

**Microplastic:  
A contaminant of emerging concerns**

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Microplastics are widely distributed in various environmental matrices such as air, water, and sediment and various organisms including commercial species through the trophic levels. Sources, input pathways and fate of microplastics in environments, however, are largely unknown. Especially, production of secondary nano- and microplastics from physical, chemical, and biological weathering according to polymer types and various environmental conditions are not well addressed yet. As large items fragment into microplastics the abundance of litter increases, and this effectively increases their availability to wildlife. Furthermore, decreasing particle size increases the range of organisms that can ingest the debris. Because of their small size detecting presence of microplastics and adverse biological effects, if any, becomes considerably more challenging. In addition, the persistence of plastic particles in the environment can increase because small plastic particles would be extremely difficult to remove from the environment. Ultimately, microplastic has shifted the paradigm of conventional macroplastic litter pollution.