

GUAM YEAR OF THE REEF NEWSLETTER

“REDUCE, REUSE, RECYCLE”

This edition of the GYOR newsletter highlights the importance of the three Rs of sustainability: reduce, reuse, and recycle.

We'd like to acknowledge contributions to September's newsletter from the UOG Center for Island Sustainability, a leader on sustainability initiatives around Guam.

If you would like to contribute content or photos to the newsletter, please contact us at GuamYOR2018@gmail.com.

Don't forget to check out our website at www.guamcoralreefs.com and like us on Facebook at [@GuamYearoftheReef2018](https://www.facebook.com/GuamYearoftheReef2018).

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Reduce, Reuse, Recycle. Yes, in that Order.

One of the easiest ways to protect our environment is by adhering to the three Rs: reduce, reuse, recycle. This is the hierarchy for waste management that helps conserve resources and prevent pollution. While there is debate on the exact origin of the term, many believe it arose during the growth of the environmental movement in the 1970's.

When thinking about ways to protect the environment, most people immediately think of the third R, recycle. Although recycling is important and we should do it when necessary, it is not the most effective way of protecting our environment.

When we recycle, we avert waste from the landfill to save space for other items that are not recyclable. Unfortunately, recycling on Guam is expensive and requires energy through the burning of fossil fuels to ship recyclables overseas because there are no recycling facilities on-island. However, if we reduce the overall amount of waste generated and reuse items, we can reduce the amount of energy required to import more “stuff” to Guam that inevitably ends up in our landfills, or worse, the ocean.

Where does our trash go?

When most people throw their trash in the trash can, they probably never give a thought as to where that trash will eventually end up. Here on Guam, trash will end up in one of two places, the landfill or the ocean.

If we are lucky, waste that cannot be recycled will go to the Layon Landfill, the island's state-of-the-art landfill located in the village of Inarajan. Although this landfill is high-tech, highly regulated, and environmentally sound, it will not last forever. According to Guam Community College, Guam generates 242 tons of trash per day. Even at a max capacity of just over 15.8 million cubic yards, the Layon Landfill will not last more than 35 years. After that point, a new landfill will be needed to meet the demand.

Creating landfills is a poor use of Guam's limited space, and they are very expensive to build, maintain, and operate. Guam's rapidly growing tourism industry also increases the demand on our waste management system by generating more trash due to a visitor:resident ratio of 10:1 respectively. Finally, landfills are a source of greenhouse gases such as methane and carbon dioxide which contribute to climate change. This is why the 3 Rs are critical to implement at every step of our daily life: reduce, reuse, recycle.

What's the fuss with plastic bags?

In the U.S., we throw away about 100 billion shopping bags every year according to the Worldwatch Institute. These plastic bags take over 500 years to break down. During this time, they are a major source of pollution to the environment. On land, they litter our streets and may clog up storm drains contributing to flooding. Oftentimes they pollute our ocean, strangulating marine organisms such as sea turtles, whales, and dolphins. Plastic bags also contain harmful toxins that enter the food chain when popular seafood mistake them for food. We can simply avoid this pervasive source of environmental pollution by refusing the use of plastic bags at restaurants, shops, gas stations, and grocery stores.



Guam recently joined other countries and U.S. cities around the world in taking action on this issue. On June 5, 2018 acting Governor Ray Tenorio signed Public Law 34-10 which bans retailers from providing single-use plastic bags to consumers. The law will be effective on January 1, 2021. Contact [Guam Year of the Reef on Facebook](#) for a free GYOR2018 reusable bag!

DECODING THE MOBIUS LOOP



The internationally-recognized recycling symbol is called the Mobius Loop. The Mobius Loop was designed in 1970 by 23-year-old Gary Anderson. At the time, Anderson was an engineering student at the University of Southern California. Anderson designed the logo for a contest of the Container Corporation of America, who was searching for a symbol for recycled paper.

Today, the Mobius Loop appears with a number 1-7 in the middle of the triangle. The number, also known as the resin identification code, refers to what the material is made of and identifies the proper recycling protocol for that material. The symbol does not necessarily mean that product can be recycled. This is a common misconception and leads to many inefficiencies in the recycling chain. In fact, a [2017 study](#) by Geyer, Jambeck, and Law found only 9% of plastic ever created has been recycled, as of 2015.

On Guam, only plastics 1 and 2 may be recycled such as plastic bottles used for water, milk, and soda. Cardboard, mixed paper, aluminum and bi-metal cans are also eligible for curbside recycling. Check the [Guam Solid Waste Authority's](#) website to learn more about recycling other household products.

10 QUICK WAYS TO REDUCE WASTE AND SAVE MONEY:

1. Bring a reusable bag when you go shopping; you might even get a discount.
2. Carry a reusable water bottle instead of buying bottled water.
3. Bring your own cup to coffee shops; many places offer a discount.
4. Bring reusable containers to balutan at restaurants and parties.
5. Say no to plastic straws OR bring your own reusable straw.
6. Bring your own fork and spoon when dining at food courts that provide disposables.
7. Buy second-hand at either thrift stores or online (i.e. Craigslist, GuamGrabs, etc.) when possible.
8. Choose products that have less packaging or recyclable/compostable packaging.
9. Buy fewer high-quality items that will outlast low-quality items.
10. When hosting a fiesta, choose biodegradable plates and utensils instead of foam and plastic.

AUGUST HIGHLIGHT: Tumon Bay Algae Removal Event

On August 25, more than 400 volunteers came together to remove an influx of algae in Tumon Bay Marine Preserve. The event was the second of the year organized by the Guam Department of Agriculture and Guam Visitors Bureau. Community members from several organizations donated their time and nearly 2,000 pounds of algae was removed to prevent smothering of corals and other marine organisms. Some algae was taken to a farm for nutrient recycling, and the rest was properly disposed of by the Department of Agriculture.

Algae removal is a common management tool used to help build resilience of reefs coping with other impacts such as coral bleaching, overfishing, pollution, and recreational misuse. Remember, it is illegal to remove anything from a marine preserve without a permit. However, some fishing may be allowed. Please check signage.

It is also important to remember algae occurs naturally on a healthy coral reef. Many important reef fish species are herbivorous and eat algae. It is critical to be aware of invasive vs. native species when thinking about algae removal. Please do your research beforehand and contact natural resource managers before planning any removal events, such as the Guam Department of Agriculture Division of Aquatic and Wildlife Resources.

Si Yu'os Ma'åse' to all of the volunteers for their time and efforts! Stay tuned for future events. *[Photo credit: Roque Rosario]*



i*Recycle Guam Did you know? The i*recycle Guam program raises money for local schools through recycling. Community members and businesses can recycle aluminum cans at participating schools, generating much-needed income while increasing accessible opportunities to recycle without a fee. The program has raised over \$225,000 for schools and will expand from 40 to 60 schools in the near future. Contact i*Recycle Guam on Facebook to learn more: @irecycleguam.

IN THE NEWS

- A 'reduce, reuse, and i*recycle' interview with Program Administrator Peggy Denny [PDN].
- Over \$220,000 in federal funding awarded to BSP for [coral reef management projects](#) [PDN].
- A \$75,000 [watershed restoration grant](#) recently awarded to several GYOR partners for ridge to reef activities in Merizo [PDN].
- August 25 algae removal event in Tumon Bay was covered in the [GDP](#), [PDN](#), [KUAM](#), [Pacific Island Times](#), and [Guam Visitors Bureau press release](#).

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UPCOMING EVENTS

- **Sept. 15** – The 24th Guam International Coastal Clean-Up at 7:00am, locations around island
- **Sept. 8, Oct. 6, Nov. 10** - Tree plantings in Asgadao, Merizo from 8:30am-12:00pm
- **Sept. 8** - Plants identification tour from 10:00am-12:00pm at UOG Agriculture & Life Sciences Building
- Visit guamcoralreefs.com/calendar for event details and contact information.

**October's theme:
Plant a tree, save a reef**