



Metropolitan Water Reclamation District of Greater Chicago

Press Release

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Understanding possibility of life on another planet starts at MWRD disinfection facility



MWRD Engineer Aruch Poonsapaya is interviewed for a documentary that focuses on the MWRD's UV facility that provides tertiary treatment to reduce bacteria in the treated water that is cleaned before being discharged to the North Shore Channel.



UV disinfection emits a green glow of light that, like the sun, should not be viewed without special glasses. The stunning image has caught the attention of filmmakers from the BBC.

To better understand if life can be sustained on recently discovered exoplanets, filmmakers from the British Broadcasting Corporation (BBC) visited the Metropolitan Water Reclamation District of Greater Chicago's (MWRD's) UV disinfection facility at the O'Brien Water Reclamation Plant (WRP) in Skokie.

The world's largest wastewater treatment UV installation is drawing international acclaim for its work to drastically reduce bacteria in treated water—and that work caught the attention of BBC producers filming a documentary for Discovery Science regarding the TRAPPIST-1 star. Scientists recently discovered that seven earth-like exoplanets are orbiting around the star and are investigating whether alien life could exist. The dwarf star, however, is about 39.6 light years away and not much is known about it. But the work of engineers and scientists at the MWRD could shed light on the subject.

The conditions of the TRAPPIST-1 make it feasible to consider biology and even water on the planets orbiting this cool sun, but a challenge to that theory is that the TRAPPIST-1 gives off enormous amounts of UV light. "The O'Brien Water Reclamation Plant is a high func-

tioning system working around the clock to eliminate bacteria in our water and create healthy waterways as a result," said MWRD President Mariyana Spyropoulos. "We are pleased to hear that this work is drawing international intrigue and helping us gain a better understanding of the potential of UV light on earth and beyond our solar system."

Used in predetermined amounts back here on earth, the MWRD's disinfection technologies neutralize bacteria in microorganisms in treated water and reduce the risk of health problems resulting from direct contact with the waterways. The O'Brien WRP has the potential to treat nearly 500 million gallons of water per day, using 896 lamps that work to deactivate the DNA of microbes preventing them from replicating.

Aruch Poonsapaya, assistant engineer of treatment plant operations II serves as operations manager at the O'Brien WRP. He has worked there through the design, construction, start-up, and more than two years of operation of UV disinfection. Interviewed for the documentary, Poonsapaya said the MWRD was happy to impart education on the powers of UV technology and its influence on protecting the local water environment. *(continued)*

Understanding possibility of life on another planet *(cont.)*

“We are excited to share the impressive nature of our UV disinfection system,” said Poonsapaya. “The UV facility exemplifies our efforts to produce cleaner water and protect the quality of the Chicago area waterways for all users.”

quality scientists have found that UV treatment has reduced bacteria by more than 99 percent. In 2017, the MWRD and engineering consultant Greeley and Hansen received three project excellence awards for implementing the UV technology to improve water quality.

From weekly water samples collected during recreation season between March and November, MWRD water

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Recovering Resources, Transforming Water

Established in 1889, the MWRD (www.mwr.org) is an award winning, special purpose government agency responsible for used water treatment and stormwater management in Cook County, Illinois.