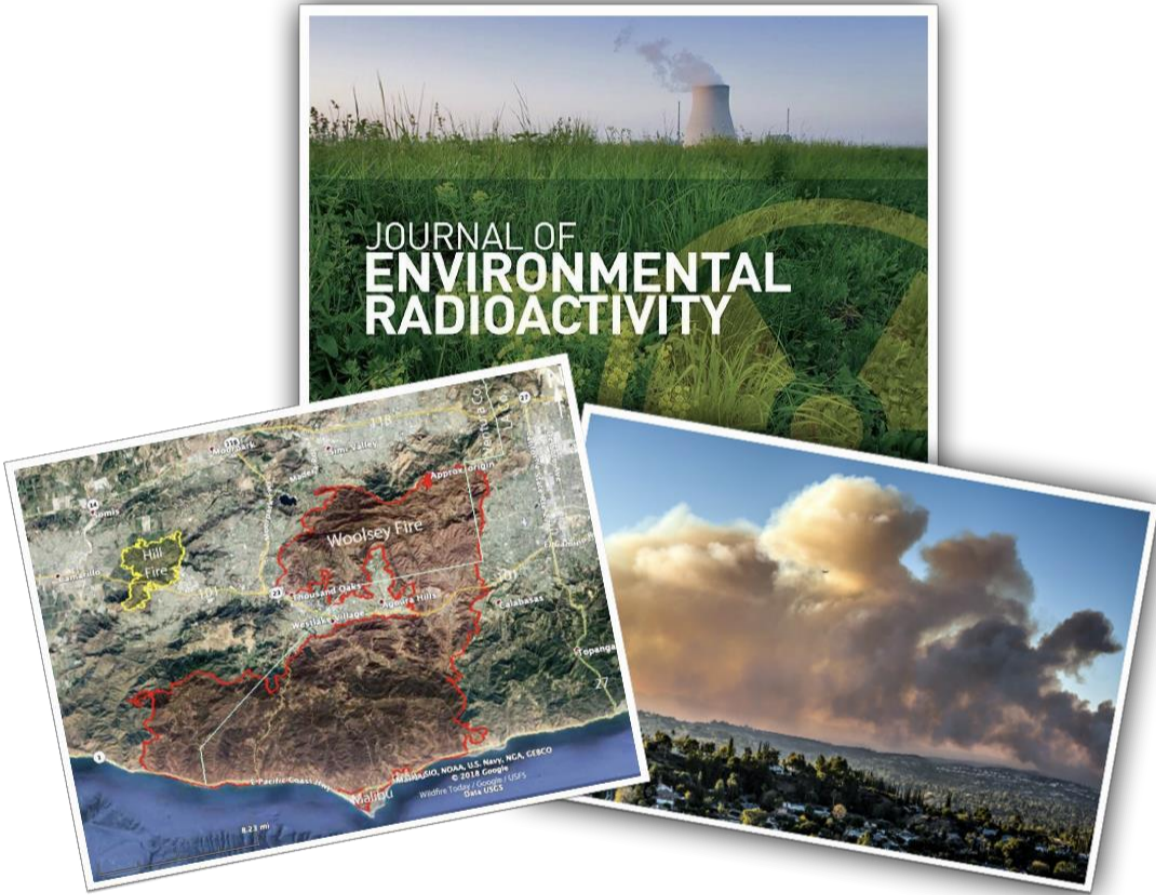


Fairewinds Energy Education

Annual Report 2021



Year In Review

2021 Highlights

Community Driven Science

The Fairewinds Crew mobilized and trained community-volunteer citizen-scientists to collect soil and dust samples resulting in peer-reviewed research with licensed professional civil engineer Dr. Marco Kaltofen. One of the strengths of our community-based citizen-science projects is that we partner with local community groups who advocate for the families living in the shadow of leaking radioactivity. Fairewinds final report on the Woolsey Fire Project analyzing the migration of radioactive microparticles in ash emanating from California's Woolsey Wildfire was published online by the [*Journal of Environmental Radioactivity*](#) on October 8, 2021.

Communicating the Story

Despite the internal and external pandemic-induced organizational complications each of us faced during 2021, The Fairewinds Crew continued sharing new radiological information with the world community. We participated in online conferences, zoom research and scientific discussions, personal meetings, podcasts, and radio interviews. Fairewinds also hosted a major [*Demystifying Nuclear Power Blog Series*](#), wrote our informative newsletters, and communicated daily via our educational website, email, and social media accounts.

A Time For Sharing

The members of Fairewinds 'Crew have diverse ethnic and religious backgrounds, yet we all welcome the winter holiday season for the space and time it gives us to reflect on the year. Usually, the winter holiday season also gives us time to catch up with family and friends, old and new. Unfortunately, as for most people worldwide and those of us at Fairewinds, 2021 presented many pauses and complications, so we only recently found time to reach out to relax with family and friends, recharge our batteries, and give thanks.

As 2021 ends, Fairewinds focuses on our relationships with all who have supported our work throughout the years. This winter, the Fairewinds Crew extends our warmest wishes to you and your loved ones.



Arnie and Maggie Gundersen

Witnessing Achievements

“When the United Nations Human Rights Council officially recognized access to “a safe, clean, healthy and sustainable environment” as a basic human right earlier this month, it was an acknowledgment fifty years in the making. [Moreover,] it was backed by an international grassroots effort, with the journey to the final vote including the voices of more than 100,000 children around the world and multiple generations of allies pushing against powerful corporate opposition,” according to Carmi Orenstein in her article entitled [Take These Beautiful Words](#).

“Today, as the result of a recently published peer-reviewed study that represents the dogged efforts of both professional researchers and a team of specially trained citizens, we have solid evidence of the spread of dangerous contamination from that site”—Carmi Orenstein. The peer-reviewed study discussed by Ms. Orenstein is based upon Fairewinds’ Woolsey Wildfire Project. Our scientific analyses resulted in a Journal article written by Fairewinds’ directors Maggie and Arnie Gundersen and our scientific colleague Dr. Marco Kaltofen and published by the *Journal of Environmental Radioactivity*. This community-based citizen-science project sampled and analyzed the migration of radioactive microparticles of wildfire ash carried in dust and dirt created by California’s Woolsey Wildfire at the Santa Susana Field Lab Site, only 35-miles northeast of Los Angeles (LA).



"No matter what people tell you, words and ideas can change the world." ~ [Robin Williams](#)

Acquired Knowledge

We know that time is of the essence! Look at the still-operating aged and decrepit nukes—designed during the 1960s using slide rules—federal attempts to use toxic plutonium in atomic fuel reclamation projects, and the World War II weapons and waste sites leaking massive amounts of radiation. Living near these leaking and toxic atomic sites severely impacts community health.

For example, living here in South Carolina for the past three years, we see how deeply most southern states are negatively affected by outmoded and expensive nuclear power and its poisonous waste. Look at South Carolina’s Oconee Nuclear Plants, with aged and vulnerable dams above them, and at the Savannah River Site (SRS) to store nuclear waste, both of which are at high-risk climate-change-induced catastrophic events. Also, investigate the multibillion-dollar political boondoggle of Georgia's Vogtle Units 3 and 4. Again, the potential for a climate change-induced toxic catastrophe is high as downriver sites will be polluted by radioactivity for generations as 100-year floods become more common.

Moving Beyond A Toxic Environment

Environmental and social justice become achievable when communities have the data needed to move mountains. Our goal is to continue contributing the scientific knowledge that correctly informs the global community about complex energy technologies and how these technologies impact our communities.

To reach these goals, Fairewinds Energy Education participated in two international video conferences during 2021. The first conference was [Humanity Rising](#) in March 2021, and the second conference in Austria in April 2021 was [How to Dismantle an Atomic Lie – Taking Apart the Nuclear Falsehoods](#).

Lasting Impacts

When the Fairewinds Crew presents information, publishes articles and podcasts, and other researchers cite our peer-reviewed research—we know our scientific work has a lasting impact. As a result, we are inundated with requests to help communities build citizen-science-based radiation monitoring programs. By fostering community partnerships, we help more communities impacted by atomic radiation. For example, Fairewinds partnered with Physicians for Social Responsibility – Los Angeles (PSR–LA) to create the community-volunteer citizen-scientists who followed sampling procedures and submitted their data. BIPOC (Black, Indigenous, and People of Color) Communities live in exploited and underserved areas with high rates of radiation-induced cancer and other diseases. These communities count on Fairewinds’ environmental justice work.



Empowered Communities

When people have accurate data, those communities get a seat at the table as fully vested stakeholders who can advocate for support and environmental mitigation. Those stakeholders enable others to create safer communities for all.

Time To Be Thankful

We are thankful to have good health and for friends who've come through for us when we needed it most.



As we approach the new year, we are preparing to connect with those who've reached out to us for help. These communities seek help from the Fairewinds Crew and its scientific colleagues to partner with their community groups to mobilize and train new community-volunteer citizen-scientists. Each time citizen scientists learn how to collect samples from radiologically contaminated areas, Fairewinds and its colleagues will have the data needed to produce scientific research and educational materials that we will freely share with the world community.



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