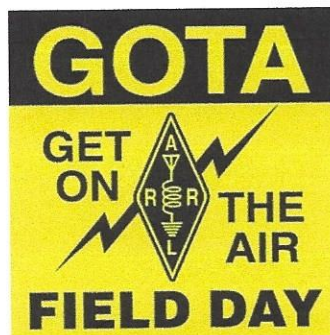
While the above is a Federal rule, the airlines *can* impose stricter rules. Mills has not had any problems with US air carriers, but a good precaution is to check with the carrier *before* leaving home. When traveling on foreign air carriers, check with them directly, but from what Mills has said, he has not heard of any problems.

Here is an FAA "pack safe" page that presents battery restrictions:

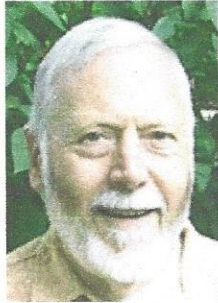
<https://www.faa.gov/hazmat/packsafe/>

See also:

https://www.faa.gov/about/office_org/headquarters_offices/ash/ash_programs/hazmat/passenger_info/media/Airline_passengers_and_batteries.pdf



Ham Radio in Emergency Operations



by STEVE ABERLE

Wed, June 21, 2017

Reprinted from Domestic Preparedness.com April 21, 2019.

Many people grew up hearing about disasters in far-off lands and how amateur (ham) radio operators were initially the only means of contact with the outside world. Disasters, both near and far, still occur today, and ham radio operators continue to volunteer their skills and personal radio equipment to serve the public. From a planning and operations perspective, emergency management professionals must effectively include these volunteer resources into comprehensive emergency management plans (CEMPs).

Ham radio was the original electronic “social media” with initial contacts between radio stations taking place in the 1890s. Federal licensing of ham radio stations began after The Radio Act of 1912 was passed, and today all ham radio stations are strictly regulated by the Federal Communications Commission (FCC) under US 47 CFR §97.

The American Radio Relay League (ARRL), a ham radio member-society founded in 1914, established the Amateur Radio Emergency Service (ARES) in 1935. This standby radio service consists of “licensed amateur radio operators who have voluntarily registered their qualifications and equipment with their local ARES leadership for communications duty in the public service when disaster strikes.”

In 1952, the Radio Amateur Civil Emergency Service (RACES) was developed as a standby Civil Defense radio service governed by the FCC under US 47 CFR §97.407. RACES is activated by emergency managers in local, county, tribal, and state jurisdictions, uses Federal Emergency Management Agency (FEMA) protocols, and are the only ham radio operators authorized to transmit during declared emergencies when the president of the United States specifically invokes powers granted under 47 U.S.C. §606.

Understanding This Communications Resource

Ham radio operators come in all ages and from all lifestyles, and are essentially neighbors in the community. Each licensee has passed one or more extensive knowledge tests covering a multitude of topics, including FCC rules, operator and station license responsibilities, operating procedures and practices, radio propagation, electrical principles and electronic circuits, common transmitter and receiver problems, antenna measurements and troubleshooting, basic repair and testing, non-voice communications, antennas and feed lines, AC power circuits, and safety.

Since ham radio is their hobby, many hams have decades of radio communications experience. Some may have professional broadcasting experience, and others may be current/former first responders. In standards that have arisen with the introduction of the National Incident Management System, ARES and RACES members may also:

- Be registered emergency/disaster workers under state law;
- Possess certificates for (sometimes many) FEMA training classes;
- Have passed law enforcement background checks; and
- May be engaged in other volunteer activities such as Search and Rescue (SAR) or Community Emergency Response Teams (CERT).



Source: Steve Aberle, 2011.

Knowing When/How to Use Ham Radio

The need for supplemental communications increases with incident complexity.

If, for example, the incident complexity is NIMS Type 5 or 4, and all communications needs are being handled through commercial services, there is no need for additional communications resources. When incident complexity reaches NIMS Type 3 or 2, regular communications systems may not be capable of normal capacity in the affected areas. Supplemental ham radio communications resources can fill the gap until regular communications are restored. Depending on the quantity of communicators needed and operational periods, deployment of emergency communications resources from outside the affected jurisdiction(s) is possible.

During major emergencies and disasters (NIMS Type 1 incident complexity), there may be major failures and overloading of the communications infrastructure, including the degradation or loss of the electrical grid, cellular phone network, Internet, public safety radio systems, and AM/FM radio systems. In such cases, supplemental emergency communications resources are needed in quantity and for extended periods until regular communications are restored.

FCC regulations permit ham radio operators to serve the public by communicating with non-amateur entities (e.g., FEMA, the National Weather Service, the military) during emergencies and disasters, and when specifically authorized by the civil defense (a.k.a. emergency management) organization for the area served (under RACES protocols):

- 47 CFR §97.111(a)(2) – Essential communication needs and to facilitate relief actions;
- 47 CFR §97.111(a)(3) – With another FCC-regulated service;
- 47 CFR §97.407(d)(1) – Public safety or national defense or security;
- 47 CFR §97.407(d)(2) – Immediate life safety, protection of property, law and order, human suffering/need, combatting of armed attack or sabotage; and
- 47 CFR §97.407(d)(3) – Public information or instructions in civil defense and relief.

In many areas, or with supplemental resources from outside the affected area, ham radio emergency communicators can provide both voice and data communications modes.

Ham radio resources are available for emergency communications support to any public service agency, and can bridge interoperability gaps between served agencies on a local, tribal, and/or state level. Potential ham deployment locations include, but are not limited to, auxiliary command posts, emergency operations centers, emergency shelters, evacuation sites, fire stations, medical facilities, mobile disaster vehicles, police stations, public works sites, and volunteer intake centers. They can also be deployed to provide mobile links to:

- Create communications links between similar agencies across political boundaries, especially where there are misalignments in frequency bands and modes;
- Establish communications in locations outside the existing coverage areas of public service and commercial communications systems;

- “Shadow” critical public officials and emergency management personnel to facilitate constant and rapid contact;
- Monitor crucial infrastructure (such as highways and bridges) and provide periodic situation reports; and
- Staff observation posts (river levels, flooding, damaged areas) and provide periodic situation reports.

While it is unlikely that ham radio will be able to replace all existing communications, the forte of this pool of volunteers is establishing critical communications under less-than-optimal conditions. For hams with solar-powered equipment, they can keep communications going well beyond the limitations of fuel reserves for motor-driven generators until the commercial infrastructure is restored.



Source: Steve Aberle, 2012

Integrating Ham Radio Into the Emergency Management Community

We get so sophisticated and we have gotten so used to the reliability and resilience in our wireless and wired and our broadcast industry and all of our public safety communications, that we can never fathom that they'll fail. They do. They have. They will. I think a strong Amateur Radio community [needs to be] plugged into these plans.

—Craig Fugate, FEMA Administrator (2009-2017), 3 May 2011

As a communications provider, ham radio falls under the Emergency Support Function #2 umbrella. Planning for a “when all else fails” communications scenario is essential for all jurisdictions, and there are multiple ways of achieving this goal at the state, tribal, and local levels. Following are two examples:

- Colorado enacted HB16-1040 in 2016 and put emergency communications provided via amateur radio into public law by establishing an Auxiliary Emergency Communications Unit within the state’s Office of Emergency Management.
- The CEMP for Clark County, Washington, includes the paragraph:

Routine communications systems will be used to the greatest extent possible. When routine communication systems are ineffective, alternate methods, such as amateur radio, will be used to communicate between the EOC, field operations, mass care facilities, and the state emergency operations center (EOC).

As a side note, in late 2015, the emergency manager in Clark County hosted a ham radio license class for his staff, and all emergency management personnel are now licensed ham radio operators.

The old adage about avoiding the exchange of business cards in the midst of an incident is the guidepost here. Each state has one or more ARRL member-elected volunteers who can put emergency management professionals in touch with local hams. So, if a jurisdiction has not yet established an ongoing working relationship with hams in the community, the section manager listed on the ARRL website can direct these professionals to local ham radio resources.

It is difficult to maintain a cadre of active ham radio emergency communicators in areas that experience little actual activation of those volunteers. To overcome this, frequent involvement in drills and exercises is essential. The professionals need to feel comfortable working with the hams and vice versa. Not every exercise plan needs to include a communications outage in the scenario, but there is no reason messaging cannot take place in parallel by sending the same message over routine communications systems and also via ham radio.

Hams typically like to implement different technologies, so what is transmitted by voice in one exercise might go by digital mode (computer to computer connected to radios) the next, a video link after that, and maybe even via a ham radio satellite at some point. Therefore, give the hams a communications problem and see what they come up with for a solution. Do not dictate the way they should solve the problem, but rather the emergency communications needs

requirements. And, make it interesting for the volunteers to keep them involved, because hams could be critical communications lifelines in disasters.

Steve Aberle is an FCC-licensed ham radio operator and been active in the Amateur Radio Emergency Service (ARES) since 1976 and in Radio Amateur Civil Emergency Service (RACES) since 1979. He has served as an ARRL Official Emergency Station in the State of Washington since 1999, and his radio station at home operates on solar power. During his multifaceted career, he was a trooper with the Oregon State Police, a county emergency communications director, a data network manager, and a cybersecurity consultant. He has over four decades of experience in volunteer emergency communications planning, training, responses, mentoring, and exercise evaluation, and is a former mountaineering and Search and Rescue leader and instructor.

May Community Events

Lucian KF6NPG, Derrill W7LTM, Bill AE6J, John K6JRO, Patrick, KG6AZZ, Brent KJ6MRG, Mark WB6BJN, Brian Km6JAG, Mike KM6MHT, Mark N6ARP, Wally KK6CPN, Robert KD6BNY, and Jim W6IJR all worked Ride for Mom.



Lucian KF6NPG, Ed KF6FIR, Mark N6ARP, Mark KI6HOB, and Paul W6UHF all worked the Modesto Criterium





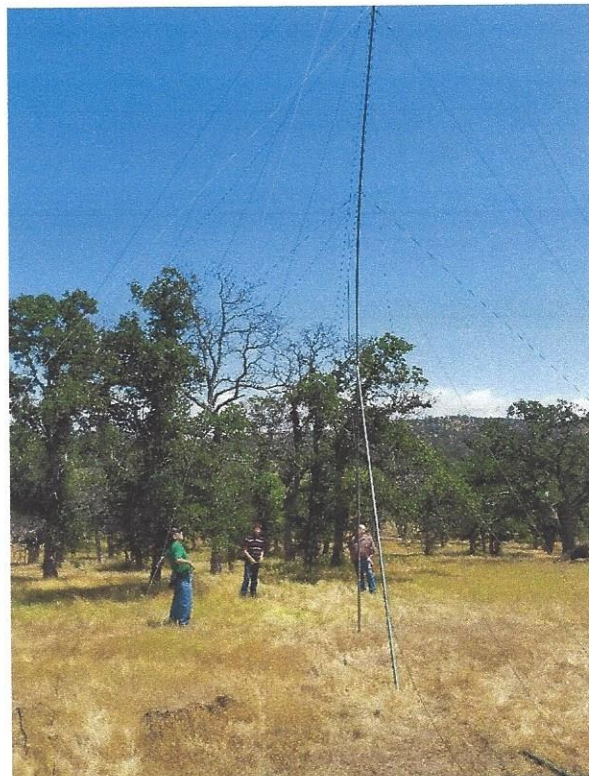
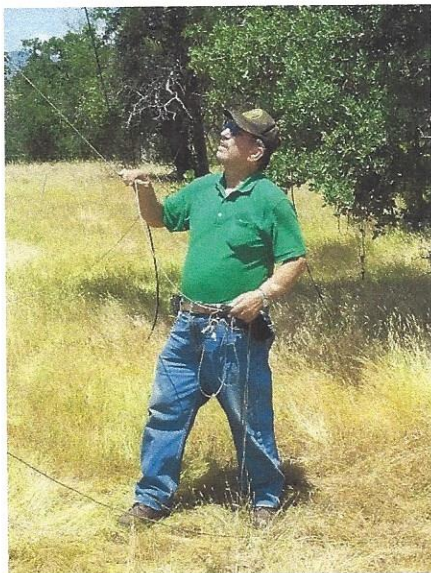
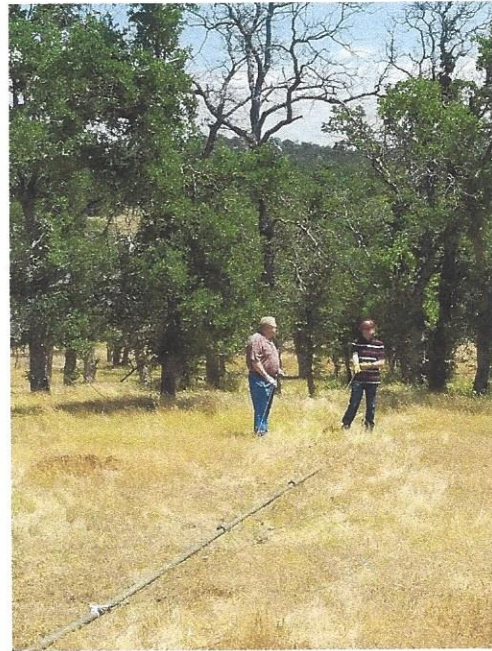
Lucian KF6NPG, Mark N6ARP, Mark KI6HOB, Patrick KG6AZZ, Robert KD6BNY, Linda W6MUT, Paul W6UHF and Brent KJ6MRG all worked the Modesto Road Race



Thanks to all who worked the events and everyone that sent in photos for the newsletter.



Lucian KF6NPG, Mark N6ARP and Mark KI6HOB made the trip to the Derrill W7LTM antenna farm to help with some maintenance. Derrill provided lunch in Coulterville.





LOCAL NETS

All SARA nets meet on the 145.390 – pl 136.5 repeater except where noted.

SARA Club net is every Tuesday (except the 3rd Tuesday) at 7:30pm.

The morning traffic and information net meets Monday through Friday from 7:00am to about 8:00am.

The Stanislaus County ARES net meets every Wednesday at 7:30pm.

The Space net meets every Friday at 8:00pm

S.A.R.A. meets the Third Tuesday of every month at 7:00pm at 3705 Oakdale Road Modesto, CA 95357. The club website is www.saraclub.net.

The Stanislaus County ARES generally meets the First Saturday of the month at 10:00am at 3705 Oakdale Road Modesto, CA 95357. Meetings can be changed due to training requirements please check the web site for current information. The web site is www.stanares.org.

S.A.R.A. operates several repeaters.

These are located on Mt. Oso in Patterson, CA:

145.390 – pl 136.5

51.800 – pl 136.5

224.240 – pl 136.5

440.225 +pl 136.5

Digital node 144.910, digipeater name “SARA”.

145.110 – pl 136.5 is a low-level repeater located in Modesto, CA.

Turlock Amateur Radio Club (W6BXN) has several nets as well:

Morning commute and Beer and Pizza Net Monday through Friday 6:30am to 7:00am 147.030 + pl 100 or 447.700 + pl 94.8.

Weekly club net every Tuesday (except the 2nd Tuesday) at 7:00pm on the above repeaters.

DMR round table net every Monday at 7:00pm on the TARC regional talk group. Brandmeister TG 310658 which is linked to the W6BXN DMR repeaters.

TARC meets the second Tuesday at 7:00pm at the Salvation Army 893 Lander, Turlock, CA.

Merced ARES has a weekly net on Mondays at 8:00pm on the TARC repeaters. They have a monthly meeting the third Wednesday at 6:00pm at the Merced County Health Department, 260 East 15th Street Merced, CA.

TARC web site is www.w6bxn.org and Merced ARES is www.mercedares.org.



2019 SARA Club Officers:

President	Jim Walsh KK6CPN	kk6cpn@yahoo.com
Vice President	Jason Peitz KA6TIO	ka6tio@gmail.com
Secretary:	Robin Axton KG6ZYQ	axtonr@hotmail.com
Treasurer	Vicki Peitz KJ6RCV	
Sergeant at /Arms	Danny Cortez W6DMC	cortezdanny51@gmail.com
Board Member	Paul Owen W6UHF	w6uhf@aol.com
Board Member	Tom Brawley K6KQR	ki6kqr@sbcglobal.net
Board Member	Brendon Church NK6M	brendonchurch@me.com
Board Member	Bill Danforth AE6J	ki6hmv@gmail.com
Committees/Workgroups:		
Club Technician	Patrick Dunbar KG6AZZ	patd@kg6azz.net
Readout Editor	Lucian Thomas KF6NPG	kf6npg@aol.com
Community Events	Lucian Thomas KF6NPG	kf6npg@aol.com
Stanislaus County ARES Emergency Coordinator	Pat Mandas KG6JXZ	kg6jxz@charter.net