

AN OUNCE OF PREVENTION IS WORTH A POUND OF CURE



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WHAT IS MARINE DEBRIS?

Marine debris is a general term for man made objects that have been disposed of into our waterways and oceans and it is a massive problem in modern society. Even in 2015, National Geographic reported that there is about 5.25 trillion pieces of plastic debris in that ocean, a number that has surely only grown since (Parker 2021). The effects of this are massive, with 1 in 3 marine mammal species getting found entangled in litter, about 100 million marine animals dying from plastic waste alone, and so much marine debris coming together to create the Great Pacific Garbage Patch, a floating trash site that is twice the surface area of Texas (Condor 2021). However, the problem of marine debris is not a lost cause - if we can stop marine debris at its source, us, then we can help solve the problem of marine debris in our oceans and waterways.



Marine Debris



Chesapeake Bay

BEGINNING LOCAL

However, when combating the problem of marine debris, it is essential that we begin by thinking about our own, local waterways, as there is where we can create the most change. For us in Nokesville, Virginia, the local waterway that we chose to focus on was the *Chesapeake Bay*. The Chesapeake bay is a partially enclosed body of water with both freshwater from rivers and streams and saltwater from the Atlantic ocean mix, otherwise known as an estuary. This estuary is the largest in the United States and the third largest in the world. Additionally, the Chesapeake Bay is connected to a massive watershed - on that stretches about 524 miles on the east coast of the United States (Chesapeake 2021). The Chesapeake Bay is vital to preserve for several reasons: it provides habitat for wildlife, a recreational area for people, and is an important source of food in the form of fish for both humans and wildlife. We Scuba Rats care about preserving the Chesapeake Bay and preventing the problem of marine debris in it not only because we live near it, but because it is an important part of our ecosystem that we need to keep healthy and alive for ourselves, the Earth, and posterity.

WHAT CAN WE DO?

There are many things that we can all do to help stop the problem of marine debris before it even begins by focusing on our own actions. There are three levels to prevention of marine debris in the Chesapeake Bay; we can prevent marine debris on a personal level, local community level, and on a wider societal level.

PERSONAL LEVEL

Not littering and reducing waste is a great way to directly reduce the amount of litter in oceans. A little comes a long way! Another way we can reduce waste is by utilizing **reusable items**. An example of this would be using reusable water bottles rather than one-time use ones.

Recycling is a fantastic way to help lessen junk. Putting items into their designated bins will save resources and are extremely helpful when working towards creating a cleaner lifestyle.

COMMUNITY LEVEL

Education is a vital part of decreasing the amount of marine debris in the Chesapeake Bay, and it is something that we can partake in in our local communities. By educating those around us about habits to decrease marine debris, we can make a large impact on a community level.

Additionally, we can participate in **local cleanups** to pick up waterways and local trash to prevent it from travelling further into the Chesapeake Bay.

WIDER SOCIETAL LEVEL

On a larger scale, we can help **influence government policies** that can help prevent marine debris from entering the Chesapeake Bay, such as laws that put a price on plastic bags that would likely end up in the estuary or laws that ban styrofoam. Additionally, ensuring that environmental protection programs, such as the EPA, are funded and doing their job is a vital part to preventing marine debris. To enact this change we can write letters to lawmakers or government officials encouraging them to focus on these issues.

WHAT COMES NEXT?

The first next step is to ensure that we continue to follow through our plans and hold ourselves accountable. It is one thing to plan change, but it is another to enact it. To do this, we can be sure to communicate to one another in order to hold each other accountable and follow through with our plan. Additionally, after we have been able to help our own local waterways, our next step is to help prevent and aid the issue of marine debris in other waterways across the country and globe. It is essential that we shift our focus not only to well known instances of marine debris, such as the Great Pacific Garbage Patch, but also shift our focus to lesser known places that are negatively affected by marine debris. To do this we can work to educate others and spread information about marine debris in other locations and donate our time or money to organizations that help prevent marine debris in these places among other actions.

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OVERVIEW

Marine debris is a term to refer to man made objects that have found their way to oceans and waterways, and they have a massively negative affect on the ecosystems that they are present in. We have chosen to make a difference by combatting the problem of marine debris at its source.

When beginning to combat the problem of marine debris, we must start by looking at our local waterway: the Chesapeake Bay. The Chesapeake Bay is a large estuary that has been negatively affected by marine debris.

We thought up of a multitude of solutions to battle this. There are three general levels; personal, community, and a wider societal level. For personal solutions, not littering, reducing waste, and recycling are all great ways to prevent marine debris from entering our oceans. For a more "community level" solution, educating, spreading awareness, and local cleanups are some of the many ways to help create a cleaner environment. Lastly, for a more widespread solution, influencing government policies and supporting environmental protection programs.

After coming up with these solutions, our next step is to ensure that we follow through with all of our plans. Then, we will conduct further research and look into other waterways that have been negatively affected by marine debris around the globe that we can work to aid.