



*Editor's Note: During the evening of Sunday, Nov 5, severe weather struck the Miami Valley. The main features of this weather were severe thunderstorms with multiple tornadoes and a frontal geometry that resulted in heavy rainfall and flash flooding in some areas.*

## President's Message

As usual, we will have the annual election of officers at the November meeting. The current officers have each agreed to serve another term and there were no other candidates nominated, so the election will simply be a vote of affirmation. However, we do need a quorum to be present to make the election official, so please try to attend.

For a number of years, XWARN was the sponsor of a scholarship targeted at students interested in technical studies. We have not given a scholarship in several years. At the November meeting, I plan to open discussion on whether we wish to get this program going again and what criteria we should apply to select recipients. Even if you cannot make it to the meeting, any input regarding this topic will be taken under consideration.

As I write this, the weather net is active on the XWARN 2 meter repeater. Please try to tune in when there is significant activity in the area. More eyes on the sky means better coverage. It is also a good time to check that your equipment is in proper working order.

See you at the meeting on November 13.

# Wavelengths

Nov 2017

**Xenia Weather Amateur Radio Net  
XWARN (W8XRN)**

147.1650+ (123.0) (Analog Only)  
443.1000+ (123.0) (Analog + System Fusion)

**Meetings:** 2nd Monday, 7:30PM,  
Greene Memorial Hospital ([1141 N Monroe Dr, Xenia, OH](http://www.greenehospital.org))  
Herman Menapace Auditorium

Online Newsletter: <https://sway.com/mERCCPXsLfT2KyBN>

## A Little of This, A Little of That

There was a bunch of little stuff I found on ARRL's website this month that piqued my interest.

First is a HamSci [workshop](https://goo.gl/nBDQzb) (<https://goo.gl/nBDQzb>) that hopes to foster collaboration between Hams and Space Science and Space Weather Researchers. One outcome they'd like to see is for hams to set up space weather stations like they do for terrestrial weather. Unfortunately, the dream space weather station doesn't exist in an easily assembled form.

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## Club Contacts

- President, Bob Baker, N8ADO  
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## Calendar of Events

- Nov 12. Sunday 6PM. Greene County Amateur Radio License Test Session. Training Room of Beavercreek Fire Station 61, 2195 Dayton Xenia Road, Beavercreek Ohio (just west of Orchard Lane).
- Nov 18 Sat 9–11. Mid East Cross Country Regionals. Indian Riffle Park, Kettering. Easy event, need 12–15 volunteers [N8ADO]
- Dec 9 Sat. Reindeer Run.
- Dec 31 Sat 1900-2100 (7-9PM). Resolution Run. Beavercreek HS, Dayton-Xenia at Fudge. 5k, VE test session, potluck snacks before. We provide comms and light the course with our headlights—we are never short of volunteers for this one, but don't miss out! [N8ADO]

## FIRST Robotics

Note from Jason, WG8B. Sorry about the late notice about another agenda item I'd like to include. Recently I became involved with the [FIRST Robotics](https://goo.gl/xeVWBC) (<https://goo.gl/xeVWBC>) competition. The purpose of the competition is to engage students in real-world Science, Technology, Engineering, and Math (STEM) problems through a worldwide robotics competition. However, the FIRST competition goes beyond STEM and includes a marketing component as well as opportunities for students to learn about teamwork and leadership. Although not officially affiliated with the high school, a Beavercreek team recently formed, and I am a mentor on that team. I'd like to offer an opportunity for some of the students to come into our meeting to give their marketing pitch with the end goal being a small donation like we do with the Youth DX competition. We don't have to decide on a donation at the meeting, but if we are going to donate we should do so in the near future. Being a new team, they literally need everything. Also, the build phase of the next competition starts in January, and they'll need resources for that. I'm not entirely certain they will be ready for the Nov 13 meeting. If not, I will simply discuss whether we want to do this or not and how much we'd like to donate.

## A Little of This, A Little of That

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So they will be talking with TAPR about possibly designing a kit.

Second, as some of you are aware, hams around the world were recently given some very low frequencies to play with. Joe Craig, VO1NA, in Torbay, Newfoundland, was able to [send](https://goo.gl/M8pK4B) (https://goo.gl/M8pK4B) a 10 microWatt, that's 0.000010W, signal on 8.27 kHz (36-kilometer band) over a distance of 3,500 kilometers to the United Kingdom.

Third, it appears the ARRL Executive Committee is [examining](https://goo.gl/fkkUaB) (https://goo.gl/fkkUaB) updating the entry level license to include more HF privileges. The article didn't really say what's driving this study.

Finally, there was some [debate](https://goo.gl/nQsb4z) (https://goo.gl/nQsb4z) over the relatively new FT8 digital mode. FT8 is among a class of modes "designed for making reliable, error-free contacts using very weak signals — in particular, signals that may be too weak for the more traditional modes to be usable, or even too weak to hear." On one hand is the group trying to experiment with new capabilities. On the other hand is another group who says things are too easy for hams today.

## Elections

Most of the important stuff is covered in the President's Message and Minutes. However, as Acting Secretary, I wanted to point out that our new Code of Regulations has a conflicts-of-interest policy. That policy requires those running for office submit a conflicts-of-interest statement and questionnaire upon being nominated so that any conflicts or potential conflicts are presented to the membership ahead of the vote. I neglected to bring blank copies to the October meeting, so I read the Conflict-of-Interest Statement aloud during the meeting and queried the nominees on whether they had any conflicts or potential conflicts. The answers were all "no". I will get signed statements at the November meeting and file them in our official records. As a reminder, the signed statements will be good until the new round of officers assume office in late 2018 or until an actual or potential conflict emerges, at which point a new statement

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### XWARN Mission

The mission of the Xenia Weather Amateur Radio Net (XWARN) amateur radio club is to conduct weather spotting nets during severe weather and other communication services for the City Of Xenia and all other Greene County communities.

In this capacity, we are set up to provide communication services as required to the Greene County Ohio Public Service Agencies and other local government entities. The communications services provided to the supported agencies may be for emergency purposes or to simply enhance their communications abilities. On an as needed basis XWARN provides similar services to various government entities of our surrounding counties.

Additionally, XWARN provides communications support to various community organizations in support of marathons, 5K runs, 10K runs, bicycle events, etc. to provide health and safety assistance to the participants and sponsors of said events.

In support of these goals, XWARN operates and maintains amateur radio repeaters and other equipment in Greene County.

## **Minutes from October 9, 2017**

At 7:30PM, President Bob Baker called the meeting to order. All recited the Pledge of Allegiance. 18 members present

### **Cracker Barrel**

- Jason Bowman announced he was going to participate in the "Battle Buddies and wanted to ask for individuals to donate to the cause.
- Mike Crawford reported on his GI Ham Con in Michigan.

Secretary's Minutes from last month received no comments or corrections. Phyliss/Ken C moved to accept minutes. Treasurer's Report was given and accepted.

### **Committee Reports**

Service-District Cross Country meet Oct 21 still needs one more volunteer. Mid-East Regional Cross Country meet November 18 at Indian Riffle Park still has openings, Resolution Run Dec 31st, and Ugly Sweater run still hasn't confirmed but probably wants us.

*Trailer.* October 14th the trailer will be at the Beavercreek Fire Open House.

*Repeater.* None

*Web site.* None

Newsletter.

### **Old Business**

None

### **New Business**

Bob wanted to ask the membership if there was anything other clubs did such as door prizes refreshments that would enhance club meetings. There was no discussion or ideas presented.

*Nominations.* The current Board (President Bob Baker, VP Bret Boggs, Acting Secretary Jason Bowman, Treasurer Steve Mackey) is willing to stand again for the next year but we did open the floor for any nominations. The only question was can we elect by proclamation tonight or do we need to vote next month. Secretary will look into Articles to see if the yes vote tonight will suffice.

### **Meeting Presentation**

Jason Bowman gave a debriefing with visual aids of radio reception plus or minuses of the past few

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events.

Next meeting is November 13, 2017

Reminder-the Christmas party will be December 11th at 6:00 PM at Golden Corral

Janese/Ken moved to adjourn.

Karen Baker, Recorder

Jason Bowman, Secretary (Acting)

## **Elections**

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must be completed by the officer.

Also at the October meeting, we collected nominations for the election in November. It was our usual circumstance - a nominating committee was not technically necessary as the incumbents agreed to be nominated to continue in office, and there was no one offering to contest any of the positions. A question arose about procedures for nominations and voting, and with the recent change in Bylaws we couldn't dig into the documents fast enough. I, the acting Secretary, tasked myself to clarify the situation by taking some time to examine our governing documents.

First a little reminder of our governing documents. Articles are the most general and very short. The Operations Manual is the most specific and longer. In between is the Code of Regulations. The Code can only be updated by a vote of the membership - these are the things we expect to not change - whereas the Operations Manual can be updated by the Executive Council - these are the things we expect need flexibility.

The Operations Manual speaks to nominations and says that a Nominating Committee be established and prepare a slate of candidates. I would argue that the President's discussion and what Janese did at the October meeting would constitute a committee. However, this policy is probably over-prescriptive. Ohio Revised Code 1702.26 only states that nominations must occur not how they occur.

Using the powers vested in the Executive Council by the Code of Regulations, I recommend that the Executive Council eliminate Paragraph II.2.e.2, which requires a Nominating Committee. This does

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## Severe Weather on November 5

On Sunday, November 5, a strong cold front came through the region. Like all cold fronts, ahead of the cold front is a warm southerly flow, and behind the cold front is a strong westerly flow. The stronger the front the stronger these differences. This particular front was oriented more along its direction of travel, which caused thunderstorms to persist over an area and cause heavy rainfall and flash flooding. I was driving back from Pittsburgh and between Springfield and Dayton when the storms hit along I-70. For about 15 minutes, cars were either stopped or barely moving at 15 mph because no one could see out their windshields. In other areas to our north, several tornadoes hit including an EF2. The pictures I've included above are from western Mercer County. Late reports on Monday indicate that the local electrical utility in Celina would have to shut down power to the city for 30-60 minutes in order to make emergency repairs. The Wilmington office of the National Weather Service has created a dedicated [page](https://goo.gl/fFeX4D) (<https://goo.gl/fFeX4D>) for this weather event with rainfall totals and descriptions of the tornadic activity.

## Amateur Radio Response to the Hurricanes

Information continues to slowly trickle out of areas damaged by the various hurricanes. I still hope to provide a more detailed summary of how amateur radio was involved, but time is not on my side for this month's newsletter due to unforeseen family commitments that took priority.

That being said, I did find an interesting [thread](https://goo.gl/dV6iZU) (<https://goo.gl/dV6iZU>) over on the amateur radio Reddit page. The original poster obviously represents one extreme and poor opinion of the amateur radio response in Puerto Rico. On the other hand, ARRL almost universally sugarcoats everything for the press, which is not very helpful in understanding how to im-

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## Elections

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not mean we cannot form a Nominating Committee if the need arises. That power is still vested in the President for establishing committees in general. We would just remove the absolute requirement. Paragraph II.2.e.1 will remain in place. That paragraph requires nominees to have been a member for 1 year and have voting privileges (honorary members can't hold office).

The Code of Regulations, on the other hand, is silent on nominations. It only discusses voting requirements. As it's currently written, elections require a written vote, and that vote occurs at the Annual Meeting not before. You can debate the sanity of holding a vote when there is only one candidate for a position, but do we have a quorum requirement for a reason? If so, then not holding a vote is problematic even if there's only one candidate. Because there are philosophical aspects here, this is probably best left to a Constitution Committee to discuss. However, any vote for an uncontested position should remain written in my opinion to maintain the sanctity of the process. After all, some members may still want to vote "no" or abstain even if it doesn't matter. But why wouldn't it matter? Plurality means only one "yes" vote is enough for an uncontested candidate, and I'm assuming they would vote for themselves.

Finally, sorry the Constitution Committee didn't consider this in the last revision. No one thought of it. We had much bigger changes distracting us. I will briefly go over this at the next meeting.

## Amateur Radio Response to the Hurricanes



*Chet Hogue, N3BK*

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prove yourself. The truth is likely somewhere in the middle. I will briefly attempt to sort through it all.

Immediately after Hurricane Maria hit Puerto Rico, the Red Cross, through an existing MOA/MOU, requested help from ARRL. Some of you probably saw emails or posts on Facebook where ARRL was asking for 50 volunteers to be sent in two teams of 25. Well, even ARRL admits that only 22 volunteers emerged. The original mission was to support the Red Cross by passing mes-

sages for their Safe and Well program. But once on the ground, the mission completely changed. Surprise, surprise. No plan survives first engagement with the enemy. The situation was so bad that just setting up basic, local communications wherever they could and especially at hospitals became the priority.

There appears to have been a breakdown in chain-of-command resulting in numerous operational problems.

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## Amateur Radio Response to the Hurricanes

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The ham aid kits and other equipment being sent had problems. There were complaints of single-band antennas, no training on the equipment, and equipment that was too hard to transport in an austere environment. The kits were focused on HF when more VHF was needed, especially temporary repeaters. The original poster made it very clear that an all-in-one radio such as an 857 or KX3 was sorely needed to keep size and weight down in the field while covering HF through VHF/UHF.

There was a report of an amateur radio operator who, because of their medical problems, should not have gone into Puerto Rico to begin with.

There was another report of an amateur radio operator complaining about the lack of cots and having to sleep on the floor.

To give an example of the change in mission, one amateur radio operator had to set up a helicopter landing zone. There was another case where an amateur radio operator helped repair a generator for a hospital, but I'm not sure it was the same person or not.

Based on my own knowledge and various comments I've seen on Facebook and elsewhere, ARRL should never have sent a group of people who didn't know each other and, more importantly, didn't train together. ARRL and the Red Cross will probably have to reevaluate how they approach this in the future for large scale disasters. I did have a brief conversation with someone that a potential for the future is to establish an [Emergency Response Unit](https://goo.gl/N6v1CT) (<https://goo.gl/N6v1CT>) dedicated to emergency communications, and that group would or should be responsible for normalization of the training, equipment, and overall response when supporting the Red Cross.

After the deployment of amateur radio operators to Puerto Rico ended, the Dept of Homeland Security deployed SHARES resources for longer term support. I don't know anything about [SHARES](https://goo.gl/HDfw4Y) (<https://goo.gl/HDfw4Y>), but here is a snippet from their FAQ:

Over 1,350 HF radio stations—representing 104 federal, state, and industry organizations, located in all 50 states, the District of Columbia, and overseas—participate in SHARES.

Nearly 500 emergency planning and response personnel participate in SHARES.

SHARES utilizes multiple federally-assigned HF radio channels for use by SHARES members.

The SHARES HF Interoperability Working Group, with members representing 110 organizations, conducts HF technical reviews, provides regulatory guidance and direction for administration of the SHARES network, and promotes awareness of new HF radio technologies.

Another interesting [story](https://goo.gl/fo8MPa) (<https://goo.gl/fo8MPa>) emerged from the Florida Keys, which were hit hard by Hurricane Irma. Chet Hogue, N3BK, elected to stay in the Keys and ride out the storm. Afterwards, he was able to relay health and welfare messages for friends and neighbors who also stayed. The interesting part is that the normal frequencies had become very busy. So Chet switched over to

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## Private Sector Response to the Hurricanes

Whereas the emergency communications needs along the Gulf Coast after Hurricane Harvey were fairly minimal due to years of preparation after Hurricanes Katrina and Ike, there was almost no hardened communications infrastructure in Puerto Rico. Companies such as Alphabet, the parent company of Google, and ATT have been experimenting with cellular stations in the sky that can be deployed on relatively short notice. The picture above shows [Project Loon](https://goo.gl/igQ3AH) (https://goo.gl/igQ3AH) from Alphabet. Project Loon uses a balloon which can be steered by varying its altitude to take advantage of winds.



While partnered with Alphabet on Project Loon, ATT has also been [experimenting](https://goo.gl/m3BkcW) (https://goo.gl/m3BkcW) with a heavier-than-air approach using a small drone that can cover up to 40 square miles. ATT believes that this approach will have a role to play as they build out FirstNet.

## Amateur Radio Response to the Hurricanes

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CW, a.k.a. Morse Code, to get messages out. The reason that CW gets out when nothing else will is that CW typically occupies a very small bandwidth, something like several tens of Hz or less. That means that the signal-to-noise ratio is much higher than with voice or phone modes, which use several KHz of bandwidth, for the same power. Even a few watts of power can go long distances when using CW.

Finally, although lacking details, there is an [article](https://goo.gl/X8pHQ1) (https://goo.gl/X8pHQ1) over on All Things FirstNet comparing and contrasting the various radio services in times of disaster. Puerto Rico only opted into FirstNet a few weeks ahead of the hurricane. They do point out that in the future utilities should be able to rapidly deploy temporary cellular services if necessary, which is the focus of the next article.

Club Call: W8XRN

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«FNAME» «LNAME» - «CALL»  
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## **Wavelengths**

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Wavelengths is published monthly by the Xenia Weather Amateur Radio Net. Our meetings are currently held on the 2nd Monday of each month at **7:30 pm** at the Greene Memorial Hospital Auditorium. You can find additional information about our organization at [www.xwarn.net](http://www.xwarn.net). We welcome new and experienced Amateur operators and those interest in becoming an Amateur operator to attend our meetings.