



Hi! Are you thirsty?

I am full of delicious,
purified water.

I am enhanced with
minerals for great
taste!

Go ahead, drink me.

I'm empty. Now what are you going to do with me?

If you are going to recycle me, turn to page 3

If you can't find a recycling bin so you throw me in the trash, turn to page 11.

If I fell out of your bag when you weren't looking and became litter, turn to page 17.

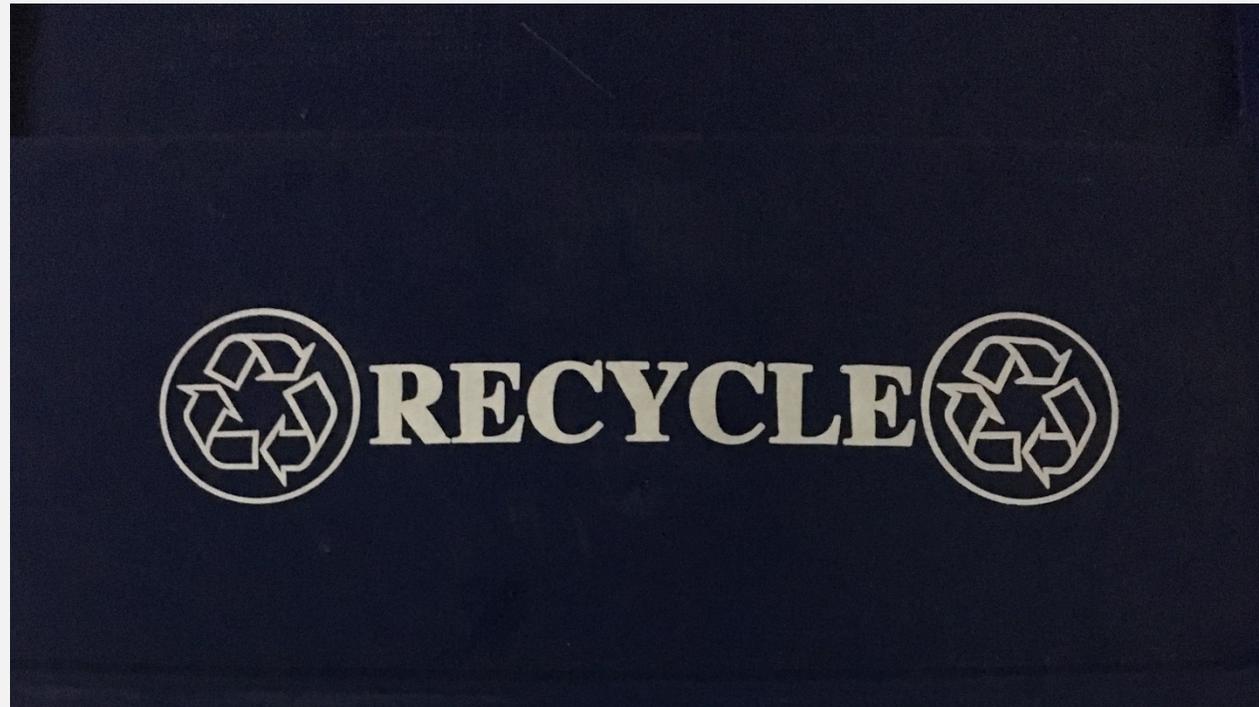


Plastic water bottles are made from either polyethylene or polyethylene terephthalate plastic.

Luckily, almost all Americans have the opportunity to recycle plastic water bottles.

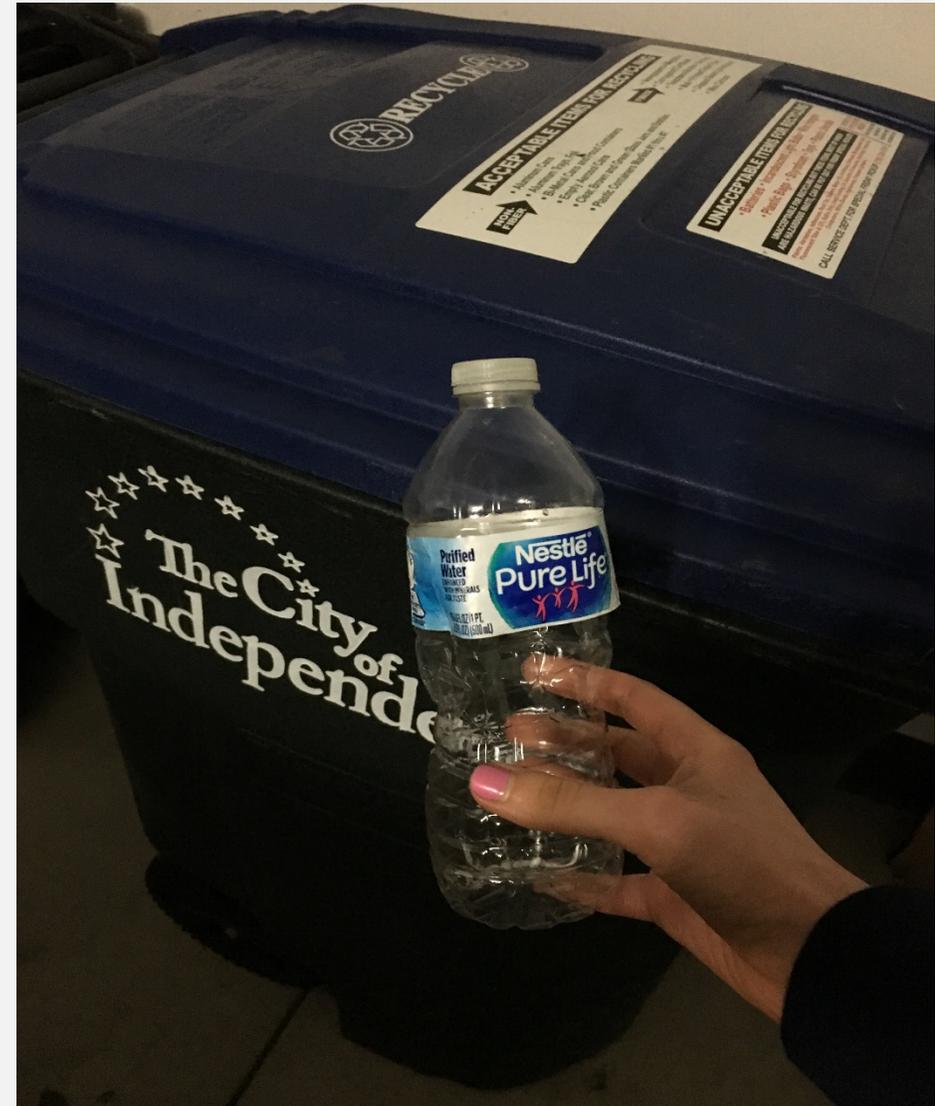
When recycling plastic water bottles, always put the cap on the bottle.

The cap is made out of another form of recyclable plastic.



So what really happens when you throw a plastic water bottle into a recycling bin?

Well, the recycling journey of a plastic water bottle goes through many steps to reach the point of a reusable product.



A recycling truck picks up the recyclables. The truck transports the recyclables to a recycling station called a MRF, which stands for Materials Recycling Facility.

At this station, the recyclables are sorted, separated, and pressed into containers that weigh a lot. These containers can hold approximately 8,000 plastic bottles.



Since the containers are sorted, they are then carried to a new place. At this place, the recyclables are torn apart using a machine. This machine is called a bale breaker.

Then, a magnet detaches any pieces of metal that may have accidentally attached to the bale.



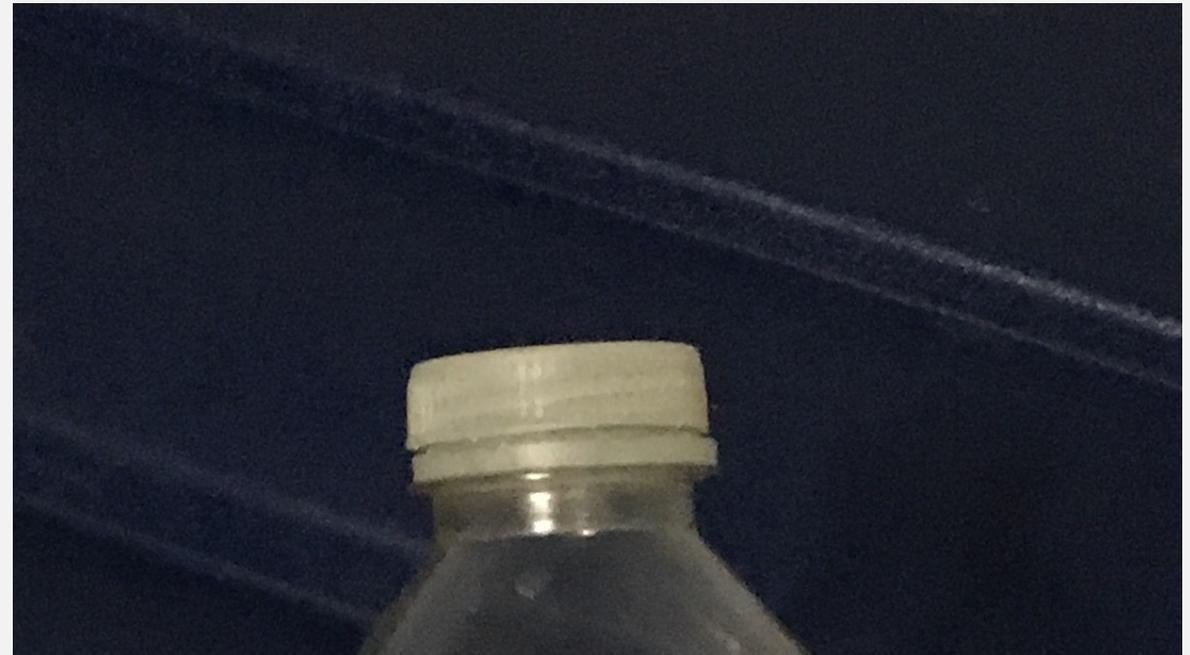
The plastic water bottles then go on to have a bath. The bottles need to be cleaned in order for them to be made into a new item. They are cleaned in an enormous washing machine. This machine is filled with clean, soapy water to wash away all of the dirt and labels on the plastic bottles.

The caps of the plastic bottles are made from a different kind of plastic than the plastic of the water bottle.

The different kinds of plastic must be separated from each other. The plastic is split up into tiny pieces.

They are then placed into a large container of water. The split up pieces of plastic are easily separated because the pieces of the cap float in the water and the pieces of the plastic bottle do not float in the water.

This process separates the particles successfully for recycling.



The tiny pieces of plastic are then dried. They are heated up to turn into a liquid and stretched out to look like a long snake.

Eventually, the snakelike pieces are turned back into a solid. This happens when the pieces are cooled. They turn back into a solid when they are placed in water.

The pieces are sliced into tiny stone-like pieces. These are the little pieces that are then carried to a company that makes new recycled plastic items.

Recycled plastic bottles can be converted into various new items: carpeting, new bottles, toothbrushes, and storage containers



Although plastic water bottles normally undergo this process when they are tossed into a recycling bin, this is sometimes not the case.

For example, if the recycling bin that the plastic water bottle is thrown in is contaminated, the bottle does not go through the same process.

Instead, it is thrown into the trash. Turn to page 11

When the plastic water bottle is thrown away in the trash, do you ever wonder what happens to it next?

Well, when it is picked up by a hauler, it transports it to either a landfill or transfer station.

To read about the transfer station, turn to page 12.

To read about the landfill, turn to page 14.



<https://www.change.org/p/stop-the-holbrook-trash-transfer-station>



<https://sciencing.com/effects-landfills-environment-8662463.html>

TRANSFER STATION

When reaching a transfer station, the workers sort them into different categories like trash, recyclables or other materials.

Workers have to wear protective equipment when sorting through the trash. By making sure we remove recyclable items from our trash, we can eliminate this step of the process.

When it is done being sorted, the waste will be sent to a landfill. The recyclables will be sent to a specific center. Other items such as furniture and household items are sometimes taken and fixed up to be used again.

Citation: <https://www.dumpsters.com/blog/what-happens-to-garbage>

JOURNEY OF A WATER BOTTLE

- If you couldn't find a recycling bin and threw me away in the trash I am either in two places...
- For Landfill, turn to page 14
- For Ocean Rubbish Patch, turn to page 15

LANDFILL

When sorted out at the transfer station, the waste comes to a landfill.

The trash is strategically layered out so it can decompose in the least harmful way to the environment.

Each day, more than 60 million plastic water bottles end up in landfills or litter.

Once the landfill has reached max capacity, it is capped and layered with soil to prevent the trash from being blown away and contaminating other areas.



OCEAN RUBBISH PATCH

There are 5 GPGP (Great Pacific Garbage Patches) in the world. They are formed by rotating ocean currents called gyres. Everyday, approximately 8 million pieces of plastic find their way into the ocean. Plastic constitutes 90 percent of all the trash that is floating on the oceans surface. Almost 100 million marine mammals are killed each year from plastic pollution. Not only has it killed marine mammals, plastic pollution has been found in 100% of marine turtles, 59% whales, 36% seals and 40% of seabird species.



HOW CAN WE HELP?

It takes about 1,000 years for every single bottle of water to decompose.

United States landfills are overflowing with more than 2 million tons of discarded water bottles.

An easy fix to the situation is for us to use more reusable water bottles. By spending a few dollars we can have more access to land and a cleaner environment.



<https://www.sas.org.uk/our-work/plastic-pollution/plastic-pollution-facts-figures/>

<https://waterbottles.healthyhumanlife.com/plastic-water-bottle-pollution-plastic-bottles-end/>

<https://www.onegreenplanet.org/animalsandnature/marine-animals-are-dying-because-of-our-plastic-trash/>

LITTER

When I fall to the ground and no one picks me up, I become litter.

I spend my days next to other items that may or may not decompose.

If you think I will decompose, turn to page 22.

If you think I will be blown down the street and into the Cuyahoga River, turn to page 18.



<https://greatlakes.org/wp-content/uploads/2018/06/Plastic-pollution-on-beach-1133x1200.jpg>

LITTER IN THE WATER

Litter that makes its way into the river can then find its way into Lake Erie.

Researchers estimate that over 4 tons of microplastics are floating in Lake Erie.

Most of it ends up near the shore where people and wildlife live and get their drinking water.

If the litter remains in Lake Erie, turn to page 20.

If the litter gets picked up by volunteers, turn to page 20.



<https://greatlakes.org/wp-content/uploads/2018/05/plastic-in-water-1280x0-c-default.jpg>

MICROPLASTICS IN THE WATER

Plastic litter in the water
never really goes away.

It just turns into really small
beads, called microplastics.

Fish can be harmed by
eating microplastics.

It is so small that it can
make its way past water
treatment facilities and into
our drinking water.



<https://greatlakes.org/wp-content/uploads/2018/06/USGS-microplastic-picture-1200x900.jpg>

CLEANING UP LAKE ERIE

In 2017, volunteers with the Alliance for the Great Lakes cleaned up more than 16 tons of plastic at the beaches.

The federal government recently passed a bill providing funding for programs that protect the drinking water which comes from the Great Lakes.



https://greatlakes.org/wp-content/uploads/2016/08/Donate_Teaser_CTA-e1522876198863-1280x0-c-default.jpg

WAYS TO PREVENT LITTER

The best way to get plastic out of our water supply is to not put it there in the first place.

Just by giving up plastic grocery bags, straws, and water bottles, we can make the lake cleaner.



https://cdn.technologynetworks.com/tn/images/thumbs/jpeg/640_360/microplastic-found-in-human-stools-for-first-time-310862.jpg

DECOMPOSING LITTER

Some items like banana peels, paper bags, and orange peels only take a few months to rot.

Wool socks and cigarette butts take several years to decompose.

Some litter, like aluminum cans and disposable diapers take hundreds of years to break down into its components.

Plastic bottles never completely decompose.

Rotting Litter

Litter Items	About	Litter Items	About
 Banana Peel	1 month	 Leather Shoes	40 years
 Paper Bag	3 months	 Aluminum Can	100 years
 Orange Peel	6 months	 Plastic 6-Pack Holder Rings	450 years
 Wool Socks	3 years	 Disposable Diapers	550 years
 Plastic Milk Carton	5 years	 Glass Bottles	1 million years
 Cigarette Butts	6 years	 Plastic Bottles	never

<https://greeneducationfoundation.org>