

Man, Land, & Sea

A publication by Guam Coastal Management Program

August 29, 2025



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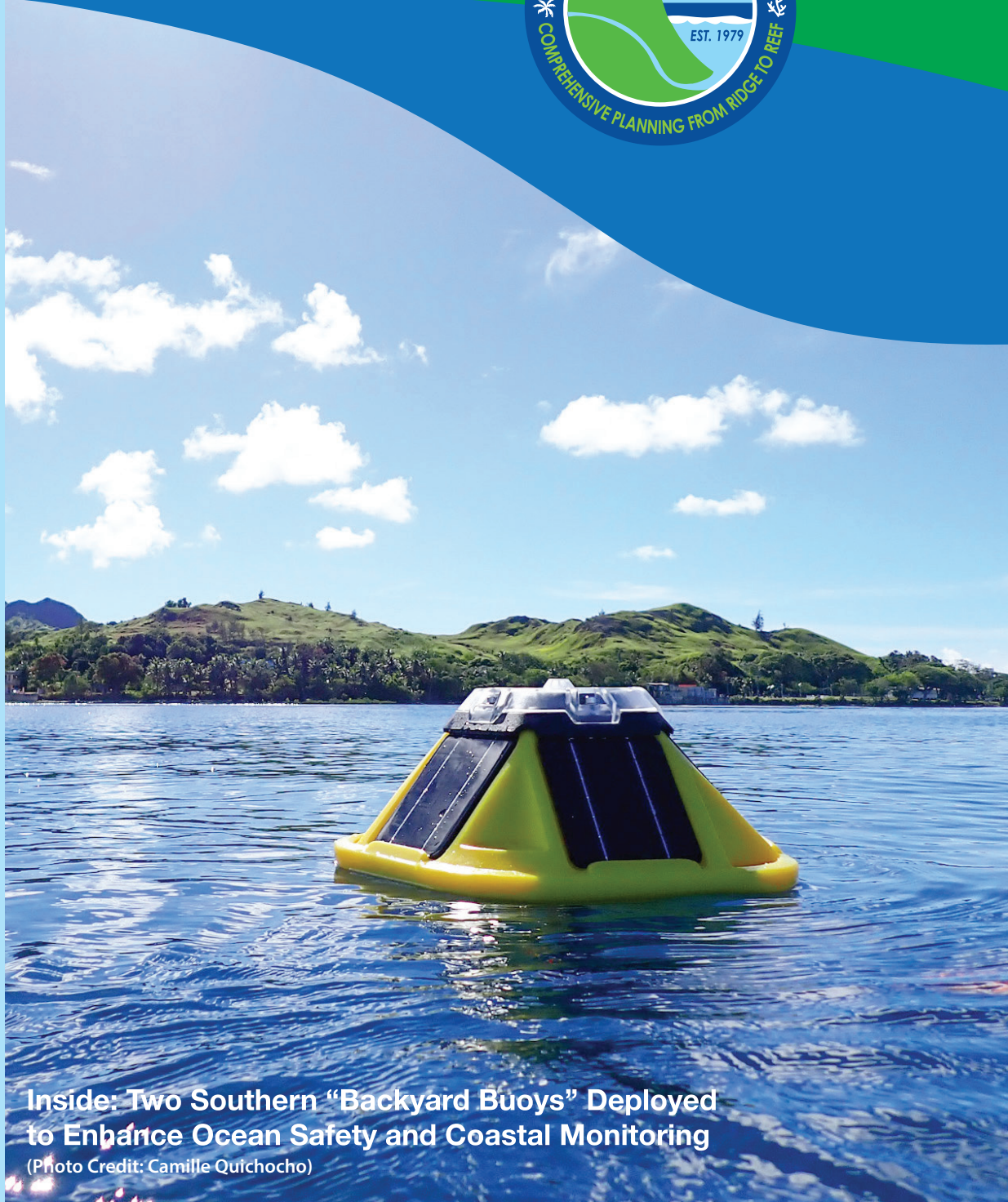
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*Protecting Guam
from Ridge to Reef*



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(Photo Credit: Camille Quichocho)



Register Now for the 31st Guam International Coastal Cleanup

By: Steven Dierking, Guam Coastal Management Program

The island's largest single-day beautification event is expected to cover 25 miles of Guam's shores, and volunteers are invited to sign up and help protect our precious marine environmental resources. Entering its 31st year, the annual Coastal Cleanup is set for Saturday, September 20, 2025.

This critical community service is supported locally by the Bureau of Statistics and Plans, Guam Coastal Management Program (GCMP), in partnership with the Office of the Governor and the Lt. Governor's Islandwide Beautification Task Force (IBTF).

With over 23 cleanup locations available across the island, there are many opportunities for individuals, families, schools, businesses, and organizations to participate. Showtime for most sites is 6:30 a.m. Cleanup locations include Alupang, Adelup Shore, Agat Shore, Asan Beach Park, Dadi Beach, Fisheye to Piti Shoreline, Hågat, Humatak Bay, Malessos, Inalåhan

Bay, Ipan Beach Park, Nimitz Beach Park, Okkodo Pipeline, Pago Bay, Paseo de Susana, Ritidian Beach, Talofofo Bay, Tarague Beach, Tagachang Beach Park, Tanguisson Beach Park, and Tumon Beach.

The Guam International Coastal Cleanup is a landmark event, part of a worldwide effort to prevent pollution, and is supported by partners such as Ocean Conservancy and NOAA.

Governor Lou Leon Guerrero said, "Guam is known around the world for our natural beauty, and every year this cleanup reminds us that it is our job to protect it. I am grateful to the students, families, and organizations who give their time to keep our beaches and oceans clean. Their work today protects our island's future."

Lieutenant Governor Josh Tenorio said, "Kids and parents, teachers and students, entire villages - they all work side by side to make Guam a cleaner and safer place. That's what makes the Coastal Cleanup so special. Picking up one soda can may seem like a small thing. But when we join up as a unified community, the

difference we make together is amazing to witness."

To ensure a smooth and organized experience, all volunteers are required to pre-register online at <https://bsp.guam.gov/gicc2025/>.

There will be NO on-site registration on the day of the event. Registered volunteers will receive essential supplies, including trash bags and gloves, along with a free Coastal Cleanup T-shirt while supplies last. Students can also earn valuable service-learning credits for their participation. Minors will need a chaperone and parent/guardian authorization.

For more information, please contact Steven Dierking at the Guam Coastal Management Program. He can be reached at 671-475-9647 or via email at steven.dierking@bsp.guam.gov.

The Guam International Coastal Cleanup is organized and led by the Bureau of Statistics and Plans, Guam Coastal Management Program, in cooperation with dedicated volunteer Site Leaders who organize and manage each cleanup site.



Guam Coastal Management Program Deploys Two Southern “Backyard Buoys” to Enhance Ocean Safety and Coastal Monitoring

By: The Guam Coastal Management Program

In a major step toward improving ocean safety and climate resilience, the Bureau of Statistics and Plans, Guam Coastal Management Program (GCMP) has deployed two community-informed Backyard Buoys off the island’s southern coastline. The first wave-monitoring device was deployed off the coast of **Hāgat**, while a second buoy was recently placed near the entrance of **Cocos Lagoon in Malesso’**. Both will deliver real-time ocean data to benefit fishers, boaters, scientists, and coastal planners.

The buoys, about the size of a basketball and colored bright yellow for visibility, were provided through a partnership with the Pacific Islands Ocean Observing System (PacIOOS). Designed for nearshore use, they transmit wave height, direction, period, and water temperature data to online and mobile platforms accessible to the public.

“This project brings technology closer to the people,” said Camille Quichocho, Biologist with GCMP. “From boaters and fishers to engineers, everyone gains from having access to timely, reliable ocean data—especially in areas where it’s never been available before.”

The buoy locations were chosen after public meetings and surveys with local ocean users, who emphasized the importance of safety and usability. As a result, the original deployment site near Facpi Island was adjusted to avoid boating routes, ensuring the technology supports rather than disrupts local activity.

“Real-time wave and temperature data turn guesswork into informed decisions,” said Edwin Reyes, Administrator of GCMP. “This isn’t just about buoys in the water—it’s about safety, productivity, and resilient coastal management.”

Beyond immediate benefits to Guam’s maritime communities, the Backyard Buoys are a game-changer for scientific monitoring. The island’s southern coast has experienced significant erosion, but the lack of high-resolution wave data has hindered the development of effective coastal protection strategies. Engineers can now use this data to model erosion and design adaptive, nature-based solutions.

The buoys also support coral reef conservation by tracking changes in sea temperature that influence coral bleaching events.

This effort was accomplished without direct funding to GCMP, made possible through a National Science Foundation Convergence Accelerator grant secured by the Backyard Buoys project collaborators, which is comprised of three U.S. IOOS regional associations (AOOS, NANOOS, and PacIOOS) and a proven ocean sensor developer, Sofar Ocean. The Guam Department of Agriculture’s



DAWR’s deployment team pictured - Carlos Quintanilla and Andrew Kang. (Photos courtesy of Carly Champaco-Munoz)

Division of Aquatic and Wildlife Resources (DAWR) and the Guam Police Department (GPD) provided vital assistance with planning, vessel support, and logistics for the deployments.

Data is free to access and now live via the

Backyard Buoys Mobile App: <https://backyardbuoys.org/data/>

To explore the data or learn more, contact GCMP Biologist Camille Quichocho at **camille.quichocho@bsp.guam.gov** or call **671-475-9664**.



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JFK and Sanchez Students Lead the Charge in Ocean Conservation

By: Marie Auyong, Resilience Specialist Contractor, NOAA's Office for Coastal Management

In a remarkable display of dedication to environmental stewardship, students from JFK and Simon Sanchez high schools, participating in the NOAA Ocean Guardian program, have collectively logged an astounding 51,570 hours picking up trash from Guam's beaches and school campuses.

It's an impressive number, especially given that there have been 1,140 NOAA Ocean Guardians at the two high schools over the past four years. That means the average Ocean Guardian has spent 45 hours filling bags with debris.

Beyond clean-ups, these committed students have demonstrated impressive creativity in addressing the beach trash problem. Each school's Ocean Guardians group dreamed up new ways to care for Guam's environment. A NOAA Ocean Guardian School (OGS) makes a commitment to the protection and conservation of its local watersheds, the world's ocean, and national marine sanctuaries through implementing a school- or community-based conservation project.



A JFK Ocean Guardian cleaning an illegal dump site. Mayors have supported student efforts by hauling trash.



A JFK Ocean Guardian digs out plastic netting washed up on Ritidian's beach. The netting weighed over 300 pounds and was over 10 feet long. More than 20 Ocean Guardians helped dispose of it, which took a couple months of effort.



Running Parent Teacher Association (PTA) workshops where participants craft items that repurpose “trash.” Surveying student attitudes about campus waste. Composting. Creating digital escape rooms about coral reefs, removing invasive plants, building sand sifters to filter sand for microplastics data collection: these are only a few of activities students led from 2021 through 2024.

Marine biology teachers Carolyn Haruo of JFK and Melanie Blas of Sanchez, who first applied for funding back in 2021, spearhead their respective teacher teams and students.

Haruo attests to the transformative impact of the program, stating that the Ocean Guardian program has “created space for my students to become better versions of themselves. Former students still write back to talk about the impact that OGS has on their college or careers. My favorite stories include: ‘I got this internship because I did OGS’ or ‘My class was so easy because I already learned those things from OGS.’”

Of course, challenges disrupt every project and the past four years have been exceptionally difficult for these students. It is notable that the Guam NOAA Ocean Guardians started during the pandemic. Subsequently, students completed remote learning, endured a typhoon, and are now sharing the JFK campus in double session.

Sanchez teacher Blas praises student resilience. “Our school

participation in the NOAA Ocean Guardian School Program has been a source of pride for our school that has been through so much trauma through these past four years. The struggle has been constant and the challenges never ending, but that never broke our stride and forced us to adapt, evolve, and pivot constantly.”

The NOAA Ocean School Guardian program, administered by NOAA’s Office of National Marine Sanctuaries, was started as a way to connect schools to their sanctuaries. Although Guam does not have a national marine sanctuary, NOAA’s Marine Debris program saw an opportunity to support local efforts addressing waste on Guam shorelines and provided funds for the clubs’ first few years.

The Guam NOAA Ocean Guardians program was made possible through partnerships with Guam Department of Education, JFK and Simon Sanchez schools, and the Foundation for Public Education.

Check out the work of the Sanchez Ocean Guardians at their website, <https://guamoceanguardians.weebly.com/>

You can also find the JFK Ocean Guardians on Instagram: [jfkhs_ogs](https://www.instagram.com/jfkhs_ogs)

To learn more about the NOAA Ocean Guardian School program, check out sanctuaries.noaa.gov/education/ocean_guardian/.



Typhoon Mawar displaced Sanchez students from their Yigo campus. However, Ocean Guardians have taken advantage of their proximity to Tumon by cleaning beaches close to their temporary home at JFK.

For school year 2024-25, JFK and Sanchez Ocean Guardians:

- Led 5 community clean-ups and 8 coastal clean-ups,
- Removed 727 kg of debris from Guam’s beaches,
- Of debris removed, students recycled 165.61 kg of glass, 15 kg of aluminum cans, and 53 kg of plastic bottles, and 3.7 kg of steel cans,
- Conducted community outreach throughout their schools and other events, and
- Generated more than 1,000 hours of student service.



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Highlights from the 10th Assembly of Planners Symposium

By: Steven Dierking, Guam Coastal Management Program

The 10th Assembly of Planners Symposium was held on August 19 and 20, 2025, at the Hyatt Regency Guam. The event convened more than a hundred planners, government agencies, regional partners, academics, professional associations, and community stakeholders. Anchored under the theme “Examining the Vital Role of Codes, Ordinances, and Enforcement in Fostering Economic Growth, Community Empowerment, and Managing Coastal Resources,” the symposium provided an important platform to reflect on Guam’s planning priorities and the policies that shape land, water, and coastal resource management.

The two-day program highlighted a wide range of pressing issues. A session on **Comprehensive Development Planning** examined progress on the Guåhan 2050 Sustainability Plan, sharing lessons from the completion of the draft plan while drawing from off-island examples to strengthen Guam’s long-term land use strategy. **Wildland Arson** was addressed through a panel exploring the cultural, social, and behavioral drivers of arson in the island’s watersheds, with emphasis on

community engagement, public education, and policy reforms that can reduce risks to forest health and water resources.

The **Northern Guam Lens Aquifer** was the focus of a plenary on enforcement gaps, bringing attention to the disconnect between existing water regulations and their implementation, as well as the implications for water quality, public health, and infrastructure costs. Discussions stressed the need to close permitting and compliance loops, prioritize aquifer protection through capital improvement projects, and ensure long-term sustainable yield.

On the coastal and ocean side, the **Marine Planning plenary** convened resource managers and community leaders to explore integrated approaches for managing competing ocean uses, building resilience, and safeguarding Guam’s coastal zone. Similarly, the **Flood Policy and Stormwater Management plenary** underscored the urgent challenges of climate change, increased rainfall, and inadequate stormwater infrastructure, drawing input from both regulatory agencies and private sector experts.

The symposium also showcased innovation through **GIS Data**



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Integration, demonstrating practical applications of spatial data for hazard management, infrastructure planning, and resource optimization. Finally, the panel on **Stewarding Guam's Working Landscapes** addressed the future of forest systems and agricultural lands through the Guam Forest System and Habitat Conservation Plan, and highlighted the collaborative work of the Guåhan Sentinel Landscapes Partnership to protect open spaces and agricultural productivity.

The **keynote address** by Derek Brockbank, Executive Director of the Coastal States Organization, provided a critical update on the uncertain future of federal coastal funding, including the impacts of FY'25 and FY'26 budget processes, potential rescissions, and impoundments. He outlined the risks to critical funding sources such as annual appropriations, the Bipartisan Infrastructure Law, and the Inflation Reduction Act, all of which directly affect Guam's capacity to invest in coastal resilience and infrastructure.

The symposium's success reflected the active involvement of a diverse group of partners, including the Office of the Governor, Bureau of

Statistics and Plans, Guam Coastal Management Program, Department of Land Management, Department of Agriculture, Guam Environmental Protection Agency, Department of Public Works, Guam Fire Department, Guam Visitors Bureau, University of Guam, CIS/Sea Grant, WERI, the American Institute of Architects Guam Chapter, and off-island programs such as the Coastal States Organization, Texas General Land Office, Washington State Department of Ecology, Maryland Department of Natural Resources, and the Hawaii Coastal Zone Management Program. Their contributions enriched discussions with both local expertise and comparative regional perspectives.

Overall, the 10th Assembly of Planners Symposium advanced the mission of BSP and GCMP by strengthening interagency and inter-jurisdictional coordination, exchanging best practices, and reinforcing the importance of codes, ordinances, and enforcement as foundational tools for sustainable development. The event reaffirmed Guam's commitment to balancing economic growth with conservation, empowering communities through policy, and ensuring that coastal and working landscapes are managed for resilience and long-term sustainability.



Panelists discuss the Northern Guam Lens Aquifer and challenges with water regulations and enforcement at the 10th Assembly of Planners Symposium.



Panelists from Plenary 9: Strengthening Regional Coordination: CZMA Federal Consistency Across the Marianas discuss the evolving role of the Coastal Zone Management Act's (CZMA) Federal Consistency provision in shaping regional federal activities across Guam and the Commonwealth of the Northern Mariana Islands (CNMI).



**Man, Land and Sea
Newsletter
August 29, 2025**

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guam-coastal-management-
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**Organizing
a Beach
Cleanup?
We can help!**

Contact the Guam Coastal
Management Program and
get connected with other
volunteers and supplies.
Call 671-475-9647
or email
gcmp@bsp.guam.gov
for more information.

*Limited supplies available
per cleanup event.



REGISTER NOW!



Over 23 cleanup locations across the Island to choose from!

SATURDAY, SEPTEMBER 20, 2025

Showtime: 6:30am for most sites

SCAN HERE



TO REGISTER

- Register Now at: <https://bsp.guam.gov/gicc2025/>
- Trash Bags and Gloves are provided.
- Free T-Shirts for Participants (While Supplies Last)
- Service Learning Credits Available for Students!

Need More Information? Interested in Becoming a Sponsor?

Contact Steven Dierking at the Guam Coastal Management Program:
671-475-9647 or email steven.dierking@bsp.guam.gov | bsp.guam.gov/gicc2025/