

Metropolitan Water Reclamation District of Greater Chicago

Press Release

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MWRD soil scientists' biosolids paper earns IWEA acclaim



Mr. Wale Oladeji, Associate Environmental Soil Scientist at MWRD's Stickney plant in Cicero, Illinois. His presentation entitled "Biosolids Beneficial Reuse Programs: SWOT and PEST Evaluations to Ensure Sustainability," which he co-authored with fellow MWRD soil scientists Lakhwinder Hundal, Dominic Brose, Kuldip Kumar and Dan Collins, is being recognized for giving the "IWEA Best Technical Presentation."



The MWRD is expanding the use of biosolids by mixing them with tree debris provided by the city of Chicago. This debris mix is composted into an organic material for use as a substitute for fertilizer, compost and soil amendment. This material is used for maintaining or establishing turf grass in parks, athletic fields and public access areas throughout Cook County.

New legislation has sparked heightened interest in and accessibility to biosolids, the nutrient-rich product of the Metropolitan Water Reclamation District of Greater Chicago's (MWRD's) water treatment process. Biosolids are in popular demand by farmers, golf course managers, landscapers, municipalities and park districts, but re-using these soil enhancers can be a challenge in the context of urban sprawl, regulatory restrictions, public perceptions and other oppositions.

Academic papers written by MWRD soil scientists address these issues, and in the process, the scientists have drawn rave reviews from experts in the field for their ability to tackle the complex hurdles in creating a sustainable practice.

The Illinois Water Environment Association (IWEA) recognized MWRD environmental soil scientist Wale Oladeji for his presentation entitled "Biosolids Beneficial Reuse Programs: SWOT and PEST Evaluations to Ensure Sustainability," which he co-authored with fellow MWRD soil scientists Lakhwinder Hundal, Dominic Brose, Kuldip Kumar and Dan Collins. The team is being recognized for giving the "IWEA Best Technical Presentation" at the 2015

Annual Conference. The IWEA Awards Banquet will be held Feb. 29 at the Colonnade Club at Memorial Stadium in Champaign.

In the paper, the soil scientists evaluated the SWOT (Strengths, Weaknesses, Opportunities, and Threats) and the PEST (Political, Economic, Social, and Technological) attributes of MWRD's biosolids beneficial reuse programs. They also assessed biosolids' reuse for farmland, composting, pelletizing and controlled solids distribution through the urban use of exceptional quality biosolids approved by the Illinois Environmental Protection Agency (IEPA). The paper documented both the opportunities and weaknesses of each program that must be addressed to ensure long-term sustainability. The paper asserts that understanding this information is critical in designing and maintaining a biosolids reuse program to achieve desired goals.

"Congratulations to our team of soil scientists for their proactive leadership and adept knowledge for the range of issues involving biosolids," said MWRD President Mariyana Spyropoulos. "This group of soil scientists have been working to address the many implications of reuse programs."



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IWEA award (continued)

The beneficial reuse of biosolids provides a safe and friendly alternative to chemical fertilizers and has also proven to be a sustainable and cost-effective option in resource recovery following the water treatment process. Not only do the biosolids contribute toward the natural development of plant life and other agricultural benefits, but by better managing biosolids for reuse, the MWRD is eliminating the cost of hauling it to landfills.

The MWRD worked with the IEPA, Illinois Department of Agriculture and several environmental groups to develop legislation to amend the Illinois Environmental Protection Act to create the new definition of exceptional quality biosolids and make this recovered resource more accessible. In July 2015, Gov. Bruce Rauner signed the bill into law, allowing recognition of exceptional quality biosolids in the state of Illinois to be consistent with federal rules. The law helps establish the MWRD's biosolids program as a bona fide resource recovery model. The MWRD is working on a plan to make biosolids more readily available.

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The MWRD environmental soil scientist group includes (from L-R) Lakhwinder Hundal, Dan Collins, Wale Oladeji, Dominic Brose and Kuldip Kumar. They are being recognized by the Illinois Water Environment Association for their research on how to best grow a sustainable program for the reuse of biosolids in the context of many challenges.



The end result of biosolids' use is beautifully maintained landscapes, such as the new Maggie Daley Park, where the Chicago Park District has used this valuable recovered resource from the water treatment process. After 18 months of storage for thickening and stabilization to improve quality and reduce volatile organic compounds and pathogens, the biosolids are then air-dried and resemble a dark, fine-textured topsoil that is a sustainable alternative to chemical fertilizers.

Recovering Resources, Transforming Water