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Environmental Education

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Decreasing Mosquitoes with Stormwater Basins and Rain Gardens

By Krista Scheirer, Conservation Coordinator at the Perkiomen Watershed Conservancy

Though some stormwater management solutions like planted basins and rain gardens collect water, when properly functioning, they can reduce the number of mosquitoes in your community. Recent reports of West Nile Virus may have residents alarmed about mosquitoes and the standing water in which they can breed. Some people may even be wary about local waterways or other places where water collects, like retention basins or rain gardens. These places, however, produce very few mosquitoes. In fact, properly constructed stormwater basins and rain gardens decrease mosquitoes in your community.

Mosquitoes cannot breed successfully in wetlands, ponds or flowing streams, because either the water is moving, or there are predators to eat any mosquito larvae. Mosquitoes generally breed in temporary pools of standing water, and most species require at least one to two weeks for a complete life cycle. So if a puddle dries up in a week, it will most likely not produce any mosquitoes. Some common culprits of mosquito breeding are improperly discarded tires, undrained and open containers, unturned wheelbarrows, unchanged bird baths, and even wheel ruts or other indents where water is not absorbed by the soil.

Rain gardens and properly constructed stormwater basins collect water from roads, roofs and other surfaces to prevent flooding and allow the water time to seep into the soil. This naturally filters the water of any pollutants it may have picked up along the way and can recharge our groundwater resources. It also prevents polluted stormwater from rushing into streams all at once, which erodes stream banks. Well-designed basins and rain gardens collect water that might otherwise create puddles where mosquitoes can breed.

If the soil of a rain garden or a retention basin is properly absorbing water, there will not be standing water for more than a couple days. This does not give mosquitoes adequate breeding time. The plants of a rain garden not only use up a lot of that ponded water, they provide habitat and food for animals that eat mosquitoes, like frogs, toads, spiders, birds, dragonflies and other insects. These are reasons why stormwater retention basins should be planted with native vegetation, rather than being mown as part of a lawn. Some stormwater basins hold water



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constantly in designated ponding areas. Predators around these retention ponds can control any mosquito populations.

If you have any long-standing puddles after a rainstorm, consider putting in a rain garden or simply planting some native flowers to help soak up the water. You will be minimizing your risk

for mosquito-borne illnesses, creating habitat for wildlife and improving the quality of our water resources. Go to perkiomenwatershed.org for more information about rain gardens and stormwater basins. Also check your county's health department for more information on how to prevent mosquitoes from breeding on your property and how to avoid being bit.

References:

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A rain garden filled with native flowers at the Perkiomen Watershed Conservancy.



A stormwater basin filled with native flowers, shrubs and trees in Upper Providence.