

# Wavelengths

April 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](#))  
Herman Menapace Auditorium

Online Newsletter: <https://sway.com/2SnJkTGey8cpNRS9>

## President's Message

Public Service Events are starting to pop up again. Jason usually publishes a list elsewhere in this document, so I won't recap, but I will point out that XWARN is the lead coordinating group for the "Xenia" Marathon which will take place on Sunday, April 9. This is a large event and needs as many volunteers as possible to help provide for the safety of the runners. Please contact [Mike Crawford](#) KC8GLE [callsign@earthlink.net] if you are able to assist.

Hamvention is coming up fast and I wish to offer a reminder that all able members are expected to support XWARN's t-shirt sale. At the next meeting, we will start planning for our operation. Many of you are already signed up as Hamvention volunteers, but those of you who are not have an opportunity to get a free pass into the show in exchange for a six hour commitment. I know that the Talk-In Committee has a lot of time slots that need filling. Folks with local knowledge are very much desired, especially those who are familiar with Xenia and Greene County. Simply go to the [website](#) ([www.Hamvention.org](http://www.Hamvention.org)), click the VOLUNTEER label, and submit your application. Most committees have a full roster, but Talk-In is really desperate for help. On the job training will be provided.

Many of you are aware that the XWARN Communications Support Trailer (CST) has been the base of operations for Hamvention Talk-In for a number of years. This year, Talk-In has been bumped inside one of the buildings as the CST will be used in a major role to support public safety operations. Please avoid disturbing the folks inside the trailer during show hours. The antennas on the CST will still be used by the Talk-In



Recent Facebook [post](#) (<https://tinyurl.com/jwea5yu>)  
by the Wilmington Office of the National Weather Service.

## March 1, 2017

On March 1, 2017, the Greater Miami Valley region experienced its first major severe weather this calendar year. The Wilmington, OH, office of the National Weather Service [reported](#) (<http://www.weather.gov/iln/20170301>) six (6) tornadoes (EF0 and EF1) as well as straight line winds. The area of concern was southwest of Dayton. I was monitoring both the XWARN and Skywarn nets but not actively participating. However, I did note that at least one power outage was noted on the Skywarn net and that this outage was reported by a county EMA. Curious, do the various EMAs not report damage to NWS or do reports like this end up coming into the local NWS office from multiple sources?

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## Club Contacts

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team, so it will need to be located appropriately. We plan to sell shirts under the awning, as usual, but we will not be located in the flea market. The current plan calls for the CST to be located along the main pedestrian concourse, near the entry gate. This should be an outstanding location.

Join us at the next meeting on April 10 at 7:30.

Best 73, Bob Baker N8ADO

## Calendar of Events

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- April 1, Saturday, Spring Has Sprung 5k race, Xenia (details to come)
- April 1 is the date set for the 2017 Ohio ARES Conference! The conference will be held again at the Marion Technical campus (OSU Marion) as it was last year.
- April 9, Sunday, ORRRC Marathon, Xenia (details to come)
- April 10, Monday, 7:30 PM, XWARN Monthly Meeting, [Greene Memorial Hospital Auditorium](#) (<https://goo.gl/maps/bE2zCag4Krz>)
- April 22. NVIS antenna day
- May 13. Founder's Run 5k/10k
- May19-21. Hamvention

## Amateur Radio in Action

This month's ARES [e-Letter](http://www.arrl.org/ares-el?issue=2017-03-15) (<http://www.arrl.org/ares-el?issue=2017-03-15>) is loaded with information!

The Maryland Auxiliary Communications Service (ACS) was activated during the Presidential Inauguration January 20, 2017, to support the Maryland State Emergency Management Agency. Operators established voice and digital links with Prince George's, Montgomery and Anne Arundel Counties. The ACS concept clearly demonstrated a comprehensive ability to provide both communications flexibility and proficiency.

Approximately 100,000 people came together in downtown Oakland, California, for the Women's March Bay Area. The planning for this event occurred over a very limited timeline - 3 weeks. All event planning was based on the Federal Incident Command System (ICS). Key debriefing points include:

- Commercial radios need to be tested as if they were being used during the event. The Peace Ambassadors need radio training prior to arriving at the event.
- A separate medical net should be conducted to ensure that medical communications have a dedicated channel in case they require it.
- Simplex channels should be tested prior to the event in the areas where they are being used.
- Assign shadows to particular persons earlier in the planning process.
- Utilize more Amateur Radio operators to provide more information as to the progress of the March.

Hurricane Matthew After Action Analysis. As far as the Red Cross is concerned, prior badging or credentialing shouldn't be necessary anymore as the Red Cross now uses "Event Based Volunteers," typically registering them at the Disaster Operations Centers (DOC). ARES volunteer operators that do not have Red Cross credentials should be advised to check in and register at the DOC first before proceeding to a shelter. So far as ARES operators wanting to install antennas and cable drops in schools and other potential candidate shelters, they would be well advised to simply be prepared and self-contained with everything they think they might need to set up radio ops when they arrive at a shelter and not rely on pre-installed equipment. Pre-staged drops and equipment would usually be found in Red Cross "hard" facilities such as chapter or regional offices where a DOC would be established.

### 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 February 2017

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At 7:30 PM President Bob Baker(N8ADO) called the meeting to order. We recited the Pledge of Allegiance. There were 22 members present.

**Cracker Barrel:** Condolences to Josh Long, former President of XWARN, on the death of his father

**Secretary:** Dick Bray/Jim Simpson moved to approve the February minutes as printed in newsletter

**Treasurer:** Report for February 2017 was accepted by vote of the members.

### Committee Report

- Public Service Mike Crawford upcoming: 'No Butts', April 1 'No Fool-in', April 9 Big Marathon
- Trailer Mike Crawford reports the trailer now has it's new license sticker and new chairs.
- Membership 44 members
- Newsletter Jason Bowman asks member to contribute articles

**Old Business:** None

### New Business

- Wednesday March 22 9:50AM is tornado drill-Nigel offered to be net control/net liason
- We made an informal decision not to offer to take t-shirt orders and fullfill them after Hamvention
- We saw a slide of the program cover and probably the design for the XWARN t-shirt

### Presentation

Jim Storms presented a video recap of the Dave Kalter Memorial Youth DX Adventure from 2016 Saba Island. President Baker presented a check to Youth DX Adventure for future event-next being Aug 3-8,2017 in Costa Rica raffle tickets are available to help raise funds for the next adventure.

Dick Bray/Jim Beller moved to adjourn

Submitted,  
Karen Baker



Ruth Willet participated in the 2016 Youth DX Adventure. Ruth became interested in ham radio due to an interest in Morse Code a few years ago. She quickly got her Extra class license. Ruth is now an engineering major at Kettering University in Michigan. Ruth is the invited speaker at this year's SouthWest Ohio DX Association DX Dinner during Hamvention.

## March & April Programs

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For March's program, Don Dubon discussed the [2016 Youth DX Adventure](http://qsl.net/n6jrl/) (<http://qsl.net/n6jrl/>) on [Saba Island](https://goo.gl/maps/nxcrun3KFev) (<https://goo.gl/maps/nxcrun3KFev>) and talked about the next adventure coming August 3-8 in Costa Rica. During the [2016 adventure](http://qsl.net/n6jrl/2016_Results/Results.htm) ([http://qsl.net/n6jrl/2016\\_Results/Results.htm](http://qsl.net/n6jrl/2016_Results/Results.htm)), a satellite distance record was broken (SO50 5,168.753km satellite QSO), and the CW and pile up skills of Ruth Willet KM4LAO (see opposite page) were highlighted. Ruth had 1,599 contacts or 38% of the total for the trip!

For April, we plan on using some of the meeting to discuss T-shirts sales at Hamvention, but there is no formal monthly program scheduled at this time. Jason (WG8B) suggested he might have something to fill any time remaining.

## Canned Ham II

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*Editor's Note: Excerpts reproduced with the permission of Stan Broadway. The [full article](http://www.k8es.org/canned%20ham%202.htm) (<http://www.k8es.org/canned%20ham%202.htm>) can be found at the K8ES website.*

It birthed after putting in hours on the Hurricane Net as Super-storm Sandy clobbered the nation's east coast. In Canned Ham, we had the facility, the repeater, and some of the creature comforts that might allow for such service, but honestly I was afraid to tow the thing a great distance. As can be the

case in buying anything used, I purchased someone else's nightmare. It didn't start out that way. The Coachmen unit has a full bathroom, two bunks in the rear, a spacious dinette and kitchen area. It has a walled off room at the front that contained a queen bed. The bed, easily removed, would allow for a radio room that would actually be separated from any other activity in the trailer.

The first inkling of trouble was the brown goo that stuck to some of the screws as we removed the bed frame. As we pulled wall board and rolled back linoleum, there was a stinky, moldy mess of

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## Canned Ham II

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rotten wood under the flooring. Back to the dealer I went. They were professional, helpful, and understood my plight. And they agreed to replace the floor framing and bolster the underpinnings. One extra benefit has shown up. When we tore off the front wall, we discovered that the framing for the front actually was prepared for a window!

So we have dry erase walls and front wall. Floor is in. Window is ready to be cut in. We have the material for the operating desk, and we've been tossing around ideas for its configuration. Actually, Tim's setup in Canned 1 worked so well, that's probably going to be how we roll. A lower shelf will hold power supplies, an inverter, and the guts to the 100W Motorola rig for working out further than normal. There will be a third operating position with power and antenna at the dinette table, which will come in handy for a large scale event. It might also be a great place for Safety Services to work if we do a joint incident.

I think I'm going to move away from the big desktop PCs - didn't really use them at all (required a generator, and most of our activities are completed using internal battery). Instead, I'll be relying on laptops.

A major work was completed with Tim's creation of the antenna rails for each side of the trailer's roof. This both minimized the number of holes and take advantage of the metal roof's ground plane potential. To be truly flexible, we have to have easy access to the inside and lots of antennas! Canned Ham II has six dual band antennas spread across the two mounting rails. We continue the flexibility by having the low cargo storage doors available to access coax or power leads from either side of the trailer.

We've changed our approach to power for the radios. We're running the rigs straight from the battery. In Canned 1, we could switch between AC and DC. In 2, we're going to rely on the battery. When AC power is attached to the trailer, the onboard conditioner and charger will keep the battery charged. We have added an AC inverter to support laptop power supplies. AC power shouldn't be a problem - we have a new 3500/400 watt generator which will be mounted on a cargo rack off the rear bumper.

## Back to Basics — Circuit Protection

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While ham radio operators may know their radio equipment very well, they may not understand safety associated with the AC power source that typically powers our radios in a home or shack.

All circuits, with very limited exceptions, required circuit protection. Circuit protection can take many forms - fuses, breakers, and Crowbars circuits. Generally speaking, circuit protection is not about protecting the load (device) on the circuit rather the wiring of the circuit!

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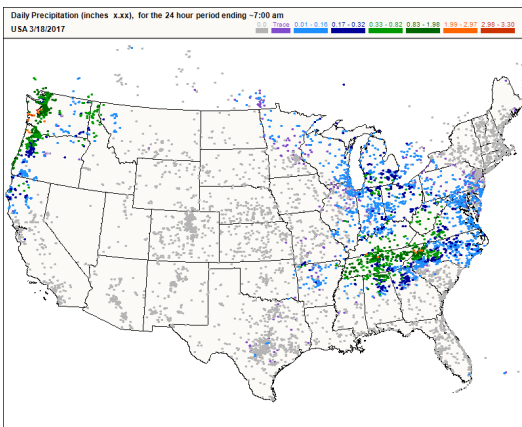
## Back to Basics — Circuit Protection

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Certain circuits require the use of Ground Fault Circuit Interrupter breakers. GFCI breakers are required on circuits near water like bathrooms and kitchens or in outside applications. GFCI breakers work by sensing the difference in current between the hot and neutral wires. If the difference isn't zero, the GFCI breaker assumes the current is leaking through YOU and will trip.

Electrical code has changed yet again in the past few years. New installations now require Arc Fault Circuit Interrupter (AFCI) breakers. When a circuit exhibits an intermittent short or connection such as with an arc, a normal circuit breaker won't trip. Homeowners nailing pictures into walls hitting wiring, loose connections at terminals, and (internally) broken/worn out cords can all create arcs. AFCI breakers have special circuitry that detects these kinds of arcs while ignoring safer arcs such as switches being thrown. Originally, AFCI breakers were only required in living spaces, e.g. bedrooms. However, AFCI breakers are now required on all outlets. Just like GFCI, you can now purchase outlets with AFCI built in for retrofit applications.

## Boring Weather is Important, Too!



XWARN and SkyWarn stand up their nets when severe weather is on the way. However, collecting weather information around the clock is important, too, for short-range forecasts and to help fill information gaps below radar. These information gaps are especially critical during the winter months when low level weather, which is typically below the radar, often drives the amount and kind of precipitation. That's where Community Collaborative Rain, Hail, and Snow Network ([CoCoRaHS](https://www.cocorahs.org/)) (<https://www.cocorahs.org/>) and Citizen Weather Observation Program ([CWOP](https://tinyurl.com/k77wpaa)) (<https://tinyurl.com/k77wpaa>) come into play.

The emphasis of CoCoRaHS appears to be on ensuring accurate collection of precipitation information as well as transpiration/evaporation information. CoCoRaHS greatly favors manual readings of rain gauges available from their website due to automatic stations being notoriously inaccurate. Training is required, but they provide charts for self-study if necessary. Also, CoCoRaHS provides smart phone apps to make reporting of precipitation information easy.

CWOP favors automated, instantaneous information that is used by the [Rapid Refresh](https://tinyurl.com/lq8l68l) (<https://tinyurl.com/lq8l68l>) forecast model for very short term (3-12 hrs) forecasts. In fact, CWOP grew out of amateur radio using APRS to report weather information, and APRS is still used. NOAA's Meteorological Assimilation Data Ingest System (MADIS) ultimately ingests this information and applies spatial and temporal checks to ensure data quality.

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.