



GUAM ENVIRONMENTAL PROTECTION AGENCY



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GUAM ENVIRONMENTAL PROTECTION AGENCY RESPONSES TO PUBLIC QUESTIONS OR COMMENTS FOR GUAM EPA DOCUMENT

DOCUMENT TITLE: RECREATIONAL BEACH MONITORING PLAN: GUAM COASTAL WATERS (FIRST DRAFT)

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Created by: Recreational Beach Monitoring Program (RBMP), Environmental Monitoring and Assessment Services (EMAS) Division of the Guam Environmental Protection Agency (Guam EPA)

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1. *Page iii: List of Acronyms, Abbreviations and Measurement Units:*

BOP should be changed to BSP, The Bureau of Statistics and Plans.

Guam EPA Response: Change noted and corrected.

2. *Section I.A. NATIONAL MICROBIOLOGICAL INDICATOR HISTORY.*

Although the footnote on page 2 notes the debate over using Enterococci in the tropics, we suggest that this problem of natural occurrence of this indicator, independent of sewage, be further explained here or in Section I.B.

Guam EPA Response: Comment noted and explanation expanded in Section I.B. This issue will be addressed further in the next review scheduled for 2004.

“ALL LIVING THINGS OF THE EARTH ARE ONE”

3. *Section II.A. EXISTING MONITORING DATA. The second sentence of the second paragraph states, "Beaches may be ranked using these trends to determine the need to continue further monitoring or include additional unmonitored beaches to the list."*

GCMP would like to see further clarification as to what criteria decide whether to increase or stop sampling, or to add more sites to the sampling regime.

Guam EPA Response: **In accordance with Section IX.A.2.b and c, sampling will increase at specific sites impacted by known sewage breaks/leaks and when heavy rain has occurred. As long as a beach is accessible and is used by the public, sampling will not cease; the frequency of the sampling may change depending on the assessment of annual prioritizing criteria listed in Section II.B. Sites may be added to the sampling regime when annual prioritizing criteria are assessed and changes have occurred. Trend analysis can be used to enhance decision-making.**

4. *Section IX.A.2.a. This section states, "A CLOSURE will NOT be issued for beaches not meeting the water quality criteria."*

GCMP would like to inquire whether there should be a set limit that, if exceeded, would trigger a closure. Is there a point at which bacterial concentrations become high enough that closure is justified, even if a sewage leak has not been identified?

Guam EPA Response: **Beach closures are issued at beaches exposed to known sources of raw sewage. GEPA is currently researching an additional closure procedure for beaches that are under swimming and wading advisory for extended periods with no known sources. This new closure procedure will be available for public review in the next review scheduled for 2004.**

5. *Section IX.A.2.a. This section also describes the RBMP advisory signs that will be permanently posted at beach sites.*

GCMP would like to express concern about possible tampering or vandalism of the signs. This section states that the signs can be flipped open to show a warning icon. Are the signs secured or protected by a lock, such that only authorized personnel can flip open the sign?

This question may be answered by the detail contained in Appendix seven, but appendices were not made available for review on the website.

Guam EPA Response: **Yes, all signs will be properly secured. Please view our website at <http://www.guamepa.govguam.net> to review the appendices of the plan.**

6. *What about a fourth source -- naturally occurring? Is there no naturally occurring*

microorganisms?

Guam EPA Response: Yes, but the microbial organisms of concern are attributed to warm-blooded animal fecal matter. Indicators used in this program pertain to those that cause illness in humans or indicate the presence of pathogens that cause illness in humans.

7. *Throughout whole document, in general, word usage inconsistent — either use “microbial organisms”, “microorganisms” or “bacteria”. Also either “bacterial contamination” or “microbiological contamination”.*

Guam EPA Response: Change noted. Definitions listed below have been included in the document to clarify terms used. Further clarification and consistent use of terms will be addressed in the next review scheduled for 2004.

DEFINITIONS

Bacterial: of, like or caused by bacteria.

Microbes: microorganisms, especially a bacterium that causes disease or fermentation.

Microbial: of or having to do with or caused by microbes.

Microbiological: dealing with microorganisms.

Microorganisms: microscopic or submicroscopic organisms including bacteria, pathogens and algae.

8. *Delete first “has” and insert “program” after “monitoring”*

Guam EPA Response: Change noted and corrected.

9. *On Page 2, paragraph 3, is 1986 date correct?*

Guam EPA Response: Yes, date is correct. This is a USEPA document titled “Ambient Water Quality Criteria for Bacteria – 1986.” EPA document number: EPA 440/8-84-002.

10. *If you are referencing a study by RBMP personnel, then the study/report should be referenced at the end of plan if it was an officially approved report/analyses.*

Guam EPA Response: No formal report is written; analysis of data was conducted as an in-house study. Any mention of the study is removed from the document.

11. *On Page 3, paragraph 3, make the following corrections:*
Line 2: delete “and is”
Line 3: insert “physical” after distinct
Line 5: delete “It is”, insert “Rocky Coastline accounts for” and delete “in”
Line 6: delete “length”
Line 7: delete “s” on “comprises”
Line 8: delete “centered” insert “located”
Line 9: insert “water quality as” after “for”
Line 10: delete “primary” insert “Excellent (Whole Body Contact)” insert M-1, delete M2, delete “and” insert comma after closed”, delete “secondary contact” insert “Good (Whole Body Contact) M-2 waters” and Fair (Limited Body Contact) M-3 waters by the Guam Water Quality Standards (GWQS, 2001).

Guam EPA Response: Change noted and corrected.

12. *If you compiled a total beach number — then state the number here. This is a confusing sentence because you talk about “total beaches” yet give no number, then you say you identified 73 accessible beaches then refer to a table in Appendix I that isn’t provided. (The down-loadable PDF from website does not contain Appendices). Insert: “Of the 73 accessible beaches, 39 were identified as monitored beaches.*

Guam EPA Response: Change noted and corrected.

13. *On Page 4, paragraph 1, whole section is weak you need to go into detail on your criteria. You haven’t justified or developed a foundation for subsequent sections.*

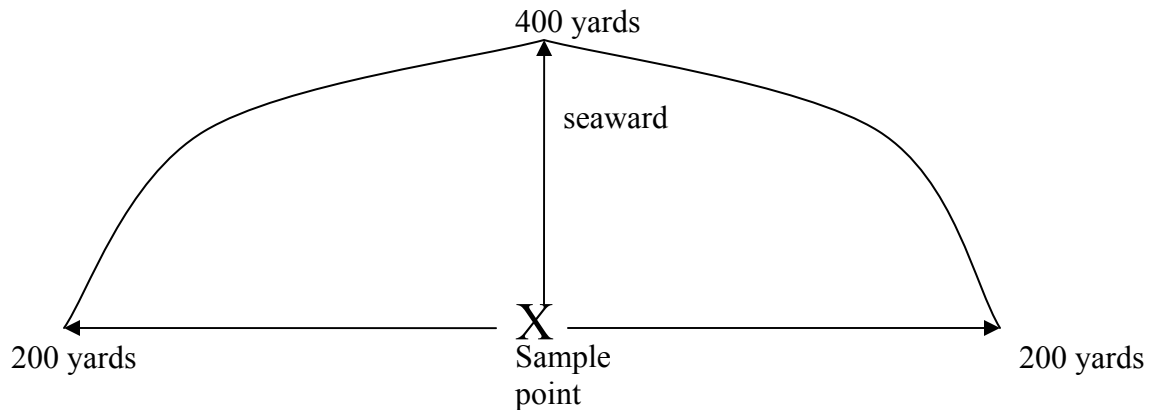
Guam EPA Response: Change noted and corrected.

14. *On Page 4, paragraph 3, line 1: insert “s” on “site”*

Guam EPA Response: Change noted and corrected.

15. *If the sample assesses water quality within 400yds, how can the entire beach be on the advisory if the beach is greater than 800 yards? [section VI.C]*

Guam EPA Response: RBMP fixed sites assess the quality of water in a 200 yard radius left and right of the sample site. Signs are placed above the high water mark but in line with the sample sites. Specifically, from where a fixed site is located the assessed area of beach is 200 yards of shoreline (0.23 miles) going left and right along the shoreline from the sample point and 400 yards seaward. A diagram follows:



***diagram not to scale**

Regardless of the total length of a beach, assessed shoreline miles will not exceed 400 yards total (0.46 miles) per sample site. Any area of beach outside the 200 yards left or right or 400 yards seaward of the sample point is not under a swimming advisory. Long beaches may include more than one site thus providing a comprehensive assessment. If two sites are closer than 400 yards, the shoreline distance between the two sites is divided equally and each fixed site will assess those portions. The number of miles monitored for all tier 1 beaches are listed in Tables 1 and 2. A map of this coverage will be provided in the next review scheduled for 2004. Maps will also be printed in local newspaper(s) and in advertisements on television. This response will be included in the document for further clarification.

16. *Table 1 on Page 4, - Put a “-“ between M and 2. This should be a global change for consistency in the plan and with GWQS*

Guam EPA Response: Change noted and corrected.

17. *On Page 7, section VI B 2 - Insert “which impacts the beach” after “sewage spill”*

Guam EPA Response: Change noted and corrected.

18. *Page 8, Line 3: Reword — you say “contaminated” twice in same sentence.*

Guam EPA Response: Change noted and corrected.

19. *Page 9, paragraph 1, last sentence: What are you trying to say - the 2-inch rainfall is a*

threshold value not a designation - reword.

Guam EPA Response: Change noted and corrected.

20. *On Page 9, section VI C paragraph 1, line 3: Table 1 is not “Guam’s Beaches”, it is “Monitored Beaches”, Table 2 is “Sampling Sites Designated for Monitoring after Heavy Rainfall”.*

Guam EPA Response: Change noted and corrected.

21. *On Page 9, section VI D: You should state the minimum depth at which you will collect sample at GPS location. Is there always water at every location?*

Guam EPA Response: Change noted and corrected. Minimum depth is 16-18 inches, knee deep, as outlined in section page.

22. *On Page 9- How did you decide the 2-inch rainfall? (I found later how the 2-inch rainfall is determined but this does not state how or why you decided on the 2-inch rainfall).*

Guam EPA Response: National studies show that heavy rainfall can influence bacterial/microbial concentrations at beaches. Due to lack of local sufficient studies, the heavy rainfall value is an interim threshold and was determined using NOAA rainfall data for Guam as stated in section IX.A.2.C. Decision on the value is based on the necessity to develop a value for a ‘heavy rainfall event’ on a subtropical island. Ideally, when this value is exceeded, an automatic swimming advisory is released and immediate resampling is initiated. Data collected by resampling will be analyzed to determine a proper ‘heavy rainfall event’ value at individual designated recreational beaches. Clarification of this threshold value and planned studies will be included in the document.

23. *On Page 10, section VII A- You should say “are assessed”, not “are collected”. In other words, based on your title of the section, you collect the sample and do an assessment as well. i.e. — site conditions, water temp, weather.*

Guam EPA Response: Change noted and corrected.

24. *On Page 10, section VIII A- Table 4 - Why put S-1, S-2 and S-3 waters in table if you don’t discuss where they are? You also don’t have standards for them. Take them out or explain them.*

Guam EPA Response: **Change noted and corrected.**

25. *On Page 15, paragraph 2: You should describe what is meant by “moderate body contact” or “limited body contact”.*

Guam EPA Response: **Change noted and corrected.**

26. *On Page 16, section IX A 1, paragraph 1: You are using primary and secondary contact terms instead of whole body contact and moderate or limited body contact. Consistency is needed.*

Guam EPA Response: **Change noted and corrected.**

27. *On Page 17, heading 2a, Line 4 “implemented soon” is ambiguous— revise.*

Guam EPA Response: **Change noted and corrected.**

28. *On Page 17, heading 2a, Last Line- It is not clear if a Pre-emptive Closure would occur even if data indicates all is O.K. You need to spell this out.*

Guam EPA Response: **Change noted and corrected.**

29. *On Page 17, heading 2a, paragraph 4, line 8:*

A) Color of sign should be yellow not Red.

B)No swimming icon should be left off. If the beach is not closed, they should be allowed to swim, shouldn't they?

Guam EPA Response: **A.) Change noted and corrected. B. ‘No swimming’ Icon removed.**

30. *On Page 18 first line: Leave out the last sentence it sounds too self serving.*

Guam EPA Response: **Change noted and corrected.**

31. *On Page 18, heading B:Will you issue Pre-emptive Closures on sewage spills without data? If so State Conditions.*

Guam EPA Response: **Yes. Upon report of sewage spill or leak, decision to close a beach will be determined by DPHSS and Guam EPA. If spill is deemed a public health threat, a closure will be in effect without sampling. The area of closure will be determined upon**

best professional judgment by DPHSS and Guam EPA. Further characterization of the contaminated area and removal of the closure will be done with sampling. These conditions have been included in the appropriate section.

32. *On Page 21, paragraph 1: Delete this paragraph from Report. GEPA takes many data sources into account within the watershed in developing Non-Point Source Pollution Investigations, of which one of them is beach monitoring data. There is no basis at this time to use this data alone over a relatively short time (5 wks — 5 samples) to perform a special evaluation. This plan is also not the correct forum. Special investigations, above baseline, are more than adequately addressed in the Guam Non-Point Source Program and Guam Point Source Program Plans.*

Guam EPA Response: Change noted and corrected.

33. *Generally a good plan, however, I would not use arial font it is not professional looking and not consistent with the majority of GEPA reports/plans. Also the headings format is clumsy and hard on the reader — suggest reconfigure.*

Guam EPA Response: Change noted and will be addressed in the next review scheduled for 2004.

34. *Section II.A Existing Monitoring Data Since the waters have shown continuous contamination over a period of time why are they not posted and closed until they are safe. This would mitigate the risk of exposure.*

Guam EPA Response: GEPA is currently researching a new closure procedure for beaches that are under swimming and wading advisories for extended periods with no known sources. This new closure procedure will be available for public review during the next review scheduled for 2004. In the mean time, source identification and mitigation measures are ongoing by GEPA sanitary inspectors and RBMP personnel.

35. *Section VI.B. 1. When To Conduct Additional Sampling. Beach closure will be in effect only after a sewage spill. Why only, what happens when the site is continuously failing standards, i.e. Toguan Bay due to sewage treatment plant putting out waste-water when they cannot treat it.*

Guam EPA Response: There are GEPA procedures in effect that regulate point source dischargers. Point source dischargers are required to apply for NPDES permits. Prior to issuing a permit, dischargers are aware of specific requirements that involve the monitoring receiving waters and the submittal of monitoring results. Also, any violation of the permit subjects the

discharger to penalties defined by law. Non-point source discharge is a different process - see question 34.

36. *The responsible party does not say anything? What next?*

Guam EPA Response: Consistent, dedicated sampling by GEPA and water authorities, routine sanitary inspections by GEPA and public outcry will identify many environmental problems. Law establishes penalties for violators. If the law has been broken, GEPA will pursue violators through investigation and legal action.

37. *Rainfall Due to runoff from hills that were burned? Something needs to be addressed from people starting fires.*

Guam EPA Response: GEPA addresses these issues through a Non-point Source Program. It involves monitoring and source identification of pollutants emanating from unknown sources.

38. *Citizens who live or work near these areas (sites) should have direct communication with EPA to notify them of problems when they occur.*

Guam EPA Response: GEPA relies on public knowledge and information concerning any environmental problem. Please call Guam EPA at 475-1658/9 to report possible environmental pollution. GEPA numbers are also posted on weekly swimming and wading advisories and on our webpage <http://www.guamepa.govguam.net>

39. *Noticed that there are no M-1 class sites being monitored. Any reason?*

Guam EPA Response: M-1 waters are located along the northern coast of the island of Guam. The northern coast of Guam is accessed mainly through military and privately owned lands. Recreational activity is limited by permission from the military and private land owners. Access to the beaches in the northern coast is also limited by its physical environment. This area is made up of cliff features and is remote. Access by boat is limited as the entire coast is terraced and high surf occurs year round. Monitoring and inspection occurs in this area by the US Air Force who may conduct beach monitoring near military lands. Also, the US Fish and Wildlife and the local Department of Agriculture monitors the area for activity because the

northwest coast is designated a preserve area. This explanation will be included in the appropriate section of the document.

40. *I assumed that "Table 1. Monitored Beaches" = Tier 1 beaches. Should identify all beaches and categorize them into other tiers (Tier 2 and 3), so that we have an accounting of the universe of beaches, and which are really monitored. Example: Tier 2 are less frequented beaches, not many sources, less frequent monitoring warranted; Tier 3 are very infrequently visited beaches, remote, and/or inaccessible, so not monitored routinely.*

Guam EPA Response: Change noted and corrected. "Table of Guam's Beaches" in Appendix 1 will be edited to list tier classification in the next review scheduled for 2004. Currently, all beaches monitored are classified as Tier 1.

41. *On page 6, section V.A. Beach Watch Survey, 2nd paragraph - Says reports are submitted annually. Would probably be better if submitted electronically quarterly instead of annually, so we can populate STORET more frequently.*

Guam EPA Response: Change noted and corrected.

42. *On page 7, section V.B. 305(b) Reporting, 1st paragraph - "Recreational beach water quality [insert "summaries are" here] submitted biennially..." Actually the real raw data will be required to be submitted annually. The summaries in 305(b) reports are on a biennial basis.*

Guam EPA Response: Change noted and corrected.

43. *On page 17, heading c. Heavy Rainfall Event, 1st paragraph - Middle of paragraph refers to Table 3. I believe it should say Table 2.*

Guam EPA Response: Change noted and corrected.