

Terra Bite 12: Three Degrees of Separation

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Three degrees. That is all that stands between a 12-inch February snow and a 1-inch February rain. The former nourishes the soil as it slowly melts while the latter destroys the soil as it rushes over the surface, carrying excess nutrients into the watershed. Our fragile Cape Cod landscapes, with weak soil and dormant vegetation, is far more prone to runoff during winter than in summer. One inch of precipitation, which in winter should fall as 12 inches of snow, instead falls as 1 inch of rain due to just 3 degrees; 33 to 30. While we can all agree that 33 degrees is still a cold day; it is, simply put, not cold enough. And as our winter days are slowly but surely getting less and less cold, the time for us to act is now...by managing the runoff.

So the question is this: within this climate warming reality, how DO we guide the destructive, dormant season rain so that it will behave as if it were nourishing, dormant season snow? The answer to that riddle lies in the question; “we guide”. This means that we adapt to meet our changing climate; we mitigate the impact of pounding rain; and we deepen our gardens so that they flourish with easy management. This is simply being “climate-smart”. We adapt our hillsides to intercept the runoff before it leaves our property and allow it to sink and spread; thereby allowing a rain event to ‘melt’ and nourish the soil rather than rush over it and destroy. While we are not (yet) able to change the climate above our heads, we can in fact change the climate below our feet. We just have to be “smart” about it. The wonderful result of this collective effort, as it unfolds across our hillsides and waterways, neighbor to neighbor, is that when we all do these few simple tasks, within our own home landscapes, we will be able to say that we changed the course of the climate above our heads. We can say no longer that we are victims, but rather, that we are victors. We stood our ground and guided the rain to behave like snow, thus preserving our waterways.

Water Management “Six S” (Success)

As you walk around, you will notice where the runoff has been stopped, and then been allowed to slowly sink. From there it goes beyond our view as it spreads through the soil, where it is saved within the subsoil until the coming growing season just a few months away, when it can rise through the roots and stems to create a wonderfully cool canopy of leaves that provides the soil with welcome shade during our increasingly hot and dry summers. And there it is, water management “six s”; success! The rain which fell from February clouds now slowly rises through the leaves to the clouds of July. That water that did not rise will continue on its slow, gentle, purifying journey to our lakes, marshes, oceans and sole source aquifer deep below our feet. We will overcome the challenges of drought and have kept any excess nutrient in our soil. And we will all be richer for it.

Stop – Slow – Sink – Spread – Save – Shade. If you learn nothing more today, on this visit to Terra Firma, let it be this. We can change the climate; the one below our feet. And if we all learn how, we can in fact begin to change the climate above our heads. Lithic Swales, Hugel Terraces, Downspout Keyholes, Tier Drop Gardens, Road Runoff Raingardens, Abyssinian Walls, Riprap WaterWalks ...These are all “Terra Firma Permagardens”. These are the essential hardscape elements on display. But what you cannot see is the deep, moist and healthy soil teeming with vibrant microbial life. It is these vibrant bacteria and fungi, which work for us, tirelessly through the year, to filter the runoff and snowmelt; whichever we are lucky enough to enjoy. It’s a mere three degrees that separates destructive runoff from nourishing walkoff. The choice is ours to decide which one we want..... and then, to act, teach, observe and learn.

The Terra Firma Process: Assess x Capture x Protect x Produce x Manage

The Progression of Change: From Downspout to Hillside to Roadside



The Answer Lies in the Leaves.

It is our mission to ensure that the answer does not leave in the lies. [#TerraFirmaPermagardens](#)