AMERICAN SAMOA ENVIRONMENTAL PROTECTION AGENCY

BEACH ACT GRANT APPLICATION 2012

Implementation of Coastal Recreational Water Monitoring and Public Notification Program



Director Fanuatele Dr. Toafa Vaiaga'e Address: P.O Box PPA Pago Pago, American Samoa 96799

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INTRODUCTION

The American Samoa Environmental Protection Agency (ASEPA) hereby submits this ASEPA FY 2012 grant application for the Implementation of our Coastal Recreation Water Monitoring and Public Notification Program under the Beaches Environmental Assessment and Coastal Health (BEACH) Act.

In FY 2002 ASEPA developed a program consistent with the nine performance criteria for the implementation of monitoring, assessment, and notification. The primary objective of the project was continued development of an enhanced coastal recreation water monitoring program for American Samoa.

In FY 2003 through FY 2011 ASEPA continued with full implementation of the beach monitoring and notification program. ASEPA also submitted an annual performance report, financial report, and monitoring and notification report for each fiscal year.

Continued Beach Act Grant funding awarded in FY 2011 enabled ASEPA to enhance its beach monitoring and public notification program. After receiving first hand training by USEPA Region 9 Standards and TMDL staff, ASEPA modified its excel beach database and enhanced the Beach Monitoring and Notification data submission through Access to STORET and PRAWN. ASEPA continued with the weekly publishing of advisories in local print media and with the activities for posting permanent beach advisory signs at public beaches in town areas. The publishing of the weekly beach advisory on the ASEPA website is a new notification method applied in 2011. (see <u>www.asepa.gov/beachadvisory.asp</u>)

Program Summary

The Territory of American Samoa is surrounded by approximately 149 miles of beaches. Residents and tourists of American Samoa use all of the 149 miles of beaches for both swimming and for family subsistence fishing. Thus, protection of public health by reducing the risk of disease acquired from swimming and recreating in contaminated waters is a great concern for the local community. Prior to 2002, the existing methods for monitoring recreational waters in the territory did not adequately protect public health.

The American Samoa Environmental Protection Agency addressed this public health concern through the continued development and implementation of an enhanced coastal recreation water monitoring and public notification program that was implemented in the ASEPA Nearshore Marine Water Quality Monitoring Plan. The program used BEACH Act Grant funds to develop a beach monitoring and notification program consistent with the nine performance criteria. Funds were used for personnel costs, staff training, equipment, supplies, public notification, intensive surveys and special studies. The program was further developed to achieve the following: (1) establish a water quality database that integrates current and future

efforts with previous data and identify water quality trends, (2) determine if selected water bodies support their designated uses for recreational swimming and family subsistence fishing support 305b efforts), and (3) verify the suitability of the American Samoa Water Quality Standards (ASWQS). As part of this monitoring program, a public notification process also was developed to inform the community of beaches that failed to meet the ASWQS for each sampling event.

The ASEPA Coastal Recreation Water Monitoring Program meets the statutory eligibility requirements and statutory grant conditions for previously awarded CWA section 406 grants listed in section II (Funding and Eligibility) of the FY 2012 Beach Grants notice.

Program performance criteria include:

1. Risk based Beach Evaluation and Classification

The Territory of American Samoa has approximately 149 miles of beaches. Beaches in American Samoa are, for the most part, characterized by the fringing coral reefs that surround all of the islands in the territory. Designated uses for these beaches are established in the ASWQS and include fishing and food gathering, recreation, support of marine life, mariculture, and scientific investigations.

Beaches were evaluated and classified according to (1) factors that indicate the potential risk to human health presented by pathogens, and (2) uses of the beach. More specifically, the potential risk to human health presented by pathogens at each beach was determined using all available information of suspected sources of human pathogen contamination of the water, and of pollution threats from urban point sources and urban and agricultural nonpoint sources. Invariably, all coastal recreation waters in the Territory are used year round for primary contact recreation due to the tropical climate. An additional factor considered in the evaluation and classification process was the effect of storm events on the waters.

Based on these potential risk factors and uses, a four tiered process was used to rank beaches. A classification of Tier 1 indicates that waters receive high usage in relation to waters of Tier 2, 3, and 4, and as such, are the focus of more intensive monitoring and public notification efforts. Tier 2 waters include beaches that are moderately used in relation to Tier 1 waters. Tier 3 waters are beaches that are not included in the Tier 1 and Tier 2 rankings. Beach users are predominantly local residents, and beach use by visitors are relatively lower than Tier 1 and 2 beaches. Finally, Tier 4 waters include beaches that are the least frequently used in relation to Tier 1, 2 and 3 waters.

Public comments regarding the beach list are addressed under Performance Criteria 9.

2. Develop Tiered Monitoring Plan

A sufficient sampling design and monitoring plan was developed to adequately address the following monitoring elements: public health, maximum number of

beaches, existing monitoring data, public review, adaptive monitoring approach, and quality control.

Moreover the monitoring plan was designed to specify frequency and location of monitoring and assessment of coastal recreation waters based on a) the periods of recreational use of the waters; b) the nature and extent of use during certain periods; c) the proximity of the waters to known point sources and nonpoint sources of pollution; and d) any effect of storm events on the waters.

Sampling is conducted throughout the year due to the tropical climate at weekly and monthly frequencies. Sites are grouped into sampling frequencies based on tiers and available resources. Tier 1 beaches, the high-risk waters, are sampled weekly and consist of seventeen beaches located within Pago Harbor and neighboring villages. Six beaches comprise Tier 2, the moderate risk waters, and are sampled monthly. The twenty-six remote beaches of Tier 3 are sampled weekly and on the same days as Tier 1 waters. Although the degree of Tier 3 beach use warrants less concentrated monitoring relative to Tier 1 and 2 waters, Tier 3 beaches are sampled weekly as a result of increased program resources and in order to generate statistically significant sample sizes for determining designated use support for recreational swimming and family subsistence fishing. Due to the remoteness of Tier 4 beaches, as well as remaining resource constraints, these lowest risk waters are not sampled at regular frequencies. Tier 4 beaches will be monitored when sufficient resources become available.

This tiered monitoring approach allows for the inclusion of the maximum number of beaches to be sampled with the available resources. At sites where a stream empties into the beach area, samples are collected in close proximity to the mouth of the stream. Additional sampling is conducted if a specific request is made for sampling. Samples are collected no lower than knee depth, independent of tidal level. The monitoring program is designed to undergo modification if current research determines improved monitoring protocols.

In addition to these elements, the ASEPA Coastal Recreation Water Monitoring Program undertook activities in support of establishing and implementing quality assurance and quality control (QA/QC) procedures, including producing data quality objectives (DQOs) and standard operation procedures (SOPs) to be applied to sample collection and data management. Documentation equivalent to a QMP and QAPP was submitted to EPA Region 9 to meet the ASEPA consolidated grant requirements; this documentation was reviewed and approved by the EPA Region 9 Quality Assurance Officer.

Public comments regarding the monitoring plan are addressed under Performance Criteria 9

3. Monitoring Report Submission and Delegation

ASEPA compiles their monitoring data into timely reports consistent with the list of required data elements. Monitoring data is reported by fiscal year, and is submitted quarterly to EPA Region 9 electronically and in print as an attachment to the ASEPA

Water Program's quarterly reports. Annual reports are submitted to the American Samoa Governor's Office and to other local agencies concerned with water quality data. In addition, these reports are made available to the public via the mass media.

ASEPA is responsible for the coastal recreation waters monitoring and public notification program. ASEPA does not delegate to local governments responsibility for implementing the monitoring and notification program.

4. Assessment Methods and Procedures

The ASEPA Water Quality Laboratory Staff is experienced in sample collection and in performing microbiological techniques needed to analyze water samples. The AS-EPA Laboratory is fully certified by EPA Region 9 to analyze water samples, and all ASEPA laboratory personnel are certified by EPA Region 9 as laboratory analysts for the detection of microbial contamination in water samples. The ASEPA Laboratory has the capability to analyze water for total coliforms and E. coli using the Colilert18® method, and enterococcus using the Enterolert® method. Marine samples are analyzed using the Enterolert ® method. Enterococci are enumerated using most probable number (MPN). A standard operating procedure was created for the Enterolert® method, and includes procedures for sample collection, handling, and analysis procedures.

The assessment procedures for identifying short-term increases in pathogens and pathogen indicators which are harmful to human health in coastal recreation waters, including increases in relation to storm events, are based on single sample enterococci densities as opposed to geometric mean densities. The climate of the Territory is tropical, with June through September being the driest months and December through March being the wettest, but heavy showers occur consistently throughout the year, oftentimes on a daily basis (e.g., 3 inches/day is not unusual). The EPA enterococci criteria listed in the <u>Ambient Water Quality Criteria for Bacteria – 1986</u> provides a geometric mean density for steady state dry weather conditions. The ASWQS allow the option to employ either a single sample or geometric mean density assessment, or both; however; ASEPA utilizes a more conservative single sample density assessment due to the incidence of heavy rain events in American Samoa, as well as the frequency with which samples are collected.

Additionally data verification and validation procedures are performed.

5. Public Notification and Risk Communication Plan

The development of an enhanced coastal recreation water monitoring program, an overall public notification and risk communication plan was designed to identify

measures to notify EPA, local government, and the public when indicator bacteria levels exceed a water quality standard. Furthermore, the plan describes efforts and measures taken by the ASEPA to inform the public of the potential risks associated with water contact activities in the coastal recreation waters that do not meet the ASWQS. The plan also describes the notification report submission and delegation process utilized by ASEPA.

6. Measure to Notify EPA and Local Governments

ASEPA issues water quality exceedance advisories as public notices to promptly communicate to EPA and local government that the coastal recreation waters are not meeting or are not expected to meet ASWQS for pathogens and pathogen indicators. Public notices are authored by the ASEPA Staff, and include information explaining the potential risks associated with water contact activities in the coastal recreation waters that do not meet the ASWQS, and recommending to the public to avoid swimming in such waters to reduce the potential of contracting a swimming related illness. Additionally, public notices include details identifying problem beaches, explanations for the advisory, duration of the advisory, and contact information for the ASEPA.

Public notifications are disseminated in English and Samoan, and if requested, are disseminated in additional languages bearing in mind the various cultural groups residing on island. Reports are prepared by ASEPA Staff on the same day that the results are available, and are submitted to the American Samoa Governor's Office and other local agencies concerned with water quality data. ASEPA reports all data, including exceedances of ASWQS, to EPA Region 9 quarterly. In addition, ASEPA submits annual reports to EPA Region 9 summarizing all data, exceedances of ASWQS, and actions taken to notify the public. All data reports are submitted in hard copy and electronically. Electronic submissions are STORET compatible.

7. Measure to Notify the Public

ASEPA also issues public notices to the public to promptly communicate when the coastal recreation waters are not meeting or are not expected to meet ASWQS for pathogens and pathogen indicators. In the event of an imminent public health hazard (sewage line break or other high-risk contamination source) at a beach, ASEPA officially closes the beach and any contaminated recreation waters adjacent to the beach. Beaches remain closed to the public until further sampling and laboratory analyses indicate that enterococci concentrations are within water quality standards. Reports are prepared on the same day that the samples are analyzed by ASEPA Staff, and results are submitted to the public via the mass media.

Several measures are taken to inform the public of an advisory or beach closure. The primary means for prompt communication are the local radio and television stations, two local newspapers, Samoa News and the Samoa Post, and the American Samoa Government newsletter Tapuitea. A new addition, publishing of the weekly beach advisory on the ASEPA website began in 2011. Public notices authored by the ASEPA Staff are issued weekly to inform the public of advisories or

closures, cancellation of advisories or closures Signs in English and Samoan are posted as advisories at beaches that are contaminated as well as the ones that meet AS-EPA water quality standards. The beach advisory signs are color coded to reflect "green" being good and safe beaches and red indicating "contaminated beaches. Beach signs are changed every week after results are received.

Public comments regarding evaluation of notification programs effectiveness is addressed under Performance Criteria 9.

8. Notification Report Submission and Delegation

ASEPA issues public notices to promptly communicate to EPA, local government, and the public that the coastal recreation waters are not meeting or are not expected to meet ASWQS for pathogens and pathogen indicators. ASEPA compiles their notification activities into timely reports consistent with the list of required data elements. Notification data is reported by fiscal year, and is electronically submitted quarterly to EPA Region 9 and the American Samoa's Governor's Office. Current notification data is promptly made available to the public via the mass media.

ASEPA is responsible for the coastal recreation waters monitoring and public notification program. ASEPA does not delegate to local governments responsibility for implementing the monitoring and notification program.

9. Public Evaluation

ASEPA employs several methods to provide the public with opportunities to review and to comment on the ASEPA Coastal Recreation Water Monitoring Program. Public notices are issued annually via the local newspaper, Samoa News, requesting public comments regarding (1) the beach evaluation and classification process, including a list of waters to be monitored and beach ranking; (2) the sampling design and monitoring plan, including sampling location and sampling frequency; and (3) the public notification and risk communication plan, including methods to notify the public of a beach advisory. To achieve these ends, ASEPA maintains a file containing the ASEPA Nearshore Marine Water Quality Monitoring Plan, a summary of historical bacteriological data of coastal recreation waters, the ASWQS, and the advisory format used to give notice to the public that the coastal recreation waters are not meeting or are not expected to meet the ASWQS. In FY 2010, the public was invited to review this file and submit comments in writing to ASEPA within 30 days of the published date of the notice. (See Appendix A for the Public Notice – Annual Request for Comments).

The process used by ASEPA to evaluate the notification program's effectiveness is also included in the ASEPA Nearshore Marine Water Quality Monitoring Plan. Surveys are distributed to the public regarding the notification program's effectiveness, general perceptions of water quality and health problems, whether beach users desire a monitoring and notification program, and level of satisfaction with the program that has been implemented. ASEPA surveys the public throughout the year in order to include a greater number and more diverse representation of the

population. Summary evaluations are completed and included in the annual monitoring and notification reports submitted to EPA Region 9.

Program Objectives for FY 2012

ASEPA will continue to provide American Samoa with beach advisories via new advisory boards in place in recreational beach areas as well as local newspapers and websites. Other program objectives for FY 2012 include continued implementation of the beach monitoring and public notification program. Beach data will also be used to fulfill the American Samoa NonPoint Source Monitoring Strategy requirements and Integrated Water Quality and Assessment report requirements.

DATA SUBMISSION PLAN

The ASEPA Data Submission Plan was previously submitted on January, 2010. The corresponding latitudinal and longitudinal measurement for each sample site is described in the Data Submission Plan. (See Appendix B for the ASEPA Data Submission Plan).

Appendix A. Public Notice – Annual Request for Comments

American Samoa Environmental Protection Agency January, 2012

Public Notice

The American Samoa Environmental Protection Agency (ASEPA) has developed the **ASEPA Nearshore Marine Water Quality Monitoring Plan** that addresses the need to monitor for nonpoint source pollution in American Samoa. A main group of pollutants that cause water quality impairments in American Samoa are pathogen indicators, specifically enterococcus in coastal recreation waters. Two objectives of the ASEPA Nearshore Marine Water Quality Monitoring Plan are to determine whether nearshore marine water quality meets the American Samoa Water Quality Standards (ASWQS) for enterococci, and to inform the public when coastal recreation waters do not meet ASWQS for enterococci, as well as the potential risks associated with the polluted waters.

The American Samoa Environmental Protection Agency has created a file that contains the ASEPA Nearshore Marine Water Quality Monitoring Plan, a summary of historical bacteriological data of coastal recreation waters, the American Samoa Water Qualtiv Standards, and the advisory format used to give notice to the public that the coastal recreation waters are not meeting or are not expected to meet applicable water quality standards for enterococci. These documents are available to the public at the ASEPA office in Utulei. ASEPA invites public comments concerning the monitoring and public notification program regarding: (1) the beach evaluation and classification process, including a list of waters to be monitored and beach ranking; (2) the sampling design and monitoring plan, including sampling location and sampling frequency; and (3) the public notification and risk communication plan, including methods to notify the public of a beach advisory. Comments must be submitted in writing within 30 days of the published date of this notice. Submit comments to the ASEPA office or by mail to ASEPA Water Program, P.O. Box PPA, Pago Pago, American Samoa 96799. For more information, please contact Josephine Regis at 633-2304.

Appendix B FY2012 Data Program Plan

Table E1	Description			
BEACH TRACKING ONETIME SUBMISSION				
Beach				
Name	See attached list "Beach Sampling Stations and Frequencies"			
Description	See attached list "Beach Sampling Stations and Frequencies"			
Comment Text	See attached list "Beach Sampling Stations and Frequencies"			
Organization				
Name	American Samoa Environmental Protection Agency			
Description	The state agency affliated with the US EPA, Region IX			
Short Name/Abbreviation	ASEPA			
Contact (State Lead/Beach Lead/Notificati	on Lead)			
First Name	Josephine			
Last Name	Regis			
Middle Initial	A			
Suffix	NA			
Title	Laboratory Manager, Water Program			
Suite/PO Box/Street/First Line	P.O. Box PPA			
City Name	Pago Pago			
State	AS			
ZIP Code	96799			
Electronic Address	j_regis96799@yahoo.com			
Telephone Number	6846332304			
Address Start Date	19Mar03			
Address Stop Date	Ongoing			
MONITORING ONETIME SUBMISSION				
Sampling Station				
Station Identifier	See attached list "Beach Sampling Stations and Frequencies"			
Station Name	See attached list "Beach Sampling Stations and Frequencies"			
Station Description	See attached list "Beach Sampling Stations and Frequencies"			
Water Level Measure	Knee deep			
Sampling Location Point				

Latitude Measure (UTM)	See attached list "Beach Sampling Stations and Frequencies"
Longitude Measure (UTM)	See attached list "Beach Sampling Stations and Frequencies"
Monitoring Lead Contact	
First Name	Josephine
Last Name	Regis
Middle Initial	A
Suffix	NA
Title	Laboratory Manager, Water Program
Suite/PO Box/Street/First Line	P.O. Box PPA
City Name	Pago Pago
State	AS
ZIP Code	96799
Electronic Address	j_regis96799@yahoo.com
Telephone Number	6846332304
Address Start Date	19Mar03
Address Stop Date	Ongoing

Appendix C. FY 2012 Project Budget

American Samoa Environmental Protection Agency

Implementation of Coastal Recreational Water Monitoring and Public Notification

PROJECT BUDGET FY 2012

Staff Training

The ASEPA Beach Monitoring staff will attend meetings / conferences and trainings relating to water quality monitoring and analysis in water; QA/ QC for laboratory work; watershed planning and comprehensive monitoring. Staff will also seek trainings to study and become skilled on nutrient posing threats to water bodies of American Samoa and how to use the Nutrient analyzer.

Travel

Vehicle maintenance and transportation expenses for the purpose of performing field work, including collecting samples, transporting samples to laboratory, and posting of advisory signs

Supplies

A one year supply of IDEXX reagent ENTEROLET ®, IDEXX sample bottles (without preservatives) and Quanti Tray Pacs, and pipetts will be needed for the detection and quantification of the enterococci in water samples. Miscellaneous supplies and consumables will be purchased as the need arise.

Personnel Costs

Grant funds will be used to finance ASEPA Beach Monitoring staff payroll

Public Notifications for Beach Advisories \$10,000.00

Grant money will be used to finance publication costs for ASEPA beach monitoring public notices issued weekly in the Samoa News and the Samoa Post, as well as advisories issued via the local radio and television stations. Funds will also be used to

\$11,000.00

\$60,000.00

\$11,000.00

\$200,000.00

support additional beach monitoring education and outreach programs as well as maintenance of beach signs for recreational beaches already in place.

Intensive Surveys and Special Studies \$11,000.00

AS-EPA will continue to use beach funds to support intensive surveys and special studies for scientific research to better protect the health of beach users, for the improvement of monitoring protocols and analytical methods, and for the enhancement of data collection and analyses. Potential areas of interest include evaluating effectiveness of the ASEPA Piggery Compliance Program by determining enterococci and nutrient load reduction at beaches, studying the appropriateness of current indicator organisms in tropical environments, and conducting an intense survey of selected streams for pathogen distribution.

American Samoa Environment Protection Agency Beach Sampling Stations & Sampling Locations

ID #	Location	Watershed No.	Latitude ¹	Longitude ¹	Frequency	Tiers	Miles
1W	Tafuna Pala Lagoon	27	- 14.321721857	- 170.714181340	Weekly	1	4.39
2W	Nu'uuli Coconut Point	27	- 14.316862768	- 170.700381984	Weekly	1	4.39
3W	Nu'uuli Avau	26	- 14.307335428	- 170.694573971	Weekly	1	1.11
4W	Fatumafuti Beach	26	- 14.297999425	- 170.678319055	Weekly	1	1.11
5W	Faga'alu Beach	25	- 14.292206351	- 170.681509694	Weekly	1	0.67
6W	Gataivai Beach	25	- 14.284021101	- 170.677059742	Weekly	1	0.67
7W	Utulei Yacht Club Beach	24	- 14.281110849	- 170.681721405	Weekly	1	1.32
8W	Utulei Samoana Beach	24	- 14.279128439	- 170.682482466	Weekly	1	1.32
9W	Fagatogo Stream Beach	24	- 14.277080928	- 170.690022473	Weekly	1	1.32
10W	Aua Pouesi Beach	24	- 14.270054236	- 170.666689313	Weekly	1	1.32
11W	Aua Stream Beach	24	- 14.270922763	- 170.665093992	Weekly	1	1.32
12W	Aua Diosa Beach	24	- 14.275633670	- 170.664923426	Weekly	1	1.32
13W	Lauli'i Tuai Beach	23	- 14.287891776	- 170.652588993	Weekly	1	2.01
14W	Alega Stream Beach	22	- 14.280109159	- 170.637822950	Weekly	1	0.44
15W	Alega Beach	22	- 14.280375287	- 170.638302960	Weekly	1	0.44
16W	Avaio \$2 Beach	22	- 14.281033442	- 170.631565896	Weekly	1	0.44
17W	Nu'uuli Pala Spring	27	- 14.319707000	- 170.715294000	Weekly	1	2.92
		1	14.319/0/000	170.715294000		l	

1M	Auasi Wharf Beach - reclassifed in Tier 3 category, ID # 22Q						
2M	Aunu'u Wharf Beach	34	- 14.284351045	- 170.561312766	Monthly	2	3.37
3M	Ofu Beach	36	- 14.174186111	- 169.677661111	Monthly	2	5.19
4M	Olosega Beach	38	14.172683333	- 169.627822222	Monthly	2	4.05
5M	Ta'u Beach	40	- 14.240000000	- 169.510455556	Monthly	2	6.24
6M	Fitiuta Beach	40	- 14.214838889	- 169.423494444	Monthly	2	6.24
7M	Faleasao Beach	40	- 14.220655556	- 169.515580556	Monthly	2	6.24
						•	
1Q	Utumea East Beach	19	- 14.271375320	- 170.569526533	Weekly	3	0.56
2Q	Aganoa Beach (before Auasi)	19	- 14.274708453	- 170.578366793	Weekly	3	0.56
3Q	Aoa Bridge Stream Beach	15	- 14.261424593	- 170.586382218	Weekly	3	1.49
4Q	Sa'ilele LMS Beach	14	- 14.256291787	- 170.597749685	Weekly	3	1.48
5Q	Masefau Bridge Stream Beach	12	- 14.255765320	- 170.631701781	Weekly	3	4.53
6Q	Fagaitua HS Beach	21	- 14.268869759	- 170.615740084	Weekly	3	1.84
7Q	Auto Vikings Mart Beach	21	- 14.278144357	- 170.628074435	Weekly	3	1.84
8Q	Vatia Bridge Stream Beach	10	- 14.250567996	- 170.675219554	Weekly	3	4.01
9Q	Fagasa Stream Beach	8	- 14.285481939	- 170.720604358	Weekly	3	2.29
10Q	Malota Stream Beach	3	- 14.303693798	- 170.815880565	Weekly	3	0.44
11Q	Malota Gurr Beach	3	- 14.304100367	- 170.816455845	Weekly	3	0.44
12Q	Amanave LMS Beach	33	- 14.326364580	- 170.830318637	Weekly	3	1.85
13Q	Utumea West Beach	32	- 14.329360954	- 170.815022751	Weekly	3	2.65
14Q	Leone Pala Bridge Beach	30	- 14.336459091	- 170.787326519	Weekly	3	2.47
ID #	Location	Watershed No.	Latitude ¹	Longitude ¹	Frequency	Tiers ²	Miles
15Q	Taputimu Sliding Rock	30	- 14.359240763	- 170.778352633	Weekly	3	2.47
16Q	Asili LMS Beach	31	- 14.331352000	- 170.797026000	Weekly	3	1.24
17Q	Tafuna Plain Beach	28	- 14.341446000	- 170.721677000	Weekly	3	3.48
18Q	Fagasa-Fagatele Boat House Beach	8	- 14.258234000	- 170.723971000	Weekly	3	1.15
19Q	Afono Beach	11	-	-	Weekly	3	3.44

			14.258540000	170.351631000			
20Q	Alofau Asasama Stream Beach	21	- 14.273389000	- 170.604501000	Weekly	3	1.23
21Q	Amouli Beach	20	- 14.274277000	- 170.585368000	Weekly	3	2.41
22Q	Auasi Wharf Beach	19	- 14.271586669	- 170.572921948	Monthly	2	0.56
23Q	Alao Beach	18	- 14.263676000	- 170.563593000	Weekly	3	0.70
24Q	Tula Beach	17	- 14.254213000	- 170.564216000	Weekly	3	2.50
25Q	Onenoa Beach	16	- 14.251609000	- 170.581501000	Weekly	3	0.90
26Q	Tafuna Plain Swimming Hole	28	- 14.340956000	- 170.721741000	Weekly	3	3.48
27Q	Masausi Beach	13	- 14.255236000	- 170.611922000	Weekly	3	1.69

<u>NOTE</u>¹: Latitude and Longitude measured using the Universal Transverse Mercator System

ID #	Location	Watershed No.	Latitude ¹	Longitude ¹	Frequency	Tiers ²	Miles
1Nm	Poloa Beach	1	- 14.317461000	- 170.834867000	TBD	4	1.35
2Nm	Fagali'i Beach	2	- 14.306381000	۔ 170.825856000	TBD	4	1.81
3Nm	Fagamalo Beach	4	- 14.298264000	۔ 170.810114000	TBD	4	3.24
4Nm	Aoloau Sasae	5	- 14.292653000	- 170.791836000	TBD	4	3.33
5Nm	Aoloau Sisifo	6	- 14.295042000	۔ 170.779692000	TBD	4	2.62
6Nm	Aasu Beach	7	- 14.292161000	۔ 170.759631000	TBD	4	4.48
7Nm	Fagatuitui - Vaaogeoge	9	- 14.262431000	- 170.705375000	TBD	4	8.61
8Nm	Afono Beach	11	- 14.258544000	- 170.651697000	TBD	4	3.44
9Nm	Masausi Beach - reclassified in Tier 3 category, ID # 27Q						
10Nm	Onenoa Beach - reclassifed in Tier 3 category, ID # 25Q						
11Nm	Tula Beach - reclassifed in Tier 3 category, ID # 24Q						
12Nm	Alao Beach - reclassifed in Tier	⁻ 3 category, I	D # 23Q				
13Nm	Amouli Beach - reclassifed in Tier 3 category, ID # 21Q						
14Nm	Tafuna Plain Beach & Swimmir	ng Hole - recla	assified in Tier 3 (category, ID # 17G	& # 26Q		
15Nm	Fagatele - Larsen	29	- 14.358589000	- 170.752358000	TBD	4	5.73
16Nm	Asili Beach - reclassified in Tier	r 3 category, I	D # 16Q				
17Nm	Aunuu Sasae	35	- 14.284692000	- 170.546589000	TBD	4	0.11
18Nm	Ofu Matu	37	-	-	TBD	4	4.16

			14.167372000	169.633589000			
19Nm	Olosega Sasae	39	- 14.172336000	- 169.609708000	TBD	4	3.36
20Nm	Tau Saute	41	۔ 14.248861000	- 169.459931000	TBD	4	6.36

NOTE¹: Latitude and Longitude measured using the Universal Transverse Mercator System

<u>NOTE²</u>: Recreational waters classified as Tier 4 beaches are not currently sampled. Tier 4 recreational waters will be sampled as resources become available.

*TBD - To be determined

BEACH TRACKING CONTINUOUS SUBMISSIONS			
Organization			
Name	American Samoa Environmental Protection Agency		
Description	The state agency affliated with the US EPA, Region IX		
Short Name/Abbreviation	AS-EPA		
Contact (State Lead/Beach Lead/Monitoring	Lead/Notification Lead)		
First Name	Josephine		
Last Name	Regis		
Middle Initial	A		
Suffix	NA		
Title	Laboratory Manager, Water Program		
Suite/PO Box/Street/First Line	P.O. Box PPA		
City Name	Pago Pago		
State	AS		
ZIP Code	96799		
Electronic Address	j_regis96799@yahoo.com		
Telephone Number	684-633-2304		
Address Start Date	19-Mar-03		
Address Stop Date	On-going		