

Volunteer Newsletter November 2024

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Newsletter Editor: Katherine Grace August, PhD

About MOVE Disaster Relief & Outreach, An IEEE-USA Initiative

The MOVE program, founded by Mary Ellen Randall 2025 IEEE President-Elect, is committed to assisting victims of and responders to natural disasters and is gathering momentum around the globe. MOVE responded to many crises in 2024. Fulfilling essential short-term communications, technology, and power solutions makes MOVE a game changer. Volunteers bring their diverse skills to the team, share their experiences and knowledge, raise awareness and provide STEM engagement to educate the public about the varied aspects of technology with a positive impact on society. See the Member Profile of STEM Volunteer Melody Richardson in this issue. MOVE volunteers develop new skills while bringing meaningful humanitarian engagement to the community near and far. Please visit move.ieee.org to learn more.



Announcing MOVE-3

MOVE News Update by Loretta Arellano

I hope you all enjoyed the first digital newsletter in October. You can expect to see the digital newsletter monthly to keep you posted on MOVE activities. We will continue to provide print editions in February, June, and November, as they are used at many events.

We are excited to announce the addition of a third vehicle, MOVE-3, to our fleet. Along with the other two vehicles, MOVE-3 has been deployed to support relief efforts for Hurricanes Helene and Milton. All three vehicles have returned and a full report is in this issue. Grayson Randall will present a technical talk in December about the deployments during these two major Hurricanes. Sign up to receive notifications for upcoming talks and events at <https://bit.ly/MOVE-SIGNUP>

We recently trained five new drivers, two of whom supported the recent deployment for Helene. We continue to look for drivers, maintainers, and many others to fill roles in support of the program. If you would like to learn more about volunteering, please sign up at: <https://bit.ly/MOVE-SIGNUP>

MOVE founder, Mary Ellen Randall, has been elected to be the 2025 IEEE President-Elect and will begin serving as IEEE President on 1 January 2026. Congratulations Mary Ellen.

For more information please see: <https://www.ieee.org/about/news/2024/elected-2025-ieee-president-elect.html>

MOVE relies on donations. Please consider contributing at <http://bit.ly/DONATION-MOVE>



Mary Ellen Randall



IEEE MOVE-1, MOVE-2, MOVE-3 Respond to Disaster Hurricanes Helene and Milton

By Grayson Randall

Hurricane Helene made landfall in the Big Bend area of the Florida Gulf Coast as a Category 4 storm late in the evening of Thursday 26 September 2024. Helene started impacting North Carolina on Friday 27 September. MOVE was requested by North Carolina Emergency Management (NCEM) to respond to Western North Carolina Agricultural Center in Asheville NC to support a shelter that had no power or communications.

After studying the NC DOT maps, there were no open roads into Asheville. All roads were blocked by landslides or were flooded. On Saturday 28 September, with the assistance of NCEM we were given a police escort through areas of closed roads that got us to the shelter in Asheville. When we arrived, the shelter had about 700 people with no power, communications, or running water.

We immediately set up MOVE-1 to supply communications to those running the operation. With internet available, the Red Cross was able to communicate with the Red Cross Operations headquarters to request additional supplies and to update Red Cross headquarters on numbers of people sheltered and the operational needs. We also supplied the deployed NC Incident Management Team (IMT) with communications that allowed them similar communications capabilities with state and local authorities to convey status and needs. We then provided the IMT with a VOIP phone, radios, and technology support. MOVE-1 provided power and communications at the shelter for a 2-week period until commercial power and temporary internet were available at our site. Helene is responsible for at least 241 deaths (119 in NC) and \$88 Billion in damage. MOVE-2 was requested and was routed through Charlotte NC where they stopped and picked up Red Cross equipment to be delivered to Asheville.



Continued IEEE MOVE-1, MOVE-2, MOVE-3 Respond to Disaster Hurricanes Helene and Milton

MOVE-2 was able to enter from the south through I-26 which had been partially opened. They responded to the Red Cross Headquarters (DROHQ) where they were trying to evaluate the needs in the area. But that turned out to be very difficult. With 700 closed roads, 100 missing bridges, and 1700 landslides it was nearly impossible to move about western North Carolina (WNC).

We had military and private helicopters overhead helping to move first responders from all over the US. At one point we had 2700 first responders operating in WNC. Over 1 million people were without power and virtually all cellular communications were damaged and unusable. MOVE-2 was utilized to go to badly damaged communities to allow the residents to charge their phones and use the internet. The truck was located in several communities over a 4-week period.



While MOVE-1 and MOVE-2 were operating in WNC, there was yet another hurricane approaching Florida... hurricane Milton. After discussions with the Red Cross, MOVE-3 was driven from its base in San Diego California to Tallahassee Florida which took about 4 days. MOVE-3 was requested to go to the Red Cross warehouse in Georgia and pick up a load of Red Cross DST equipment. That was delivered to Orlando Florida where they set up and provided equipment for pre-landfall shelters. MOVE-3 was in place in Orlando for the 10 October landfall near Siesta Key, Florida. MOVE-3 spent the next 2 weeks assisting the Red Cross with shelters across western Florida. Storm damage from category 3 Milton is estimated at \$85 Billion with 32 deaths.

In the 5-week period starting in late September, IEEE MOVE deployed 3 trucks, 12 volunteer members on the ground, and had 18 volunteer members supporting the deployments virtually. This includes our network team, weather team, maintenance team, and radio club. The MOVE trucks provided the Red Cross and NCEM the tools they needed to operate in catastrophic conditions to support those in great need. For me, I continue to see pictures of the catastrophic destruction in WNC and know it will take years to recover but will never be the same. It is very sad but I am grateful that IEEE MOVE has the equipment and skills to assist in such operations. If you have an interest in supporting the MOVE mission, please sign up at <https://bit.ly/MOVE-SIGNUP> or donate at <http://bit.ly/DONATION-MOVE>

MOVE-2 Supports Red Cross Disaster Mental Health Summit in North Carolina

By Jay Diepenbrock

Walt Burns and Jay Diepenbrock brought MOVE-2 from the IEEE International Microwave Symposium in Washington, DC to the Air Force training center at Kure Beach, NC to support a Red Cross Disaster Mental Health (DMH) training exercise on 22-23 June. MOVE's new Starlink dish provided Internet service crucial for the hybrid event, and it worked well. Jay and Walt assisted with some IT-related issues, and the event was successful. Walt participated in Amateur Radio Field Day on 22-23 June. Field Day is both a contest and a practice event for disaster communications, a primary mission of the MOVE program. MOVE-2 was returned to its home base in Durham, NC.



STEM on the MOVE Member Profile: Melody Richardson

By Melody Richardson

My STEM journey began in first grade, teaching my dolls—and a very reluctant basset hound—addition and subtraction. Over time, that passion for teaching grew as I became a tutor in both high school and college. Eventually, it led me to creating Family STEM Nights, developing a STEM adventure book, and dedicating myself to a personal mission: showing that STEM is all around us, even when we don't always recognize it. My passion for STEM education has always been intertwined with a desire to make a meaningful impact, and nowhere is this more evident than through my work with IEEE's MOVE Community Outreach program. Since 2018, I've coordinated IEEE-Atlanta and IEEE Region 3's annual sponsorship of the Atlanta Science Festival's Exploration Expo, where we engage over 25,000 attendees each year. This event offers a unique platform to highlight how STEM skills intersect with real-world problem-solving, and it's been a privilege to showcase IEEE's MOVE trucks as working STEM assets, demonstrating their vital role in disaster recovery and community support.

I founded *STEM on the MOVE*, the STEM outreach initiative of MOVE Community Outreach, to bring the transformative power of STEM directly to communities. With a focus on harnessing STEM skills for the benefit of humanity, I lead hands-on workshops, created STEM Challenge backpacks, and crafted a STEM adventure book. My mission is to make STEM education engaging, accessible, and impactful for learners of all ages. Through MOVE, we not only respond to disasters, but we also inspire the next generation of innovators by showing them how the same STEM skills they learn today can be used to solve the challenges of tomorrow. Whether through educational outreach or real-world deployments, MOVE serves as a powerful catalyst for change, making STEM both accessible and relevant, and I'm proud to be a member of the team. For more information and updates on upcoming events, please contact Melody Richardson at Richardson.Melody@ieee.org



Explore the IEEE-USA MOVE truck in virtual reality:

<https://ewh.ieee.org/ieee/move/vr/>



MOVE-2 Community Outreach Eastern North Carolina Section Summer Social

By David C Wright

On 17 August 2024, MOVE participated in the annual Eastern North Carolina Section summer social at the Pullen Park Community Center. David C. Wright drove MOVE 2, Dan Czuhai co-piloted. They were joined by Dan Fuccella. The three provided popular community outreach tours to many including curious young folks who acquired coloring books, and some communications savvy folks seriously considering joining the MOVE team.



MOVE-2 on display at IEEE International Microwave Symposium 2024

By Jay Diepenbrock

IEEE MOVE was represented at the IEEE International Microwave Symposium (IMS) at the Walter Washington Convention Center in Washington, DC 16-21 June 2024. IMS includes technical paper sessions and forums, panel discussions, an exhibit floor, housing component suppliers, Electronic Design Automation software suppliers, and providers of commercial and military equipment in the Radio Frequency (RF) and microwave spectra. With approximately 8000 attendees, it was an ideal venue for showcasing the MOVE-2 truck and for community outreach about the MOVE project. Andy Moorwood and Walt Burns drove MOVE-2 and set up on the exhibit floor. Andy, Walt and Jay Diepenbrock gave many tours sharing information about how the MOVE project has helped people following disasters, about modular MOVE and MOVE International activities. Attendees requested information about bringing MOVE to their home countries, and other areas of the United States. Many requested information about becoming a volunteer.



Introducing: MOVE-3

By Chris McManes

IEEE MOVE introduced our latest vehicle, MOVE-3, at a special event on 14 August 2024 in San Diego where the new vehicle will be deployed as needed. At the ceremony, IEEE leaders demonstrated the MOVE-3's new modular technology and shared how the components can be easily transported by plane, helicopter, or used with the van.



MOVE-3 is introduced. Pictured at the San Diego American Red Cross facility are L-R – Kathy Hayashi (Region 6 Director), Tim Troske (MOVE West Operations Lead), Loretta Arellano (MOVE USA Program Director), Kathleen Kramer (IEEE President-Elect), Tim Lee (IEEE-USA President-Elect), Sean Mahoney (American Red Cross Southern California Region CEO) and Bob Birch (American Red Cross local DST manager).

Making MOVE Modular: MOVE-3 has the same technologies as the other vehicles but in a modular format so they can be transported easily to remote locations. Unlike the other larger vehicles, MOVE-3 is a smaller van, which can arrive at disaster sites more quickly. IEEE Senior Member Tim Troske, operations lead for MOVE-3, says “MOVE-3 has a solar power station that is strong enough to charge two lithium-ion battery packs.” The vehicle’s flexibility allows the equipment to be deployed not only across California – which is highly susceptible to wildfires, landslides, and earthquakes – but also to Alaska, Hawaii, and other regions in the western United States. Similar modular equipment is used in IEEE MOVE programs in India and Puerto Rico.

New MOVE Drivers Completed Training

By Grayson Randall

IEEE MOVE recently completed a driver training class held from 16 to 19 August in North Carolina. The class was an intensive 4-days that included both classroom and hands-on training. Walt Burns, David H Sewell, and Grayson Randall taught the many aspects of rules, regulations, and procedures for operating the trucks and equipment. Bill Wooton, Chris Sutton, Bill Guzek, Morgan Kiani, and Gerry Ourada completed the class. IEEE MOVE leadership is very proud to welcome new drivers, expanding our driver list to seventeen highly trained volunteers. We also have hundreds of trained crew members that volunteer on the ground and many remote volunteers. As our program continues to expand in the United States and around the world, we continue to need additional volunteers. Please feel free to contact us to find out how you can become a MOVE volunteer. Sign up at <https://bit.ly/MOVE-SIGNUP>



Very active October for MOVE Puerto Rico

By Francisco Carrero, Chair MOVE International Puerto Rico

This has been an active month for MOVE PR with the participation of the Radio Club members on various activities. On 17 October, the radio Club team participated on the Shake Out event sponsored by IEEE MOVE Project Radio Club to use the Amateur Radio Community Intensity Map (ARCIM) to point "Do you feel it?" messages during that day. This activity showed the support that the Amateur Radio Community could bring during an earthquake event.

On 19 October, MOVE PR deployed our radio and satellite internet at the JOTA-JOTI event organized by the Scouting America organization, specifically with the Yagueka District of Puerto Rico. The JOTA-JOTI (Jamboree Over The Air- Jamboree Over The Internet) event allow boys and girls that are members of the Scouting program, to learn about amateur radio and other communication technologies. During the event, MOVE PR showed its communication capabilities to over 400 participants, and explained how the program support the ARC during a disaster relief effort.

As part of a growth plan, MOVE PR volunteers met on 26 October to discuss activities held during 2024 and a workplan for 2025. From this activity great ideas came to the table establishing the basis for a very active and productive 2025 for MOVE PR. Stay tuned for upcoming news! For information about how to become a volunteer, contact us: move-puertorico@ieee.org.



MOVE Volunteers with Scouts members at JOTA-JOTI event.



MOVE Volunteers reviewing 2024 Workplan.

Thanks to our Supporters

Disaster Awareness Training Program in Karnataka

By Sadhana Attavar

IEEE MOVE Outreach India's activities continue with full speed. A key objective is disaster awareness, as a preventive and precautionary measure for its disaster relief program. Following the STEM toolkit launch and training in July and several Train-the-Trainer programs for disaster awareness, three programs were conducted recently. An IEEE MOVE hands-on workshop Combating Climate Change with Technology was organized by IEEE EDS SBC and Center of Excellence, Heritage Institute of Technology in collaboration with IEEE MOVE Outreach India Program and IEEE SIGHT Kolkata Section. The event took place on 12 September 2024, at Heritage Institute of Technology, Kolkata when 20 high school girl students participated.

A Disaster Management workshop was held for school children during the IEEE TENSYP 2024 conference held at Delhi during a conference held 27 through 29 September. About 30 students participated in the event along with Dr.Perna Gaur, India Council Chair Elect 2025.

Ms Sadhana Attavar, Chair of the MOVE India program and Vice Chair of the HTB India Council delivered two talks raising awareness of disaster management, the impact of Climate Change, and the role the MOVE India program. The first talk was a part of the IEEE WIE International Leadership Summit held in Delhi on 10 – 11 August also graced by Mr. Deepak Mathur, VP of IEEE MGA. The second talk was part of the IEEE Day Celebration at the Oxford Engineering College in Bangalore. Several hundred students benefited from these talks.



Want your IEEE Society to support MOVE?

Possibilities include (depending on level)

- Sponsor a Joint STEM event
- MOVE truck at your conference
- Your Logo on MOVE web page
- Facebook post featuring your society
- Your Logo on the MOVE truck

The MOVE program is funded by donations to the IEEE Foundation "MOVE fund." Help today! leefoundation.org/move

For more information, contact merandall@ieee.org