## A garden grows resilient



By Robert Greene Sands Email the author

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One day last week, I spent digging a deeper runoff canal alongside one of the walkways at Rose Haven gardens. The ground was hard after two weeks without rain. The gardens sit on 8-10 inches of topsoil and a much thicker layer of clay. Clay holds moisture well, but when it dries, it hardens like concrete. I kept scraping with a shovel 'til the tip bent, tried a posthole digger, then finally maneuvered an adze to gouge out the clay.

We have built rock-filled drainage conduits, two large French drains and a bioswale to protect the soil from erosion by transporting runoff from high to low areas in the landscape. We have brought in over 15 tons of rock in the gardens. Some people think I am a little bit daft using that much rock in produce and meditation gardens. I imagine they must think, "Going overboard on the rock, aren't you?" or "A little shrub or two with your rock garden?"

Storm after storm earlier this year produced heavy rain. Rivers of runoff flowed through our gardens to the adjacent lot. I stood in the rain taking photos during those deluges recording the path of the runoff. Building resilience into the hardscape — design/construction to absorb, adapt or recover from extreme climate events — will give flower beds and shrubs a better chance of survival.

It is our challenge to learn from past climate events and adapt our vision of the terrain to a more resilient and restorative garden. This space still needs to provide the healing balm of nature — even with 15-plus tons of rock.

This dry spell ended last weekend, yet the Midwest experienced two weeks of tornado hell (while writing this column, severe thunderstorms lashed the area, and I again stood in the rain watching the impact on gardens). Rivers were swollen from constant rain, and levees built two generations ago have started to fail in Arkansas and Mississippi. Two years ago, California was as dry as a bone. Now it is drought-free for the first time since 2011 and boasts a record-level snowpack.

Weather pundits tell us more "normal" weather patterns will soon return.

Really? Normal? For how long? Nine tornadoes ripped through Ohio last week. It seems like it has rained daily in Alexandria, Virginia, for the last 3 months. Yet, before the rain fell last Friday night, my weather app warned of increased fire danger across eastern North Carolina. On top of all that, my newsfeed just broke that the past 12-month period nationwide has been the wettest in the last 124 years of record keeping.

Climate change is happening now.

We've become hypersensitized to the weather events that assault us on TV and our devices: wildfires, hurricanes, rain, more rain and flooding. Heart wrenching stories of personal tragedy leave everyone involved with climate PTSD, dreading the next catastrophic event.

The effects of climate change dramatically alter our world every day. In the last 10 months, alternately responding to flooding from hurricanes, days of rain, high winds and days of drought, we've re-designed, rebuilt and repositioned the gardens' hardscape components, in effect, daily building in resilience. Last week, still the middle of May, my energy was spent after working just four early morning hours in 90-plus degree heat and high humidity. We were hoping to begin replacing the back roof this week, but not in those temps.

These are just a few examples of the effects of climate change on our gardens and those who work them. In this two-lot garden, we can also help counter climate change with micro innovations, such as testing raised beds for different characteristics that reduce the impact of climate change. We can adapt our gardens to climate uncertainty by not "living in the past" when seasons were predictable. This includes building the hardscape better to withstand climate events so as to meet the needs of those physically and mentally disadvantaged, selecting plants and shrubs that can withstand fluctuations of extreme weather, improving the design of raised beds and mitigating design bias when it comes to incorporating climate resilient features into healing landscapes and working to promote a better understanding of the effects of climate change in Washington.

We can use our gardens in some small way to help grow resilience.

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