

EnviroMix Named WEF Innovative Technology Award Winner

EnviroMix's BioMix-DC Enhanced Anaerobic Mixing has been selected as a 2022 WEF Innovative Technology Award winner.

CHARLESTON, SC, UNITED STATES, October 5, 2022 /EINPresswire.com/ -- [EnviroMix's BioMix-DC](#) Enhanced Anaerobic Mixing has been selected as a 2022 WEF Innovative Technology Award winner. Each year, the Water Environment Federation (WEF) recognizes up to four outstanding technologies and companies who have introduced new innovative products or services related to the water and wastewater industry. WEF announced the winners in August, and the awards will be presented on October 11 at WEFTEC, the organization's annual technical exhibition and conference.



EnviroMix's BioMix-DC was selected as a WEF Innovation Award Winner.

Criteria considered for the award include:

- The technology must demonstrate an innovative aspect utilizing new ideas, methods, alterations, and/or unique changes from existing systems.
- The technology must have been in full scale operation at a wastewater treatment facility or in a collections system for more than one year, but not more than five years.
- The technology must demonstrate a significant achievement in design, operation, maintenance, or process change resulting in demonstrated long-term water quality improvement.

Launched by EnviroMix in 2021, BioMix-DC optimizes biological phosphorus removal by transforming a traditional anaerobic selector into an intensified fermentation tank by alternating a short mixing cycle with a long deep cycle. The deep cycle stratifies the solids in the reactor to create a fermentation blanket that increases solids retention time and maximizes volatile fatty acid production and utilization. During the short mixing cycle, intermittent mixing of tank contents is provided by bursts of compressed air fired through engineered nozzles located at the floor of the tank. Compared to continuous mechanical mixing in anaerobic zones, BioMix-DC provides energy savings of 90% or greater. Highly adaptable, BioMix-DC is compatible with in-line

mixed liquor fermentation, sidestream RAS fermentation, and sidestream mixed liquor fermentation.

[In one study](#), the Warren, MI, WRF upgraded their anaerobic selectors by installing a BioMix-DC system in one of their process trains in order to compare a conventional anaerobic reactor to the in-line fermentation environment created with BioMix-DC. EnviroMix collected comprehensive data from both parallel trains in order to compare performance. Compared to the train running with a conventional mixing regime, BioMix-DC further reduced the effluent soluble phosphorus by 75%, the ferric chloride consumption by 73%, and the mixing input power by 89%. Using DNA analysis, the study also demonstrated that the relative abundance of phosphorus accumulating organisms (PAOs) tripled compared to the conventional process.

Removing phosphorus from municipal wastewater to comply with permitted effluent limits helps protect surface water bodies from disastrous ecological outcomes while recovering a valuable nutrient for reuse as fertilizer. BioMix-DC provides a key innovation to enable water recovery facilities to do their part in delivering a clean future for our critical water resources.

WEFTEC Participation

EnviroMix is looking forward to joining water sector innovators, visionaries, and thought leaders at WEFTEC 2022. All attendees are invited to visit the EnviroMix team at Booth #3533! On Monday, October 10, at 3:00 p.m., a short presentation entitled Enhanced BNR: Make Your Carbon Work for You will be followed by a complimentary happy hour. The presentation will be repeated on Tuesday, October 11, at 11:00 a.m. along with a Yeti cooler giveaway. Hope to see you there!

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