



The
Wave Bender



January 2020



AWARD WINNING NEWSLETTER

MAKE A NEW YEAR'S RESOLUTION NOW

TAKE THE NEW ARRL INTRODUCTION TO EMERGENCY COMMUNICATIONS COURSE - IT'S FREE

The newly revised ARRL Introduction to Emergency Communications Course is now available on-line - it's free, and designed to provide basic knowledge and tools for any emergency communications volunteer. The course has six sections with 28 lesson topics. It includes required student activities, a 35-question final assessment and is expected to take approximately 45 hours to complete over a 9-week period. You will have access to the course platform at any time of day during this 9-week period so you may work according to your own schedule. You must pace yourself to be sure you complete all the required material in the allotted time.

At the end of the course an online final assessment is taken. A score of 80% or better is required for successful course completion. For the student to receive a "Pass," Mentors must also verify student completion by evaluating work on required activity assignments and notify the Continuing Education Program that the student has successfully completed both the course work and achieved a satisfactory score on the final assessment.

This is an online course hosted on the Canvas online learning platform, and is best accessed using the Chrome or Firefox browsers.

Before you begin the course you should have completed the following prerequisites. These courses provide a foundation for the content of this course. These are free mini-courses you can take online:

ICS-100 (IS-100.c) Introduction to the Incident Command System

IS-700 (IS-700.b) National Incident Management System

For more information, click here <http://www.arrrl.org/online-course-catalog>. To register for the EC-001 course click here

The ARES E-Letter for December 18, 2019



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2020 Officers:

- President:** Chris Monske, WF8U wf8u@wrarc.net
- VP:** Maureen Stein, KD8NXS kd8nxs@wrarc.net
- Secretary:** Mike Cibella, KC8UNR kc8unr@wrarc.net
- Treasurer:** Bob Kramer, KE8HHH ke8hhh@wrarc.net
- Past President:** Bob Mitzel, N8RCM n8rcm@wrarc.net

Trustees:

- Steve Fabry, KC8SOY kc8soy@wrarc.net
- Darrin Cannon, N8DMC n8dmc@wrarc.net
- Ray LaShure, K8NVY k8nvy@wrarc.net

Appointed Positions:

- Social: Maureen Stein, KD8NXS
kd8nxs@wrarc.net
- Repeater & Nets: Steve Fabry, KC8SOY
kc8soy@wrarc.net
- Classes: Chris Monske WF8U
kd8ely@gmail.com
- Testing: Darrin Cannon, N8DMC
n8dmc@wrarc.net
- Newsletter/Web: Jane Avnet K8JAA
k8jaa@wrarc.net
- Historian: Rose Marko, KD8TII
kd8tii@wrarc.net
- Badges: Darrin Cannon, N8DMC
n8dmc@wrarc.net

Officer's Meeting:

January 12, 2020, at Davidson's
All members welcome

After the Holidays & Annual Meeting:

January 12, 3:00 P.M.
Davidson's
3636 Canfield Rd.,
Cornersburgh



OTHER IMPORTANT WEB SITES

THE ARRL EXAM SEARCH PAGE

<[HTTP://WWW.ARRL.ORG/FIND-AN-AMATEUR-RADIO-LICENSE-EXAM-SESSION](http://www.arrl.org/find-an-amateur-radio-license-exam-session)>

OHIO SINGLE SIDEBAND NET

<[HTTP://WWW.OSSBN.ORG/INDEX.HTML](http://www.ossbn.org/index.html)>

ANTENNA HEIGHT ABOVE AVERAGE TERRAIN (HAAT) CALCULATOR

[HTTPS://WWW.FCC.GOV/MEDIA/RADIO/HAAT-CALCULATOR](https://www.fcc.gov/media/radio/haat-calculator)



[http://www.wrarc.net/](http://www.wrarc.net)

FROM OUR VP

Happy New Year to everyone. I hope you all had a wonderful December holiday season. I would like to start by congratulating our newly elected WRARC Officers - Chris Monske, W8FU, as President, Bob Kramer, KE8HHH, as Treasurer, Mike Cibella, KC8UNR, as Secretary, and Ray LaShure, K8NVY, as Trustee. We will have a very strong and capable Board going into this new term. On that note, I would like to thank the outgoing Officers for their time of service to WRARC. Each of you has done an excellent job in your positions. Thanks going out to Bob Mitzel, N8RCM, as outgoing President (now immediate Past President on the Board), Rose Marko, KD8TII, as outgoing Treasurer, Stan Adamski, KB3WPD, as outgoing Secretary, and Roy Haren, KD8IJF, as outgoing Trustee. I know I've said it before, but it is so true - you are greatly appreciated for all your time and effort given to WRARC.



We will have a good year in 2020. We will have our usual Public Service events and likely the Family Fun Day at Boardman Park in the fall. There may be other activities we would like to do throughout the year as well. If anyone has ideas for activities, workshops, or anything else, please bring them forward to the Board for consideration. You can submit something in writing to a Board Member, or give a request to the President for a spot on the board meeting agenda to present an idea in person. Everyone's input is important. Likewise, any concerns anyone has can be submitted to the board in writing via e-mail or letter for the board to address. Hopefully 2020 can be a year where those who haven't yet participated in club activities will do so. It takes us all, and these things are enjoyable. It's good to connect with fellow club members too by catching up with them on the repeater more often, and checking in to the Friday night nets and/or taking a turn at being Net Control when you can. That one can be a New Year's resolution for me too. I know, life has a way of getting really crazy.

Don't forget the After the Holidays Party on Sunday, January 12, 2020 at 3:00 P.M. at Davidson's in our usual meeting room. Our newly elected Officers will be installed then, and it is a good social time for all. If you would like to come and have not signed up yet, you can contact me at 330-398-1303 or at mfstein@zoominternet.net with your name, call sign, number in your party, phone number, and e-mail address. This party is for families, friends, and any other guests, not just for WRARC members.

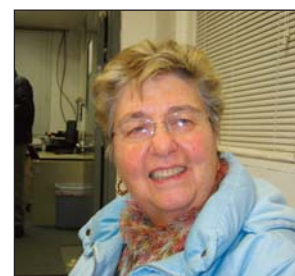
I will be giving the restaurant a head count on or about January 5 so I need to know before then. Hope to see you all there. We will not have a Tuesday evening meeting in January the usual schedule of monthly meetings on the third Tuesday evening of each month will resume in February on the 18th. Remember, get your dues renewals in by January 31 if you have not done so already. Looking forward to a good year.

73 Maureen, KD8NXS
WRARC/VP



I'm always asking for input by members. The following questions may give you something to think about.

- What was your first station?
- Tell us about our first contact.
- Have you built something?
- Who was your First Elmer?
- How old were you when you got interested? and/or
- How did Ham Radio shape your life? -ye ed



WHAT'S COMING UP?

- Jan. 01 **2020 Happy New Year!**
- Jan. 04 YL Breakfast - PTBD
- Jan. 12 After the Holidays Annual Dinner/Meeting 3:00 P.M.
- jJan.14 Ham Community Breakfast - Austintown Eat 'n Park

- Feb.01 YL Breakfast - PTBD
- Feb.11 Board Meeting - Austintown Eat 'n Park
 Members welcome
- Ham Community Breakfast - Austintown Eat 'n Park
- Feb.18 Members Meeting
- Feb.24 Ham Community Breakfast - Austintown Eat 'n Park



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CONTACT WRARC ELMERS WITH YOUR QUESTIONS - QUESTIONS@WRARC.NET

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 Haren, Roy KD8IJF
 Williams, Russ NR8W

Yaesu FT8900, FT8800, Mobile
 ???
 Electrician, tele-data, Amateur
 Extra

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Articles from members for the Wave Bender are encouraged. They must be received by the editor by the 20th each month. Please send your articles to: k8jaa@arrl.net, and put WRARC on the subject line of your email. You may also send your articles to the editor: Jane Avnet, 1440 Skyhawk Pl., Wright City, MO 63390

Join us for the WRARC Friday night Net 9:00 P.M.
 KD8DWV - 145.270, PL -110.9
 Upcoming Net Control Operators

Jan. This could be you

If your name has never been on this list
 Contact Steve, KC8SOY to take a turn at Net Control
 330-774-6346



WRARC Simplex Frequency 146.565

Mahoning County ARES® Nets

1st Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

&

3rd Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

ARES thanks MVARA for the use of their repeater



W8SGT is facilitating The Ohio HF net every Tuesday - 7:00 PM

The net is run from the State of Ohio EOC on the

Ohio ARES Admin frequency 3875 kHz LSB

moves to 7240 Khz after 20-min.

All are welcome to check in.

The Ohio ARES/OES Digital Emergency Net held every Tuesday at 8:00PM.
 held on 3585 kHz USB.

Please note all digital communications are Upper Side Band.

<http://www.http://ohden.org/> for net details. Net Manager Gary NJ8BB



Thanks & 73 to all of our members (and others) look forward (hopefully) to getting this newsletter every month, so keep sending those articles, jokes, and suggestions! sending those articles, jokes, and suggestions!

Thanks goes out to this month's contributors; N8SY, W5YI, the ARRL, FaceBook, and the World-Wide Web.

DARE TO IMAGINE

(from Howard Michel, WB2ITX –ARRL CEO)

(Scott, N8SY Note... *I don't usually print the message from the CEO of ARRL, but this week I'm making it the exception. I really want you to read his column carefully. Why? This I believe will help answer the most common question I get from folks when I'm traveling around "What's the League doing for me?"*)

Are you imagining monthly meetings of local clubs, hamfests with flea markets, hams reading QST cover to cover, and on-air rag-chewing or contesting –all with fellow hams that look like you? Maybe you're imagining all of those familiar activities being done by younger versions of yourself.

The world has changed. People are busy with many activities –establishing careers, building families, giving back to their communities. Free time is scarce. People are used to customization. They expect to engage with the world on their own terms, on their own schedule, and in their own way. Younger hams are not just younger versions of you and me. They have grown up in a different world.

Data tells us that 54% of our current members have an Amateur Extra-class license, but in the pool of non-member amateurs 75% are Technicians. But more than license class, their interests are different. Their demographics are different. They are different, and they want different things. I get emails from members who complain that QST is too technical, and other emails telling me it is not technical enough. Members complain to me that contesting takes over “their” bands. I get other emails suggesting that we expand contests and awards. I'm sure you get the picture.

We can try to mold the future generation of hams to our image, or we can embrace new hams for what they are. ARRL needs to do the latter. We are now organizing our thinking around the concept of verticals –narrow markets or target niches –that will allow ARRL to provide each member what they want.

I've already talked to you about some initiatives On The Air magazine, and Lifelong Learning –that ARRL is taking to engage new hams. We intend to continue developing new products and services for this vertical.

Other verticals I'll be proposing to the Board in January are Radiosport, Experimenters, and Emergency Communications (these are just working titles at this time). ARRL Needs to develop products and services in these verticals.

One product we are recommending to the Board is to create a family of “mini-magazines” that will span the various verticals. To jump start the “mini-mag” revolution, considering the business case, we will offer NCJ and QEX in digital form to everyone as a new member benefit in early 2020. We hope the digital editions will generate interest in their respective areas. Paper editions would still be available as a paid subscriber. Another way we plan to engage hams is through local clubs. ARRL will be hiring a national club coordinator in 2020, who will be charged with developing new ways for clubs to organize and operate.

We will continue to support traditional clubs, clubs that meet monthly for business and social events, organize Field Day activities, etc. But traditional clubs are not the future of clubs. Young people now join causes, not clubs.

Our focus will be on developing ways, and an infrastructure, that members can use to organize themselves in ways they want, to do things that they consider meaningful. I can see these new clubs organized to support special events such as a marathon; to engage in STEM education; or prepare for disasters. These types of clubs exist now, but they may need to conform to a set of rules designed for traditional clubs. Can we scrap the rules and provide meaningful support? To aid in this, club leadership could be another vertical. ARRL could provide training in soft skills, such as how to run a meeting or give an effective presentation.

These are just my thoughts. To implement them, the ARRL Board needs to agree. If you think we are on the right track, if you think the vision I have outlined for 2020 is on the right track, let your Director know. I encourage your comments to me at ceo@arrl.org



DAYTON HAMVENTION ADMISSION, FEES TO INCREASE IN 2020

Dayton Hamvention® is increasing the cost of admission and its booth fees. Hamvention General Chair Jack Gerbs, WB8SCT, announced this week that general admission would rise by \$4 per ticket to \$26 in advance or \$31 at the gate for all 3 days. The cost of flea market spots will go up by \$5 per space, and inside exhibitors will pay \$30 more.

“Hamvention has always strived to produce a very high-quality event for amateur radio enthusiasts from around the globe,” Gerbs said. “We have always felt it is imperative that we give back to amateur radio at many levels. We have been very generous in our support over the years.” Gerbs cited “the economic pressures to present a show like Hamvention” as the reason for the price increases.

“The Hamvention Executive Team is asking for your support and understanding as we move forward together,” he said.



HAMVENTION 2020 THEME



The theme for the 2020 Dayton Hamvention® will be "Amateur Radio, The Future." Hamvention General Chair Jack Gerbs, WB8SCT, invited Hamvention attendees to celebrate amateur radio's past, present, and future. "As amateur radio operators, we enjoy many modes of operating," Gerbs said. "We also enjoy challenges such as satellite communications, moonbounce, meteor scatter, and more. What truly excites me about our

hobby is the diversity of these modes and the fact that, as we move to the future, we still enjoy the technologies of the past." Gerbs noted that Hamvention has long been a place to find vintage parts and gear and to see the latest technology. "The theme acknowledges the role that amateur radio has always played and will continue to play in future communication developments," Hamvention said, acknowledging the contributions of the many hams who actively work on new ideas, equipment designs, and software to improve electronic communication. Hamvention 2020 takes place May 15 - 17 at the Greene County Fairgrounds and Expo Center in Xenia, Ohio.

The ARRL Letter for December 12, 2019



**Semi-Monthly
Ham Community
Breakfast
Second and Fourth
Tuesdays
9:00 A.M.
Eat 'n Park Restaurant
in Austintown
Join Us!**

DO YOU KNOW WHAT THE WORD HAM MEANS?

The word **HAM** is often used by many as a shortcut for amateur radio "**HAM RADIO**". As radio operators we call ourselves "**HAM**" or "**HAMS**".

The actual meaning of **HAM** is taken from the three pioneers that helped to make it possible for us all to become "**HAMS**".

The letter **H** stands for Hertz (Heinrich Hertz) who helped to develop the theory of electromagnetic waves.

The letter **A** stands for Armstrong (Edwin Howard Armstrong) who was successful in inventing FM (Frequency Modulation).

The letter **M** as you may have guessed already stands for Marconi (Guglielmo Marconi) who was the first to transmit signals across the Atlantic.

H = HERTZ

A = Armstrong

M = Marconi

Or the funny one - **Haven't Any Money!**



ARRL ASKS FCC TO DISMISS PETITION

ARRL Asks FCC to Dismiss Petition Seeking Declaratory Ruling on Encoded Message Rule



ARRL has asked the FCC to dismiss a Petition for Declaratory Ruling filed by New York University (NYU), that in ARRL's view proposes a new interpretation of the rule -- Section 97.113(a)(4) -- prohibiting "messages encoded for the purpose of obscuring their meaning." In its December 2 filing, ARRL said NYU's call to "clarify" the rule's meaning to prohibit "effectively encrypted or encoded messages, including ssages that cannot be readily decoded over the air for true meaning," is not only vague but could weaken the prohibition against encryption.

ARRL pointed out that the FCC rule prohibiting "messages encoded for the purpose of obscuring their meaning," is essentially the same as what appears in the International Telecommunication Union (ITU) Radio Regulations applying to all countries. ARRL made clear that it continues to support rules prohibiting encrypted messages on the amateur bands, even for limited emergency communication purposes, and the ARRL Board reiterated that opposition last July.

In its comments, ARRL said that NYU's request that the FCC adopt its suggested language would introduce ambiguity and confusion in the application of a rule that's clearly understood to prohibit encrypted messages. ARRL noted that Morse code is encoded and would fall within the prohibition as proposed by NYU. "The very fact that messages sent in CW are 'encoded' by any definition of the term starkly demonstrates the problem with this proposal," ARRL said.

ARRL said that adding the word "effectively" would make the definition even more vague by including all encoded messages plus an additional set of undefined messages, the extent of which is unknown. Similarly, ARRL maintained, it is "unclear and undetermined what the petitioner may mean by 'effectively encrypted.'" Encryption is a binary proposition, ARRL pointed out, and the meaning either is hidden from all but the intended recipient(s) or it is not; a message cannot be considered "encrypted" if the means to enable non-recipients to understand the message are generally available.

"Adding the modifier 'effectively' to 'encrypted' converts clear meaning into vague uncertainty," ARRL asserted. FCC rules explicitly authorize radio amateurs to use new digital techniques on the condition that the techniques be described adequately and available publicly, ARRL said,



WHAT IS AN ELMER

There is much being said and written these days about the importance of bringing new people, especially young people, into our Hobby. There are many obvious reasons for this. As we all get older or get busy with other aspects of our lives, some will leave the hobby. Also, we have the use of many commercially valuable portions of the RF spectrum and there is always pressure to reallocate bands or segments of bands which are not fully utilized. In my mind, the most important reason to bring new HAMs into our hobby has to do with the energy and new ideas that these folks bring to Amateur Radio. Amateur Radio has always been a learning hobby and new folks help us to keep this important part of what makes our hobby so much fun vibrant.

Jane, K8JAA, and I putting a lot of time and energy into getting folks started in Amateur Radio and helping them to build their skills and progress. Our Amateur Radio License Classes and the youth outreach work that we've been doing are two good examples of this. To make these efforts as successful as they can be, it's also very important to provide good opportunities for folks who are new to various aspects of Amateur Radio to learn and gain experience. This means becoming an "Elmer" or a HAM Radio mentor to people who are less experienced in some part of the hobby than you are.

Perhaps the most challenging part of Amateur Radio for many new HAMs is making the transition from getting their initial license or a license upgrade, to getting on the air with their new privileges. I think that this is equally true for newly licensed folks and for folks who have upgraded to a higher license class and are looking to get onto the HF bands. It's impossible to teach everything that one needs to get the most from their Amateur License in classes alone.

Help A Young Person Learn To Operate From Your Shack

So what does effective Elmer'ing look like? I think that the answer is different for every HAM. For a new Tech, it may be as simple as helping the person to pick their first radio and antenna along with some help getting it programmed for the local repeaters. For a person upgrading their license to gain HF privileges, it is often about helping to get a first HF antenna up along with helping them to select equipment for and assemble a first HF station. All of these folks will also benefit from help getting on the air and learning to operate. Most of all, a great Elmer is someone who is willing to give their time to help a person who is new to an aspect of Amateur Radio learn and get started doing what they want to do.

I have personally found that being an Elmer to be one of the most rewarding and enjoyable aspects of Amateur Radio. Every time that I help someone get on the air for the first time or help someone to build their first HF antenna or station, I get the same enjoyment as when I did these things for the first time in my Amateur Radio experience.

Elmer'ing is also a great opportunity for the "Elmer" to learn new things. Newer or less experienced folks will have different things that they want to try or learn about than those things that we "Elmers" consider our "tried and true" Amateur Radio activities. A great Elmer will help the less experienced HAM take on these projects and learn along with them. This gives the less experienced person the confidence and support that they need to try more difficult projects with confidence. The learning experience associated with being an Elmer has often been the best part of the experience for me.

So how does one get started with Elmer'ing? You could open your station to newer HAMs and offer them a chance to get on the air and learn to operate. There is always someone looking to put up a new antenna or to repair an existing one. These are all great opportunities for Elmer'ing. Also, you could consider creating a presentation that you can deliver at your local radio club meetings as a way to share specialized knowledge or experience that you may have. If you are new licensed, perhaps you could help someone who is studying for their license exam with some of the areas that they are finding difficult. Also, new folks tend to have experience with computers and the Internet that many of the folks who have been in the hobby for a while can benefit from. This can be a 2-way Elmer'ing opportunity.

I hope that all of our readers will consider becoming an Elmer in some way. Your efforts to help someone new or less experienced can provide you with the satisfaction that you helped to make Amateur Radio a better hobby for everyone.

73 Allan, AB8AA

TOP SIGNS THAT YOU MAY NEED AN ELMER

An Elmer is the person you go to, to ask questions about topics in Ham Radio that you don't understand.

In that vein, you know it's time for you to find an Elmer if...

Your friend tells you he has a new two meter radio and you figure one of the meters must be for SWR and the other for power out.

You hear a conversation on the low bands about CW and you think they're referring to the cold war.

You hear someone sign this is N8XXX mobile 4 and you think it's because he has three other radios

You hear that someone won a 40 meter radio at a Hamfest and you wonder how they're going to get something that large in their house.

You build a Morse code key out of plexiglass and can't figure out why it won't key your radio.

You think the difference between short wave and long wave is the speed at which you move your wrist back and forth.

You're thinking about joining your other ham friends in the local ATV group because you own a four wheel drive vehicle that will go just about anywhere.

You won't use a repeater because you've heard that using a repeater could be dangerous. You've heard an alligator could get you.

You think a colinear antenna can only be used with two amplifiers.

You think FM is the modulation type that came after em, dm, cm, bm and am.

You wouldn't mind getting into packet radio but no matter how much you practice you can't get the hang of sending those beeps and braps with your keyer.

You wonder what sound a short wave makes and why anyone would want to listen to one.

You think the repeater owner would be a lot happier if instead of talking about his cavities he just went to the dentist and got them filled.

You think a CW ID is the number the army gave you on your dog tags.



The Boy Scouts say JOTA station participation was up in 2019. The Scouts report that, although overall Jamboree On the Air (JOTA) 2019 participation was down slightly from 2018, "our calculations show that each station averaged an additional 13 people in attendance over 2019. This shows an aggregate increase of 24% attendance per station, even with our reported stations being down from 266 in 2018 to 201 in 2019." The Scouts reported that 13,783 individuals took part in JOTA 2019, down from 14,708 in 2018.

The ARRL Letter for December 12, 2019

NWS TO IMPLEMENT CHANGES

NWS to Implement Changes to Flash Flood Wireless Emergency Alerts

By Kate Abshire, Hydrologist, NWS, Water Resources Services Branch

Beginning on January 8, 2020, (or the next day without critical weather) the NWS only will issue Wireless Emergency Alerts (WEA) for Flash Flood Warnings (FFW) based on two damage threat tags: Considerable or Catastrophic. These WEAs will be sent using the new 90-character messaging. FFWs labeled with these tags are life-threatening and require urgent action. Because these tags are applied to FFWs relatively rarely, this change will reduce the number of flood-related WEAs NWS sends. NWS will also issue WEAs for Flash Flood Statements that exhibit an increase in damage threat.



This change will not affect key information in the FFW segment header block, such as the Valid Time Event Code (VTEC) and Hydrologic VTEC (H-VTEC) strings, nor will it affect changes to the existing criteria for warning dissemination.

NWS will still issue and distribute all FFWs via NOAA Weather Radio, the Emergency Alert System, on radio and TV broadcasts, weather.gov and through dissemination systems to emergency managers and partners.

Users can find information about the specific changes to WEA Messages for FFWs in the Product Description Document (PDD). The PDD also includes more details on the characterization of the flash flood damage threat, source information and causative event, along with examples of FFWs in Impact-Based Warnings format.

In addition, NWS has solicited public feedback on a proposed expansion of weather warnings to the new 360-character maximum and the proposed content of the NWS messages carried by WEA in English and Spanish. Based on the positive feedback received, we have now finalized those types of messages. Look for another article in *Aware* or on Service Change Notice web page once NWS has set an implementation date for 360-character FFW WEA messages in English and Spanish



- Dave De Simio, WA8GCF
- Mike Austin, KC8WUX
- Russ Williams, NR8W
- Aiden Divelbiss, W0TIS
- Dennis Marko, KA8DJM
- Ted Balog, KD8PBW
- Liz Beatty, KD8DWV



FCC FORMALLY ADOPTS PROPOSALS

ARLB024 FCC Formally Adopts Proposals to Remove Amateur 3-GHz Band, Invites Comments

From ARRL Headquarters

Newington CT, December 19, 2019

To all radio amateurs



At its December 12 meeting, the FCC formally adopted a Notice of Proposed Rulemaking (NPRM) in WT Docket 19-348 and invited comments on its plan to remove "existing non-federal secondary radiolocation and amateur allocations" in the 3.3 - 3.55 GHz band and relocate incumbent non-federal operations. The FCC said it's seeking comment on appropriate "transition mechanisms" to make that happen. ARRL has indicated that it will file comments in opposition to the proposal. The amateur 9-centimeter allocation is 3.3 - 3.5 GHz. The NPRM comes in response to the MOBILE NOW [Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless] Act, approved by the 115th Congress to make available new spectrum for mobile and fixed wireless broadband use.

The NPRM can be found online in PDF format at, <https://docs.fcc.gov/public/attachments/FCC-19-130A1.pdf> .

"By proposing to delete the existing non-federal secondary allocations from the 3.3 - 3.55 GHz band, we are taking an important initial step towards satisfying Congress's directives and making as much as 250 megahertz of spectrum potentially available for advanced wireless services, including 5G," the FCC said in the Introduction to its NPRM.

Currently, the entire 3.1 - 3.55 GHz band is allocated for both federal and non-federal radiolocation services, with non-federal users operating on a secondary basis to federal radiolocation services, which have a primary allocation, the NPRM explains.

The FCC said it is seeking comment on relocating non-federal licensees to another band. With respect to amateur operations, the FCC invited comments on whether sufficient amateur spectrum exists in other bands that can support the operations currently conducted at 3.3 - 3.5 GHz. The 3.40 - 3.41 GHz segment is earmarked for amateur satellite communication. "We seek comment on the extent to which the band is used for this purpose, whether existing satellites can operate on other amateur satellite bands, and on an appropriate timeframe for terminating these operations in this band," the FCC said. If non-federal licensees are relocated to 3.1 - 3.3 GHz band, the FCC proposes that they continue to operate on a secondary basis to federal operations, consistent with current band allocations.

Some comments began to arrive before the FCC formally adopted the NPRM, as it points out in a footnote. Kevin Milner, KD0MA, the secretary/treasurer of the Ski Country Amateur Radio Club in Colorado, has argued that the club's equipment cannot be re-channeled below 3.4 GHz, and the club is seeking relocation costs. Devin Ulibarri, W7ND, told the FCC that amateur networks in the current band cannot move easily into other amateur allocations because there is no readily available commercial equipment to support the bandwidth, the FCC recounted.

In the event the proposed amendments are adopted, the FCC "seeks comment on relocation options and on transition and protection mechanisms for incumbent non-federal operations."

Also at its December 12 meeting, the FCC considered another NPRM in WT Docket 19-138 that would "take a fresh and comprehensive look" at the rules for the 5.9 GHz band and propose, among other things, to make the lower 45 MHz of the band available for unlicensed operations and to permit "cellular vehicle-to-everything" (C-V2X) operations in the upper 20 MHz of the band. The FCC is not proposing to delete or otherwise amend the amateur allocation, which would continue as a secondary allocation.

This NPRM can also be found online in PDF format at, <https://docs.fcc.gov/public/attachments/FCC-19-129A1.pdf> .

FCC FORMALLY ADOPTS PROPOSALS - CONTINUED FROM PAGE 12

The Amateur Radio Emergency Data Network (AREDN) has offered its voice in challenging the FCC proposals on the two bands, saying their adoption would "eliminate our use of the most-effective resource hams have to build its networks."

"The AREDN Project is able to leverage low-cost commercial devices solely because they are designed to operate on adjacent allocations," AREDN said on its website. "Moving to other allocations would be difficult if not impossible without a complete redesign, manufacture, purchase, and installation of new custom amateur hardware and software..., raising the price out of reach for the typical ham."

Interested parties may file short comments on WT Docket 19-348 via the FCC's Electronic Comment Filing Service (Express). Visit the FCC "How to Comment on FCC Proceedings" page for information on filing extended comments at, <https://www.fcc.gov/consumers/guides/how-comment> .



TAKE TIME TO LAUGH FOR IT'S THE MUSIC OF THE SOUL -- FROM AN OLD ENGLISH PRAYER

29 LINES TO MAKE YOU SMILE

1. My husband and I divorced over religious differences. He thought he was God and I didn't.
2. I don't suffer from insanity; I enjoy every minute of it.
3. Some people are alive only because it's illegal to kill them.
4. I used to have a handle on life, but it broke.
5. Don't take life too seriously; No one gets out alive.
6. You're just jealous because the voices only talk to me
7. Beauty is in the eye of the beer holder.
8. Earth is the insane asylum for the universe.
9. I'm not a complete idiot -- Some parts are just missing.
10. Out of my mind. Back in five minutes.
11. NyQuil, the stuffy, sneezy, why-the-heck-is-the-room-spinning medicine.
12. God must love stupid people; He made so many.
13. The gene pool could use a little chlorine.
14. Consciousness: That annoying time between naps.
15. Ever stop to think, and forget to start again?
16. Being 'over the hill' is much better than being under it!
17. Wrinkled Was Not One of the Things I Wanted to Be When I Grew up.
18. Procrastinate Now!
19. I Have a Degree in Liberal Arts; Do You Want Fries With That?
20. A hangover is the wrath of grapes.
21. A journey of a thousand miles begins with a cash advance
22. Stupidity is not a handicap. Park elsewhere!
23. They call it PMS because Mad Cow Disease was already taken.
- 24 . He who dies with the most toys is nonetheless DEAD.
25. A picture is worth a thousand words, but it uses up three thousand times the memory.
26. Ham and eggs...A day's work for a chicken, a lifetime commitment for a pig.
27. The trouble with life is there's no background music.
28. The original point and click interface was a Smith & Wesson.
29. I smile because I don't know what the hell is going on.

January 2020

PREPAREDNESS LEADS TO READINESS - MATT W8DEC



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	4 YL Breakfast 
5	6 ARES Net 8:30 PM 146.745 PL 110.9	7	8	9	10 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	11
12 After the Holidays Dinner Meeting 	13	14 Eat'n Park Austintown 8:30 A.M. Ham Community Breakfas	15	16	17 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	18
19  WaveBender Articles Due	20 ARES Net 8:30 PM 146.745 PL 110.9	21	22	23	24 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	25
26	27	28 Eat'n Park Austintown 8:30 A.M. Ham Community Breakfas	29	30	31 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	