



## LRWP Meeting Minutes

March 12, 2018

In attendance: JeanMarie Hartman (Rutgers), Billy Kurzenberger (Perth Amboy), Daniel Cohen (Highland Park), Bill Schultz (Raritan Riverkeeper), Jeanine Kopec-Zanghi (Middlesex County), Nick Tufaro (Middlesex County), Elizabeth Schuster (The Nature Conservancy), Louie Greenwell (Middlesex County), David Tulloch (Rutgers), Anne Singer (Highland Park), Susan Edmunds (Highland Park), Mirah Becker (Middlesex County), Justin So (LRWP), Alex Zakrewsky (Middlesex County), Heather Fenyk (LRWP)

### Special Presentations on Green Infrastructure in Perth Amboy

#### I. Professor Jean Marie Hartman: "The Role of Forests as Green Infrastructure"

Professor Hartman discussed the value of forest to value of water within a watershed, demonstrating through a slide series how at every level forests are important for water quality. Canopy breaks fall rate of precipitation. As you go into forest proper - see forest litter that provides layer of protecting soil. Ultimate protection is roots that take up water and recycle as evapotranspiration All work together to give a low runoff rate.

Professor Hartman created a case for quality soils that the trees can thrive in (needs higher infiltration and organic content) - saying that they will get much better impact of water infiltrating. Also need microbotic community, bring in inoculant from healthy forests

Professor Hartman reported on research that shows how well protected forests are in the Raritan Basin. Forest cover represents approx 24.1% of land cover in the Raritan Basin. Of that, 39.1% is not conserved, 60.9% is conserved. Brush land is successional land turning to forest. 87.7% of deciduous forest is protected, but future forests are not protected and are highly vulnerable to development.

Looking at the Raritan Basin, an analysis by County shows that Morris County is most protected. Also Hunterdon County. The Highlands Act is making a big difference in the counties. Accounts for discrepancies and biases apparent protection of the forest. Both the Lower Raritan watershed and the Stony Brook Millstone Watershed have much lower rates of protection than the Upper Raritan does.

Professor Hartman believes that HUC-14 is best level to look at planning issues and potential changes, and she is interested in the Research Question: What is the relationship between forest cover and water quality? Her research approach proposed: VHA and macroinvertebrate assessment (chemical monitoring was much too variable)

Findings: VHA + macros testing give significantly different results. Both are valuable!  
-VHA and macros explain forest

[www.lowerraritanwatershed.org](http://www.lowerraritanwatershed.org)  
[hfenyk@lowerraritanwatershed.org](mailto:hfenyk@lowerraritanwatershed.org)

54 Hassart Street #A3  
New Brunswick, NJ 08901  
#908349.0281



-Biotic assessment best indicator for wetlands

-Biotic also good for barren land

Forest cover is strongest land cover variable for predicting habitat quality. Forest cover and wetland cover are strong variables for predicting biotic integrity results.

Conducted study in Perth Amboy - "Urban Forests as Green Infrastructure"

Perth Amboy is an area of particular interest because of CSOs. Conducted a pilot in Perth Amboy sewershed. Randomly selected sewershed #2. Asked the question: "What if we turn vacant lots into urban forests?" Approximated 12 acres of vacant land. Estimated infiltration rate of compacted urban soil 12.5% of total runoff.

Questions: What would it take to do this?

-ownership of property

-site clean-up

-tilling the soil

-purchase and planting of trees

-purchase and planting of appropriate ground cover

Cost: \$1.5 million : 6 trees//lot (50 foot lot), low mow grass. Remember: forests are part of GI, and very effective!!

Specific tree suggestions for floodplain and swamp trees:

-red maple

-sweet gum

-Black Tupelo

-American sycamore-

-swamp white oak-

-"silk tree" (non-native) that is very tolerant of urban crummy conditions

Elizabeth Schuster comments: TNC now has hydrologist (PhD from Stockholm). She asks about acquisition #s for vacant lots. She suggests that municipal urban forestry plans should hear this!!!

- II. William Kurzenberger: NY/NJ Harbor Estuary Program's SWMM proposal for Perth Amboy
- III. Raritan Riverkeeper Bill Schultz: "Tree Farm" and "Tree Fund" proposals for Perth Amboy

Bill Schultz provides an overview of citizen's campaign work in Perth Amboy (reintroducing public into public process) to assist with moving ideas forward. This includes a model ordinance establishing a tree donation program. Bill has summary of process around trees in Perth Amboy.

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Lower Raritan Watershed Partnership

Funding: NOAA fisheries coastal resilience grants, TNC roots for rivers, NJ Tree Recovery campaign - free seed lines. National NUCFAC - annual grants program that would be great for Perth Amboy. Train urban youth to take care of the trees!!

Billy Kurzenberger suggests trading taxable areas for implementation? Park spaces? "Useless Green Spaces" - Billy thinking highway off ramps, brownfield sites. NJ Transit open spaces.

Billy K: Washington Park Study Area stormwater management amphitheater in Perth Amboy, will utilize for outdoor performances in dry weather. In wet weather it will fill.

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