

WHAT WILL IT TAKE ??

We Must Take Better Care of Planet Earth

- by Gary Griggs

Although we still have four months left in 2023, NOAA just reported that this year has already been the worst on record for billion-dollar climate disasters, including severe storms, wildfires, tropical cyclones, floods and droughts. The nation has already experienced 23 of these event with damages in excess of \$57.6 billion and the loss of 253 lives. The projection is that losses and deaths will continue to rise through the remaining months of this year.

The summer of 2023 was Earth's hottest since global records began in 1880, according to scientists at NASA's Goddard Institute of Space Studies. The combined months of June, July and August were warmer than any other summer on record. This record is one I'm certain that nobody wants to own. It comes as exceptional heat spread across most of the planet, intensifying deadly wildfires in Canada, Hawaii, and Greece and scorching heat waves in South America, Japan, Europe and the US. This week we have been impacted by smoke from the fire that has burned 28,829 acres (45 square miles) in northern California and southern Oregon, severe enough that kids in at least some schools weren't allowed outside for sports.

The oceans were being heated to temperatures fatal to coral as water around the tip of Florida reached hot tub temperatures, over 100 degrees F. two days in a row. This was 1.5 degrees F. higher than the hottest ocean water ever recorded, which was in the waters of Kuwait three summers ago.

Warmer ocean waters mean more fuel for hurricanes that will likely be more intense, and even spawned a rare hurricane that battered California's desert region, an event not seen in more than 80 years. Hilary dropped a year's worth of rain in a few hours in places like Palm Springs and Palm Desert leading to flash floods, mudslides and debris flows.

A warmer ocean also means greater evaporation rates, which can lead to heavier rainfall and flooding. And global heating has led to changes in the frequency, intensity and duration of precipitation, which means the rainfall and streamflow history of the past is no longer a reliable measure of what we can expect in the future.

The intense storm and rainfall that hit Libya last week led to high streamflows and two dam failures which destroyed much of the coastal city of Derna where most recent estimates are that about 4,000 people have died. Unfortunately, one death can be a tragedy and 4,000 often becomes a statistic.

Floods this summer have also severely impacted Greece (which we fortunately just missed on our recent trip), Bulgaria and Turkey. In Asia, Monsoon rains resulted in severe flooding

and landslides in northern India leading to the evacuation of more than 378,000 people. On the evening of September 7, a heavy downpour flooded Hong Kong with multiple deaths and injuries. Brazil and Guatemala have also suffered major flooding and landslides.

In August as Lahaina on Maui was burning, Florida was busy adopting a new climate-change curriculum in schools that minimizes teaching about the dangers of global warming, distorts scientific information and adopts a curriculum produced by Prager University Foundation, a conservative nonprofit that aims to present The Other Side on hot-button issues. I am sorry, but there is no other side of climate change. The Florida Legislature approved climate change denial videos in schools. Among the statements included in children's videos: Wind and solar power pollute the Earth and make life miserable. Recent global and local heat records reflect natural temperature cycles.

Florida's approval is alarming because children watching these videos will do so when they are at their most impressionable stage, in kindergarten through 5th grade. The videos are also targeted at the parents themselves, saying that if you want to be a good parent, you should be teaching your children this story.

The world is burning and this is Florida's response?

In June, the state General Assembly in Ohio was weighing in on a proposal that would regulate higher education including a provision that designates climate policy as a "controversial belief or policy" and says faculty must "encourage students to reach their own conclusions about all controversial beliefs or policies and shall not seek to inculcate any social, political, or religious point of view". In late August this bill passed the Ohio Senate and moved to the Ohio House.

Texas recently changed its science curriculum to require that schools teach positive lessons about fossil fuels, in an effort to downplay climate science and to influence the national textbook market, since Texas is one of the biggest consumers of educational materials in the U.S.

Science is not an option that we get to vote on, and our climate does not have a political affiliation. All carbon dioxide molecules trap heat, it doesn't matter if you are a Republican or a Democrat, nor does your gender, any religious preference, or your age matter.

As humans, all eight billion of us share the same planet, the same air and the same water; and while there may be a few who will live on the moon at some future date at some astronomical cost, for the other 99.99999% of us, Earth is the only home we have and will ever have. And to put it mildly, we haven't been taking very good care of our planet; and if we don't take drastic steps now, lots of them and fast, there will be a lot more climate-disasters and suffering. This isn't a test we get to take over if we don't like the results.

We have to change the course we are on now, and the best way to do this is to elect those who understand what a warming planet means for all of us and is committed to do everything they can at all levels of government to make the changes necessary to turn this ship around.

In addition to his teaching and research efforts at UCSC, Gary was a former director of the UCSC Institute of Marine Sciences. He is also an accomplished science writer, having authored or co-authored 13 books on the environment. This article first appeared on September 24, 2023 in the bi-weekly column he writes for the Santa Cruz Sentinel newspaper called "Our Ocean Backyard".