RESEARCH CORPORATION OF THE UNIVERSITY OF GUAM

35GL-20-1385
Speaker Tina Rose Muña Barnes

JAN 06 2020
Time 8:50 (AM) ( )PM
Received By:

2020 JAN -6 AM 11:40

December 24, 2019

The Honorable Tina Muña Barnes
Speaker, 35th Guam Legislature
Guam Congress Building
163 Chalan Santo Papa
Hagåtña, Guam 96910

Dear Speaker Muña Barnes,

On behalf of the Research Corporation of the University of Guam (RCUOG) Board of Directors, I have enclosed for your review RCUOG's FY2019 Annual Report. This report highlights the Research Corporation's growth and achievements over the last fiscal year, provides a snapshot of the grants managed by RCUOG, and illustrates the role the Research Corporation plays in supporting the University of Guam's research projects while ensuring efficiency and compliance in daily operations.

As required by Public Law 32-114, the Research Corporation of the University of Guam is self-sufficient and does not rely on government of Guam funds for its operations. RCUOG provides a robust framework that supports scientific inquiry and has fostered an environment that enables the University of Guam to expand its research activities and portfolio to address important issues facing our community and our region. We thank you for your continued support of research and outreach projects which directly benefit our island and our students.

Si Yu'os ma'åse'!

Sincerely,

Thomas W. Krise, Ph.D.
Chairperson, RCUOG

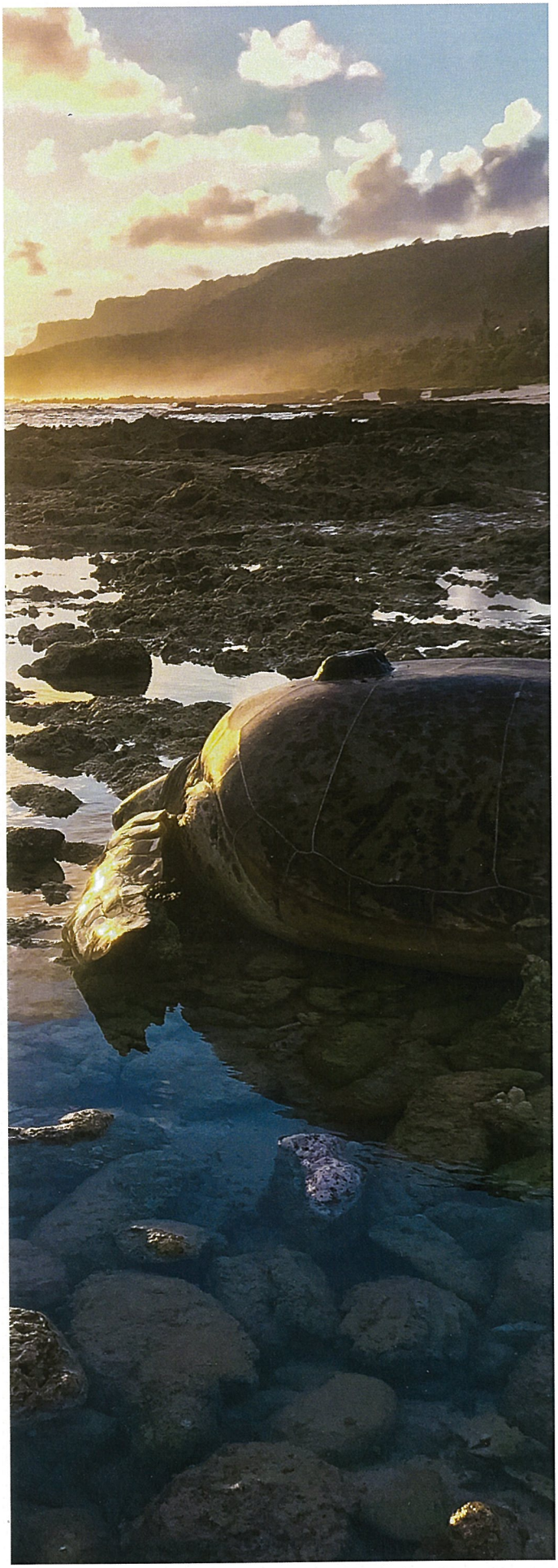
1385

ANNUAL REPORT
FY2019

RESEARCH CORPORATION
OF THE UNIVERSITY OF GUAM



Doc. No. 35GL-20-1385.



BOARD OF DIRECTORS

The Research Corporation of the University of Guam is under the management and control of a ten-member Board of Directors. Board membership includes representation from the UOG Faculty Senate, the UOG Board of Regents, the UOG Research Council, UOG senior administrators, and members representing the community at large.

Dr. Thomas W. Krise
Chairperson/UOG President

Dr. Anita Borja Enriquez
Vice Chairperson/UOG Senior Vice President

Randall Wiegand
Treasurer/UOG Vice President of Administration and Finance

Mari Flor Herrero
UOG Board of Regents Representative

Lesley-Anne Leon Guerrero
UOG Board of Regents Representative

Dr. John Jenson
UOG Research Council Representative

Dr. Cheryl Sangueza, Secretary
UOG Faculty Senate Representative

Joseph F. Ada
Community Member Representative

Dr. Artemio R.A. Hernandez
Community Member Representative

Ray Topasna
Community Member Representative

CREDITS

Cover Photo
Andrew Mc Innis

Photographs
Guam EPSCoR | G. Curt Fiedler | Kyle David Santos

Layout
Kyle David Santos



YEAR FIVE OPERATIONS

At the end of the fifth year of operation, the Research Corporation of the University of Guam (RCUOG) marked several positive outcomes including a 26% growth rate over the prior year for the total number of grant projects supported.

The University of Guam is experiencing a record level of grant activity which is rivaled only by the activity generated through the American Recovery and Reinvestment Act of 2009, which was implemented after the 2008 economic crash. Many of the new grants supported by RCUOG in FY2019 are due to the strong working relationship between UOG's Office of Research and Sponsored Programs and the Department of the Navy, via Cooperative Ecosystem Studies Units (CESU), on projects related to vegetation restoration, invasive species, and forest enhancement.

Notably, there were no findings regarding RCUOG operations in the University of Guam's FY2018 audit under which RCUOG is reviewed as a component unit. RCUOG has had no questioned costs on any of the grants it services through four consecutive audits.

This report highlights the positive outcomes in year five and the role RCUOG plays in supporting the University of Guam's research projects while ensuring efficiency and compliance in daily operations.

Cathleen Moore-Linn
Executive Director

RCUOG Core Team
Danica Batac, *Grant Budget Specialist III*
Barbara Molarte, *Accounting Specialist*
Colleen Bamba, *Human Resources Specialist II*
Gloria Travis, *Chief Business Officer*
Michelle Santos, *Accounting Analyst II*
Cathleen Moore-Linn, *Executive Director*

Doc. No. 35GL-20-1385.

KEY PERFORMANCE INDICATORS

FY2019



26%

Increase in the number of grants supported



12%

Increase in grant expenditures which underscores efficiency



128

Employees



12

Travel grants awarded

Doc. No. 35GL-20-1385.

PURPOSE

The purpose of this report is to capture a snapshot of the organization after its fifth year of operation and to demonstrate how RCUOG supports research and outreach projects through its streamlined and efficient policies and processes.

POLICIES

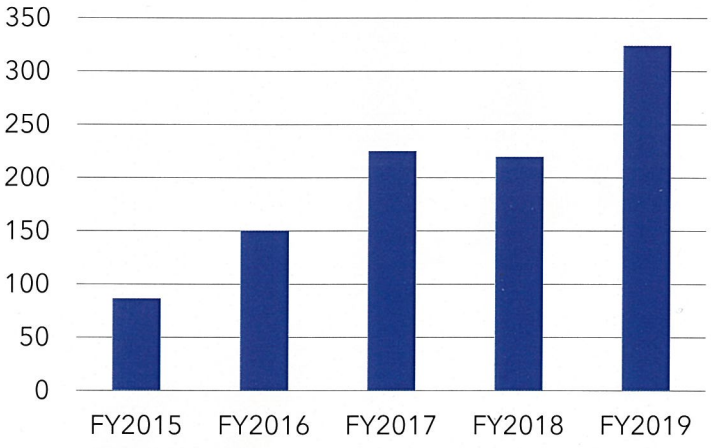
The following policies were approved by the RCUOG Board of Directors to support efficiency within the organization and to ensure RCUOG remains a competitive employer:

- Amending the salary increments and employee evaluation policy to allow for annual increments through step 18.
- Approved a schedule adjustment, overtime, and compensatory time off policy.

HUMAN RESOURCES

RCUOG completed 330 personnel hiring actions in FY2019 compared to 220 hiring actions during the prior fiscal year. The increase in personnel actions reflects the growth in grant projects supported by the Research Corporation.

RCUOG Personnel Actions Processed

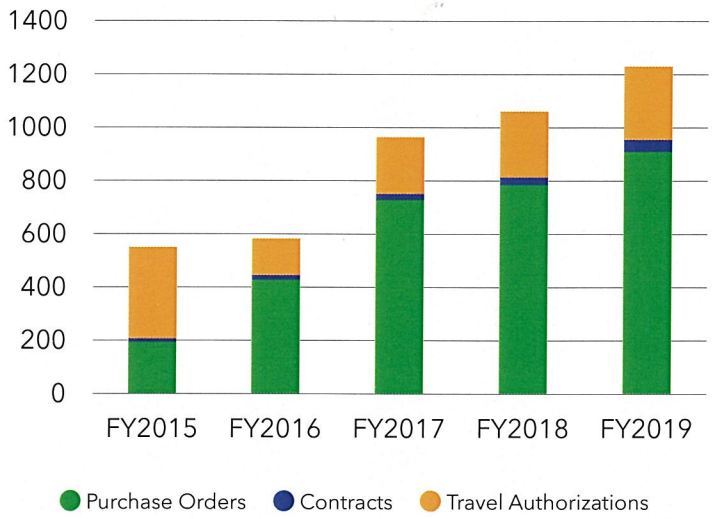


These hires include all temporary full-time and part-time positions based on availability of funds as well as summer salaries for UOG faculty for grant related work. At the end of FY2019, RCUOG numbered 128 employees.

FINANCIAL TRANSACTIONS

The number of financial transactions, which includes purchase orders and contracts, increased 15% in FY2019 compared to the prior year. Despite the increase in workload, documents are still processed within 24-48 hours. RCUOG's streamlined procedures work in tandem with UOG systems in payroll, accounting, and human resources.

RCUOG Financial Transactions



RCUOG was able to increase outputs in year five utilizing a core staff of five full-time employees and one part-time employee. In the fourth quarter, RCUOG converted the part-time position to full time to handle the increased workload. RCUOG now has a core team of six full-time individuals.

FY2018 AUDIT

RCUOG is included as a component unit of the University of Guam with respect to the FY2018 audit. There were no findings regarding RCUOG activities in FY2018, which indicates RCUOG continues to utilize strong internal controls which comply with federal regulations and its own policies. The FY2018 audit marked the fourth consecutive year of no questioned costs.

SELF-SUFFICIENT

Public Law 32-114, which established RCUOG, requires the Research Corporation to be self-sufficient by the end of FY2019. RCUOG receives 20% of grant generated indirect cost revenue which provides about 58% of its general operations budget. The remainder is generated through RCUOG's administrative fees. At the close of the fiscal year, RCUOG realized $280,525 in indirect costs and $161,829 from administrative fees, which are charged to those projects without an indirect

cost rate included. RCUOG realized a total of $442,729 in FY 2019.

OPERATING AGREEMENT

A new five-year Operating Agreement was approved by the RCUOG Board of Directors and the UOG Board of Regents in September and November 2019, respectively. The Operating Agreement sets forth the terms and conditions under which RCUOG may operate as a public corporation of the University pursuant to Guam Public Law 32-114.

GROWTH

At the end of the fourth quarter, RCUOG provided support services to 117 different grants, an increase of 26% over the FY 2018 fourth quarter total of 93 grants. Total grant expenditures for FY 2019 were $8,931,300 which is an increase of 12% over the prior year's expenditures of $7,980,057.

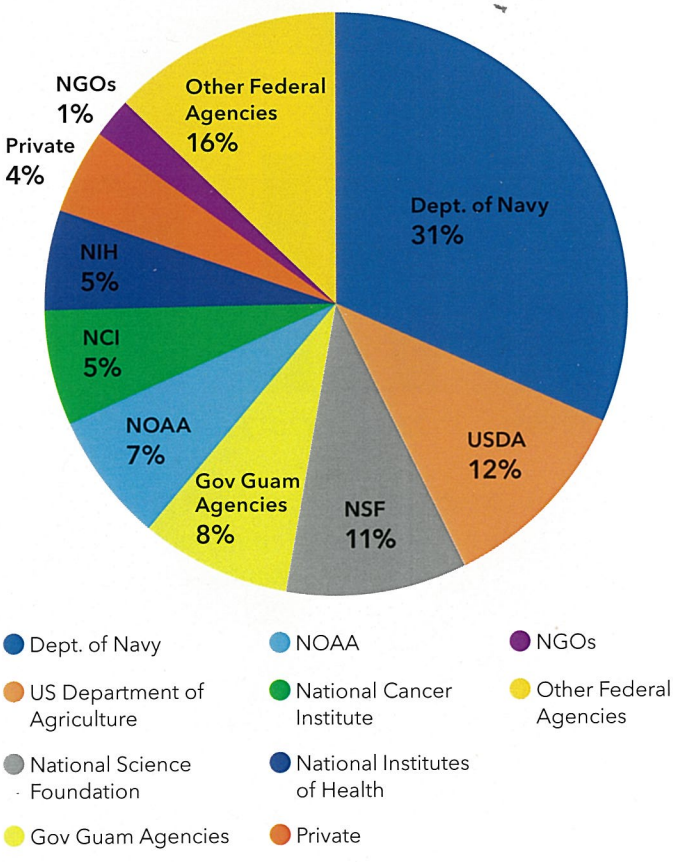
GUAM AQUACULTURE DEVELOPMENT AND TRAINING CENTER

Throughout FY 2019, RCUOG worked with the University administration to pursue legislation to resolve a long-standing boundary issue between UOG and the Chamorro Land Trust Commission regarding the Guam Aquaculture Development and Training Center facilities. The issue was finally resolved with the enactment of Public Law 35-43 which transferred 1.5 acres of land to the University of Guam. This allows the Research Corporation to lease the facility to a private partner which will support the development of Guam's aquaculture industry.

FOCUS ON RESEARCH

The chart below provides a breakdown of grants by funding agency. Federal agencies, Government of Guam agencies, and non-profit foundations partner with the University of Guam to produce research and service outcomes. The Research Corporation, with a focus on efficiency, provides support to scientists who pursue research projects that have a direct, positive, and lasting impact on Guam and the region.





Doc. No. 35GL-20-1385.

FINANCIAL STATEMENT

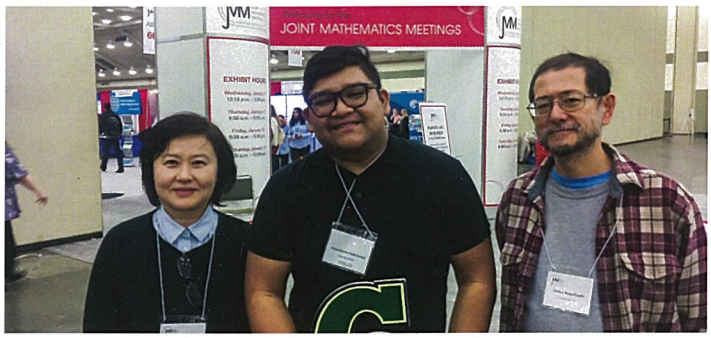
RCUOG REVENUE & EXPENSE/BALANCE SHEET FY2019 UNAUDITED 09/30/19

REVENUE & OTHER ADDITIONS	
Federal Grants	7,670,736.49
GovGuam Grants	79,529.97
Private Grants	178,996.93
Miscellaneous	1,173,966.30
Total Revenue & Other Additions	**9,103,229.69**
EXPENDITURES & OTHER DEDUCTIONS	
Salaries	3,746,706.52
Fringe Benefits	387,043.96
Travel On/Off Island	833,792.88
Contracts	1,288,373.01
Supplies	474,004.15
Equipment	217,233.44
Capital Outlay	321,180.46
Miscellaneous	1,662,966.29
Total Expenditures	8,931,300.71
Increase/Decrease this Year	171,928.98
Fund Balance Beg.	1,457,616.93
Fund Balance, End	**1,629,545.91**
BALANCE SHEET	
ASSETS	
Cash in Bank	498,435.30
Account Receivables	1,856,916.14
Advances to Supplier	13,990.00
Advances to Traveler	39,264.18
Total Assets	**2,408,605.62**
LIABILITIES & FUND BALANCE	
A/P Contracts	3,175.73
Accrued Payroll	9,545.29
Due to/fr Unrestricted	766,338.69
Fund Balance End	1,629,545.91
TOTAL LIABILITIES & FUND BALANCE	**2,408,605.62**



TRAVEL GRANTS

RCUOG awarded 12 travel grants to University of Guam students for education related travel in in 2019. Recipients traveled to Japan, Thailand, Hawaii, Kosrae, the Philippines, Singapore, and the U.S. mainland to present their research projects, participate in internships, and enhance their academic experiences.



Dr. Hyunju Oh, Vince Nicholas Salas Campo, and Dr. Hideo Nagahashi at the Joint Mathematics Meeting.

Vince Campo presented his research on Dog Vaccination and Quarantine: A Mathematically Approach on Rabies at the Joint Mathematics Meeting in Maryland in January.



Pictured left to right: Arielle Lowe, Christian Valencia, and Lillian Troy

English Major Arielle Lowe attended the Conference on College Composition and Communication in Pennsylvania in March where she conducted a workshop on native-centered composition theory and pedagogy.

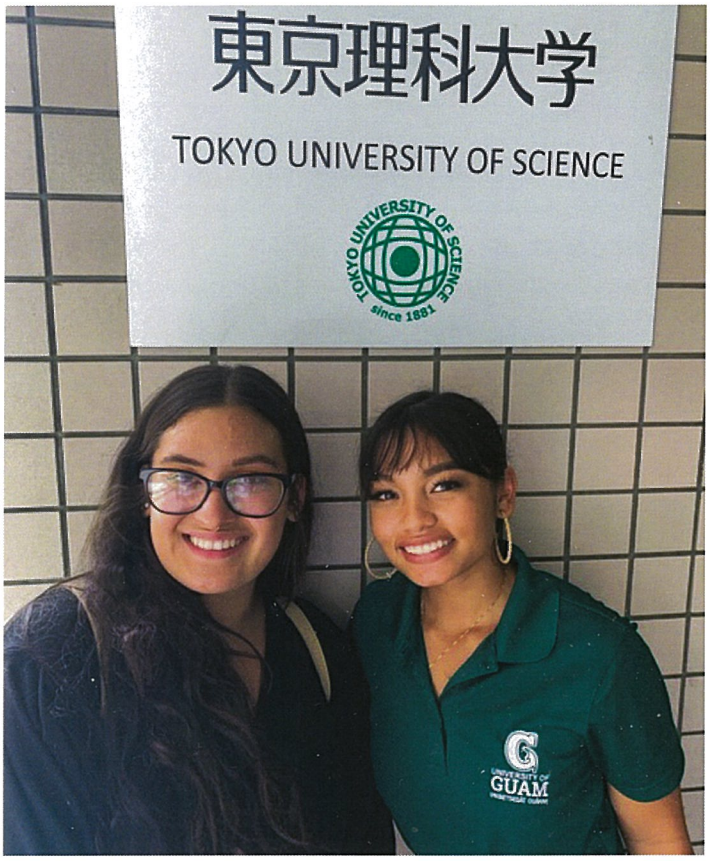
Christian Valencia presented his paper on the economic and non-economic factors of international migration at the International Conference on Business, Economics, and Information Technology in Singapore in March.

In June, senior and Pre-physical Therapy major Lillian Troy participated in a physical therapy summer internship hosted by the Kameda Medical Center in Japan. Lillian gained 100 hours of hands-on experience mentored by licensed physical therapists at Kameda Medical Center's state of the art facilities.





Graduate student Jeried Calaor presented his thesis work on the role that Mariana fruit bats play as seed dispersers in Guam at the 18th International Bat Research Conference in Thailand in July.



Sociology majors Alyssa Gordon and Heather Garrido traveled to Tokyo, Japan to present their research at the International Conference on Education, Psychology and Social Sciences in August. Their research focuses on how the collectivist cultures and values of Micronesia are impacted by individualism and materialism.

Doc. No. 35GL-20-1385.



Frank Roberto and Nicole Imamura at the 2019 SACNAS conference.

Frank Roberto, who is pursuing his master's degree in biology, presented his thesis at the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) conference in Honolulu in October. Roberto, as part of his duties as a research fellow for UOG's NSF INCLUDES grant, also prepared UOG undergraduates to present their research at the SACNAS conference.

Nicole Imamura, a sophomore majoring in Biology, attended the SACNAS conference in Honolulu in October.



Mykel Lizama, a senior majoring in Biology, also attended the SACNAS conference in Honolulu in October.

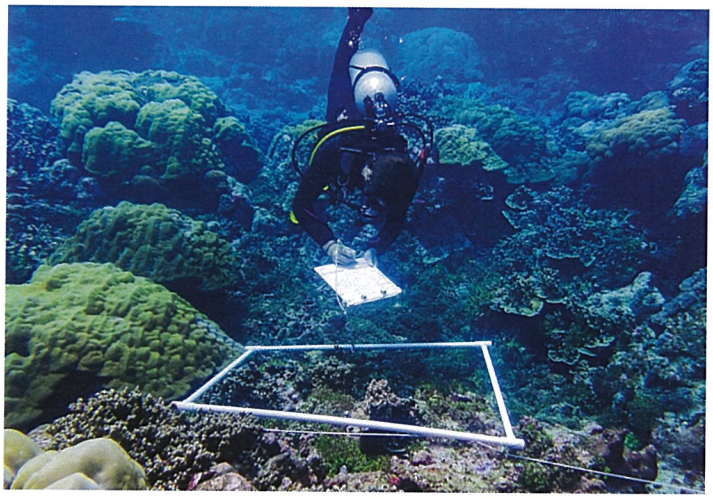




Pictured left to right: Justin Johnson and Andrew Mc Innis

Justin Johnson, a senior majoring in Business with an emphasis in Finance and Economics, attended the Inter-Collegiate Finance Competition in Manila, Philippines in November.

Andrew Mc Innis is a master's candidate in the Biology program working in Dr. Peter Houk's lab at the Marine Laboratory. One of Dr. Houk's major projects is to assist in long-term coral reef monitoring for a regional initiative, The Micronesia Challenge. Mc Innis traveled to the island of Kosrae to conduct coral reef surveys and to work with counterparts at local natural resource agencies to improve data analysis skills. These long-term ecological surveys are critical to understanding both local and regional changes to valuable coral reef ecosystems.



RCUOG is able to offer travel awards to students using mileage accrued from purchases made with the RCUOG official credit card in accordance with Public Law 32-019. RCUOG management and staff are delighted to play a small part in supporting students' academic endeavors. RCUOG has supported a total of 33 awards since it first began offering the travel award in 2017.

Doc. No. 35GL-20-1385.

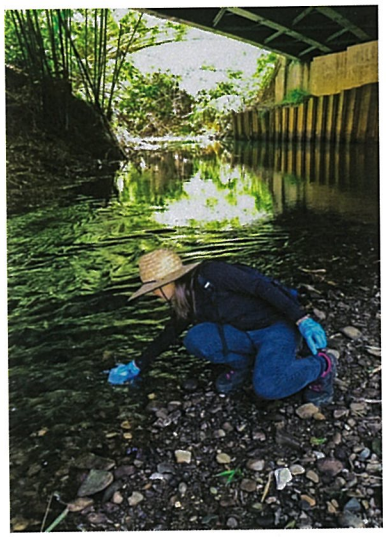
RCUOG SUPPORT FOR UOG AND THE COMMUNITY



RCUOG purchased a new water fountain and refillable water bottle station at the residence hall to reduce plastic waste and encourage hydration.



Each year, the Association of Government Accountants recognizes chapters and financial management professionals for outstanding service that advance the association and improve communities. Guam Chapter was selected as a recipient for 2019 Chapter Accountability and Transparency Award. AGA's 2018-2019 National President John Lynskey presented the Guam Chapter award to Michelle Santos from Research Corporation of the University of Guam.















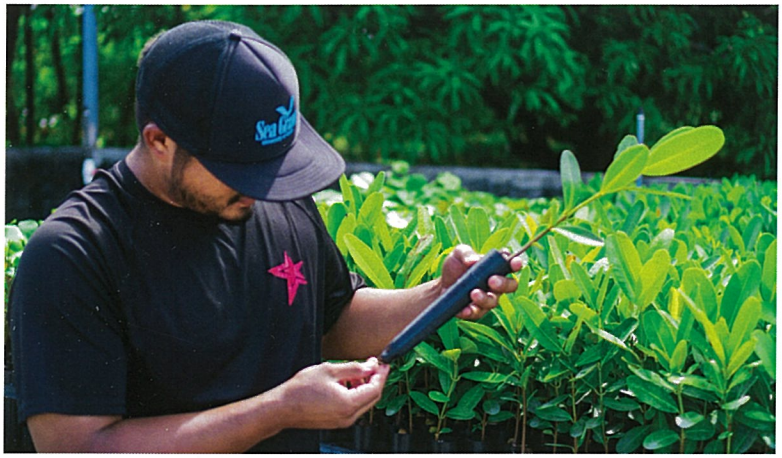








Doc. No. 35GL-20-1385.





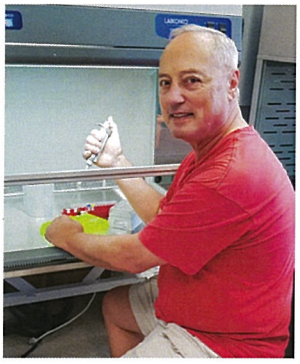






















Doc. No. 35GL-20-1385.

LIST OF GRANTS & CONTRACTS

In 2019 RCUOG provided support services to the following grants:

Abstinence Education

Administer and Manage the Guam Coconut Rhinobeetle Management Program

Advancing Science to Management Feedback Loops to Prioritize Stressors on Coral Reef Econsystems in Support of Micronesia Challenge

AFB Hydrological Survey

Autonomous Control Technology for Unmanned Aerial Systems with Agricultural and Environmental Applications in the Central Pacific Islands

Bio monitor Support for Natural Resource management Surveys JRM Areas of Responsibility

Biological Control Asian Citrus Psyllid, *Diaphorina citri*, on Guam

Biological Control of Coconut Rhinoceros Beetle

Biomonitor Support for Natural Resource Management at JRM AOR

Biomonitor of Survey Tree Snails; Report on Condition of Cycads

Bleaching Mitigation and Need Resilience

Build EXITO with Portland State University

Building Reef Resilience through Environmental Education

Capacity Building of Clinical Trials on Guam

CC Network Design: Upgrading the UOG Network to Connect to Internet2 and Create a Science DMZ - OAC 1659182

Cetti Bay Watershed Monitoring

CI-STEEP-Sources Transport, Exposure and Effects of Perfluoralkyl

Consurtium for Sustainability Outcomes Seed Funding for the Solar Spell

Continuation of Surveillance of Citrus Pests and Huanglongbing Diseases in the Marianas

Continued Surveillance of Insect Pests in Ornamental and Landscape Nurseries in the Mariana Islands

Coral Mitigation Plan for the GTA Conduit Installation and SEA-US Cable Landings,Piti

Course in Tropical Forest Ecology of the Mariana Islands



Doc. No. 35GL-20-1385.

Cycad Monitoring and Management on Anderson Air Force Base

Develop a comprehensive Implementation Plan for Phase I of the North Finegayan Forest Enhancement Site located within JRM AOR

Developing Chamoru Language Infrastructure

Developing Interactive Distance Education Curricula without the Internet

Development of a Skilled Workforce for Orchid Nurseries on Guam

Eight Spot Butterfly

Enhance the Health and Resilience of Natural and Agro Forests

Enhancing Awareness of CRB and LFA in Micronesia

Enhancing Forest Inventory and Monitoring throughout the Pacific Islands

Enhancing Local Knowledge to Sustain a Forest Inventory and Monitoring Program through the Pacific Islands

Enhancing Marine Science Capacity in the Western Pacific through Science Internships at UOG

Environmental Education Outreach Awareness on Naval Base Guam

Establishing a Fisheries-Dependent Monitoring Network Across Micronesia to Maximize Economic Benefits, Food Security, and Ecosystem Health

Farallon de Medinilla Fish Video Analysis

Field Support and professional hydrogeologic work

Fish collection services along the Orote Peninsula Guam.

Forest Bird Monitoring & Assessment on Tinian Joint Region Marianas (JRM) Leased Lands

Fruit Bat Monitoring on Guam

Geocore: Geospatial Studies of Reef Ecology and Health using Satellite and Airborne Data

Geotechnical investigation of rainfall-induced landslides in Piti-Asabn

Geriatrics Workforce Enhancement Progam

Getting Guam Healthy MOU with DPHSS "Walk to Wellness Program"

Guam Ecosystems Collaboratorium

Guam Health Providers Cancer Symposium

Guam Restoration of Watersheds: GROW Ugum

Guam Water Kids: Protecting Guam's Fresh Water Resources

Guam WSARE Implementation Award Delivery of Educational Programs

Herbarium Improvement

Hydrogeologic Assessment of the Suspected Sinkhole AC15

Hyperuricaemic Trail

Identifying Key Reef Sites for the Management and conservation of Coralgenetic Diversity and Resilience

Improvement of Tissue Culture, Stereomicroscopy and Biochemical Analysis Laboratory in Agriculture Science Education

Improvement of Tropical Agriculture and Food Science Research at UOG

Improving Forest Inventory/Analysis

In situ and ex situ Recovery Actions for *Serianthes nelsonii*

IOA-LSAMP Stem Pathways

LFA Survey, Perimeter Monitoring and Eradication at Anderson South

LRS 2018 Guam Forestry Watershed Restoration Project

Mariana Eight-Spot Butterfly at Northwest Field in Live Fire Training Complex

MCT Expanding Science

MGT-Invasive Vegetation (Ironwood), Wake Island (cooperative agreement)

Micropropagation of Guam's Native Trees

Mitigation of Little Fire Ant, *Wasmannia auropunctata*, on Guam

Doc. No. 35GL-20-1385.

ML-DOI/NPS: Building Staghorn Coral Community

MOA Between LMS and UOG

Montana State U - WSARE - Development of Alternative and Sustainable Farming Methods Compatible with Sustained Humand and Environmental Wellbeing.

NASA EPSCoR Research Infrastructure Development Program

National Survey of Honey Bee Pests and Diseases.

NMC Insect Collection

Northern Guam Lens Aquifer Monitoring System

NRMP Hammerhead Shark in Apra Harbor and Orote Point

NSF INCLUDES "NSF Inclusion Across the Nation of Communities of Learners in Underrepresented Discoverers in Engineering and Science (INCLUDES): Supporting Emerging Aquatic Scientists Island Alliance"

NSF Includes DDLP: STEM Engagement and Participation in Native Pacific Islander communities

Oryctes rhinoceros nudivirus for biocontrol of the Guam biotype of the coconut rhinoceros beetle.

Outreach and Education to Inform Public on How to Reduce the Impact of the LFA Invasive Species

Pacific ENSO Application Climate Center

Pacific Island Climate Science Center

Perform Hydrological Assessment of Site Depression

PFM Contract- Granite Obayashi, Hensel Phelps, SWCA, Granite Obayashi, and EA Engineering.

Phylogenetic Study of *Serianthes*

Plant and Invertebrate Surveys JRM Area of Responsibility as Specificed on Guam and CMNI

Plant Surveys Joint Region Marianas

Postdoctoral Entomologist to Develop biological control for the CRB

Predicting Extreme Tide Events to Inform Shallow Reef Community Restoration and Management in Guam, Micronesia

Production of *Fusarium* Wilt Resistant Bananas for Guam farmers; Small Scale and Backyard Growers

Project Launch

Radon Training

Recovery Actions for *Serianthes nelsonii* and Species Considered for Listing under Endangered Species Act

Reducing Tree Decline of Casuarina equisetifolia in Guam through Replacement of Bacterial Wilt Infected Trees and Research into the Bacterial Microbiomes of Trees and Associated Termites.

Removal of Dead Coconut tress (CRB breeding sites) near AB Won Pat Int'l Airport and Jose D. LG Port Authority

Salvage Transplantation of Federally Listed Plant Species at Northwest Field in the Construction Footprint of the Live Fire Training Range Complex

Santa Rita Spring: Hydrogeologic Evaluation to Determine Engineering Design Options for Rehabilitation (MOA between GWW and UOG WERI)

Sea Grant

Sea Grant John A. Knauss Fellowship for Lauren Swaddell

Sea Turtle Aerial Surveys in Farallon de Medinilla Nearshore Waters

Sea Turtle Monitoring, Protection, and Educational Outreach on AAFB

Self-Determination Study

Serianthes nelsonii Monitoring AAFB

Sub Award UOG/UH Cancer Center Partnership

Subaward UH Children's Health Living Center of Excellence to Collect Child Heath Data on Guam and support CHL Intervention Training

Surveillance of Harmful Exotic and Invasive Ants in Guam and the Mariana Islands

Doc. No. 35GL-20-1385.

Survey of Tomato for *Raistonia solanacearum* race 3 biovar 2 and Tuta abosluta in Guam

Synthesis and Sructure-Activity-Relationship Studies of Cannadibiol analogs for anti-cancer activity

Tasi Guides Program

Training & Technical Support for UOG Faculty Developing STEM Courses for On-line Delivery

Treating LFA infested forest and utilize drone technology to assist in eradication efforts

U24 Cardiometabolic Diseases

UH Cancer Center Partnership

University of Guam Sea Grant Omnibus Proposal 2018-2022

UOG/ SBPA RCPP to conduct a Self-Determination Study.

USAPI Pacific Regional Central Cancer Registry

Use Fish DNA to Create a New Predictive Fisheries Management Tool for Micronesia

USU WSARE Pacific Island

Vegetation Restoration for the Habitat Management Unit AAFB

Vulnerability Analysis of the Built-Environment at Various Coastal Bays / Climate Change Assessment

Water Quality Monitoring on Naval Base Guam Submerged Lands

Water Wells Salvage and Transplantation of Federally Listed Species at AAFB

Wetlands Protection Development - Guam Watershed

Doc. No. 35GL-20-1385.