Guam Environmental Protection Agency  
Board of Directors Meeting  
Thursday, May 23, 2019 @ 4:00 pm  
Main Office Conference Room

AGENDA

I. Call to Order

II. Approval of Agenda

III. Approval of April 18 & 30, 2019 Minutes

IV. Administrator’s Report

V. Old Business
   • Navy NOV Status
   • Nova Group, Inc. Settlement Agreement Status
   • Safe Drinking Water NOV – GWA Status
   • Air Force Re Stipulated Request for Continuance – NOV #2019-001
   • PIEC Update
   • Status of RRF Approval Process
   • Presentation of Proposed Revision to the Recreational Beach Monitoring Plan: Guam Coastal Waters

VI. New Business
   • Introduction of New Board members Steven Carbullido, Moneka De Oro and Nicholas Pape

VII. Miscellaneous

VIII. Next Meeting Date/Adjournment
Guam Environmental Protection Agency Board of Directors
Building 17-3304 Mariner Avenue
Tiyan Barrigada, Guam 96913

SUBJECT: Third Stipulated Request for Continuance re: Notice of Violation #2019-001

Honorable Members of the Board:

By stipulated requests for continuance, dated February 15, 2019 and March 13, 2019, the undersigned requested that the Board of Directors postpone setting a hearing date for the above-referenced matter while the parties worked toward a resolution. Since the last stipulated request, the parties have met, including on April 17, 2019. Guam Environmental Protection Agency ("GEPA") at that meeting requested for information, which has since been provided, but is still under GEPA’ review. GEPA has recently requested for additional clarification on some of the information provided, which we are diligently working with GEPA to clarify. Consequently, we respectfully ask that the Board postpone setting a hearing date until the July board meeting.

We thank you for your kind consideration. Our point of contact is LT James Hammons, whom you may reach by phone at (671) 366-2526 or by email at james.hammons.3@us.af.mil.

Sincerely,

OSTIL JONATHA
N.C.1187888596
JONATHAN OSTIL, GS-14, P.E., PMP
Deputy Director
36th Civil Engineer Squadron

So stipulated:

Kris Finney
GEPA Legal Counsel
II. **RECYCLING REVOLVING FUND ACCOUNT (as of 05/22/2019)**

**REVENUES**

Recycling Revolving Funds - $2,895,965.00

**GUAM EPA OPERATING EXPENSES & O/S ENCUMBRANCES FOR THE RECYCLING FUND (as of 05/22/2019):**

A. Personnel - $34,155.75
B. Contractual - $1,348,790.49
C. Equipment, Materials, Supplies, Utilities, etc - $0.00
D. Travel - $0.00

**TOTAL GUAM EPA EXPENDITURES & ENCUMBRANCES:** $1,382,946.24

**TOTAL GUAM EPA BALANCE/(DEFICIT):** $1,513,018.76
I. **FISCAL YEAR 2019 FINANCIAL REPORT (as of 05/22/2019)**

**GUAM EPA REVENUES:**
- A. Federal Grant Funds - $1,257,973.62
- B. Special Funds (Budget Law Allotted) - $1,321,137.48

**TOTAL GUAM EPA REVENUES:** $2,579,111.10

**GUAM EPA OPERATING EXPENSES & O/S ENCUMBRANCES (as of 05/22/2019):**
- C. Federal Grant Funds - $1,785,894.29
- D. Special Funds (Budget Law) - $649,951.76

**TOTAL GUAM EPA EXPENDITURES & ENCUMBRANCES:** $2,435,846.05

**GUAM EPA BALANCE/(DEFICIT):**
- E. Federal Grant Funds - ($527,920.67)
- F. Special Funds (Budget Law) - $671,185.72

**TOTAL GUAM EPA BALANCE/(DEFICIT):** $143,265.05

**TOTAL GUAM EPA FEDERAL GRANT REIMBURSEMENTS**
- Total Payment Requests for Reimbursement - $1,385,423.20
- Pending Approval of Reimbursements - $0.00
May 6, 2019

Hi Arlene

Attached are the OATHS for the individuals listed below, please distribute to them at the next scheduled board meeting.

Steven Carbullido
Moneka De Oro
Robert A Perron
Florida Sanchez

If you have any questions, please let me know.

Thanks
Michael
OATH

I, STEVEN P. CARBULLIDO, do solemnly swear in the presence of Almighty God, that I will well and faithfully support the Constitution of the United States, the laws of the United States applicable to Guam and the laws of Guam, and that I will conscientiously and impartially discharge my duties as a:

Member

GUAM ENVIRONMENTAL PROTECTION AGENCY
BOARD OF DIRECTORS

I swear under penalty of perjury that the foregoing is true and correct.

Executed at Adelup, Guam on MAY 2, 2019.

[Signature]

STEVEN P. CARBULLIDO

Administered by:

[Signature]

LOURDES A. LEON GUERRERO
I Magå’Hågan Guåhan
Governor of Guam
OATH

I, MONEKA DE ORO, do solemnly swear in the presence of Almighty God, that I will well and faithfully support the Constitution of the United States, the laws of the United States applicable to Guam and the laws of Guam, and that I will conscientiously and impartially discharge my duties as a:

Member
GUAM ENVIRONMENTAL PROTECTION AGENCY
BOARD OF DIRECTORS

I swear under penalty of perjury that the foregoing is true and correct.

Executed at Adelup, Guam on MAY 2, 2019.

MONEKA DE ORO

Administered by:

LOURDES A. LEON GUERRERO
I Maga’Hågan Guåhan
Governor of Guam
OATH

I, ROBERT A. PERRON, do solemnly swear in the presence of Almighty God, that I will well and faithfully support the Constitution of the United States, the laws of the United States applicable to Guam and the laws of Guam, and that I will conscientiously and impartially discharge my duties as a:

Member
GUAM ENVIRONMENTAL PROTECTION AGENCY
BOARD OF DIRECTORS

I swear under penalty of perjury that the foregoing is true and correct.

Executed at Adelup, Guam on MAY 2, 2019.

[Signature]

ROBERT A. PERRON

Administered by:

[Signature]

LOURDES A. LEON GUERRERO
I Maga’Hågan Guåhan
Governor of Guam
OATH

I, FLORIDA M. SANCHEZ, do solemnly swear in the presence of Almighty God, that I will well and faithfully support the Constitution of the United States, the laws of the United States applicable to Guam and the laws of Guam, and that I will conscientiously and impartially discharge my duties as a:

Member
GUAM ENVIRONMENTAL PROTECTION AGENCY
BOARD OF DIRECTORS

I swear under penalty of perjury that the foregoing is true and correct.

Executed at Adelup, Guam on MAY 2, 2019.

____________________________
FLORIDA M. SANCHEZ

Administered by:

____________________________
LOURDES A. LEON GUERRERO
I Maga’Hågan Guåhan
Governor of Guam
GUAM ENVIRONMENTAL PROTECTION AGENCY

BOARD OF DIRECTORS MEETING: Thursday, May 23, 2019 • 4:00PM

Guam EPA Administration Conference Room
17-3304 Marine Avenue Tiyan Barrigada, Guam 96913-1617

AGENDA:
1. Call to Order
2. Agenda Approval
3. Approval of 04/18/19 and 04/29/19 Minutes
4. Administrator's Report
6. Safe Drinking Water HNV - GHWA Status
7. New Business: Introduction & New Board member Steven Corbullide, Member of the Guam and Western Islands

Recreational Beach Monitoring Plan: Guam Coastal Waters

VII. New Business: Introduction & New Board member Steven Corbullide, Member of the Guam and Western Islands

Individuals requiring special accommodations, auxiliary aids or services should contact Guam EPA by calling 300.4751/9 or via email at arlene.actolla@epa.guam.gov
Recreational Beach Monitoring Plan 2019:
Guam Coastal Waters PROPOSED
The goal is to monitor and assess the island's coastal beaches for bacteria concentration and notify the public against swimming at beaches with high levels of bacteria.

Exposure to high concentrations of bacteria increases the risk of contracting potential waterborne illnesses such as diarrhea, nausea, ear and eye infections, skin rashes, etc.

The RBMP has been collecting bacteriological samples and providing advisories weekly since 1974.

3rd Program Revision

What is the Recreational Beach Monitoring Program (RBMP)?
Beaches Environmental Assessment and Coastal Health (BEACH) Act

- Awards grants to state and local governments to develop and implement beach monitoring and assessment programs
  - Guam EPA receives approx. $300,000/year ($9.5 million)

- Requires states and tribes that have coastal recreation waters to adopt new or revised water quality standards
  - Board Approved in 2017
  - USEPA Approved in 2018

- Requires Online Reporting of data and advisories to USEPA databases.
  - Complying since 2000
  - In-house database allows for weekly reporting

BEACH Act 2000/2012
Beaches Environmental Assessment and Coastal Health (BEACH) Act

- Expand and Enhance existing beach monitoring programs
  - Improve beach monitoring
    - Evaluating Risk
    - Increase in Sampling Frequency
    - Increase coverage Area
  - Improve public notification of beach advisories or closures
  - Use the *National Beach Guidance and Required Performance Criteria for Grants, 2014 Ed*

**BEACH Act Requirements**
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<tr>
<th>Category</th>
<th>Performance criterion</th>
<th>General requirement</th>
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<td>Evaluation and Classification</td>
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<td>Risk-based beach evaluation and classification process</td>
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<td>Adoption of new or revised WQS and identification and use of a beach notification threshold</td>
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<td>Public evaluation of program</td>
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Performance Criterion 1
Evaluation & Classification
102 areas around the island have been classified
- Data Layers on a Geographical Information System (GIS)
- Local & Federal

Performance Criterion 1
Step 1 Identify Coastal Recreation Waters
Scoring Criteria

- **Accessibility** to a beach indicating use by the public
- A **bacterial pollution source** that may affect the water quality of a beach
- Resulted in 78 Beaches needing further Evaluation

Performance Criterion 1
Step 2 Identify BEACH Act Beaches
Beach Use and Risk

- Use refers to the usage of the beach by the public
  - Identify beaches within 1 mile to socioeconomic resource points: Beach, Boat Ramp, Dive Site, Marina, Subsistence Fishing and Surfing
  - Beaches within a Marine Preserve Area (MPA)
  - Location of Beaches and village population density

Performance Criterion 1
Step 3 Characterize the Beach to Determine Risk and Use
Risk refers to the susceptibility of beach waters to contamination from fecal pollution sources.

- 2018 GWA Spill Reports
- 2018 Guam EPA Typhoon Incident Reports
- Reported Incidences of *Leptospirosis* and *Vibrio*
- Microbial Source Tracking (MST) Monitoring is conducted
- Proximity to Non-Sewered Buildings
- Proximity to River Discharges
- Proximity to National Pollution Discharge Elimination System (NPDES)
- Percentage of Impervious Land Cover within the Watershed
- Water Quality Data

Performance Criterion 1

Step 3 *Characterize the Beach to Determine Risk and Use*
Scoring Matrix

- Tier 1 = 18-25
- Tier 2 = 9-17
- Tier 3 is ≤ 8 points,

*Maximum Points = 25

**Break Points determined by dividing by 3 tiers

Performance Criterion 1
Step 4 Rank Beaches by Tiers
Tier 1 beaches – 8 Total
- Considered highest priority based on risk/use indicators

Tier 2 beaches – 39 Total
- Considered Medium priority based on risk/use indicators

Tier 3 beaches – 24 Total
- Considered Lowest priority based on risk/use indicators

7 Beaches were removed as they have been determined to be Federal property

Performance Criterion 1
Step 4 Rank Beaches by Tiers
Beach Monitoring
Tier 1
(8 Beaches)

- West Hagatna Beach
- Beach at Pago Bay
- Beach at Talofofo Bay
- Beach at Piti Bay
- Dungca's Beach, East Hagatna Bay
- Beach North of Finile River
- Toguan Bay
- Trinchera Beach, East Hagatna Bay

Dry Season Monitoring
- 2 samples/week
- Composite Sample

Wet Season Monitoring
- 3 samples/week
- Composite Sample

Performance Criterion 2
Monitoring
Beach Monitoring
Tier 2
(39 Beaches)

- Asan Memorial Beach
- Naton Beach, Tumon Bay
- Ypao Beach, Tumon Bay
- Beach at Fonte River
- Hagatna Marina
- Togcha Bay (Agat Beach)
- Beach North of Togcha River
- Gognga Beach, Tumon Bay
- Gun Beach, Tumon Bay
- Merizo Public Pier Park
- Beach South of Finile River
- Salinas Beach
- Alupang Island
- Faifai Beach
- Umatac Bay
- Tanguisson Beach
- Tanguisson Point
- Nimitz Beach
- North Pago Bay Beach
- Apaca Park Beach
- Inarajan Pools

Performance Criterion 2
Monitoring
Beach Monitoring
Tier 2
(39 Beaches)

- West of Adelup Point
- Intermittent beach 2 - Ajayan Bay
- Intermittent beach 3 - Ajayan Bay
- Intermittent beach 4 - Ajayan Bay
- Intermittent beach - North Tanguisson
- Pigua River Beach
- Taelayag Beach
- United Seamen's Service Beach
- West of volcanic headland
- Aba Beach
- Beach to Liyog River Mouth
- Intermittent beach 1 - Ajayan Bay
- Liyog river Mouth
- Urunao Beach

Performance Criterion 2
Monitoring
Beach Monitoring
Tier 2
(39 Beaches)

- Dry Season Monitoring
  - 1 sample/month
  - Grab/Composite Sample

- Wet Season Monitoring
  - 1 sample/week
  - Grab/Composite Sample

Performance Criterion 2 Monitoring
Beach Monitoring
Tier 3
(24 Beaches)

- Family Beach
- Outhouse Beach
- Tagachang Beach Park
- Agfayan River Beach
- Ajmo Beach
- Asanite Point Beach aka First Beach
- Beach to Asgadao Bay
- Intermittent beach - Asgadao Bay
- Marianas Yacht Club Beach
- Mouth of Cetti Bay
- Port Authority Beach
- Aang Beach
- Beach north of Asmafines River
- Ypan Beach Park Beach
- Beach south of Sella River
- Calvo’s Beach
Beach Monitoring
Tier 3
(24 Beaches)

- Cocos Island
- Head of Fouha Bay
- Islet
- Agfayan River Beach
- Jones Beach
- Atao Beach
- Beach north of Acho Point
- Guien Rock area

Performance Criterion 2
Monitoring

Dry Season Monitoring
- 1 sample/quarter
- Grab/Composite Sample

Wet Season Monitoring
- 1 sample/month
- Grab/Composite Sample
Beach Monitoring
Total All Tiers

- Dry Season Monitoring
  - 1,588 samples
  - 698 analyses

- Wet Season Monitoring
  - 3,364 samples
  - 1,695 analyses

- Yearly Total
  - 4,952 samples
  - 2,393 analyses

Performance Criterion 2
Monitoring
Beach Method and Assessment Procedures

- Field Assessment
  - SOP #GEPAMP017: Collection of Wadeable and Non-wadeable Surface Water for Microbiological Examination

- Laboratory Assessment
  - Standard Method 9223B; Enzyme Substrate Coliform Test (Enterolert®)

- Assessment Criteria - Enterococcus
  - Geometric Mean > 35 CFU/100mL (30 Days)
  - 10% of Samples > Statistical Threshold Value (STV) of 130 CFU/100mL

Performance Criterion 3
Monitoring
Beach Reporting Procedures

- Guam EPA Database and Notification System
  - Element Laboratory Information Management System (LIMS)
  - Water Air Land Territorial Electronic Record System (W.A.L.T.E.R.S)

Performance Criterion 4
Monitoring
Beach Reporting Procedures

- US EPA's Database and Notification System
  - Water Quality Exchange (WQX)
  - Mechanism for Submitting Data to USEPA
  - Water Quality Portal (WQP)
  - Mechanism for Retrieving Data from USEPA
  - STOrage and RETrieval (STORET) database
  - Analytical Data and Station Repository
  - PRogram tracking, beach Advisories, Water quality standards, and Nutrients (PRAWN)
    - database provides information on any beach closings or advisories.
  - Beach Advisory and Closing Online Notification (BEACON 2.0)
    - public database depicting pollution w/in coastal recreational waters

Performance Criterion 4
Monitoring
Guam EPA is the Responsible Entity for the collection and Analyses of all samples collected under this program.

- Sample Collection
  - Monitoring Program, EMAS Division
    - 3 Biologists and 1 Environmental Technician
  - Sample Analyses
    - Analytical Services Program, EMAS Division
      - 2 Chemists and 1 Laboratory Technician
- No plans to “Out Source” either Sampling or Analyses
  - Volunteer Sampler Program
  - Contractor

Performance Criterion 5
Delegation of Monitoring Responsibilities
Beach Notification

- Weekly Advisories are released Notifying the Public of Beaches exceeding the Standard, jellyfish exposure, and consumption advisories
  - Agency webpage and social media sites
  - Email
    - Print media, television, and radio
    - Government Agencies
    - Interested Businesses
    - Interested Individuals
  - Permanent Signs with a matrix bar code (QR Code), various languages
  - Smart Phone Applications
  - Call In/Text phone number

Performance Criterion 6-9
Public Notification and Prompt Risk Communication
Beach Notification

- Special Advisory/Closure
  - Heavy Rainfall Event Notification
  - 2 inches of rainfall in a 24-hour period
  - Automatic Advisory
  - In place until next sampling event
- Beach Closures
  - Only when verified pollution event (sewage spill) occurred
  - Issued by Guam Public Health and Social Services

Performance Criterion 6-9
Public Notification and Prompt Risk Communication
Beach Notification

- Reporting
  - USEPA Databases
  - WQX/WQP
  - STORET
  - PRAWN
  - BEACON
- USEPA Integrated Report (IR)
- Guam EPA’s Annual Best Beaches Report

Performance Criterion 6-9
Public Notification and Prompt Risk Communication
Beach Water Quality Criteria

- 2017 Guam Water Quality Standards

- *Enterococci* bacteria – The GM of samples taken in any thirty-day interval should not exceed 35 CFU/100mL and the statistical threshold value (STV) of 130 CFU/100mL should not be exceeded by more than 10 percent of the samples taken during the same thirty-day interval.

- *E. coli* bacteria - The GM of samples taken in any thirty-day interval should not exceed 126 CFU/100mL and the STV of 410 CFU/100mL should not be exceeded by more than 10 percent of the samples taken during the same thirty-day interval.

Performance Criterion 10
2012 Recreational Water Quality Criteria
RBMP Public Evaluation

- USEPA and Public Review and Comment
  - July 2019
- Guam EPA Board of Director’s
  - Review September 2019
  - Approval October 2019

Performance Criterion 11
Public Evaluation
Differences

- Proposed Revision
  - 71 Beaches
  - 114 Stations
  - 8 Tier 1
    - 2 samples/week - dry season
  - 39 Tier 2
    - 1 sample/month - dry season
    - 1 sample/week - wet season
  - 34 Tier 3
    - 1 sample/quarter - dry season
    - 1 sample/month - wet season

- Current RBMP
  - 31 Beaches
  - 43 Stations
  - All Tier 1
    - 1 sample/week

RBMP Major Differences
Proposed vs Current
Differences

- Although these enhancements will increase the demand on existing laboratory and field resources,

- They will allow for monitoring and public notification of beaches that either have never been or were infrequently monitored.

RBMP Major Differences
Proposed vs Current