

WHY TAKING ACTION AROUND PLASTICS IS IMPORTANT



BMC has ten employee resource groups (ERGs), each dedicated to a range of environmental, social, and governance (ESG) and diversity, equity, and inclusion (DEI) topics. In July, our One Earth ERG, which fosters environmental awareness and the United Nations Sustainable Development Goals including protecting life under water, observed "[Plastic-Free July](#)" for the entire month to highlight the growing threat of plastics to the environment, humans, and animals.

The impact of plastics

According to [The Ocean Conservancy](#), an estimated 11 million metric tons of plastics are entering our oceans every year, on top of the estimated 200 million metric tons that currently circulate marine environments—equivalent to "dumping one New York City garbage truck full of plastic into the ocean every minute of every day for an entire year."

Those same plastics are also finding their way into the water we drink and the food we eat. Recent research by the [Medical University of Vienna](#) stated that, "Five grams of plastic particles on average enter the human gastrointestinal tract per person per week. This is roughly equivalent to the weight of a credit card."

According to the researchers, experimental studies indicate that ingested plastics passing through the gastrointestinal tract can lead to changes in the composition of the gut microbiome, the development of metabolic diseases such as diabetes, obesity, or chronic liver disease, and activate inflammatory and immune responses. Nanoplastics in particular are associated with biochemical processes that are involved in carcinogenesis.

This is not good news for humans and it's even more dire for animals. [The Ocean Conservancy](#) says,

“Plastic has been found in more than 60 percent of all seabirds and in 100 percent of sea turtle species that mistake plastic for food...caus life-threatening problems, including reduced fitness, nutrient uptake, and feeding efficiency—all vital for survival.”

Increasing awareness

There's much work to be done and the good news is there's more than one way to have a direct impact. BMC Professional Services is sponsoring Seabin™ to increase awareness, reduce waste, and research the impact of plastics on our future.

We talked about our Seabin sponsorship in [a previous blog](#). As a unit sponsor of Seabin™, our funding not only supports the Seabin technology and the collection of debris, but it also supports Seabin™ Foundation, which has a mission to assist with Education, Science, Research, and Community Engagement around ocean health. The Foundation's research and data collection on ocean health supports policy and behavior change on land to protect our oceans and waterways.

They also initiate educational and STEM programs for students to raise awareness and inspire youth, with a focus on reducing the consumption of plastics, recycling, and data collection. Lessons generally include activities on how to design and build new technologies. Additionally, it provides an intensive hands-on program that demonstrates the issues concerning waste in our oceans and what can be done about it.

The Foundation researches the debris captured and presents quarterly reports on its findings to Seabin™ sponsors. Seabin™ is currently scaling up its data collection with the support of a global app to make it more efficient and deliver real-time data with cloud connectivity. The data is critical to detecting marine pollution issues, monitoring the health of our waterways, and predicting marine litter volumes based on weather patterns. All with the end goal of turning off the tap and creating policy and behavior change on land.

Decreasing waste

The Seabin™ 6.0 is the latest Seabin model and has several key advancements. It uses 70 percent less steel than the v5, which makes it much lighter. It filters double the amount of water per hour, catches nearly two times as much debris per year, has a much more ergonomic design, and most importantly, has custom water sensors built in to monitor the physical health of the ocean.

As was shared in [our previous blog](#), BMC's v5 Seabins went in the water this spring. We received [our first data report](#) from Seabin™ and it's amazing how fast we are having an impact. In just three months, our two bins captured an estimated 497 kgs (over 1,100 lbs) of debris and a total of 6,479 plastic items—30.8 percent microplastics (plastics < 5 mm), 13.2 percent soft plastic food wrappers, and 12.9 percent foam pieces. This demonstrates how far the plastic you handle can travel to negatively impact oceans and waterways. It's up to us all to start paying attention to our use of plastic and prevent it from entering the water.

Researching the impact of plastics on our future

Lastly, Seabin™ just launched the world's first [microplastics lab in Sydney, Australia](#). The [Seabin™ Foundation Ocean Health and Microplastics Laboratory](#) is a 40-ft, self-sufficient, purpose-built upcycled shipping container. The laboratory will enable Seabin™-captured samples to be cold-

stored, dried, counted, and sorted by all polymer types. This will complement the already-established data monitoring protocols and give the team new capabilities in the study of the types and toxicity of microplastics to better support litter prevention with communities and authorities and drive clearer and more efficient legislation and incentives.

Doing your part

As you can see, Plastic Free July and other practices to reduce the amount of plastic are critical to protect our planet. BMC has committed to reduce the use of consumables, recycle equipment and waste products, as well as avoid redundant items. Our families are doing our part year-round by avoiding as much single-use plastic as possible. We have reusable shopping bags that we use each week and shop at markets that do not use plastic packaging. We decline plastic straws at restaurants and our children have taken to carrying metal straws with them instead. We also limit fast food and take out ordering to reduce the amount of plastic that we use. And, whenever we do use plastic, we make sure we reuse or recycle it.

It is our hope by sharing this information on the many challenges plastic poses, as well as the many great efforts going on to reduce it, that you will start your own efforts to reduce plastic in your daily routine. If we all take steps toward reduction and recycling, we can make a difference together.

If you'd like to get regular updates on Seabin™, you can [sign up](#) for the newsletter.