

More rain predicted; make the most of it

By Antonia Shoumatoff

“We all walk on water....this area will be thought of as the Saudi Arabia of water”

— Russell Urban-Mead, Hydrologist

Climate change influences precipitation. We can expect an 8-10% increase in rainfall in the Hudson Valley. Due to global warming, this part of the Northeast will be wetter as opposed to the Southwest, which will experience severe shortages of water, according to Aquatic Biologist, Emma Rosi-Marshall. She explained that 2.5% of the water on planet earth is freshwater and that all freshwater fauna is endangered or threatened at this point.

Hydrologist Russell Urban-Mead presented the area's rainfall statistics, saying: “We get 38-44 inches of rain per year around here. Even in a drought year, we get around 32 inches, which is good.” Mr. Urban-Mead predicted that there will be a resurgence of agricultural uses that need the support of irrigation in the Hudson Valley due to our abundant water supply.

In an informative and well-attended regional Freshwater Forum hosted by the Cary Institute on April 16, a roster of experts on water resource protection presented thought-provoking information about both the threats and the solutions to preserving our ground water. An Environmental Program Expert from the NYS DEC went into regulations for stormwater management and green infrastructure that will change the way towns are required to handle runoff, floods and contaminants.

“The new stormwater permits (SPDES) which were revised last May and implemented in a new manual in August will require a reduction of runoff, treatment of that runoff, and the implementation of green infrastructure....we no longer view run-off as a site as soon as possible but as a resource to be retained and infiltrated onsite,” said Mr. Pat Ferracone of the NYS DEC in White Plains.

“These regulatory changes are going to require a paradigm shift,” Ferracone continued, “and what it means is that we no longer view water as a problem or as ‘waste’ but as a resource that can be captured, treated and re-used.”

The DEC also put up graphs of figures from the federal EPA that demonstrate how implementing better site design, called “Low Impact Development,” costs 25-40% less than conventional development and is easier to maintain due to the increase of groundwater infiltration. Ferracone showed how projects can be planned to fit the site and how sidewalks, driveways and cul de sacs can be reduced, eliminated or re-designed to allow the water to flow through to the ground.

Emily Vail of the DEC's Hudson River Estuary Program explained the difference between “green and gray infrastructure” and showed examples of how to

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enhance water infiltration with rain gardens, grass pavers, raised planters below roof gutters, retrofitting and even green roofs.

Another important point that was made by Russell Urban-Mead is that the major contaminants and threats to ground water are not “point source pollution” such as spills, gas stations and manufacturing impacts which are heavily regulated and more easy to remediate. The main problems come from the more nebulous “non-point source pollution” such as road de-icers, pesticides, pharmaceuticals, household chemicals, nutrients from faulty septic tanks that are spread throughout the watershed and are more difficult to eliminate.

Erik Kiviat of Hudsonia was able to explain the extraordinary functions of different kinds of wetlands and how people get away with filling in wetlands that are under a half acre. He said that better enforcement of wetlands laws is needed.

Of the many county and town officials in attendance, the Mayor of Wappingers Falls, Matt Alexander, who is also the chairman of the Wappingers Creek Intermunicipal Council (WIC has 13 municipalities as members of this council) explained why it is important for towns to work together: “We need to think beyond the borders of our towns. One town can learn from the other. We had 17% growth of population in Wappingers over the last decade, according to the census, and if we are going to be able to deal with the impact of higher density development and the impacts over-all of sewage and road salt we have to work together. The municipalities along the watershed may have different problems but we can share the same solutions. We are in the beginning stages of sharing resources to write model ordinances, we have all learned from each other about how to protect the watershed. East Fishkill just brought a very interesting road salt spreader to our attention which will cut way back on road salt waste.”

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