

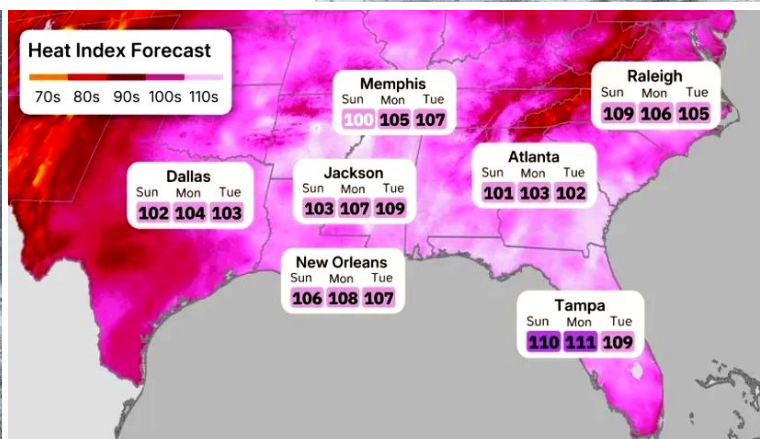
Microvolt

Monthly newsletter of the Utah Amateur Radio Club

August 2025



The Weather



Before engaging in an outdoor activity, we tend to consult the weather forecast. We often measure the meteorological effects of the weather in terms of temperature, humidity, barometric pressure, wind, and precipitation. *Climate* refers to the weather pattern or history in a region or localized area. It turns out that the weather affects amateur radio, but not always how we might expect. Yet, when we do expect severe or an undesirable weather event, what can we do to prepare for it? Let's look into that and similar weather-related questions.

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Cover – Weather

It seems that the weather affects much of what we do, even if we're indoors. When the conditions outside become too uncomfortable, they tend to drive us inside. And when it looks and feels pleasant outside, most of us are tempted to join other adventurers beyond our ability to resist. Still, we allow the outdoor ambient to dictate what we wear and where we might go, such as when deciding whether to work from home.

Adverse weather, hazardous weather, severe weather. Many avid outdoorsmen say that there's no such thing as **bad weather**, only bad clothing, emphasizing the thought that the right apparel can protect them against any adverse weather. It would be curious to know whether any of these nature-hardy folks had ever survived a hurricane.

Weather types and effects

Weather can include the following:

- Rain, drizzle
- Snow, sleet, freezing rain, icing over
- Fog, haze
- Extreme cold
- Heat wave
- Wind, hurricane, tornado, dust storm, squall
- Hail, pellets, grains
- Lightning

But weather can extend into these effects:

- Flooding
- Storm surge
- Inversion, ducting
- Wildfire
- Dew, frost
- Absence of air movement (too calm)
- Drought

Also, these can be affected by weather:

- Sunburn, cancer
- Sleep cycle
- Mood
- Metallic corrosion
- Material degradation
- Ecological system
- World economy
- So much more

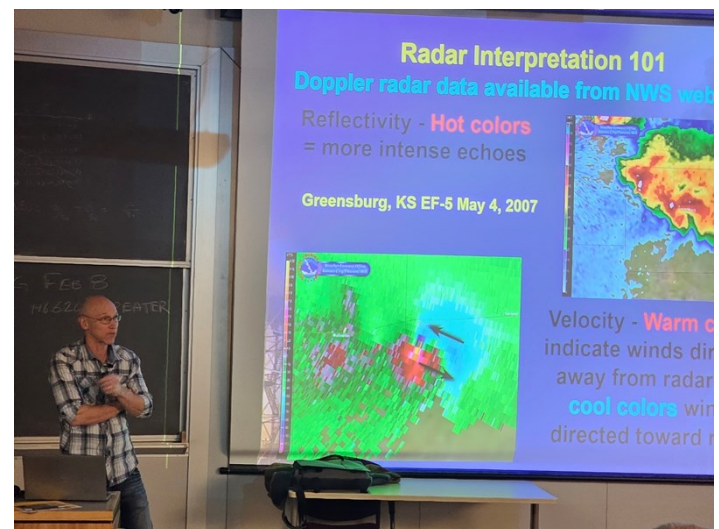


Weather effects on propagation

Many hams wonder how the weather might affect their signal, and that's a great question. In general, rain and snow do not have much effect on your signal unless its frequency is greater than about 2000 MHz (2 GHz). On the other hand, lightning can introduce a lot of noise in an SSB signal.

Talk about the weather

Early last year, Kevin Barjenbruch made a presentation in the monthly UARC meeting on "storm watching" and explained how people can get involved. *Everybody talks about the weather, but nobody does anything about it*, he says. Today, Kevin's retired from the NWS (National Weather Service), but you can still see [his presentation](#) on [our YouTube Channel](#).



Finally, when people on the radio start talking about the weather, that's typically your clue that the QSO is about to come to and end. That is, when weather concerns are not the main topic of the conversation.

Microvolt editorial staff

Editorial – Check the weather

There might be a time when you'll want to leave the comfort of your home, and use your radio to help out with a drill, for personal hobby interest, or for an actual emergency. If you plan to operate your radio outside your home, maybe away from any permanent shelter, it's a good idea to check the weather forecast before venturing out there. You don't want to rush out and risk harming your equipment by allowing it to get wet, sun-damaged or worse; it would be good to know what awaits you.

It might seem obvious to glance outside your big picture window to get a good idea of what's happening currently, but there are a couple of things to consider. One is that you're viewing the weather in its current condition, and anybody who's lived in our area knows how quickly weather can change. Another is that not everybody has the luxury of a clear view of the weather from the living room, or any other room, for that matter. Many hams live in apartments or small living spaces that are surrounded by trees, tall fences, or buildings. So, simply looking outside is not always the best idea, but it's a start.

If possible, before going out, get online and check the forecast for the next few hours. If your internet is unavailable, then by all means go outside and get a look at the sky if it's daytime, and estimate which way the clouds are moving. Even at night, you might be able to get some idea of what weather to expect.

You might find out that the equipment you're so used to operating seems to work differently in the out-of-doors for one reason or another. One might be that your equipment can function differently under conditions of higher or lower temperature, greater humidity, or simply because your eyes are unaccustomed to the bright sunlight. Another is that



wind, even a slight breeze, can make it difficult for others to hear you, as it whistles across your microphone. Finally, operating at an unfamiliar location can place you just a little out of your comfort zone, resulting in shivering, stammering, and occasional hesitation.

Because of the nature of our preparation-minded activities, it's ironic to think that the worse the weather is, the more likely our help might be needed. While we tend to experience good weather more often than adverse weather, the likelihood of a communication need seems to increase with the times storms roll through.

Besides creating a nuisance with your microphone, as we had mentioned, wind can easily tear down tarps, canopies, and tents, and overturn tables, chairs, and small vehicles, like wagons and bicycles. If you know that you'll be out in a windy condition, bring extra rope, and brush up on your [knot-tying skills](#). Also, bring several bottles of water, because the wind tends to quickly dehydrate us humans.

By the way, if you suspect there'll be lightning coming your way, being outside is not a very good idea; remain indoors, if at all possible. If you must go outside in a lightning storm, stay away from trees, ponds, lakes, hilltops, and mountain ridges. When you hear thunder, the best place for you to be is inside.

So, the bottom line is that operating our equipment outdoors can be fun and different, but it has its challenges. So, use good judgment and check before going out there, and make sure it's safe for both you and those operating with you.

Anything to add? Email editor@utaharc.org

Letters to the editor

Dear Editor:

I've read that the National Calling Frequency (146.520) can be used to call for help. How does one do that, and what are the rules?

Grant in Bountiful

Dear Grant:

There are many simplex frequencies that have been assigned as NCFs ([National Calling Frequencies](#)), of which 146.520 MHz FM is the one on the 2-meter band. To use the NCF, simply listen for a time to call out. If it's in use, ask to break in by announcing your call sign between key-ups. When it's available, announce your call sign and that you're in need of help by police or ambulance, or fire. In spite of what you might have read on the Technician exam, do not use the words **emergency** or **priority**, and especially not **break**. Many are used to hearing these words as part of a drill, and are not likely to take them seriously. Instead, state that **you need somebody to call an ambulance** or other statement to indicate a serious situation that requires immediate assistance.

It's been demanded by some of a previous generation to change to another frequency once a contact has been established on the NCF, to prevent over-occupation of the frequency in case it's needed for an emergency. Today, however, it's encouraged to use the NCF for making contacts, holding a sustained emergency communication, even ragchew purposes, to increase the likelihood of reaching an operator for urgent assistance. The operator in need can then enter the ongoing conversation like usual.

Dear Editor:

How is it that radio waves need no medium to travel in space?

Jason in Highland

Dear Jason:

If you placed an ordinary paper clip near a household magnet, the magnetic forces will attract the paper clip to the magnet. If you were to bring the same magnet and paper clip into space and took a space-walk, will the magnet still attract the paper clip? Yes, it will. But how could the magnetic field exist in space without a medium? It's because that magnetic



field *is* the medium. The same observation can be made with a small piece of Styrofoam and the electric field on a cat's fur. When you combine the two (leave the cat home), you have an electric and magnetic, or **electromagnetic** medium, another name for a **radio wave**.

Dear Editor:

I live in Indonesia, and am planning to visit my uncle in Salt Lake City. I also plan to bring my AnyTone VHF mobile, TYT handheld radio, a Xiegu G90 HF radio, and an end-fed antenna with me, but I've heard that some countries limit the carrying of Chinese equipment into them. What sort of restrictions or Customs rules do I need to be aware of, when bringing these into the US? My amateur license is equivalent to the American Extra Class.

Samitka in Depok (near Jakarta)

Dear Samitka:

Welcome to the United States of America! The US has no restrictions on you bringing your Chinese (or other) equipment into our country, but here are a few things you should be aware of, some of which you might already be:

- Bring a copy of the [CEPT agreement](#) (which covers Indonesia) and your license with you
- If any of your equipment contains lithium batteries, be sure to place them in your carry-on (cabin) baggage
- If possible, have equipment receipts with serial numbers, to prevent having to pay duties on them
- Have fun! We would love to hear you on the air right here in Utah.

Send your questions to editor@utaharc.org

Club news

As you know, UARC doesn't hold a July club meeting, so instead, we're going to highlight our two big recent gatherings: Field Day and the Steak Fry.



BTW, you can view past club meeting presentations on our [YouTube channel](#).



Also, a Ringo 10-meter vertical antenna (upper-right of the tower shown here) was prepared for UARC's third [HF Remote](#), which will be open to Technician Class operators:



UARC 2025 Fall Potluck

This is a repeat announcement, so please skip it if you've already read it. But since you don't know for certain that you've actually read it the first time, you'll need to read it again. We plan to hold a Fall 2025 Potluck dinner on Thursday 11 September at the same location as the Spring Potluck, the [Salt Lake County Facilities Management Cafeteria](#), 2001 S State St, room S1-100.

But wait, there's more, and this one is not a complete repeat, so aren't you glad you kept reading? Yes, we've discovered that our members enjoy eating and socializing so much that we're planning a third dinner (not counting the one at Field Day or Steak Fry) for this year, this one in time for the Holidays. This [UARC Christmas Dinner](#) (not a "potluck" after all) will replace the December club meeting on Thursday 11 December 2025, to be held at the [Golden Corral on 665 E 7200 S](#) in Midvale.

For your information

Fall 2025 Potluck Dinner

The next club potluck dinner is 6:30 pm Thursday 11 September 2025 at the [Salt Lake County Facilities Management Cafeteria](#), 2001 S Sate St.

UARC Homebrew Night

Many of you are not only inclined to building, fixing, or modifying your gear, but are also itching to show it off. Thursday 09 October 7:30 pm at the [UofU Warnock Building](#) is the time and place of our annual Homebrew Night for you to come and do just that.

Christmas 2025 Dinner

The club Christmas dinner is 6:30 pm Thursday 11 December 2025 at the [Golden Corral](#), 665 E 7200 S in Midvale.

License courses

Salt Lake:

General : Tuesdays 7:00 pm to 9:00 pm
147.160+ MHz (127.3 Hz tone)

Provo:

Technician : Saturday, 8:00 am to 1:00 pm
20 Sep, 18 Oct, 15 Nov, 20 Dec, 17 Jan
Visit [HamStudy.org/sessions](#) to register (free)
Provo Fire Station #2, 2737 N Canyon Rd
Email nv7vham@gmail.com for info

Orem:

Extra : 5 Tuesdays, 6:30 pm to 9:30 pm
15 Jul, 22 Jul, 29 Jul, 05 Aug, 12 Aug
Technician : 4 Tuesdays, 6:30 to 8:30 pm
Sep 16, Sep 23, Sep 30, Oct 07
Visit [psclass.orem.org](#) to register (\$10)
Orem Traffic Training Room, 95 E Center St
HamStudy.org account required
Email nojiratz@hotmail.com for info

Eagle Mountain:

Technician : 5 Thursdays, 7 to 9 pm
Aug 14, Aug 21, Aug 28, Sep 11, Sep 18
Email ki6oss6365@gmail.com to register (free)
Eagle Mountain City Hall, 1650 Stagecoach Run



Exam sessions

Salt Lake County:

- Email Garth Wiscombe W7PS w7ps@arrrl.net
Aug 25, Sep 29, Oct 27, Nov 24
- Email Rick Morrison W7RIK w7rik@arrrl.net

Utah County:

- Wed 20 Aug 7:00 pm : **Provo** : [signup](#)
- Wed 17 Sep 7:00 pm : **Provo** : [signup](#)
- Sat 20 Sep 2:30 pm : **Provo** : [signup](#)
- Sat 20 Sep 10:00 am : **Eagle Mtn** : [signup](#)
- Sat 27 Sep 10:00 am : **Spanish Fork** : [signup](#)

Club repeaters

Farnsworth Peak : 146.620– MHz (no tone)
Scott Hill : 146.620– MHz (no tone)
Lake Mountain : 146.760– MHz (no tone)

SDRs and beacons

Northern Utah WebSDR : sdrutah.org
KK7AVS SDR : k7xrd.club
N7RIX SDR : sdr.n7rix.com
K7JL beacon 28.2493 MHz

HF remote and club transceiver stations

If you'd like to learn how to get started using the remote stations, visit the [HF Remotes link](#) on [the club website](#):

<https://user.xmission.com/~uarc/HFRemote.html>

Reach out to the club leadership by sending an email to uarc@xmission.com. Also, add to this page by emailing editor@utaharc.org

Spotlight – Ron Edwards K7RCZ

I had been interested in ham radio for years but did not think I could pass the Morse code portion of the exam. Living in California with all of the fires and earthquakes, the normal communication, such as landlines and cell phones, were always the first thing to go. I saw that ham radio would always work and it continued to pique my interest.

*In December 2004, we moved to Saratoga Springs, Utah, and I was called to be a Bishop for the Church of Jesus Christ of Latter-day Saints. We established a block captain system for emergencies and tried to help them understand more about emergency preparedness, but the words **emergency preparedness** seemed to fall on deaf ears. It had been preached for years by our church leaders, and it just was not happening. In 2009, I was called to be the Stake President in Saratoga Springs. My responsibilities for families and their safety grew from one ward to eight wards overnight. I kept asking myself how we were going to help our families become more prepared. One night it dawned on me that we needed to change the title to **family preparedness**, and that seemed to change the mindset of stake members, which prompted many of them to start getting their families prepared.*



Remembering my California experiences, I took the Technician exam in July 2011, and became a ham radio operator, KF7RCZ. The following month I passed the General exam and requested a vanity call sign, K7RCZ.



After researching the FCC database the licensed ham radio operators in Saratoga Springs, and found those living in my stake boundaries. I contacted two of the ones with the most experience, and asked them to be communication specialists. We established a stake net for each Sunday, and began recruiting ham radio operators to join our net. We also started teaching ham radio classes. Over the next two years, our stake net grew to a city-wide net, and we had approximately 35 operators checking in from multiple stakes and wards in the city each week.

This net was activated in a emergency situation in Saratoga Springs on two occasions. The first was the [Dump Fire](#), in which we assisted the fire department and the police in evacuating some 2500 residents. The second occurred two months later, when we experienced a "100-year" flood. Our ham radio operators and additional operators from the ham community helped manage some 10,000 volunteers with mucking out basements and helping build stone barricades to help mitigate any further flooding.

I truly believe in ham radio, and have seen it in action as we helped families in need! I continue to volunteer with many of the communication teams in the State of Utah, in Utah County, and here in Eagle Mountain. I've made more wonderful friendships from the ham radio community, and will be forever grateful for their associations!.

– 73, Ron K7RCZ

Ron is a member of UARC, UVARC, UCARES, and several EmComm groups. Thanks for all you do, Ron!

2025 ARRL Field Day



2025 UARC Steak Fry



2025 UARC Steak Fry



2025 UARC Steak Fry



Strays – Approaching storm checklist

You've been warned in advance of a major storm that's approaching your area. Chances are, your family and home will survive it without a problem. Still, you'd like to have a checklist of what you can prepare with the few hours you have. This one might help.

Kinds of "storms" to prepare for

- Weather (thunderstorm, heavy wind, severe cold / heat)
- Earthquake (tremors, aftershocks)
- Water (flooding, mud slide, dam break)
- Terrorist attack (foreign, local riot)
- Solar event (CME, EMP, other)

Plug in the battery chargers

- ___Phone
- ___Radios (ham, FRS, broadcast, etc.)
- ___Lights (headlamp, flashlight, work light)
- ___Computer (laptop, tablet)
- ___Power bank
- ___Tools (drill motor, GPS, etc.)
- ___Other (CPAP, toy, etc.)

Unplug unnecessary appliances

- ___Except as listed here
- ___The fridge is necessary, but the washer, the dryer, and the A/C are not
- ___Limit the number of room lights
- ___Ensure the gas oven and dryer are turned off

Test

- ___Your smoke and CO detectors
- ___Your radios (review frequencies*)
- ___Your generator (not in your garage)

Review locations

- ___Your first-aid supplies and meds
- ___Your food and water supplies
- ___Your important documents and photos
- ___Your GPS coordinates
- ___Your pets

Fill your fuel tanks

- ___Vehicle fuel
- ___Portable propane tanks
- ___Generator fuel
- ___Other (cooking butane, heating kerosene)



Close your fireplace damper

- ___Keeps your home heat from escaping
- ___Ensure it's open if even the smallest ember is alive, however

Special window measures for a hurricane or tornado

- ___Screw sheets of plywood over your windows
- ___Stay away from all windows if possible

Other things to consider

- ___Replace your furnace filter
- ___Ensure all your windows are closed
- ___A tarp, plastic sheeting, and a staple gun
- ___Pay attention to news (radio, TV, phone, internet) for storm developments
- ___Withdraw a couple hundred dollars of cash

Inform a relative or friend

- ___Email or text a couple of friends or relatives outside your trouble area
- ___Tell why you believe trouble is on the way
- ___Give them your location (GPS too)
- ___Let them know who's with you

Be prepared to evacuate if needed

- ___Know at least two evacuation routes
- ___Review what you'll take with you

Avoid water sources (shower, tub, sink, drains) as much as possible

- They can become an electric shock hazard
- They can become contaminated, depending on the event

* Your frequencies should include your 1) **area** (stake), 2) **city**, 3) **ARES**, 4) **National Simplex**, and 5) popular **repeaters**

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We encourage you to submit original pictures (highest resolution), articles, software and hardware descriptions, appropriate humor, and responses to editorials. Email the content, pictures attached, to the editor at editor@utaharc.org by the 20th just prior to the target month.

The **Utah Amateur Radio Club** was organized under its present name in 1927, although its beginnings may date back as early as 1909. In 1928, it became affiliated with the **American Radio Relay League** (club #1602) and is a 501(c)(3) non-profit organization. It holds a club station license with the call sign W7SP, a memorial to Leonard "Zim" Zimmerman, amateur radio pioneer in the Salt Lake City area.

The club meets each month except July and August. The meetings are usually held on the second Thursday of the month at 7:30 PM in the University of Utah's **Warnock Engineering Building**, room 2230.

Club membership is open to anybody interested in amateur radio; a current license is not required. Dues are \$20 per year. Send dues to club secretary James Bennett, 4960 W 5400 S, Kearns, Utah 84118. Email address changes to kk7avs@gmail.com

Tax-deductible monetary contributions are gladly accepted. Send directly to club treasurer Shawn Evans, 1338 S Foothill Dr, #265, Salt Lake City, Utah 84108-2321. For in-kind contributions, please contact uarc@xmission.com to make arrangements.

UARC maintains the 146.620– and 146.760– repeaters, which are administered by the **UARC Repeater Committee**. Direct comments and questions to any committee member. The 146.760– repeater is on IRLP node 3352.

Call the **UARC Ham Hotline** at **801-583-3002** for amateur radio information, including club, testing, meeting, and membership information. Leave a message, and we'll make an effort to return your call.

UARC 2025 Board

President: **Marvin Match**, KA7TPH
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For-late breaking news listen to the UARC Information Net, Sundays at 8:30 pm on 146.620– or visit the [announcement page](#).

We are grateful to the management of our internet service provider XMission, for the donation of our web service. For account information go to <https://xmission.com/> or call 801-539-0852

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