

# After-Action Report: Winter Field Day 2025

## Montgomery County Auxiliary Communications Service

### Introduction

Winter Field Day (WFD) 2025 was conducted to test and improve the Montgomery County Auxiliary Communications Service's (MCACS) readiness for deployment under challenging conditions. The event was under the overall leadership of Jim Alyanak (K3MRI). This exercise aimed to balance operational effectiveness, participant engagement, and the camaraderie amateur radio operators are known for.

Winter Field Day is an international emergency communications exercise is organized by the Winter Field Day Association (<https://winterfieldday.org>). It is held annually on the last weekend in January. Participants are encouraged to set up amateur radio stations under austere conditions in the field and operate independent of commercial power. Setup begins on Friday afternoon, and the on-air portion of the exercise runs for 24 hours from midday Saturday to midday Sunday. During the operating period, participants attempt to make contacts with other operators throughout North America and beyond.



*Winter Field Day site at sunset on Saturday*



This was the fifth year MCACS has participated in WFD as a group. The 2024 MCACS Winter Field Day was held at Assateague Island National Seashore under the overall leadership of Jim Alyanak. Eight MCACS members camped for the weekend and put up antennas right on the beach. The weather was rainy and chilly. The participants agreed that the event was very successful and lots of fun. We thought that as a general idea having Winter Field Day alternately in Montgomery County and away would be a good idea.

Previous site for the MCACS WFD include:

- 2023 - Issac Walton League in Germantown
- 2020 – Upper Montgomery Volunteer Fire Department grounds
- 2019 – Robertson Park (Gaithersburg city park)

There was general agreement that the 2025 exercise was successful, and in spite of, or perhaps because of, having to work in the cold, very enjoyable. While the event demonstrated significant strengths, it also highlighted areas for improvement in equipment readiness and participant expectations.

---

## Overall Event Comments

**Marc AC3N:** Thanks to the Montgomery County Fair for letting us camp on their Fairgrounds. They were very generous, and it really helped that they left the gate open all weekend for us. Initially it was going to be locked, but somehow we impressed them with how responsible we are so they left it open. One aspect they insisted on that we would like to be different is that we were not allowed to do publicity or have visitors. Do you have any suggestions for next year?

**Jim K3MRI:** Winter Field Day 2025 successfully demonstrated MCACS’s resourcefulness and ability to deploy under challenging conditions. However, this event highlighted key areas for improvement in equipment readiness and participant engagement. Future events must carefully balance being a club activity that fosters camaraderie and fun with preparing for real-world scenarios that demand discipline and readiness. Additionally, a focused effort to attract and engage younger participants is essential to the long-term growth and sustainability of amateur radio activities. By addressing these priorities, MCACS can continue to evolve and thrive while maintaining its commitment to operational excellence.

**Jim K3MRI:** Strengths Demonstrated

- Resourcefulness of Participants: Operators adapted to challenges, improvised solutions, and maintained a collaborative spirit.
- Successful Deployment: Despite chilly temperatures and icy conditions, all stations were operational, and no injuries were reported.
- Camaraderie: The informal, team-oriented nature of the event fostered strong relationships among participants.
- Facilities Provided: A heated tent and (unheated) latrine significantly enhanced comfort and safety during the event.

**Jim K3MRI:** Participant Engagement:

- Fewer operators were on the air, and fewer participants camped overnight than expected.

**Jim K3MRI Recommendation:** Within the context of MCACS and most amateur radio or

communications support organizations, increasing participant engagement remains an ongoing challenge without clear solutions.

**Jim K3MRI Recommendation:** Develop an ongoing outreach program aimed at younger participants, such as a partnership with schools, scout groups, or youth organizations. Create a mentorship program pairing experienced operators with younger participants.

**Jim K3MRI:**

- **Event Rigor vs. Accessibility:** Unclear expectations led to a mix of “for fun” and “serious training” approaches, affecting overall engagement.

**Jim K3MRI Recommendation:** Decide on the level of challenge for future events based on organizational goals. Whether fun-focused event more accessible to broader participation or training focused event that emphasizes hardship and realism. Could alternate event types annually to balance broader participation with rigorous training, ensuring both accessibility and preparedness.

**Jim K3MRI:**

-**Leadership Ambiguity:** Overlapping leadership roles did not, but might have, created confusion in a real-world setting.

**Jim K3MRI Recommendation:** Designate fewer roles and ensure clarity of command. Better prepare pre-event briefings to define roles and prevent overlapping authority. This event underscored the importance of clarity in leadership. While multiple voices provide valuable perspectives, there must be a single leader for each responsibility area to ensure coordinated efforts. Despite the challenges, the camaraderie and spirit of amateur radio shone through, making this event a valuable experience for all involved.

**Ken KC3MIX Recommendation:** Going forward, to make planning easier, it was suggested that full go kits be used for every station/shack. We had a 3rd slot for a radio in the ops tent that went unused because we did not have a full kit but an erector set of parts to build one. It was not really conducive to build with all the other setup needs having higher priority but was a BACKUP to some degree if needed.

**Howard KC3LUE:** Delighted to be able to stick my big toe in Field Day. I got to see equipment I have not seen or used. I was impressed at how organized the operation was and at the skill of the operators. I had several hams sit with me and help to get me on the air. Making and documenting contacts at the event was lightning fast, making it quite a challenge for me. I did successfully make several contacts. Some of my contacts were a collaboration with another operator helping me. I was taken aback at how few people from the club were there. I hope the event was busy through the weekend. Quite a tent. Years ago enjoyed winter backpacking as a Scout leader. Never saw a quilted winter tent.

**Will K3XIT Recommendation:** I do have a suggestion for making the event an even better learning experience: As suggested in the ARRL guidance "Send and receive at least one Winlink email: Winlink has proven useful during emergencies and is considered a digital mode." Although I don't have enough experience with Winlink to do this alone, I'd like to be part of a team who does.

**Ellen KC3MJV:**

- When I had heard that the operation site was restricted only to people on the roster, I thought that would dampen some of the fun that I had found field day 2023. That was not the case. People who wanted to drop by (i.e., David W2LNX) were on the roster and were able to stop in. I spent

more time with the radio than I had in 2023, and the tear down at the end seemed less chaotic with care taken to store things properly. Overall learned a lot and had an excellent time.

- This was lots of fun and a good learning experience. It gave me more practice using the radio and the rhythm of contest communications. And I always learn a lot when operating with Ross. However, the biggest lesson I learned was about trouble shooting. At first when I could not be heard, even after Al had checked the antenna and made some changes with the radio I thought it might be just me. Although I have the same model radio, I had not thought about looking to check what the radio read for SWR when I was transmitting. I saw how helpful the antenna analyzer was in finding the problem connection. If I had been alone in the van, I probably would have spent the ~4 hours hearing people but being unable to log any contacts. This also showed me that when there is a problem, it is important to consider every part of the system. And also that connections within the van that have not been changed can fail, and should be checked if other parts are working well. During the clean up, I was impressed how smoothly things went with us all working together.

**Bruce W3SCI:** The MCACS WFD went pretty-well. This optimistic view should be tempered by the fact that a series of planning meetings preceded the WFD. A real EMCOMM deployment will be much more “come as you are.” Given this reality, it may be useful to devise a plan, and train for, a “*Minimal Effective Deployment*.” Presumably, this would be based around the MCACS van. Under this scenario the MCACS van would be positioned and made fully operational before addressing other tents, antennas, generators, etc. Perhaps one training could be dedicated solely to increasing the number of club members prepared to deploy the main antennas for the van (folded dipole and VHF/UHF), operate the van itself (generator and electrical panels), and familiarize themselves with operating the radios on board.

**AI KN3U Comment:** Not to minimize Bruce’s excellent suggestions, but I would like note that we had at least six training sessions with the MACAS van in 2024, and we will have multiple opportunities in 2025. We need more members to participate when these opportunities arise. Not only will it increase our organizational readiness, but we have fun at these training events.

---

## Support Infrastructure: Tent, Van, Heat, Generators, etc.

### Tent

**Ken KC3MIX:**

- The Operating TENT- it was WARM this year and held together well, a cost-effective investment.
- The MESS TENT - we needed to secure the sides as they bowed in with a breeze and pushed over chairs/trash cans depending on the force. Perhaps several more sandbags could help or a backup operating tent.

**Marc AC3N:** As much as it hurts me that Nancy is so down on my tent stakes, I think she is correct that part of figuring out the floor is having appropriate stakes, and twisty is good. If so, we should purchase the right number of twisty ones to be part of the kit. Do you think they, like the ones that came with the tent, should be capable of screwing into ice?

**Victor W3CID:** We may need a better tool to remote stakes from the ground. The frozen ground made the task difficult to do with just a hammer, and we may have damaged some stakes during the process.

**AI KN3U Comment:** Others have also suggested standardizing on screw-in stakes, which are

much easier to use. We actually have a set of those in the van, but Marc already had his stakes and a hammer in hand, so we used his. We purchased our screw-in anchors from The RF Connection at a very competitive price. They work very well in typical soil and sand. The ones that came with the Eskimo tent are even nicer than the ones in the van, at least in ice and frozen ground. They might not work in soft or muddy soil.

**Bruce W3SCI** Comment: I use these very heavy-duty stakes. There is a hammer with a hook that matches the little hole on the top of the stake to facilitate removal. I will purchase set of these for MCACS van--if desired.

[https://www.amazon.com/dp/B075N6TMGG?ref=ppx\\_hzsearch\\_conn\\_dt\\_b\\_fed\\_asin\\_title\\_2&th=1](https://www.amazon.com/dp/B075N6TMGG?ref=ppx_hzsearch_conn_dt_b_fed_asin_title_2&th=1)  
[https://www.amazon.com/dp/B07G5XJQ5T?ref=ppx\\_hzsearch\\_conn\\_dt\\_b\\_fed\\_asin\\_title\\_2](https://www.amazon.com/dp/B07G5XJQ5T?ref=ppx_hzsearch_conn_dt_b_fed_asin_title_2)

**Victor W3CID:** I liked the idea of using small rubber floor mats outside. It may be good to get a few more of those.

**AI KN3U** Comment: Agreed. MCACS purchased two floor mats for this event. More would be useful, and they don't take up much room.

**Victor W3CID:** Lighting inside the tent was good and this location had some illumination outside, but we should also plan on bringing our own exterior lighting.

**AI KN3U** Comment: The van also has adequate exterior lighting that we didn't set up because it wasn't needed.

## Van

**Ken KC3MIX:** The MCACS van seemed to perform well and provided a 3rd station.

## Heat

**Victor W3CID:** It was already mentioned, but a ceramic heater may be a better option to heat the new tent. We may still need a CO detector inside, and a small fan that could help move air out. I may have a 6 inch (or so) computer fan that may help. We may want to invent some way to keep it a few inches away from the tent vent so we can use the Bernoulli effect to improve the efficiency of the air flow.

**AI KN3U** Comment: Agreed on all counts.

## Computers

**Victor W3CID:** I wonder what we can do to improve the chances that the computers are pre-configured for logging and networking before the event. I do not have a good solution, as I have witnessed the complications of doing it, but it's something we can discuss to try to make it better.

**AI KN3U** Comment: I spent many hours setting up the computers ahead of time. I didn't originally anticipate using computer # 1 in the van. The reason it wasn't syncing is that, when I configured it on site, I mistyped the computer name "TS-590" as TS-950." That simple typo kept that PC from being recognized in the N1MM networking scheme. It took quite a while to discover the error. After that, the N1MM software worked as intended. The way the N1MM program does syncing is an acknowledged weakness of the software. Maybe it will be improved in a future update – but human error will always be with us.

**Victor W3CID:** We should check the Winlink capabilities, and possibly other digital modes, in the truck before deployment.

**AI KN3U** Comment: Winlink and Fldigi are fully operational on all the radios in the van. We have used Winlink in the van at least a dozen times in the past year, on HF as well as 2m. I simply forgot about sending and receiving Winlink messages until the last half-hour of the event,

and it was too late to finish the task with everything else going on. We need more MCACS members to invest in the time to become proficient in setting up and using the van's many capabilities.

## Generators

**Bruce W3SCI:**

- The supplemental portable generators seem (to me) to be a big question mark. While two Honda generators were donated, they initially arrived with less than one gallon of spare gasoline between them. Not a problem where we deployed for this WFD but could have been a major issue in other scenarios.
- Club members who own the portable generators (that are maintained in an operational state) must be available to bring them and set them up. It is an open question as to how many generators would be available during an actual emergency as they may already be in use at the members' homes.
- As an alternative, we should learn how much "excess capacity" is present in the MCACS van's 7000 kW generator that could be used to power secondary stations for short or long-term deployment. Understanding what this number is answer will allow for appropriately prioritizing the use of portable generators.
- It would also be know many watts were required to support the Operations tent? Could it have been supported on a single portable generator (1500 kW)?

---

## Radios

**Ken KC3MIX:** One suggestion I noted was the need for every station to have multiple headphone ports. One port was fine for a single operator use but was not conducive to inviting a learning environment of others. It was noted at times that given the need for a local speaker to be used, it could be heard by the mic of the other station. We may want to source/locate some multiport jacks with individual volume controls for group observation/learning.

**Ken KC3MIX:** I was happy to refresh on the NIMM logging process and be able to answer some questions as they came up.

**Jim K3MRI:** Lack of pre-organized kits delayed deployment and complicated logistics. Computing and networking challenges continue to impact amateur radio events.

**Jim K3MRI:** Recommend Standardized Equipment Kits

Transmission Kit: Radio, tuner, filters, headset, foot pedal, and backup battery.

Antenna Kit: Antenna, mounting hardware, and feedline.

Computing Kit: Network-capable laptops with logging software.

---

## Antennas

**Ken KC3MIX:** Antennas, we could have built out one or two more in the large open space. Going forward we should have another spare online and ready to go or with another config.

**Victor W3CID:** I understand why you did not raise the folded dipole too much above the truck, but we may need a way to separate the antenna from the truck itself. At some point the supporting poles at the ends failed and the antenna dropped, touching the truck. But even when the poles were up, the antenna was very close to the truck and I wonder if some wind could have made it touch it.

**Al KN3U Comment:** Actually, we do have enough mast sections on the truck to erect the antenna separately. There is even a manual for our sectional mast kit on the MCACS website, I chose to use the vehicle's pneumatic mast to save time. It also supported the triband VHF/UHF antenna. As it turned out, the poles supporting the ends of the antenna did not fail. What happened is that the mast lost some of its air overnight and dropped about 15 feet, introducing slack in the antenna. That's what caused the end poles to tip over. We have never had the mast leak before. I'm sure the temperature was a factor. The seals between mast sections are 21 years old and are visibly deteriorating. Replacing them is possible, but would be a significant project. There are so many things we could do with a few additional volunteers -- and cash!

**Skip W3PDP:** I am curious whether the Buddipole did well compared to the other antennas. I am looking for a good portable/go box antenna and that is one option.

**Marc AC3N:** Response We used it successfully last year at Assateague and this year. Maybe 4 people who have them have contacted me and a couple who are interested, and one person sent plans for a home brew buddipole, so my plan is that when the weather gets better to set up something in a park and we can get together and play erector set. If we have both male and female buddipoles we can breed them.

**Ellen KC3MJV:** I participated in winter field day Saturday January 25 from around 1200 to about 1630, and Sunday January 26 from around 1100 to 1400. When I arrived, the setup was almost complete. I had brought some equipment (antenna tuner and antenna) that I had signed up to bring as backups, but none of my equipment was needed. I chose to operate in the communications van because it has the same model radio as mine (IC-718). I am still new to operating HF and wanted more practice using the IC-718. I was alone for the first few minutes, and could hear someone calling CQ, but he could not hear me. Victor W3CID joined me in the van and neither he nor I could be heard. Al KN3U came in to see how things were going and checked the antenna and tweaked some of the radio settings. However, that still did not fix the issue. Ross WA2WDT came into the van and noted that there was a very high SWR. Ross and Victor used the antenna analyzer to track the problem to a faulty jumper cable within the van. They found a replacement and that fixed the problem.

**Bruce W3SCI:** In line with my "*Minimal Effective Deployment*" suggestion above, perhaps initial effort should be placed on erecting antennas that are "good enough" for the task at hand. This would include antennas that can be erected with minimal staff. An antenna that takes the intermittent attention of multiple people over several hours will not be very useful if there are only 1-2 people to work on the task. (I have the Chameleon EMCOMM III portable, that I can install by myself, in an NVIS configuration, on any surface, in less than 30 minutes. An "A vs B" test conducted in the MCACS van on a previous deployment suggests that it may meet the "good enough" criteria. However, it was certainly less effective than the folded dipole.)

---

## Safety

**Jim K3MRI:** Grounding kits were not set up.

**Jim K3MRI:** Insufficient planning for icy conditions caused difficulties during setup and movement.  
Recommend  
-Prepare for winter-specific challenges by maintaining a checklist of required gear, such as ice cleats, shovels, and salt.  
-Include weather contingency plans in pre-event briefings.

**Bruce W3SCI:** If propane heating will be the primary heating source in the future, a carbon monoxide detector should be installed in the tent and monitored. I moved my CO detector from my Jeep to the operations tent on Sunday morning. By the time the tent was struck the detector was showing 10 ppm. Some sources suggest that this is the maximum safe exposure level for an 8-hour period. Other sources set higher levels. More investigation will need to be done to set a safe level for elderly club members who may have heart and lung issues.

---

## For Additional Information

Photos have been compiled by Bruce, W3SCI, and may be viewed at:

<https://www.brucefuchs.com/Amateur-Radio-Events/MCACS-Winter-Field-Day-2025>

The complete log of contacts has been compiled in a spreadsheet, which may be accessed here:

<https://mcacs.net/wp-content/uploads/2025/02/WFD-2025-Log.pdf>

## MCACS 2025 WFD Final Participant List

1	Jim Alyanak	K3MRI
2	Nancy Anthracite	W3NN
3	David Bern	W2LNX
4	Victor Cid	W3CID
5	Bruce Danly	KB3CGE
6	Kristopher Doyen	K3ID
7	Bruce Fuchs	W3SCI
8	Ellen Goldman	KC3MJV
9	Marc Hoffman	AC3N
10	Tom Horne	W3TDH
11	Ken Knopp	KC3MIX
12	Howard Lichtman	KC3LUE
13	Ross Merlin	WA2WDT
14	Andy Mitz	WA3LTJ
15	Al Taylor	KN3U
16	Skip White	W3PDP
17	Will Wurzel	K3XIT

