Delaware River Basin Commission



Delaware Estuary Microplastics Monitoring and Cleanup

TAC Announcement June 18, 2019

Presented to an advisory committee of the DRBC on June 18, 2019. Contents should not be published or re-posted in whole or in part without the permission of DRBC.



Microplastics



- Small plastic pieces less than five millimeters in size.
- Microplastics include microfibers from synthetic textiles, and microbeads which were commonly found in health care products like face washes and toothpastes.
- Microplastics also form when larger pieces of plastic like plastic bags, bottles and fishing line break down through photodegradation.
- Potential impacts of microplastics on people and ecosystems have yet to be determined.

Microplastics collected from Delaware Bay



University of Delaware



DRBC Microplastics Project



Collect surface water samples at

- Four sites in the tidal Delaware River between Trenton and C&D Canal
- * One non-tidal Delaware River site at Trenton
- * Ten Tributary sites
 - * Assunpink Creek
 - * Neshaminy Creek
 - * Pennypack Creek
 - * Frankford/Tacony Creek
 - * Schuylkill River
 - * Pennsauken Creek
 - * Mantua Creek
 - * Alloway Creek

Delaware Watershed Conservation Fund

- Samples collected in 2019
- Determination of the chemical composition of plastics at Temple University with analytical capabilities that include Fourier transform infrared spectroscopy (FT-IR)
- Data collected during microplastic monitoring efforts will be used to model microplastic dynamics by DRBC staff.
- Models will allow us to identify high plasticloading tributaries, which will be targeted for cleanup efforts with partner organizations to be determined.



Contacts

Jake Branksy, jacob.bransky@drbc.gov

Ron MacGillivray, Ph.D., ron.macgillivray@drbc.gov

Learn more at

https://www.nj.gov/drbc/quality/reports/microplastics.html