



April 2018 Newsletter

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President's Comments

Welcome to the Yelm Amateur Radio Group's monthly newsletter for April 2018. There will be a report on our March 17th, ARES, Mutual Aid Exercise in Centralia with additional support from Thurston ARES teams. There will also be a report on the state wide EOC to EOC exercise from March 31.

We are hoping to continue training on setting up an HF station in the Church with the Groups HF radio and antenna.

On Sunday night, after ARES net, we are moving from 146.55 MHz simplex 440.200 MHz PL: 100Hz. Everyone is invited and encouraged to join in.

I hope all of you can make it to the meeting Saturday April 7th at 9:00 for coffee and conversation followed at 9:30 by our brief business meeting and training.

73's

Richard WB0SRJ

President YARG

Editor's Notes

YARG Newsletter Editor: Chris Kennedy KB7NMU

Well, this months newsletter has gotten a late start due to various other demands on my time, so it is using a lot of information from other sources. Also, I don't believe in April Fools jokes, so there won't be any in this newsletter.

Thanks, and see you on the air.

Chris KB7NMU

Overheard at a Hamfest table:

Bill: Well, would look at that.

Bob: I can't believe my eyes.

Bill: I haven't seen one of those in years and years.

Bob: Me either. I been lookin' for one for a while.

Bill: Yeah. Reckon what it is?

Purloined from QRZ forum.

ARES

East Thurston County Ares

EC: Ed Braaten N7EKB

I was asked to contribute to an "ARES" column in the YARG newsletter. There are a lot of things we could cover in an ARES column - I'm a bit overwhelmed at the thought! For this first column though, please allow me introduce myself and share a little of my emergency communications background.

I was originally licensed as a ham (KF6OQI/K6EKB) in Sacramento, California where I became a member of the Sacramento Amateur Radio Club (SARC). Many of the SARC members were volunteering with the California Governor's Office of Emergency Services (OES) by joining their "Auxillary Communications Service" (ACS). I joined the team and was introduced to all sorts of cool communications gear that was used by

OES to support emergency incidents throughout the state of California.

While volunteering with OES ACS, I deployed satellite trailers to remote fire camps for several major wildfires. Part of our deployment of the satellite trailers included bringing up the satellite link and then setting up the computer and phone networks in the fire camps that the satellite link made possible.

Also, I supported a search-and-rescue operation in the Tuolumne Wilderness which included a flight in a helicopter that subsequently crashed while trying to place a portable repeater on top of Granite Dome at 11,000 feet elevation. (You can read more about that crash on my personal web site: <https://ed.braaten.net/GraniteDome.php>).

In another incident we helped a local law enforcement agency and multiple neighboring agencies plus the county sheriff to communicate during a major motorcycle event that spanned several "radio dead zones". Our support included operating a public safety band repeater in our communications van at a hidden location that bridged one of the critical dead zones.

At OES ACS we hams became invaluable to the agencies we served because we learned how to do things their way. The agencies began to trust the ACS members after seeing our communications and technical skills at work on their systems with their procedures. I learned a lot from this experience. We have different organizations here in Washington, but the ACS principle of putting our served agencies first will work here too. Learning our customer's systems and procedures will be more effective than trying to push a "ham radio" agenda at them.

Looking forward to next month's column, 73, Ed (N7EKB)

Pierce County ARES Wins Award

ARRL Western Washington Section
Section Manager: Monte L Simpson, AF7PQ af7pq@arrl.org

The Pierce County Amateur Radio Emergency Services (ARES), District 5, is Pierce County's (state of Washington) Volunteer Group of the Year for 2017.

Pierce County Executive Bruce Dommeier, in the council's written proclamation, praised the volunteer efforts of the nearly 200 members of District 5 who

have responded to numerous emergency and civic service situations in and around Pierce County and were instrumental in building a robust training program based on the lessons learned in the 2016 joint multi-state, multi-emergency operators' exercise, 'Cascadia Rising.' The exercise, which involved more than 20,000 participants in a four-state area responding to the aftermath of a simulated massive earthquake in a giant west coast fault zone known as the Cascadia Subduction Zone, was one of the largest tests of an ARES capabilities ever conducted.

Under the seven-year leadership of Stan Nelson, District 5's Emergency Coordinator (DEC), this all volunteer organization has increased member training and proficiency, made itself a key part of protecting the citizens of Pierce County and stimulated active participation from hundreds of amateur radio operators from all cities, municipalities and civic groups within Pierce County.

"I'm really proud of our volunteers," Stan explained. "They have given more than 2,200 hours of volunteer service during 2017 making it the best year in our 15-year history." Stan said that District 5 can always use more volunteers.

"There are amazing opportunities to use your amateur radio skills and equipment and at the same time make new friends and serve your community," Stan said. "Visit our website at piercecountyares.net for more information."

Interoperability Training Exercise

Modified from the [Centralia ARES web site](http://CentraliaARES.com)

Thirty six hams – a mixture of Washington State Guard, Thurston County ARES, Yelm Amateur Radio Group, Lacey ARES and Centralia Amateur Radio Emergency Service team members – gathered on March 17th at the Mt. View Baptist Church in Centralia for our very first Interoperability Training Exercise. Hosted by Centralia ARES, this was an opportunity to meet and get to know hams from our neighboring county who could be called on to provide manpower assistance after a disaster.

Training centered around Centralia's use of local churches as short term shelters and about the team's use of mobile communications vans. After a

PowerPoint presentation on why local churches might be a viable option for shelters, the group toured Mt. View Baptist Church with Pastor Bill Knepper, N7GWK, and then met to discuss how the church would fair as a shelter. Discussions involved reception areas, cooking facilities, sleeping spaces and communications placement among other topics. One by one, the group discussed options and solutions coming away with a positive evaluation of the facility.

The second half of the presentation was another PowerPoint covering Centralia's use of mobile communications vans. EC Bob Willey led the group through the history of active flooding within the region and talked about our use of mobile communications vans as everything from information distribution hubs to mobile EOC operations. After explaining how the team acquired our vehicles and how they were outfitted, we ended the day with a detailed tour of Comm II, our main communications vehicle.

What a great experience it was to have so many hams from different agencies and to be able to talk about our successes and failures. We thank the Washington State Guard, Thurston County ARES, Yelm Amateur Radio Group, Lacey ARES and of course our own amazing Centralia volunteers who did it all today. I hope this is just the start of a great multi-agency partnership.

To read the original article, go here:

<http://k7cem.com/wp/?p=1791>

Quarterly ARES Exercise

East Thurston County Ares

EC: Ed Braaten N7EKB

I'd like to thank everyone on the team that participated in today's statewide EOC-to-EOC exercise! Here's some quick feedback on what I observed with today's exercise.

What worked well:

1) The Rainier EOC initial activation went very smoothly and the participants (Rainier City Hall/EOC, Rainier Chapel, and Valley Heart) were able to check-in/check-out of a directed radio net and exchange 3 formal messages successfully. This is quite amazing considering the fact the participants have no prior radio experience.

2) Members of our team successfully checked in/out of the ETC ARES Team command net and were able to perform other parallel activities "off net".

3) Net control operator, Chris (KB7NMU) sounded professional at all times - in spite of a missing net preamble.

4) Camp Murray was easy to reach during this exercise - successfully contacted on 6M.

5) Even though Thurston County ARES District 3 wasn't participating in this exercise, they acknowledged our Winlink traffic.

6) Connection to Columbia County RMS station held up well on 80M for RF-only Winlink connectivity.

We have made notes on things that need improving and will be working on these issues over the next few months.

Tech Notes

RF Exposure Guidelines

By: Chris Kennedy KB7NMU

This month I've decided to change subjects from the previous discussion of modulation methods and talk about the FCC RF Exposure Guidelines. In particular I want to bring everyone's attention to the power thresholds for when you must do an RF Exposure Evaluation.

I won't be discussing how to do an evaluation (that will be next month), or what you need to do after completing an evaluation (June). We will be looking at when you don't have to complete an evaluation for this month.

This table is recreated from the RF Safety section of the ARRL 2017 Handbook (28.3). It shows the band, and the power level above which an evaluation is required.

Band	Power (Watts)
160m	500
80m	500
75m	500
40m	500
30m	425
20m	225
17m	125

15m	100
12m	75
10m	50
VHF (all)	50
70cm	70
33cm	150
23cm	200
13cm (and above)	250
Repeaters	500 W ERP

We can derive some interesting observations from the above. Most HF transceivers are 100W models. You can only use full power on 15m and above. At 12, 10, and 6 meters you must reduce power, else you will have to perform an evaluation. Also, 50W is the lowest power level at which an evaluation is required. If you always transmit below 50W, then you will never have to perform an evaluation.

Why does the power start to drop around 12m? This has to do with the scale at which the structures we inhabit and ourselves are resonant at. You will notice the lowest requirement is centered around the 2 meter band. People are in that size range. Basically we are full wave antennas on 2 meters, and slightly less than half wave antennas on 6m. And yes, structures at wavelength size will absorb RF.

This is an issue at microwave frequencies in the Pacific Northwest, because the length of a fir needle makes it an effective antenna at certain microwave frequencies that were commonly used for point to point links prior to fiber optics. Any fir tree in the path that was too near a transmitting antenna would slowly get brown needles as the RF was absorbed by the needles.

It is also interesting to note that Repeaters are evaluated based on Effective Radiated Power, rather than input power. This means you must take into account the gain of any repeater antennas. This isn't necessary for regular Amateur Radio stations.

Weekly Nets

East Thurston County ARES

When: Sunday 7:00PM

Frequency: 146.550MHz Simplex

Purpose: To develop communications skills, familiarize members with proper Net procedures, and to test radios and antennas.

Additional Info: Anyone is welcome to listen in, and we always appreciate visitor check-ins to the net! If you're interested in joining the ARES team feel free to contact Ed Braaten – N7EKB at ed@n7ekb.net.

East Thurston County ARES Roundtable

When: Sunday, after weekly simplex net.

Frequency: 440.200+MHz 100.00Hz Tone

Purpose: General chat among East Thurston County ARES team members.

Additional Info: Anyone is welcome to join. Generally we are on the repeater around 7:15PM, but that can change depending on how long the Net goes.

Calendar of Events

Upcoming Amateur Radio Events

Communications Academy



Cost: Early bird - \$27 for one day, \$52 for the weekend.

Normal rate - \$35 for one day, \$65 for the weekend.

Walk-in rate - \$45 for one day, \$75 for the weekend.

Event Info: Communications Academy is two days of training and information on various aspects of emergency communications. Amateur Radio Emergency Services (ARES®); Auxiliary Communications Service (ACS); EOC Support Teams; Radio Amateur Civil Emergency Service (RACES), Civil Air Patrol, Coast Guard Auxiliary, REACT, CERT and anyone interested in emergency communications should attend. Learn, network, and share your experiences with others.

Website: <http://commacademy.org/>

SEA-PAC Hamfest

Date: June 1st – 3rd, 2018

Location: Seaside Convention Center, Seaside, OR

Cost: Pre-registered - \$10 per adult. At the door - \$15 per adult. Workshops & Banquet extra.

Event Info: The Northwest's largest ham convention on the beautiful Pacific Ocean Beach. Commercial Exhibits, Giant Flea Market, Workshops, Seminars, Prizes, VE Testing, and a Banquet. Registration opens February 15th.

Website: <https://www.seapac.org/>

Club Information

Website

<https://yelmamateurradiogroup.org/>

Mailing List

<https://yelmamateurradiogroup.onlinegroups.net/>

Mailing Address

Yelm Amateur Radio Group
PO BOX 40
Yelm, WA 98597
USA

YARG Officers

President	Richard Bowen	WB0SRJ	360-446-0247
Vice-President	Ed Braaten	N7EKB	360-951-3445
Secretary	Doug Harvey	KE7ZTM	360-489-1619
Treasurer	Donna Moris	KG7WRX	360-894-5142

Meetings

1st and 3rd Saturday. Social time 9AM, meeting starts at 9:30AM. Short club meeting followed by educational/informative program.

Valley Heart Assembly of God
11318 Vail Cut Off Rd SE
Rainier, WA 98576