

Groundwater Absorbition Article

By Peter Kelly-Detwiler
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“And God said to Noah...”

Nobody needs a reminder of the rains of this Spring. Rains? How about deluge? During those May days, and again in June, we were strongly reminded of one very good reason to protect open space -- the protection and reliability of our water supply.

With every new house that goes up, the demand for water – and the amount of impervious surface – increase. Every new rooftop and paved driveway decreases the amount of water that is absorbed into the soil for later release. In fact, studies have shown that paved surfaces create more than fifteen times the runoff of an undeveloped meadow.

Rapid runoff can quickly overwhelm carrying capacity of the recipient streams and brooks. The result is flooding, the scouring of streambanks, and deposition of silt and sediment downstream. Sediment not only harms the fish, plants, and animals that depend on this habitat, but it also reduces a town’s drinking water storage capacity by filling in reservoirs.

Towns often try and respond by collecting runoff in drains and funneling it into sewers. Unfortunately, this reduces the amount of water that recharges into the soil as groundwater. By contrast, open space and wetlands are critical sponges, catching and absorbing the heavy rains of spring for slow release during later, drier periods, when we most need the water.

That is one reason that the Cohasset Water Department helped the town of Scituate in purchasing the 40-acre Litchfield Property this Spring – a transaction facilitated by the Maxwell Conservation Trust. In fact, water departments and municipalities around the country are coming to appreciate that watershed protection is a cost-effective way to mitigate flood risk, while ensuring adequate and clean drinking water.

Several examples help to illustrate the hard dollar value of open space and wetlands to society. In the 1970’s, rather than build flood control dams, Congress authorized the purchase and protection of 8,000 acres of open space on the Upper Charles River. The absorptive capacity of this acreage helped avoid major flooding in Boston this spring

Another well known case is the New York City water system, where billions have been spent to acquire tens of thousands of acres of land surrounding in upstate New York. Recently the New Jersey Department of Environmental Protection and Legislature acted to preserve hundreds of acres of watershed land from development to preserve that State’s largest surface water supply source. Preservation of open space often makes plain economic sense.

So, when the hot dry days of August arrive and you want to keep your garden alive, when you want to enjoy the soapy, crazy ritual of the car wash with the kids, or take a dip in the pool, it may be worth remembering this fact: without open space, the rainy days of Spring will not allow you to indulge you in these rituals we have come to take for granted as a rite of summer.