



# THE CURRENT

## Chapel Hill Resident Creatively Solves Water Woes



When Lenore Martin and her husband bought their house in Estes Hills 20 years ago, they did not realize how much water streamed from adjacent higher elevations onto their property during storms. It did not take long before water reached their kitchen door sill. Installing French drains between their house and their neighbor's hill helped keep the water out of their kitchen, but water still poured off their roof, sweeping away the pea gravel on the walkways and eroding the front, sloping yard.

So Lenore observed the path of the storm flow. She prioritized where the most water was coming from and how they could manage the overload. They put in larger gutters and downspouts to divert the water away from the house into the lawn and existing trees in front, and added multiple rain barrels below the downspouts with overflows draining into natural areas, later into rain gardens.

Lenore's interest in permaculture led to creating diversionary rock berms and swales to direct water to plants, but after she attended a Friends of Bolin Creek rain garden workshop, the real work began in earnest (after calling 811 for utility location- call before you dig).

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*A downspout is used for rain barrel overflow. It is connected to corrugated plastic pipe that runs into a rain garden.*

### Quick Topics

**Hurricane Season Begins June 1  
Prepare now!**

Register with OC Alerts, a community emergency notification system to keep you and your family safe!



**PREPARE YOUR EMERGENCY SURVIVAL KIT:  
ReadyNC.org**

**AND**

**CONSIDER FLOOD INSURANCE if you live in a low-lying area. There is a 30-day waiting period from date of purchase before your policy goes into effect. DON'T DELAY!  
Visit [floodsmart.gov](http://floodsmart.gov)**





In front, Lenore created a dry creek with rocks following the natural water flow paths and dug a rain garden to temporarily hold and infiltrate rainwater. When that rain garden overflowed, she created more rocky channels leading into secondary and tertiary rain gardens, creating an artistic almost maze-like yard of rocks, soil, and beautiful flowering plants. When a front yard tree needed removing, the Martin’s hired a landscaper to establish a healthy patch of grass where grandchildren can play. Underneath, ran the overflow pipe from the French drain. They also decided to use a permeable binding agent on the pea gravel walk covering the French drain to maximize infiltration of runoff and minimize disturbance of the gravel. It has worked very well.



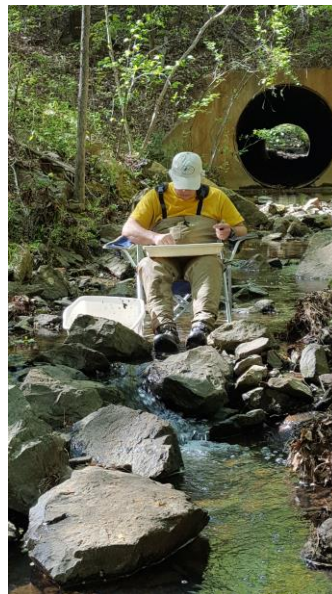
Whimsical metal sculptures, a mason bee house, signs officially certifying the yard as a National Wildlife Federation Wildlife Habitat and a Pollinator Friendly Habitat, and the vegetable garden moved to the curb with extra vegetables sometimes left for neighbors to take, have made what was once a rather plain house a delightful stormwater smart and nature-friendly home.

***Rain gardens are shallow depressions planted with trees, bushes and/or flowers that can tolerate both wet and very dry conditions. The gardens serve as landscape features that can effectively collect and treat stormwater and reduce localized flooding and pollution within our waterways. Learn more from the Stormwater Management website: [townofchapelhill.org/stormwater](http://townofchapelhill.org/stormwater) > Drainage Advice & Homeowner Tips***

## Streets are not for grass.



When grass clippings are left in streets, they can clog storm drains and lead to flooding. If they wash into waterways from storm drains, they add high levels of nitrogen that leads to algae overgrowth and low oxygen levels. The best place for them is back on the lawn, in the compost bin, or in your Town yard waste cart.



*Biologist Larry Eaton conducts an annual inventory of benthic macroinvertebrates.*

## Water quality is determined by what lives in streams.

***Benthic*** - lives on the bottom of a body of water  
***Macro*** - large enough to see with the naked eye  
***Invertebrate*** - a creature without a backbone

Benthic macroinvertebrates are “indicator species” and some live for years as larvae in a stream. Mayflies, dragonflies, caddisflies, mussels and crayfish are commonly found. Drought and pollution affect populations greatly, and can even eradicate them.

Reports are posted on Stormwater’s website under Water Quality/Biological Testing.



Town of Chapel Hill  
Stormwater Management ♦ 919-969-RAIN  
[www.townofchapelhill.org/stormwater](http://www.townofchapelhill.org/stormwater)