

**Public Outreach and Education Cumulative Progress Report  
October 1, 2014 to September 30, 2016**

**October 2014 to March 2015**

**Guardians of the Reef**

The Guardians of the Reef held its annual training on January 24, 2015 at the Pacific Star Resort & Spa, in which a total of 81 students attended. Of the 81 students, 51 students were from Simon Sanchez High School and 30 students were from George Washington High School. The training involved team building activities, arts and crafts, and creating and performing songs about coral reefs, preparing the students to conduct presentations for third grade classroom settings. Also present at the training were 2 marine biology teachers from Simon Sanchez High School, 1 marine biology teachers from George Washington High School and a retired GW High marine biology teacher, and 4 chaperones from BSP (the Bureau of Statistics and Plans).



**Guardians of the Reef Training held January 24, 2015 at the Pacific Star Resort & Spa**

The BSP Planner I coordinated and scheduled the fieldtrips for the high school Guardians of the Reef to conduct the presentations for third grade classes at each public elementary school on Guam. The Planner I also coordinated with the transportation companies to schedule transportation for the field trips. Twenty-five elementary schools were contacted to request to schedule the Guardians of the Reef presentations for their third grade classes.

The Guardian of the Reef presentations was conducted at 21 elementary schools, reaching a total of 86 third grade classes as of March 27, 2015. The George Washington High School Guardians of the Reef visited 10 elementary schools while Simon Sanchez High School Guardians of the Reef visited 11 elementary schools.

Approximately 2,150 third grade students were reached by the Guardians of the Reef as of March 27, 2015. The Guardians of the Reef expect to finish their presentations by April 10, 2015.



**George Washington High School Guardians of the Reef present at CL Taitano Elementary School**



**Simon Sanchez High School Guardians of the Reef present at UPI Elementary School**



**Guardians at Adacao Elementary School**



**Elementary Schools from the top, left to right: JQ San Miguel, Tamuning, Wettengel, Machanaonao**

### **Guam Pig Hunting Derby and Pork in the Park Cook Off**

The 4<sup>th</sup> Annual Guam Pig Hunting Derby took place on December 13 and December 14, 2014. The pig hunting derby had four sites located at the Yigo Gym, Department of Agriculture Mangilao Office, Merizo Mayor's Office, and Talofoto Mayor's Office. The Pig Hunting Derby is important to promote awareness through community engagement. The derby raises the awareness of the devastating impacts incurred by the poor management of feral ungulates pigs on Guam.

A total of three mandatory hunter safety briefings were held prior to the derby. All hunters participating in the derby were required to attend one mandatory hunter safety briefing. On the day of the derby, check stations were available for hunters to check in at the 4 locations: Yigo Gym, Mangilao DAWR Office, Talofoto Basketball Court, and Merizo Senior Citizen Center. A total of 20 hunters caught 61 pigs, 29 females and 32 males. The pig derby included three winning categories for most pigs caught by an archer, most pigs caught by firearms, and overall largest pig caught in the derby. The most pigs caught were 6 by an archery hunter and 11 by a firearms hunter, while the overall largest pig caught was 275 lbs through firearms. The pigs that were caught were brought to the check station to capture the pig's gender, weight and measurements.





Pig Hunting Derby at Yigo Gym

The Pork in the Park Cook-Off took place at the Governor Joseph Flores Memorial Park on December 27, 2015. The cook-off was a venue for a barbeque pit and pot dish contest using pork from the pig hunting derby. The cook-off also served as a great venue for bringing awareness to the community about the issue of feral ungulates pigs on Guam. The event drew in several individuals, families, clubs and organizations of the community with the food from the cook-off and entertainment from dance performances and a mascot parade.

Seven teams participated in the cook-off to prepare their best pork dishes for judges and the crowd to sample. Approximately 167 free raffle tickets were given out to the crowd for a prize raffle and approximately 127 votes were casted for the people's choice category, however, not everyone who came to the cook-off participated in the raffle or the people's choice voting. An invasive species expo was set up at the cook-off which included outreach and education displays by other agencies, school clubs, and organizations for distributing information to the public about invasive species and conservation programs on Guam.

The Pig Derby and the Pork in the Park Cook Off was a collaborative and coordinated effort between the Bureau's staff, Department of Agriculture Division of Aquatic and Wildlife Chief as the lead, and the Guam Nature Alliance members. The former CRCP funded Watershed Coordinator whom transition to the Coastal Management Program was instrumental in ensuring this annual event took place as BSP did not have a Watershed.



Pork in the Park Cook Off at Ypao Beach

## **Guam Nature Alliance (GNA)**

GNA formerly known as the Environmental Education Committee (EEC) is a working partnership between numerous government, private and public organizations that conducted environmental education events. GNA members include the Guam Department of Agriculture, the Bureau of Statistics and Plans, University of Guam, Guam Community College, the Island Beautification Task Force, the National Park Service, U.S. Department of Agriculture Natural Resources Conservation Service, Naval Base Guam and the iRecycle program.

The Watershed Coordinator and Reef Resilience Coordinator attended several GNA meeting to plan for the Earth Month. At the February 20, 2015 meeting, the Watershed Coordinator transitioned as the chair of the Hanon group to plan and coordinate the Hanon activities.

During the reporting period, GNA sponsored the “Ready, Set, Snorkel” a free activity for all ages at Ypao beach on Saturday, March 28, 2015. The event involved snorkeling, games and interactive display of Guam’s Ocean Environment.

The Socio Economic Planner I coordinated the bus schedule for the planned GNA event in April to include the Limestone Forest Hike (April 4), the Ugum Nature Hike, Site Assessment Field Day, and Seed Collection (April 9), Introduction to Forest Stewardship Program, Tour of Plant Nursery, Scarification and Propagation of Selected Plant Species, Making Seed Slingstone, Constructing Standing Seed Stone (April 13).

**Other Outreach and Education** - The Socio Economic Planner I designed several outreach and educational support items: “Protect Guam’s Coral Reefs” collapsible fans, “Protect Guam Coral Reefs” cooler bags, “Ridge to Reef – Protect Guam Coral Reef” grocery tote bag, “Protect Guam Coral Reefs” wide grocery tote bag, “Ridge to Reef – Protect Guam Coral Reef” shirts that were funded under the CRI-GU-13 grant. The items were procured and have been used for the outreach activities the Bureau was involved in. In addition, the outreach and educational items were disseminated to our local natural resource agencies and partners for their outreach events.

The Watershed Coordinator, the CZM Watershed Planner I, the Socio Economic Planning Program Planner IV and Planner I partnered with the Humatak Community Foundation in setting up an outreach at the Heritage Day Event from February 28, 2015 to March 1, 2015. The Bureau enlisted the assistance of the Department of Agriculture to utilize DAWR “Our Living Reef” display. At the outreach event, the visitors learned about ways to protect and preserve Guam’s coral reef, and what can be done to prevent further decline of our coral reefs. A total of 81 visitors were educated about ways to protect and preserve Guam’s coral reef. At the event, the following outreach and educational materials were distributed: Our Living Reef Brochures – 30 (F-14-R-1 U.S. Dept. of Interior), Micronesian Challenge: Guåhan Challenge Activity Book - 25 (CRI-GU-13), Door hanger Fish Identification – 25 (NA09NOS4190175), Discover Coral Reefs -25, Kika Coloring Book – 25 (CRI-GU-11), Guam Reef Protectors activity book – 25 (NA11NOS4820007), Size Matters Fish Stickers - 25 (CRI-GU-09), “Protect Guam’s Coral Reef” cooler bags – 25 (CRI-GU-13), and “Protect Guam’s Coral Reefs” collapsible fans – 28 (CRI-GU-13).



**Heritage Day in Umatac**

**Manell-Geus Watersheds** – The Coral Reef Watershed Coordinator partnered with the Guam Community Coral Reef Monitoring Program in setting up an outreach at the Merizo Crab Festival from March 28-29, 2015. At the

outreach event, participants learned about the life cycles of the local land crab, freshwater eel, and freshwater shrimp. The Watershed Coordinator provided a microscope with slides of different planktonic life stages for participants to observe, handouts highlighting the life cycles and the importance of habitat conservation, and play-doh for younger kids to construct the different life stages. The outreach booth was a huge success with an estimated 200 visitors, 60 of which 60 signed up for information about future events. At the event, the Watershed Coordinator distributed outreach items that were purchased with CRI-GU-13, NA09NOS4190175, NA170Z2332 and NA09NOS419079 funds: 35 “Protect Guam Reefs” reusable grocery bags, 45 Micronesian Challenge coloring books, 40 activity books, 60 Munga Masongge stickers, 4 Munga Masongge Guahan–Windshield shade, 15 “Protect Guam’s Coral Reefs” collapsible fans, 30 native/invasive plant plastic cards (NA09NOS419079), 20 Tumon Bay fish plastic cards (NA170Z2332), and 30 fish door handle hangars (NA09NOS4190175).



**Merizo Crab Festival**

Coral Reef Conference – As a result of the need to implement a coral reef conference, the Bureau of Statistics and Plans partnered with the UOG Sea Grant to implement a Coral Reef Symposium in collaboration with the UOG Center for Island Sustainability Conference. The Socio Economic Planning Program Planner IV, the Reef Resilience Coordinator and the Watershed Coordinator attended planning and coordination meeting with the UOG Sea Grant Assistant Professor, the Acting Director for the Center for Professional and International Programs with UOG, the Conference Coordinator with the UOG Center for Island Sustainability, and NOAA Liaisons to address the symposium. The 2015 Coral Reef Symposium is scheduled for April 14, 2015 at the Hyatt Regency Guam.

The Watershed Coordinator and Reef Resilience Coordinator were directly involved in sending out the calls for abstracts and posters, compiling the abstracts and posters received, compiling the bios and photos for the presenters, prepared the draft conference booklets to submit to UOG by March 31, 2015 due date, participated in the reviews of the abstracts and poster with UOG Marine Lab, UOG Sea Grant and the NOAA Liaisons, created and maintained the registration form and registrant list for the symposium.

## **April to September 2015**

### **Coral Reef Conference**

In collaboration with the University of Guam Center for Island Sustainability, the University of Guam Marine Laboratory, the NOAA Liaison, Ms. Valerie Brown and Ms. Adrienne Loerzel, and the two Coral Reef Conservation Program grant funded position, Ms. Anna Simeon and Ms. Andrea Hershberger coordinated and implemented the 2015 Coral Reef Symposium. The symposium was held at the Hyatt Regency Hotel on April 14, 2015 in conjunction with the CIS Conference. A total of 149 people registered for the conference. Of the 149 registrants, there were 111 attendees at the Coral Reef Conference. The day-long symposium showcased original research relating to coral reef health and provided a forum for researchers to exchange ideas.

The CIS Conference was held from April 15-16, 2015 preceding the Coral Reef Symposium. The two day conference provided an opportunity for the Coral Reef Conservation Program and the Coral Reef Initiative grant funded projects PI to present their project as well as ongoing coral reef research being conducted on Guam.

The Guest Speaker for the conference was Mr. Charles Birkeland. The main focus of his research has been the factors that determine reef resilience or capacity for reef systems to recover. He has also been especially interested in how life history characteristics of species affects their role in the system, e.g., why the crown-of-thorns starfish has such an effect, and how the older individuals in populations of fishes can have disproportionate effects on the ecosystem and on the resilience of their own populations.

### **Guardians of the Reef**

In April and May 2015, the Guardians of the Reef from Simon Sanchez High School and George Washington High School conducted presentations to third graders at PC Lujan Elementary School, Our Lady of Mt. Carmel Catholic School, Finegayan Elementary School, and Daniel L. Perez Elementary School, reaching a total of 16 third grade classes with approximately 400 third graders.

On May 22, 2015, the FY 2014-2015 Guardians of the Reef ended with a closing event at Underwater World. The Guardians of the Reef participants from George Washington High School and Simon Sanchez High School came together to share high lights of their experience in the program. Participants of the program were also presented with award certificates and given behind the scenes tours of both the operational and the experimental side of the aquarium, an informative tour of the tunnel, and a scavenger-hunt worksheet. Unfortunately funding for the closing event was not included in the grant budget. The costs to hold the event at Underwater World was \$25 per student. However, because it was important to gain feedback from participants of the program and have a closing event to celebrate their success, private donations were made to help pay for costs to make the event possible.

The following are pictures of Simon Sanchez Guardians of the Reef during their presentations to third grade classrooms at Finegayan Elementary School and Daniel L. Perez Elementary School and pictures from the closing event at Underwater World.

### **Finegayan Elementary School**



## Daniel L. Perez Elementary School



## Guardians of the Reef closing event at Underwater World, May 22, 2015



## Guam Nature Alliance

Bus transportations were provided for the Earth month activities to include the Limestone Forest Tour at Anao on April 4, 2015, Ugum Watershed Hike and Site Assessment Field Day on April 9, 2015, Introduction to Forest Stewardship Program and Tour of the Guam Department of Agriculture Plant Nursery on April 13, 2015, Micronesia Challenge Jurisdictions Meeting field trip to Manell-Geus tree planting sites and snorkel tour in Merizo on June 12, 2015, Aquifer Tour on August 11, 2015, and Ridge to Reef Masso Watershed Adventure on September 12, 2015; and printing of the "Ridge to Reef Masso Watershed Adventure" workbook.

## Eyes on the Reef Program Media Campaign

With funds from the FY13-14 grant, 1000 pencils, 1000 rulers, and 300 rash guards were purchased to support the "Eyes on the Reef Marianas" program to be launched at the end of the quarter in collaboration with the local NOAA office. The items contain the statements "Our Reefs. Our Future. [www.eormarianas.org](http://www.eormarianas.org)". A TV commercial promoting the program was also produced and is set to air in November.

**October 2015 to March 2016**

**Guam Nature Alliance and/or other Outreach and Education Events:**

**Marine Mania Puppet Shows**

The Marine Mania Club of George Washington High School (GWHS) conducted educational puppet shows at Carbullido Elementary School on October 16, 2015 and at Agana Heights Elementary School on December 11, 2015. The puppet shows presented topics of coral reef conservation to 4<sup>th</sup> and 5<sup>th</sup> graders of the schools. Bus transportation for the puppet shows were coordinated through the Bureau of Statistics and Plans and funded by the FY 13-14 CRCP.

Pictured below: GWHS Marine Mania Puppet Show at Agana Height Elementary School



**Arbor Month Tree Planting**

Tree planting events to support reforestation projects lead by Guam Department of Agriculture, Forestry Division, took place on October 17 and 24, 2015, at the village of Merizo within the Manell Watershed. Bus transportation allowed for several student volunteers from Simon Sanchez High School (SSHS) and George Washington High School (GWHS) to plant trees at the selected site. The busing was coordinated through the Bureau of Statistics and Plans and funded by the FY 13-14 CRCP.

Pictures below: Tree Planting in Manell Watershed with Guam Dept. of Ag, Forestry and SSHS



Pictures below: Tree Planting at Manell Watershed with Guam Dept. of Ag, Forestry and GWHS





### **Leo Palace Waste Water Management Tour**

The Guam Nature Alliance hosted the Leo Palace Waste Water Management Tour on November 7, 2015 inviting the public to learn about low impact development and why it is important to recognize the value of our natural resources. Busing for the tour was funded through the FY 13-14 CRCP.



### **Traveling Ocean Fair**

The Simon Sanchez High School (SSHS) Traveling Ocean Fair brought educational outreach to Guam Department of Education Elementary and Middle Schools through interactive booths targeted to teach students on the theme topics of Ridge to Reef, Climate Change and its Effects on Micronesia, Conservation Efforts in Micronesia, and Natural Resources of Micronesia. Within the period of November 25, 2015 to December 11, 2015 the Traveling Ocean Fair visited 5 elementary schools, UPI Elementary School on November 25, Daniel L. Perez Elementary School on December 1, Price Elementary School on December 3, Untalan Middle School on December 4, and JMG Elementary School on December 11. Bus transportation for the Simon Sanchez High School Students to visit schools for the Ocean Fair was funded through the FY 13-14 CRCP.

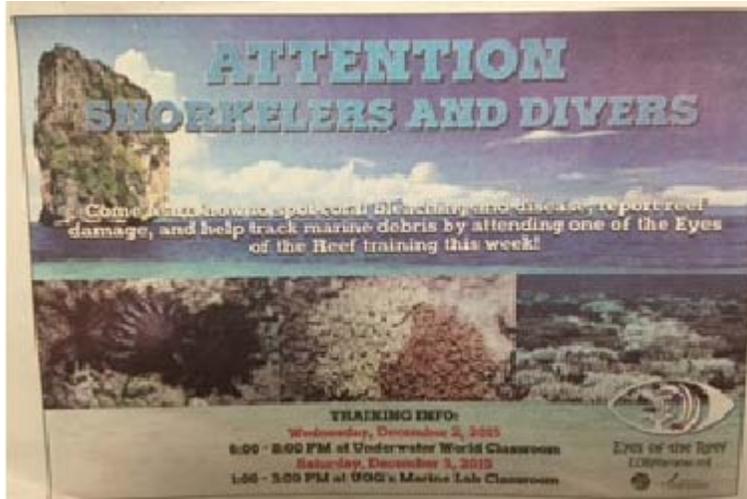


### **GWHS Seed Sling-stone Experiment**

On December 12, 2015 the George Washington High School (GWHS), Marine Mania Club together with USDA Natural Resource Conservation Service worked with GWHS students to make and plant seed sling-stones using seeds from native trees and bushes. The planting took place in an area on Cross Island Road where Guam Department of Agriculture, Forestry has been planting for the past 20 years. Busing to transport GWHS students from their school to the planting site and back was funded through the FY 13-14 CRCP.

**Eyes on the Reef Program Media Campaign**

Two Eyes of the Reef training events (December 2, 2015 and December 5, 2015) have been held with a total of approximately 25 participants who have completed the training and learned to identify reef impacts, such as coral bleaching and disease, and how to report these sightings online. The EoR online reporting form was developed and is now active on the website. Training materials, including a pre-and post-test for participants, were adapted and revised. In March 2016, we planned an EoR training event for April and began arranging a "training of trainers" event for May to train new instructors for the EoR sessions. One new instructor has volunteered for the program. A TV commercial promoting the program was also produced and aired in December, and the EOR training events publication was advertised on December 2, 3, 4 in the Guam Daily Post.



The NOAA liaison approved the script for the “Eyes on the Reef Marianas” media campaign on October 28, 2016. The Grant Award Number and the NOAA CRCP Logo will be included in the script. The amendment will read "PAID BY A GRANT THROUGH THE BUREAU OF STATISTICS AND PLANS CRCP GRANT PROGRAM AWARD NUMBER NA13NOS4820012."

TV

<b>CLIENT:</b> Bureau of Statistics and Plans, c/o Anna Simeon	
<b>Title:</b> Eyes on the Reef Campaign	
<b>LENGTH:</b> 30 seconds	
<b>RUN DATES:</b> TBD	
1	ATTENTION ALL SNORKELERS AND DIVERS! GUAM'S REEFS NEED YOUR HELP!
2	HAVE YOU NOTICED ANY OF THESE THINGS ON GUAM'S REEFS: CROWN OF
3	THORNS STARFISH, CORAL BLEACHING, FISHING NETS, OR ANYTHING ELSE
4	THAT JUST DOESN'T LOOK NORMAL?
5	HELP KEEP GUAM'S WATERS HEALTHY BY REPORTING WHAT YOU SEE TO
6	RESEARCHERS AT "EYES ON THE REEF" AT EORMARIANAS.ORG
7	EYES ON THE REEF: OUR REEFS, OUR FUTURE. PAID BY A GRANT THROUGH
8	THE BUREAU OF STATISTICS AND PLANS AND NOAA
9	

**Beauty and Basula Outreach**

The original project “Beauty and the Basula” has changed focus from targeting high schoolers to working with neighborhood watch groups in various villages along Piti-Asan and Manell-Geus watersheds with the goal of providing support to these active communities. She met with Paul McDonald – mayor of Agana Heights and President of the Mayors Council of Guam – to discuss this potential and ask to speak in front of the Mayors Council. He was enthusiastic about it and asked her to present at the upcoming meeting on April 20. She also plans to meet with the Lt. Governor’s office and the Island beautification Task Force regarding this initiative.

## **Coral Reef Bleaching Table Top Exercise**

A huge gap exists in inreach activities occurring amongst the local and federal government in responding to coral reef impacts such as coral bleaching events, coral disease outbreaks, invasive species, vessel groundings, oils spills, and outbreaks of nuisance species such as the crown of thorns as well as the distribution of inreach materials. A need exist to collaborate more with are local and federal partners through meetings, trainings, drills, and workshop to be able to clarify roles and responsibilities, and to identify additional mitigation and preparedness needs in responding to coral reef impacts. To address this gap, Guam's Coral Fellow, Ms. Whitney Hoot, will finalize Guam's Reef Resilience Strategy (GRSS) and develop an implementation plan that will include the reef impacts Standard Operating Procedures and management recommendation for the following: coral bleaching events, coral disease outbreaks, invasive species, vessel groundings, oils spills, and outbreaks of nuisance; and conduct training/drill/workshop for all reef response team members and partners.

The Coral Fellow will conduct a coral bleaching event table top exercise with are local and federal government partners in May and to share information on the following:

- Guam's coral reef ecology, status of coral reefs, and the impacts of climate change and coral bleaching on reefs
- History of coral bleaching events on Guam and anticipated future impacts
- Guam's existing community monitoring activities and capacity for community engagement during a bleaching event

On March 11, 2016, the Bureau submitted a reprogramming request to the NOAA Liaison to reallocate \$2000 from the Public Outreach and Education Project "Beauty and Basula" Campaign within object class 230 (CONTRACTUAL) to address the Coral Bleaching Table Top Exercise and Symposium scheduled for mid May 2016 (\$1800), and to cover printing cost and supplies (\$200) for the Coral Bleaching Table Top Exercise and Symposium. On Marcy 17, 2016, the NOAA liaison approved the request as there is no change in the budget category, the workshop is considered an outreach/in reach activity, and there are no in water activities associated with the workshop.

## **April to September 2016**

### **Guam Nature Alliance and/or other Outreach and Education Events Bus Transportation:**

With the funding made possible under public outreach and education, the Bureau was able to provide busing for the Ridge to Reef Pago Bay Adventure event held on April 30, 2016. Two buses were provided to transport participants from northern and central Guam, and southern Guam.

The Guam Nature Alliance hosted the Ridge to Reef Adventure in Pago Watershed. The event welcomed students and members of the community to participate in a nature walking tour, river kayaking and to learn about the connection between actions on the land and its impact on our oceans. The following is an article published in the Pacific Daily News on June 2, 2016 on the Ridge to Reef Pago Bay Adventure featured in the Pacific Daily News on June 2, 2016.



### 36<sup>th</sup> US Coral Reef Task Force Meeting:

The 36<sup>th</sup> US Coral Reef Task Force Meeting in the Marianas was held on Guam and CNMI from September 19 to 24, 2016. The funding was used to provide bus transportation for the Manell-Geus Habitat Focus Area Tour for USCRTF Principals and the 36<sup>th</sup> USCRTF Watershed Workshop participants on Tuesday, September 20, 2016, and the attendees staying at the Hyatt Hotel and the Verona Hotel to provide transport to the 36<sup>th</sup> USCRTF Guam Business meeting in Adelup on September 24, 2016. Due to issues with Saipan's runway lights, the Guam Business meeting was rescheduled from Friday, September 23, 2016 to Saturday, September 24, 2016 as the principals were unable to fly back to Guam until Friday evening.

The following are pictures of the Manell-Geus Habitat Focus Area Tour for the USCRTF Principals:





The following are pictures of the 36<sup>th</sup> USCRTF Guam Business Meeting in Adelup:



**Public Outreach and Education:**

The Bureau’s Watershed Coordinator, Coral Fellow and Planner I worked to update the “User Friendly Fishing Regulations” brochure provides information about Guma’s fishing laws and regulations to include allowable activities within Guam’s 5 Marine Preserves and the location of the Fishing Aggregating Device (FAD) and Shallow Water Mooring (SWM) Sites, “Guam Hunting, Trapping & Safety Regulation Field Guide” brochure provides information about hunting rules and regulations on Guam, “Kika” coloring book, coral reef conservation awareness stickers, “Eyes on the Reef “ magnifying glass , “Eyes on the Reef” Field Guides with coral health information to be

used by EOR participants as a field guide to help identify different kinds of disturbances, Fish Identification card and tips to be dispensed to tourists and other recreational users of Guam's reefs, and Guam's Marine Preserve handout explains the value of marine preserves, as well as rules and locations of each.

Grant funds were used to pay for the Micronesian Challenge Regional dues (\$10,000) as the MC Support continues to play an integral role for Guam's coral program as well as for our natural resource agencies partners by providing critical support in coordinating communication across the Micronesian region on coral reef conservation efforts and invasive species; and it provides access to the collection of marine, terrestrial and socio-economic datasets compiled by the measures groups. On August 18, 2016, the Bureau requesting grantor authorization from the NOAA Liaison to include the FY 15 Micronesian Challenge Regional dues (\$10,000) as a line item budget under the Support for Public Outreach and Education in the contractual budget as the request is within the Support for Public Outreach and Education Contractual Category and does not exceed the 10% of the total Federal share of the award. The request was concurred by the NOAA Liaison on August 24, 2016 as the request fit within the general descriptions of the project, so the expenditure on the MC dues is appropriate.



**NOAA**  
**CORAL REEF**  
CONSERVATION PROGRAM