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Title: No Sweetener in Your Stormwater, But What about Your Reclaimed Water?
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Abstract: Nitrogen and phosphorous loading into waterways from point and non-point sources is of increasing concern throughout the United States. The rise in nutrient levels resulting in waterbody impairment from designated beneficial uses frequently occurs in tandem with escalating urbanization. With impending numeric nutrient criteria regulations being proposed throughout the United States, one beneficial resource from our wastewater treatment facilities – reclaimed water is now a potential target as a non-point source due to possible overspray and/or run-off. Knowledge of reclaimed effluent water quality is, therefore, of importance to regulators and stormwater professionals in order to understand its potential contribution of non-point source nutrient loading to waterways. And as noted earlier, being able to single out reclaimed water from other sources – non-point and point alike – is becoming more and more important with the impending numeric nutrient criteria that are being set nationwide.

Effective control measures to minimize nutrient loading from point and non-point sources requires not only the advancement of treatment technologies, but also the development and validation of markers that can serve as tools in identifying nutrient loading sources that can be used – for example, to distinguish the wastewater and/or reclaimed water from stormwater. This information can then be used to establish appropriate regulations, reuse water treatment needs, loading rates and best management practices.

Professional Background: Hal Schmidt, Jr., P.E., BCEE, has over 30-years of experience in the wastewater treatment and reclaimed water reuse fields. He received both his Bachelors and Masters degrees from Vanderbilt University, and is a registered professional engineer in a number of states, as well as a Board Certified Environmental Engineer. He is currently the Southeast Wastewater Practice Director at MWH.

His broad experience encompasses the design of conventional and innovative wastewater treatment facilities for high level nutrient removal, public access and high quality reclaimed water reuse, and the removal of micropollutants from wastewater effluents. His water reuse experience extends throughout the United States, and has focused on working with utilities to integrate this valuable resource into their overall water resources program, rather than thinking of it as a means for disposal. As the author or co-author of numerous papers and technical manuals, he has contributed to advancing practice of nutrient removal and reclaimed water reuse within our profession.