



**Department of
Environmental
Conservation**



Sustainable Management of Urban Soil & Fill Material

Session Moderator: Steven Parisio, NYSDEC

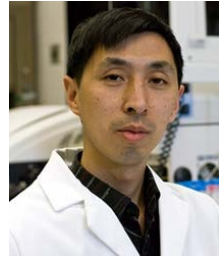
**Federation of New York Solid Waste Associations
SOLID WASTE & RECYCLING CONFERENCE**

The Sagamore on Lake George, Bolton Landing, NY
May 21, 2018

Today's presenters and the organizations they represent:



The soil survey is the definitive source of information on the characteristics and spatial distribution of NYC soils. **Olga Vargas** is a soil scientist with USDA-NRCS who worked on the NYC soil survey and has extensive experience mapping and interpreting soils in NYC and throughout NY State.



The NYC Urban Soil Institute (USI) is a clearinghouse for information on urban soils with programs including research, outreach and education, data sharing and a non-profit soil testing laboratory. **Dr. Zhongqi Cheng**, a founder of USI, is on the faculty at CUNY-Brooklyn College and is Director of the college's Environmental Sciences Analytical Center.



Under the leadership of **Dan Walsh**, the Mayor's Office of Environmental Remediation has pioneered the environmentally responsible management of excess fill material generated by urban site development projects.



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Urban soils and fill materials



Human-altered or human transported soils or fill materials typically contain “artifacts” such as construction and demolition debris and residues from the historically widespread use of coal.

Sources:



Urban fill material is generated from site development projects throughout the city.



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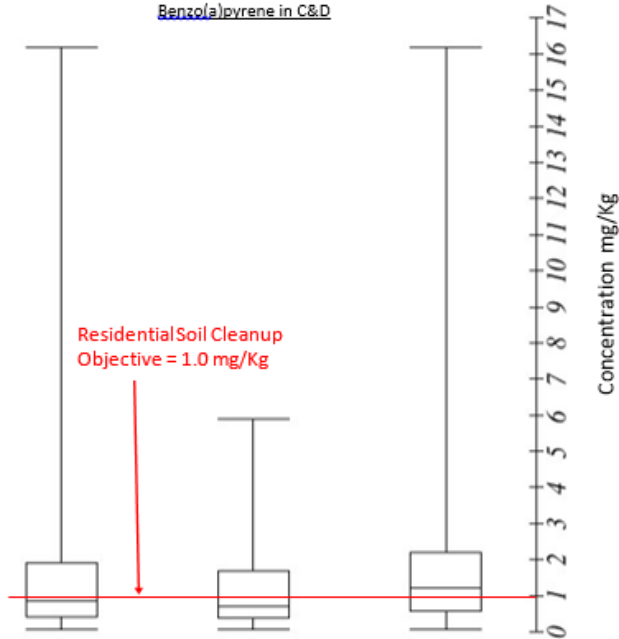
Sources (cont.)



Prior to being exported, much of the fill material is taken to C&D debris processing facilities, also known as fill transfer stations, where it may be crushed, sorted and screened.

Chemical Characteristics:

Benzo(a)pyrene in C&D



All Samples

Count=215
Min=0.06
25th Percentile=0.42
Median=0.87
75th Percentile=1.90
Max=16.20
85th Percentile=2.60

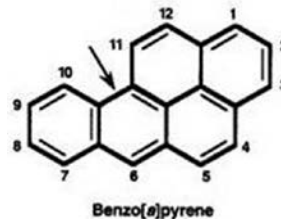
Proc Facilities

Count=102
Min=0.061
25th Percentile=0.373
Median=0.7
75th Percentile=1.70
Max=5.90
85th Percentile=2.185

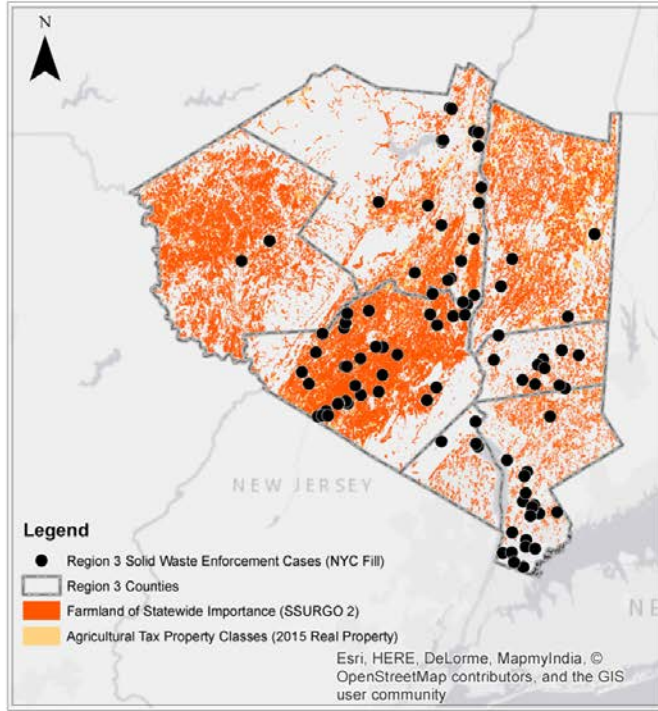
Landfills

Count=113
Min=0.073
25th Percentile=0.56
Median=1.20
75th Percentile=2.2
Max=16.20
85th Percentile=2.28

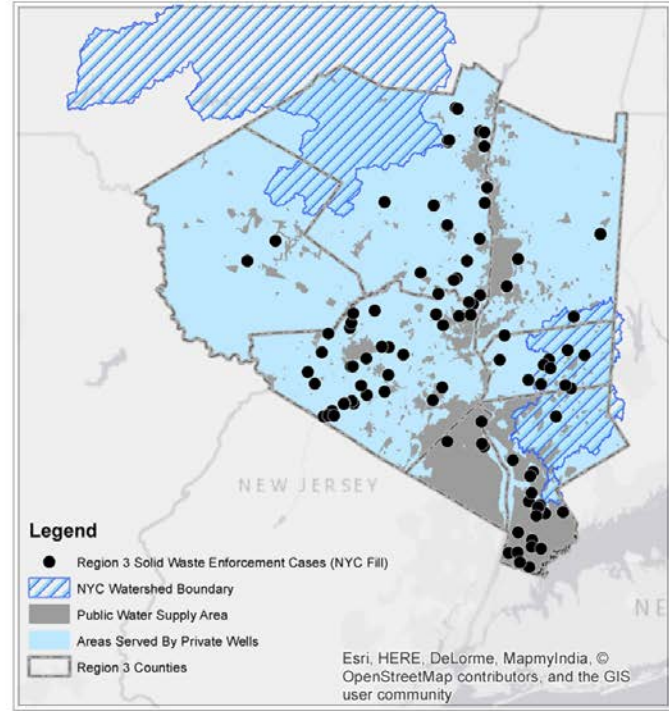
Urban fill materials typically contain polycyclic aromatic hydrocarbons (PAHs), such as benzo(a)pyrene, and heavy metals, such as lead and mercury, at concentrations which exceed background soil concentrations in rural areas as well as health-based and groundwater quality protection-based (6 NYCRR Part 375) soil cleanup objectives.



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Map Prepared by E. Cattabiani, May 2018



0 50 100 Miles

Unauthorized landfills for NYC fill material have proliferated in the Hudson Valley (NYSDEC/Region 3) impacting sensitive water supply lands and irreplaceable agricultural soils.



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Thank You

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