

**DATABASE
ON
WATER AND ENVIRONMENTAL QUALITY
IN AQUATIC AND INSHORE MARINE
ECOSYSTEMS ON GUAM**

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SECTION I

SUMMARY, TABLES AND MAPS

A. INTRODUCTION AND SUMMARY

This database is a compilation of published and unpublished surveys of water quality in surface waters and inshore marine waters on Guam. Included in the surface waters (hereafter referred to as aquatic) are rivers and many of their tributary streams and creeks, swamps and other brackish estuarine waters, springs and freshwater lakes, including Fena Reservoir and man-made lakes on golf courses. Ponding basins and storm drains are also included because these waters often run into streams or collect and form temporary ponds. Marine areas include reefs and bays. Not included in the scope of this project are groundwater or marine waters beyond the outer reef slope.

The purpose of this database is to compile a profile of all research done in these areas to be used for development of a monitoring plan for aquatic and marine waters on the island. No numerical data is included in the database, instead, each record is a profile of what data was collected in each report, the report title, author, year, survey site and other data useful in designing a monitoring strategy.

Although most of the reports were one-time surveys, some were longer-term regular or sporadic monitoring over several weeks or years. Some reports detail monitoring done during a particular construction project, others are ongoing monitoring of discharges from a power plant or other site, and still others are research surveys of a particular ecosystem for baseline or other research purposes.

The database spans from 1951 through May of 1994 and contains a total of 526 discrete records. It is not likely that every relevant published report is included because many reports have been lost and could not be found in any of the institutions visited. However, most of them were found, and it is hoped that as new reports are published, they will be added to the database.

Parameters include not only traditional water quality parameters such as bacteria, temperature and various chemical constituents, but also environmental parameters such as the flora and fauna observed in a survey area.

The next section (I.B) describes what information is found in each database record, that is, all the information for a single survey at a single

site. Because of space limitations, many abbreviations were used in the database and are detailed in Section I.C.

Section I.D lists each site surveyed, the total number of surveys per site and the range of years during which each site was surveyed. Section I.E is a series of eight tables that detail what parameters were surveyed at each site. These two sections will be useful to reviewers in designing the monitoring strategy for the future.

Section I.F contains the maps showing how the island was divided into survey sectors (Figure 1) and four color sector maps showing the location of each survey site (Figures 2 through 5). Section I.G acknowledges the help given by individuals and agencies in preparing this report.

Section II is the database organized by Type, Sector and Site. Each page contains two records, and within a sector, sites are organized alphabetically.

B. FIELDS

A field in a database is a discrete category of information (i.e. author). Each record in this database contains ten fields, and is organized as shown below. An explanation of each field follows.

EXAMPLE OF A RECORD IN THE DATABASE

Sector	East	Year	1979
Site	Fena Lake, adjoining rivers, Type Aquatic		
Title	Terrestrial and Freshwater Organisms Within, and Limnology and Hydrology of, the Guam Seashore Study Area and the War In the Pacific National Historical Park		
Author	L. Raulerson		
Location	BOP		
Frequency	Once		

Notes A third to half of current and proposed endangered and threatened species found in this area

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

1. Sector

For this database Guam is subdivided into four sectors; East, North, South and West. Each sector contains over 110 surveys. The sector configurations are shown in Figure 1 on Page 27.

2. Site

Each survey took place at a particular location on Guam such as the Ylig River or Ylig Bay. A total of 147 survey sites are included in the database of which 62 are marine and 85 are aquatic. Many reports surveyed several sites so the database contains a separate record for each of these sites (i.e. one report may be in the database 30 times, once for each location surveyed). Many site names are followed with a parenthesis containing more site-specific information (i.e. Agana Bay (Dungca's Beach)).

3. Type

Each survey site is categorized as either marine or aquatic. Marine refers to surveys on a reef or in a bay up to the outer reef slope, while aquatic refers to areas of freshwater or the brackish waters of estuaries and swamps. Aquatic also refers to water discharged from a power plant or sewage treatment plant before it enters a body of water. When a discharge is sampled after it has entered a body of water, it is categorized according to the body of water it enters (i.e. if it is discharged into a bay, it is categorized as marine).

4. Title

The title of the survey report may not be a formal title if none was given. For instance, some reports are collections of numerical data with no text or title. These are given a name that describes the data (i.e. Piti Power Plant discharge).

5. Year

This is the year the report was published. Where data collection is ongoing, as for power plant discharges, the year monitoring began is followed by the word "ongoing" (i.e. 1975, Ongoing). Only three reports were published prior to 1970, one in 1951, one in 1965 and one in 1968.

6. Author

Where there are three or more authors, only the first author is given (i.e. R. H. Randall et al). Authors include agencies and private firms.

7. Location

Each record includes the reference location, or where the report can be found on Guam. This information is included because no single location contains all the reports. A total of 18 local and federal agencies and other sources were researched to compile the reports, and 14 of them are listed in the database as reference locations. Most reports are available at one of the institutions of the University of Guam (Marine Laboratory, Water and Energy Research Institute, the UOG Library and Micronesian Area Research Center), the Guam Environmental Protection Agency archives and the Bureau of Planning archives. Several reports are also available at the Division of Aquatics and Wildlife Resources and in the personal archive of Richard H. Randall, a retired professor from the UOG Marine Laboratory. Many of the reports can also be found in other locations than the one listed.

The Marine Laboratory (ML) and Water and Energy Research Institute (WERI) have published numerous Technical Reports that are included in the database. The Technical Report number is included in the Location field as follows: ML Tech 24 (or WERI Tech 55). The Marine Laboratory also prepared numerous Environmental Survey Reports (ESR). Most of these are located in Richard Randall's personal archive as follows: Randall ESR 22.

8. Frequency

This information shows how often a site was surveyed for a report. The vast majority of reports are of a single survey, or are of several surveys performed sporadically over a period of time. However, where a survey was conducted regularly over a period of time, it is noted (i.e. weekly for two months).

9. Notes

This section contains survey conclusions when relevant to designing a monitoring strategy as well as other information useful in understanding the report. This field is usually blank because most of the monitoring reports have no relevant conclusions and contain only numerical data, species lists or statistical data.

10. Parameters

A total of 14 parameter groups were chosen for this project. A miscellaneous group includes parameters that do not fit in the main groups. Each parameter group is described in this section.

BIOLOGICAL PARAMETERS FOR AQUATIC ECOSYSTEMS

Flora: Aquatic plants. No terrestrial plants are included except where they are living in an aquatic habitat.

Fauna: Aquatic animals, including fish and macroinvertebrates such as Mollusks, Crustaceans and others.

BIOLOGICAL PARAMETERS FOR MARINE ECOSYSTEMS

Corals: Hard corals (Scleractinia).

Algae: Marine algae and seagrasses.

Fish: Marine fish.

Macros: Marine macroinvertebrates, including Cnidaria, Crustaceans, Mollusks, Echinoderms and others.

WATER QUALITY PARAMETERS FOR MARINE AND AQUATIC ECOSYSTEMS

Temp: Temperature.

Solids: Turbidity, transparency (Secchi), suspended solids and sediments, settleable solids and sediments, total nonfilterable residue, nonfilterable residue and others.

Nutr: Nitrogen and phosphorus in various forms.

Oxygen: Dissolved oxygen, chemical oxygen demand, biological oxygen demand and others.

Org: Organic compounds including pesticides, foams, grease and oil, MBAS, chloroform and others.

Inorg: Inorganic compounds and elements including heavy metals, chloride, chlorine and fluoride.

PhysChem: PH, alkalinity, hardness, bicarbonates, CO₂, corrosivity, salinity, dissolved solids, specific conductance, electric conductance and others.

Bact: Bacteriological parameters such as fecal coliform, total coliform, enterococci, plate counts and others.

Misc: Radionucleides such as alpha, beta and radium, algal biomass, chlorophylls, phytoplankton, productivity, periphyton biomass, substrate, currents, color, odor, taste and others.

C. LIST OF ABBREVIATIONS

These abbreviations are used extensively in the database.

AAFB	Anderson Air Force Base
ACOE	Army Corps of Engineers
BOP	Bureau of Planning
DAWR	Division of Aquatics and Wildlife Resources (part of DOA)
DOA	Department of Agriculture
DPR	Department of Parks and Recreation
EBS	Environmental Baseline Survey
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPP	Environmental Protection Plan
MARC	Micronesian Area Research Center
MI	Marianas Islands
OTEC	Ocean Thermal Energy Conversion
PB	Ponding Basin
PBEC	Pacific Basin Environmental Consultants, Inc.
PUAG	Public Utilities Agency of Guam
SD	Storm Drain
STP	Sewage Treatment Plant
USGS	United States Geological Survey
WERI	Water and Energy Research Institute

D. SITE TABLES

This section lists each survey site within a sector/type. For each site, the number of surveys performed and the range of years in which they were performed is given. A total of 147 discrete sites are included in the database.

SITE	SURVEYS	YEARS
EAST AQUATIC SECTOR		
Alamagosa Springs	1	1965
Asanite Cave	1	1965
Baza Gardens	2	1989, Ongoing
Bona Springs	1	1965
Bubulao River	3	1976-1994
Fena Lake	9	1951-1992
Imong River	1	1970's-1980's
Ladai Creek	1	1980
Lonfit River	4	1974-1990
Maagas River	2	1974-1991
Mahlac River	3	1989-1993
Manengon River	4	1970's-1980's
Maulap River	1	1970's-1992
Pago River	8	1974-1991
Sereno Ave (PB)	1	1981
Sigua River	2	1974-1991
Talofofo River	4	1974-1991
Tarzan River	3	1989-1994
Tepungan River	1	1980
Togcha River	4	1989-1993
Ugum River	13	1976-1990
Ylig River	12	1970's-1993

SITE	SURVEYS	YEARS
NORTH AQUATIC SECTOR		
Airport Road PB and SD	3	1978-91
Barrigada Heights PB and SD	2	1978-81
Change Springs	1	1965
Dededo SD	1	1978
Fadian Cave	1	1984
Hilaan Cenote	1	1984
Janum Springs	3	1965-1984
Latte Heights PB and SD	2	1978-1981
Marbo Cave	2	1984-1989
Marianas Terrace SD	1	1978
Perez Acres PB and SD	3	1978-1981
Santa Rosa Springs	1	1965
Tarague Cave	2	1965-1984
Tarague Springs	1	1974
Tumon Bay SD's	1	1978
Yigo (Golf Course Lakes)	1	1993-1994

SITE	SURVEYS	YEARS
SOUTH AQUATIC SECTOR		
Agfayan River	1	1968-1972
Alatgue Springs	1	1965
Geus River	8	1970's-1991
Inarajan River	4	1970's-1990
La Sa Fua River	3	1974-1992
Laelae River	2	1974-1992
Liyog River	1	1980
Madog River	3	1974-1992
Malojloj Springs	1	1965
Piga Springs	1	1965
Pigua River	1	1986
Siligin Springs	1	1965
Sumay River	1	1980
Tinago River	1	1970's-1980's
Toguan River	3	1980-1992
Umatac River	8	1965-1990
Y Ledigao River	1	1985

SITE	SURVEYS	YEARS
WEST AQUATIC SECTOR		
Agana Swamp, River, Springs	12	1965-1991
Aguada River	1	1980
Asan River	1	1981
Asan Springs	1	1965
Atantano River	1	1975-1991
Auau Springs	1	1965
Big Gautali River	1	1975-1991
Camp Watkins Road (SD)	1	1978
Chaligan Creek	1	1980
Chaot River	3	1974-1990
Dungca's Beach (SD)	1	1978-1981
East Agana Bay (SD)	1	1978-1991
Faata Springs	1	1965
Finile Creek	1	1970's-1980's
Fonte River	2	1978-1991
Maina Springs	1	1965
Mao Springs	1	1965
Masso River	1	1980
Namo River	1	1974-1991
NAS SD	1	1978
Pagachao Creek	1	1974-1991
Rivers in Agat	1	1981
Santa Rita Lakes	1	1990
Santa Rita Springs	1	1965
Sasa River	1	1975-1991
Talayag River	1	1991-1992
Taguac River	1	1980
Taleyfac River	3	1974-1992
Tipalao (at outfall)	1	1993
West Agana Bay (SD)	1	1978

SITE	SURVEYS	YEARS
EAST MARINE SECTOR		
Asiga Reef	1	1990
Coastal Waters	2	1990-1994
Ipan Reef	1	1970, Ongoing
Mana Bay	1	1987
Pago Bay	8	1970, Ongoing
Tagachan Reef	1	1970, Ongoing
Talofofo Bay	6	1970, Ongoing
Togcha Bay	5	1970, Ongoing
Ylig Bay	6	1965, Ongoing
NORTH MARINE SECTOR		
Achae Point Reef	1	1989
Amantes Point Reef	1	1991
Coastal Waters	2	1990-1994
Double Reef	4	1976-1990
Fadian Reef	2	1977-1991
Fafai Reef	5	1965, Ongoing
Haputo Reef	1	1977
Hilaan Reef	1	1984
Janum Point Reef	1	1976
Mangilao Reef	3	1976, Ongoing
Many Locations	1	1993
Marbo Reef	1	1989
Northeast Coast (No locations)	1	1991
North Tanguisson Reef	1	1976
Pajon Point Reef	1	1989
Ritidian Reef	3	1977-1991
Taguan Point Reef	1	1976
Tanguisson Reef	21	1970, Ongoing
Tarague Reef	4	1977-1993
Tumon Bay	28	1965, Ongoing
Uruno Reef	3	1975-1991

SITE	SURVEYS	YEARS
SOUTH MARINE SECTOR		
Achang Bay	5	1973-1979
Achugao Reef	1	1979
Agfayan Bay	1	1968-1972
Ajayan Bay	3	1965, Ongoing
Bile Bay	1	1979
Cetti Bay	3	1976-1979
Coastal Waters	2	1990-1994
Cocos Island (lagoon reef)	3	1990-1993
Cocos Island Seaward	3	1992-1993
Cocos Lagoon	20	1965, Ongoing
Fouha Bay	6	1975-1990
Inarajan Bay	4	1965, Ongoing
Inarajan Pools	1	1970, Ongoing
Nomna Bay	2	1965, Ongoing
Pauliluc Bay	1	1965, Ongoing
Sella Bay	3	1971-1979
Toguan Bay	5	1965, Ongoing
Umatac Bay	7	1970, Ongoing

SITE	SURVEYS	YEARS
WEST MARINE SECTOR		
Agana Bay	39	1965, Ongoing
Agat Bay	23	1965, Ongoing
Apra Harbor	31	1970, Ongoing
Asan Bay	5	1965, Ongoing
Cabras Island Reef	4	1974, Ongoing
Cabras Island Seaward	3	1972-1981
Coastal Waters	2	1990-1994
Luminao Reef	4	1977-1985
Orote Pointe Seaward	1	1977
Piti Bay	12	1965, Ongoing
Piti Channel	11	1972-1981
Taleyfac Bay	1	1976
Tipalao Bay	4	1981, Ongoing
Trinchera Reef	1	1984

E. PARAMETER TABLES

The following eight tables detail the parameters surveyed for each site within a sector/type. Because of space limitations only the first name is used (i.e. Agat Bay appears as Agat). In the marine sectors, each location is either a reef or bay, while in the aquatic sectors, locations are either rivers, creeks or as specified.

Where site abbreviations are used for sites with long names, they are noted on the bottom of the table. Other abbreviations used extensively are:

Cv = Cave
SD = Storm Drain
Sp = Springs

Where a * follows the site, no parameters are marked because these locations were from a single report that contained drainage discharge sites rather than survey data (Flooding and Drainage on Guam by ACOE). Parameter numbers on each table correspond to the parameters in the database as follows:

- | | |
|-----------|--------------|
| 1. Corals | 9. Nutr |
| 2. Algae | 10. Oxygen |
| 3. Fish | 11. Org |
| 4. Macros | 12. Inorg |
| 5. Flora | 13. PhysChem |
| 6. Fauna | 14. Bact |
| 7. Temp | 15. Misc |
| 8. Solids | |

EAST AQUATIC SECTOR

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Alamagosa								x	x			x	x		
Asanite Cv								x	x			x	x		
Baza Grd							x	x		x		x	x		
Bona Sp								x	x			x	x		
Bubulao					x	x	x	x		x			x		
Fena Lake					x	x	x	x	x	x	x	x	x	x	x
Imong							x								
Ladai*															
Lonfit					x	x	x	x	x	x	x	x	x	x	
Maagas						x	x	x	x	x			x	x	
Mahlac					x	x			x		x				
Manengon					x	x	x	x	x	x	x		x		
Maulap							x								
Pago					x	x	x	x	x	x		x	x	x	x
Sigua							x	x	x	x		x	x	x	
Sereno Av							x	x				x	x		
Talofofo						x	x	x	x	x			x	x	
Tarzan					x	x	x	x	x		x	x	x		
Tepungan*															
Togcha					x	x			x		x				
Ugum					x	x	x	x	x	x	x	x	x	x	
Ylig					x	x	x	x	x	x	x	x	x		

NORTH AQUATIC SECTOR

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Airport SD							x	x	x	x	x	x	x	x	
Barrig SD							x	x	x	x	x	x	x	x	
Change Sp								x	x			x	x		
Dededo SD							x	x	x	x	x	x	x	x	
Fadian Cv							x	x	x	x	x	x	x	x	
Hilaan Cen							x	x	x	x		x	x	x	
Janum Sp								x	x			x	x		
Latte SD							x	x	x	x	x	x	x	x	
Marbo Cv					x	x	x	x	x	x		x	x	x	
MarTer SD							x	x	x	x	x	x	x	x	
Perez SD							x	x	x	x	x	x	x	x	
Snta Rs Sp								x	x			x	x		
Tarague Cv							x	x	x	x		x	x	x	
Tarague Sp								x	x			x	x		
Tumon SD							x	x	x	x	x	x	x	x	
Yigo GcLks								x	x		x	x	x		

Hilaan Cen = Hilaan Cenote

Yigo GcLks = Yigo (Golf Course Lakes)

SOUTH AQUATIC SECTOR

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agfayan					x	x	x			x			x		
Alatgue Sp								x	x			x	x		
Geus					x	x	x	x	x	x	x	x	x	x	
Inarajan					x	x	x	x	x			x	x		
Laelae							x	x	x	x		x	x		
La Sa Fua							x	x	x	x	x	x	x	x	
Liyog*															
Madog							x	x	x	x		x	x	x	
Malojloj Sp								x	x			x	x		
Piga Sp								x	x			x	x		
Pigua							x	x	x	x		x	x		
Siligin Sp								x	x			x	x		
Sumay*															
Tinago							x								
Toguan												x			
Umatac					x	x	x	x	x	x		x	x		
Y Ledigao								x	x			x	x		

WEST AQUATIC SECTOR

20

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agana Aguada*					x	x	x	x	x	x	x	x	x	x	
Asan River Asan Sp						x	x			x			x		
Atantano Auau Sp							x	x	x	x		x	x	x	
Chaligan* Big Gautali							x	x	x	x			x	x	
CWR SD Chaot					x	x	x	x	x	x	x	x	x	x	
Dungca SD EAB SD							x	x	x	x			x	x	
Faata Sp Finile							x	x	x			x	x		
Fonte Maina Sp	x						x	x	x	x			x	x	
Mao Sp Masso*								x	x				x	x	
Namo NAS SD							x	x	x	x			x	x	

WEST AQUATIC SECTOR continued AQUATIC.....WEST SECTOR continued

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Pagachao							x	x	x	x			x	x	
Rvrs Agat							x		x				x		
Snta Rta Lk								x							
Snta Rta Sp								x	x			x	x		
Sasa							x	x	x	x			x	x	
Talayag												x			
Taguac*															
Taleyfac							x	x	x	x		x	x	x	
Tipalao					x	x									
WAB SD							x	x	x	x	x	x	x	x	

CWR = Camp Watkins Road

EAB = East Agana Bay

NAS = Naval Air Station

Rvrs Agat = Rivers in Agat

Snta Rta = Santa Rita

WAB = West Agana Bay

EAST MARINE SECTOR

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Asiga	x	x	x	x											
Coastal W												x		x	
Ipan														x	
Mana	x	x	x												
Pago	x	x	x	x			x	x	x	x		x	x	x	x
Tagachan														x	
Talofofo	x	x	x	x			x	x	x	x		x	x	x	
Togcha	x	x	x	x									x	x	
Ylig	x	x	x	x			x	x	x	x		x	x		x

Coastal W = Coastal Waters (no specified locations)

NORTH MARINE SECTOR

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Achae	x														
Amantes									x			x	x		x
Coastal W												x		x	
Double	x	x	x	x			x	x	x	x			x	x	x
Fadian	x	x	x	x					x			x	x		x
Fafai	x	x	x	x			x	x	x	x		x	x	x	x
Haputo	x	x	x	x											x
Hilaan							x	x	x	x		x	x	x	x
Janum	x	x													
Mangilao	x	x						x	x	x	x	x	x		x
Many Loc									x			x			
Marbo		x	x	x											
NE Coast									x			x	x		x
N Tanguis			x												
Pajon	x														
Ritidian	x	x	x	x					x			x	x		x
Taguan	x	x													
Tanguisson	x	x	x	x			x	x	x	x	x	x	x	x	x
Tarague	x	x	x	x					x			x	x		x
Tumon	x	x	x	x			x	x	x	x	x	x	x	x	x
Uruno	x	x	x	x					x			x	x		x

SOUTH MARINE SECTOR

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Achang	x	x	x	x											x
Achugao	x	x	x	x											
Agfayan			x	x			x			x			x		
Ajayan	x	x	x	x											
Bile	x	x	x	x											
Cetti	x	x	x	x											
Coastal W												x		x	
Cocos Is Rf	x	x	x	x				x							
Cocos Is S	x	x	x	x				x							
Cocos Lag	x	x	x	x			x	x	x	x			x	x	x
Fouha	x	x	x	x			x	x	x	x			x	x	x
Inarajan	x	x	x	x				x		x	x	x	x	x	
Inarajan P														x	
Nomna	x	x	x	x											
Pauliluc			x												
Sella	x	x	x	x											x
Toguan	x	x	x	x				x		x	x	x	x	x	x
Umatac	x	x	x	x			x	x	x	x	x	x	x	x	x

Inarajan P = Inarajan Pools

Cocos Is Rf = Cocos Island (lagoon reef)

Cocos Is S = Cocos Island Seaward

Cocos Lag = Cocos Lagoon

WEST MARINE SECTOR

Location	Parameter														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agana	x	x	x	x			x	x	x	x	x	x	x	x	x
Agat	x	x	x	x			x	x	x	x	x	x		x	x
Apra	x	x	x	x			x	x	x	x	x	x	x	x	x
Asan	x	x	x	x										x	
Cabras Isl		x	x				x	x	x		x	x	x		x
Cabras S	x	x	x	x											x
Coastal W												x		x	
Luminao	x	x	x	x			x	x	x				x		x
Orote Pt	x	x	x	x			x	x		x			x		x
Piti Bay	x	x	x	x			x	x	x	x		x	x	x	x
Piti Chan	x	x	x				x	x	x	x			x		x
Taleyfac	x	x													
Tipalao	x	x	x	x			x	x	x	x	x	x	x	x	x
Trinchera							x	x	x	x		x	x	x	x

Agana = Agana River, Agana Springs and Agana Swamp

Apra = Apra Harbor

Cabras Isl = Cabras Island Reef

Cabras S = Cabras Island Seaward

Coastal W = Coastal Waters (no specified locations)

Piti Chan = Piti Channel

F. MAPS

Figure 1. Map of Guam showing the four sectors of the database: North, South, East and West. Locations listed are those with five or more surveys profiled in the database.

Figures 2, 3, 4 and 5. Each map is a sector map showing all aquatic and marine sites found within that sector. Figure 2 is the East Sector, Figure 3 is the North Sector, Figure 4 is the South Sector and Figure 5 is the West Sector.

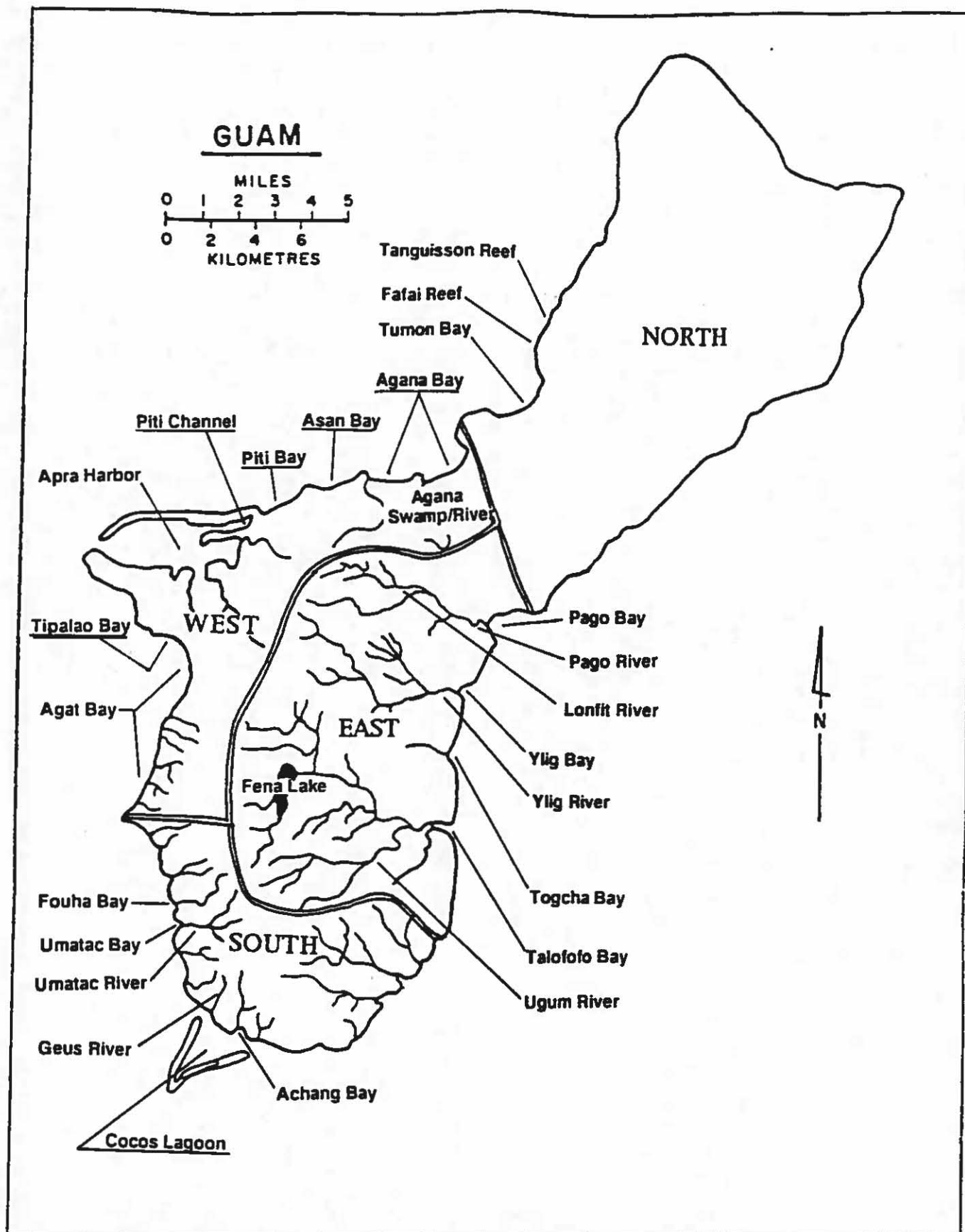


Figure 1. Map of Guam showing the four sectors of the database: North, South, East and West. Locations listed are those with five or more surveys profiled in the database.

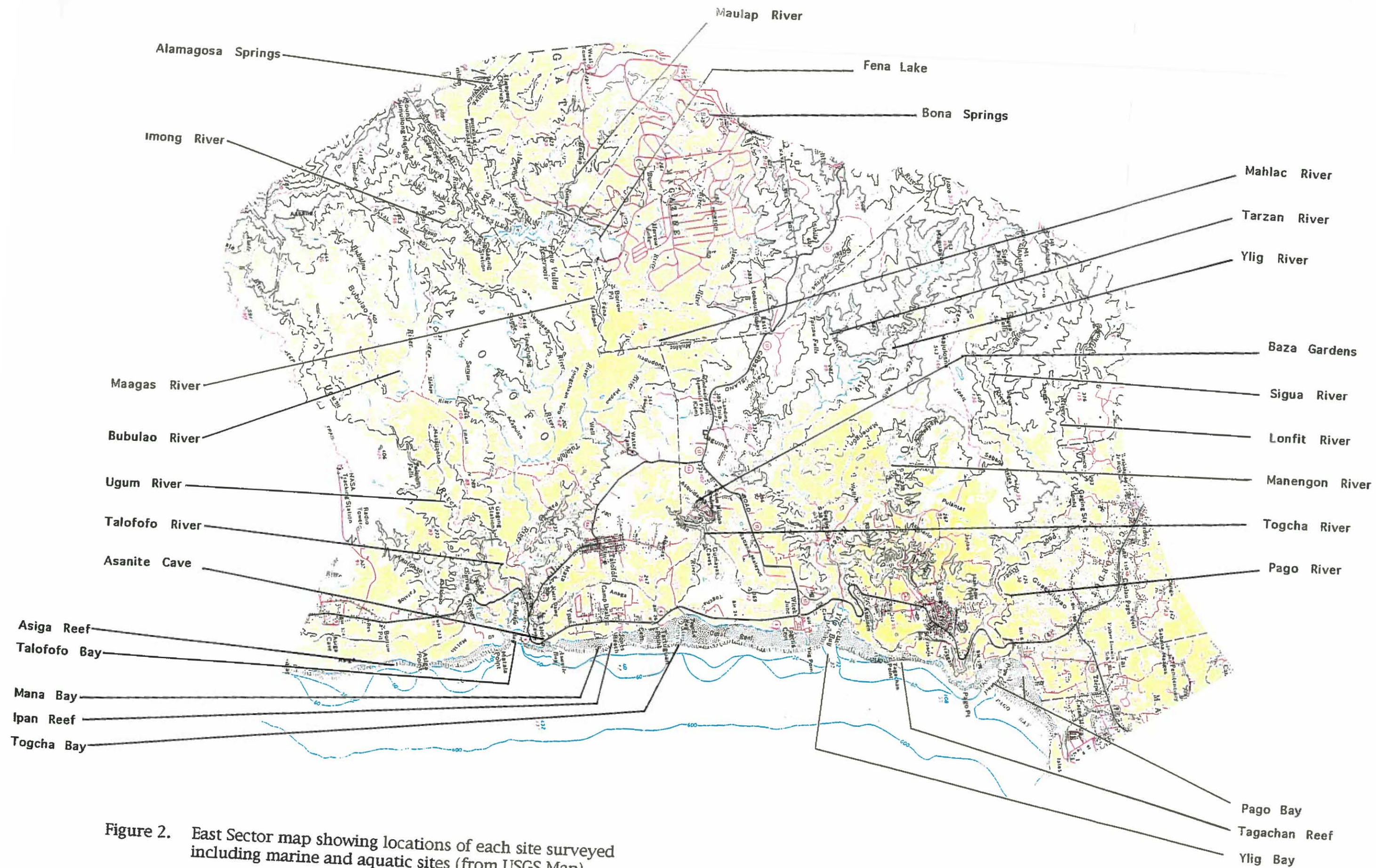


Figure 2. East Sector map showing locations of each site surveyed including marine and aquatic sites (from USGS Map).

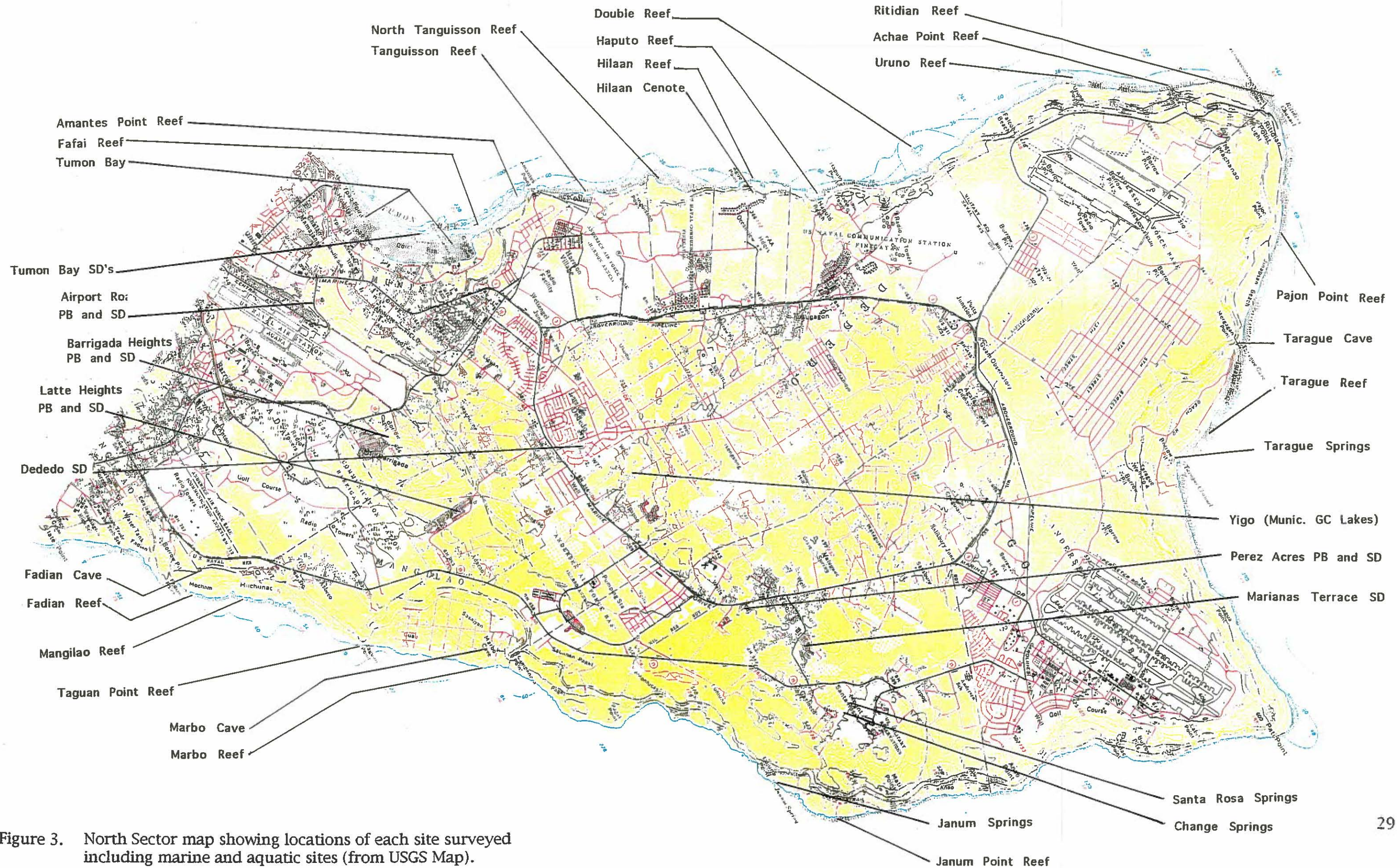


Figure 3. North Sector map showing locations of each site surveyed including marine and aquatic sites (from USGS Map).

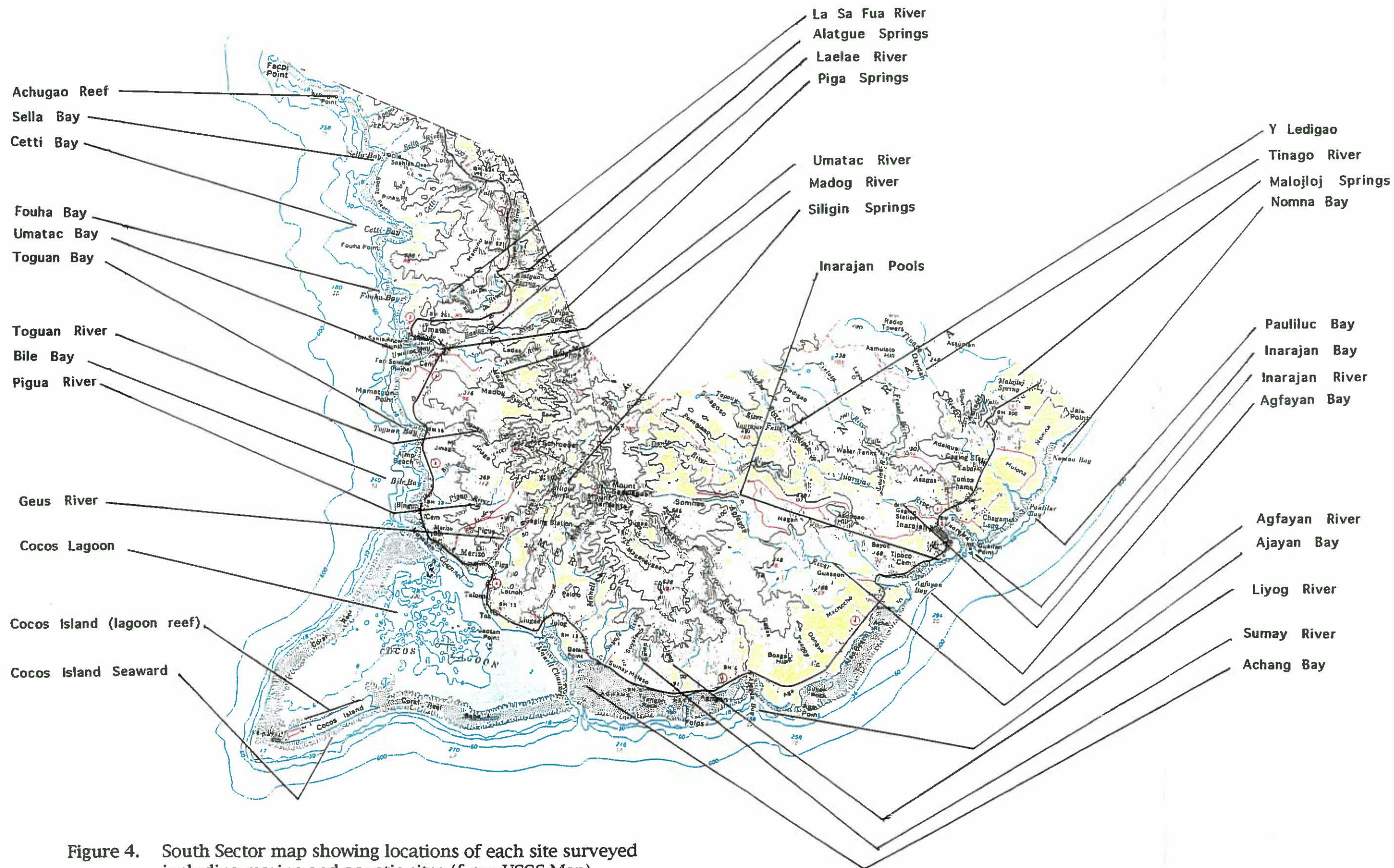


Figure 4. South Sector map showing locations of each site surveyed including marine and aquatic sites (from USGS Map).

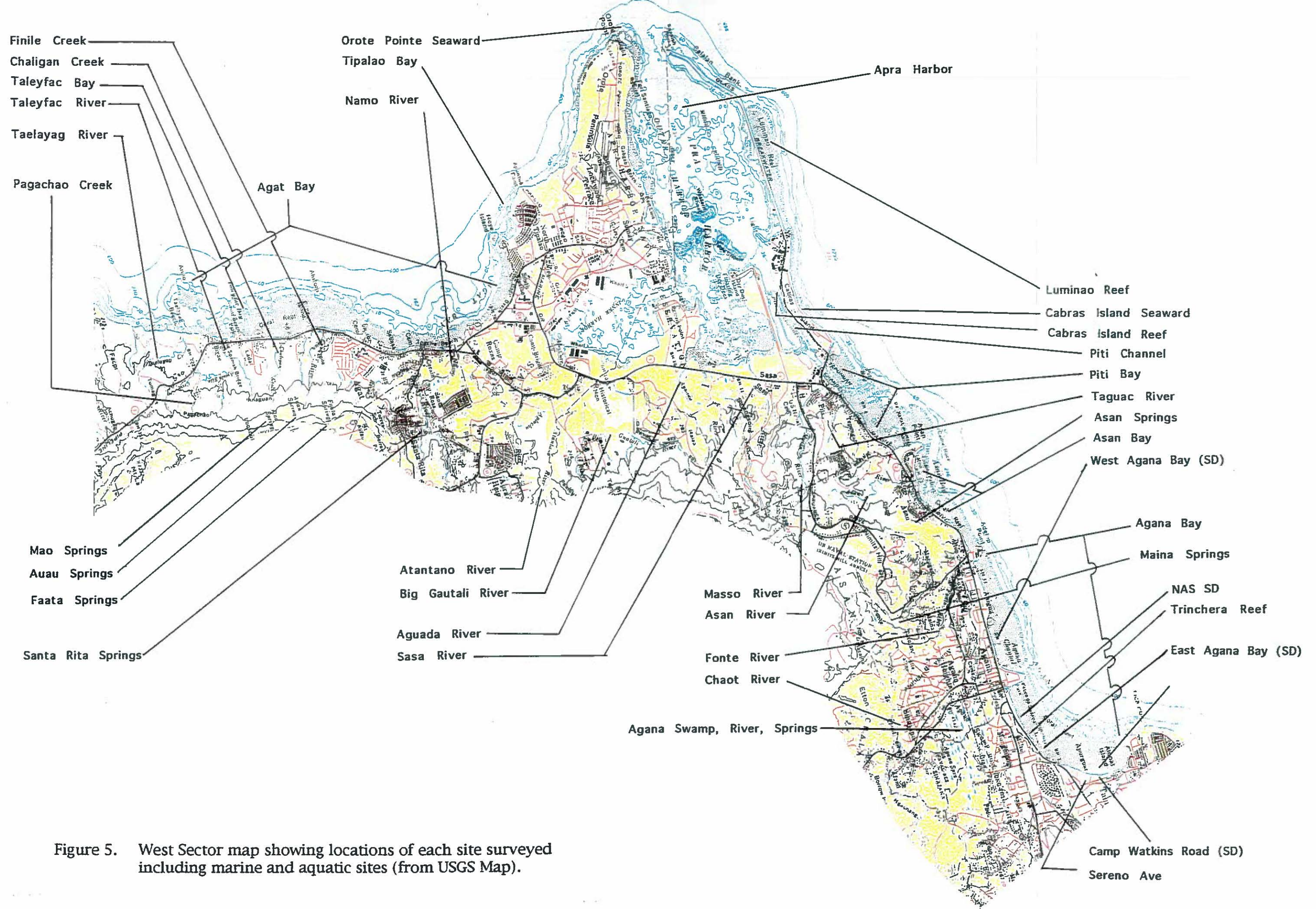


Figure 5. West Sector map showing locations of each site surveyed including marine and aquatic sites (from USGS Map).

G. ACKNOWLEDGMENTS

This database could not have been prepared as completely or in a timely fashion without the help of many individuals and their respective agencies. Many individuals allowed me to keep boxes of documents overnight while others allowed access to their files and a desk on which to work in their office. Others, although busy with their own work, helped in finding documents in their files.

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SECTION II

DATABASE

Sector East	Year 1970's, 1980's
Site Almagosa Springs	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Sector East	Year 1965
Site Asanite Cave	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1989 ongoing
Site Baza Gardens	Type Aquatic
Title Baza Gardens STP Receiving Water Monitoring	
Author PUAG	
Location PUAG	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1989 Ongoing
Site Baza Gardens	Type Aquatic
Title Monitoring STP outfall	
Author PUAG	
Location EPA	
Frequency Irregular, daily to monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1965
Site Bona Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1989
Site Bubulao River	Type Aquatic
Title Preliminary EIS for Bubulao Project, Bubulao, Guam	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year In progress
Site Bubulao River	Type Aquatic
Title In-Stream Monitoring of the Ugum River Watershed	
Author B. Smith and S. Nelson	
Location Marine Lab	
Frequency 4 times year	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1976-1984
Site Bubulao River	Type Aquatic
Title Limnological Survey of the Major Streams and Rivers of Guam	
Author DAWR Annual Reports	
Location DAWR	
Frequency Yearly	
Notes Above Talofoto considered more pristine than Geus, Lonfit, Ylig and Umatac Rivers.	

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year Since 1978
Site Fena Lake	Type Aquatic
Title Fena Water Treatment Plant Water Quality Monitoring	
Author Fena Lab	
Location EPA	
Frequency Monthly ongoing	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org Yes	Inorg
PhysChem	Bact

Misc

Sector East	Year 1974
Site Fena Lake	Type Aquatic
Title Fena Reservoir Watershed and Management Study	
Author Kennedy Engineers	
Location Fena Lab	
Frequency Three times 1973	

Notes Sediment accumulation slow; from fires and rainstorms. Nutrients low but phosphates high, nitrogen may be limiting factor. Iron and magnesium high.
--

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector East	Year 1977 - 1983
Site Fena Lake	Type Aquatic
Title Fena Lake Study	
Author Fena Lab	
Location Fena Lab	
Frequency Monthly 1977-1983	

Notes Not trends; short term cycles only.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc Yes

Sector East	Year Since 1951
Site Fena Lake	Type Aquatic
Title Fena Lake source water after chlorination	
Author Fena Lab	
Location Fena Lab	
Frequency Ongoing, weekly to monthly	

Notes Periodic problems, odor, fish kills. Sediments have caused loss of 15% volume, no increase noted. Nutrients and total organic carbon building up.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector East	Year 1985
Site Fena Lake	Type Aquatic
Title Survey of Fena Reservoir, Island of Guam, Limnological Reconnaissance	
Author USGS, Report 83-4241	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1984
Site Fena Lake	Type Aquatic
Title Sediment Survey of Fena Reservoir, Guam, MI, 1979	
Author W. Curtis, USGS, WR 1 R 84-4125	
Location USGS	
Frequency Once in 1979	

Notes Topographical survey for storage capacity.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector East	Year 1992
Site Fena Lake	Type Aquatic
Title Sediment Survey of Fena Reservoir, Guam, MI, 1990	
Author USGS, WR 1 R 92-4114	
Location USGS	
Frequency Once in 1990	

Notes Topographical survey for storage capacity.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector East	Year 1979
Site Fena Lake, adjoining rivers,	Type Aquatic
Title Terrestrial and Freshwater Organisms Within, and Limnology and Hydrology of, the Guam Seashore Study Area and the War In the Pacific National Historical Park	
Author L. Raulerson	
Location BOP	
Frequency Once	

Notes A third to half of current and proposed endangered and threatened species found in this area

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1979
Site Fena Lake, adjoining rivers,	Type Aquatic
Title Terrestrial and Freshwater Organisms Within, and Limnology and Hydrology of, the Guam Seashore Study Area and the War In the Pacific National Historical Park	
Author L. Raulerson	
Location BOP	
Frequency Once	

Notes A third to half of current and proposed endangered and threatened species found in this area.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1970's, 1980's
Site Imong River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1980
Site Ladaí Creek (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1990
Site Lonfit River	Type Aquatic
Title EIA Lonfit Master Plan	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1989
Site Lonfit River	Type Aquatic
Title Occurrence of Certain Pesticides in Ground and Surface Waters Associated with Ordot Landfill in the Pago River Basin, Guam, M.I.	
Author H. R. Wood	
Location WERI (Tech 72)	
Frequency Monthly 6-11/89	

Notes Conductivity high, shows presence of landfill leachate. No pesticides in samples.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org Yes	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1990
Site Lonfit River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector East	Year 1974-1984
Site Lonfit River	Type Aquatic
Title Limnological Survey of the Major Streams and Rivers of Guam	
Author DAWR Annual Reports	
Location DAWR	
Frequency Yearly	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1980 to 1990
Site Lonfit River	Type Aquatic
Title EPA Monitoring, Sites PGRL-1, PGRL-2 (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1974 to 1991
Site Maagas River	Type Aquatic
Title EPA Monitoring, Site TURT 1	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year In progress
Site Maagas River (Fena River)	Type Aquatic
Title In-Stream Monitoring of the Ugum River Watershed	
Author B. Smith and S. Nelson	
Location Marine Lab	
Frequency 4 times year	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1993
Site Mahlac River	Type Aquatic
Title EIA Slope Stabilization Plan for Holes No. 12 & 16 Talofoto Golf Resort	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1989
Site Mahlac River	Type Aquatic
Title Final EIA for Talofoto Golf Course, Talofoto Guam	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1993
Site Mahlac River	Type Aquatic
Title Quarterly Water Quality Monitoring Report Talofofo Golf Resort	
Author Maeda Corp.	
Location EPA	
Frequency 1993 ongoing, quarterly	

Notes No pesticides detected, nitrates low.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org Yes	Inorg
PhysChem	Bact

Misc

Sector East	Year 1989
Site Manengon River	Type Aquatic
Title EBS Aquatic Flora and Fauna and Terrestrial Wildlife at Miyama Hills	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1990
Site Manengon River	Type Aquatic
Title Water Quality Analysis of the Manengon River for the Manengon Hills Project	
Author Dames & Moore	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1990
Site Manengon River	Type Aquatic
Title Aquatic Resources, Final Report for Manengon Hills Development	
Author Dames & Moore	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1991 - 1993
Site Manengon River	Type Aquatic
Title Water Quality Monitoring Report Manengon Hills Project	
Author PBEC	
Location EPA	
Frequency Weekly, monthly, quarterly	

Notes Turbidity high following storms, no pesticides in samples.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1970's, 1980's
Site Maulap River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1990
Site Pago River	Type Aquatic
Title Final EIS for Guam First Green Golf Course, Pulantat, Yona, Guam	
Author Duenas & Swavely	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1979
Site Pago River	Type Aquatic
Title Water Resources Data for Hawaii and Other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Algae	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector East	Year 1974 to 1991
Site Pago River	Type Aquatic
Title EPA Monitoring, Sites PGRP-2, PGEP, PGRP-1, PGRLO	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1990
Site Pago River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector East	Year 1990
Site Pago River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofofo Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1983
Site Pago River	Type Aquatic
Title Vegetative and Aquatic Communities: Four Watersheds in Southern Guam	
Author ACOE	
Location BOP	
Frequency Once	

Notes Surveyed potential for reservoir sites.
--

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1992
Site Pago River	Type Aquatic
Title Manengon Hills-Weekly Water Quality Monitoring Report	
Author MDI Corp.	
Location EPA	
Frequency Daily 4-9/92	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Yes	
Nutr	Oxygen
	Yes
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1970's, 1980's
Site Pago River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1978 to 1991
Site Talofofo River	Type Aquatic
Title EPA Monitoring, Site TUETU (0,1,2 ft.)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1974 to 1991
Site Talofofo River	Type Aquatic
Title EPA Monitoring, Sites TUETO, TURT 2	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1990
Site Talofofo River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofofo Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Sector East	Year 1983
Site Talofofo River	Type Aquatic
Title Reconnaissance Study of Stream Sediments, Southern Guam	
Author USGS Water Resources Investigative	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1989
Site Tarzan River	Type Aquatic
Title EIA for Lake Agat Golf Course Santa Rita, Guam	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1991
Site Tarzan River	Type Aquatic
Title Water Quality Monitoring Plan for STT Guam Country Club, Phase 1	
Author PBEC	
Location EPA	
Frequency Weekly/monthly 5/90-8/91	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1994
Site Tarzan River streams	Type Aquatic
Title Environmental Related Information for Cascada Country Club and Resort	
Author GMP Associates, Inc.	
Location EPA	
Frequency 2-3/1992, weekly/daily	

Notes

Sector East	Year 1980
Site Tepungan River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org Yes	Inorg Yes
PhysChem Yes	Bact

Misc

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1992
Site Togcha River	Type Aquatic
Title Biological Survey Proposed Kurason Guahan Golf Course and Hotel Development, Ipan, Talofofo	
Author Duenas & Associates, Inc.	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1989
Site Togcha River	Type Aquatic
Title Final EIA for Talofofo Golf Course, Talofofo Guam	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1993
Site Togcha River	Type Aquatic
Title Quarterly Water Quality Monitoring Report Talofofo Golf Resort	
Author Maeda Corp.	
Location EPA	
Frequency 1993 ongoing, quarterly	

Notes No pesticides detected, nitrates low.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org Yes	Inorg
PhysChem	Bact

Misc

Sector East	Year 1980
Site Togcha River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1989
Site Ugum River	Type Aquatic
Title Draft EIA for the Ugum River Water Supply Development Project	
Author ACOE	
Location BOP	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1980
Site Ugum River	Type Aquatic
Title Ugum River Guam Interim EIS Harbor & Rivers, Territory of Guam	
Author ACOE	
Location BOP	
Frequency	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1989
Site Ugum River	Type Aquatic
Title Draft EIA for the Ugum River Water Supply Development Project	
Author GMP Associates, Inc.	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1978 - 1979
Site Ugum River	Type Aquatic
Title Water Resources Data for Hawaii and Other Pacific Areas	
Author USGS Annual Report	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org Yes	Inorg Yes
PhysChem Yes	Bact

Misc Yes

Sector East	Year 1989
Site Ugum River	Type Aquatic
Title Preliminary EIS for Bubulao Project, Bubulao, Guam	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1990
Site Ugum River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector East	Year 1990
Site Ugum River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofoto Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1983
Site Ugum River	Type Aquatic
Title Vegetative and Aquatic Communities: Four Watersheds in Southern Guam	
Author ACOE	
Location BOP	
Frequency Once	

Notes Surveyed potential for reservoir sites.
--

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector	East	Year	In progress
Site	Ugum River	Type	Aquatic
Title	In-Stream Monitoring of the Ugum River Watershed		
Author	B. Smith and S. Nelson		
Location	Marine Lab		
Frequency	4 times year		

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector	East	Year	1976-1984
Site	Ugum River	Type	Aquatic
Title	Limnological Survey of the Major Streams and Rivers of Guam		
Author	DAWR Annual Reports		
Location	DAWR		
Frequency	Yearly		

Notes	Above Talofoto considered more pristine than Geus, Lonfit, Ylig and Umatac Rivers.
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Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1985
Site Ugum River	Type Aquatic
Title Potential Water Reservoir Development Guam, Special Report and Environmental Assessment	
Author Bureau of Reclamation	
Location EPA	
Frequency Once in 1984	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1983
Site Ugum River	Type Aquatic
Title Reconnaissance Study of Stream Sediments, Southern Guam	
Author USGS Water Resources Investigation	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1980 to 1990
Site Ugum River	Type Aquatic
Title EPA Monitoring, Sites TURU-1, TURU-2 (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1991
Site Ylig River	Type Aquatic
Title Final EIA for Guam Takayama Golf Course, Yona, Guam	
Author PBEC	
Location ACOE	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Birds, Reptiles

Sector East	Year 1992
Site Ylig River	Type Aquatic
Title EIA for the Manengon Bridge Project	
Author PBEC	
Location PBEC	
Frequency Twice	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1989
Site Ylig River	Type Aquatic
Title EBS Aquatic Flora and Fauna and Terrestrial Wildlife at Miyama Hills	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1978
Site Ylig River	Type Aquatic
Title Water Resources Data for Hawaii and Other Pacific Areas	
Author USGS Annual Report	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1991 - 1993
Site Ylig River	Type Aquatic
Title Water Quality Monitoring Report Manengon Hills Project	
Author PBEC	
Location EPA	
Frequency Weekly, monthly, quarterly	

Notes Turbidity high following storms, no pesticides in samples.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1990
Site Ylig River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector East	Year 1990
Site Ylig River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofoto Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1983
Site Ylig River	Type Aquatic
Title Vegetative and Aquatic Communities: Four Watersheds in Southern Guam	
Author ACOE	
Location BOP	
Frequency Once	
Notes Surveyed potential for reservoir sites.	

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1992
Site Ylig River	Type Aquatic
Title Manengon Hills-Weekly Water Quality Monitoring Report	
Author MDI Corp.	
Location EPA	
Frequency Daily 4-9/92	
Notes	

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen Yes
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1974-1984
Site Ylig River	Type Aquatic
Title Limnological Survey of the Major Streams and Rivers of Guam	
Author DAWR Annual Reports	
Location DAWR	
Frequency Yearly	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1983
Site Ylig River	Type Aquatic
Title Reconnaissance Study of Stream Sediments, Southern Guam	
Author USGS Water Resources Investigative	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1970's, 1980's
Site Ylig River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1981
Site Airport Road (PB)	Type Aquatic
Title Metal Concentration in Guam Urban Runoff,	
Author W. J. Zolan	
Location WERI (Tech 25)	
Frequency 5 times 1975-1977	
Notes Mercury, lead, cadmium approached or exceeded drinking standards. Chromium, copper, iron , manganese, nickel, zinc approached or exceeded surface water standards. Higher in commercial areas.	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1981
Site Airport Road (PB)	Type Aquatic
Title Diatom Assemblages as Indicators of Water Quality in Freshwater Habitats of Guam	
Author W. J. Zolan	
Location WERI (Tech 29)	
Frequency Sporadically over two weeks	

Notes Rainfall caused variability when 48 hours before sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector North	Year 1978
Site Airport Road (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1981
Site Barrigada Heights (PB)	Type Aquatic
Title Metal Concentration in Guam Urban Runoff	
Author W. J. Zolan	
Location WERI (Tech 25)	
Frequency 5 times 1975-1977	

Notes Mercury, lead, cadmium approached or exceeded drinking standards. Chromium, copper, iron, manganese, nickel, zinc approached or exceeded surface water standards. Higher in commercial areas.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1978
Site Barrigada (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1965
Site Change Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1978
Site Dededo (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1984
Site Fadian Cave	Type Aquatic
Title Preliminary Study of the Hydrogeology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Twice a month 1981	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1984
Site Hilaan Cenote	Type Aquatic
Title Preliminary Study of the Hydrogeology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Twice a month 1981	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1974
Site Janum Springs	Type Aquatic
Title Coastal Survey of Guam	
Author R. H. Randall and J. Holloman	
Location Marine Lab (Tech 14)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem yes	Bact

Misc

Sector North	Year 1984
Site Janum Springs	Type Aquatic
Title Preliminary Study of the Hydrogeology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Twice a month 1981	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1965
Site Janum Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1981
Site Latte Heights (PB)	Type Aquatic
Title Metal Concentration in Guam Urban Runoff	
Author W. J. Zolan	
Location WERI (Tech 25)	
Frequency 5 times 1975-1977	

Notes Mercury, lead, cadmium approached or exceeded drinking standards. Chromium, copper, iron , manganese, nickel, zinc approached or exceeded surface water standards. Higher in commercial areas.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1978
Site Latte Heights (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1989
Site Marbo Cave	Type Aquatic
Title Draft EIS for the Proposed Marbo Cave Resort, Barrigada, Guam	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1984
Site Marbo Cave	Type Aquatic
Title Preliminary Study of the Hydrogeology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Twice a month 1981	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1978
Site Marianas Terrace (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1981
Site Perez Acres (PB)	Type Aquatic
Title Metal Concentration in Guam Urban Runoff	
Author W. J. Zolan	
Location WERI (Tech 25)	
Frequency 5 times 1975-1977	

Notes Mercury, lead, cadmium approached or exceeded drinking standards. Chromium, copper, iron, manganese, nickel, zinc approached or exceeded surface water standards. Higher in commercial areas.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1981
Site Perez Acres (PB)	Type Aquatic
Title Diatom Assemblages as Indicators of Water Quality in Freshwater Habitats of Guam	
Author W. J. Zolan	
Location WERI (Tech 29)	
Frequency Sporadically over two weeks	

Notes Rainfall caused variability when 48 hours before sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector North	Year 1978
Site Perez Acres (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1965
Site Santa Rosa Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1981
Site Sereno Ave (PB)	Type Aquatic
Title Metal Concentration in Guam Urban Runoff	
Author W. J. Zolan	
Location WERI (Tech 25)	
Frequency 5 times 1975-1977	

Notes Mercury, lead, cadmium approached or exceeded drinking standards. Chromium, copper, iron, manganese, nickel, zinc approached or exceeded surface water standards. Higher in commercial areas.
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Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1981
Site Sereno Avenue (PB)	Type Aquatic
Title Diatom Assemblages as Indicators of Water Quality in Freshwater Habitats of Guam	
Author W. J. Zolan	
Location WERI (Tech 29)	
Frequency Sporadically over two weeks	

Notes Rainfall caused variability when 48 hours before sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector North	Year 1984
Site Tarague Cave	Type Aquatic
Title Preliminary Study of the Hydrogeology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Twice a month 1981	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1965
Site Tarague Cave	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1974
Site Tarague Springs	Type Aquatic
Title Coastal Survey of Guam	
Author R. H. Randall and J. Holloman	
Location Marine Lab (Tech 14)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem yes	Bact

Misc

Sector North	Year 1978
Site Tumon Bay (five SD's)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1993 - 1994
Site Yigo (Golf Course lakes)	Type Aquatic
Title Water Quality Monitoring Reports, Guam International Country Club (Guam Municipal GC)	
Author PBEC	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org Yes	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1968-1972
Site Agfayan River	Type Aquatic
Title Ecological Study of the Estuaries of Guam	
Author DAWR Annual Report	
Location DAWR	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector South	Year 1965
Site Alague Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1974 to 1991
Site Geus River	Type Aquatic
Title EPA Monitoring, Sites MZRG1, MZRG2	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1974
Site Geus River	Type Aquatic
Title Biological Study of the Geus River Basin	
Author H. T. Kami et. al.	
Location Marine Lab (Tech 16)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1990
Site Geus River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1990
Site Geus River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofoto Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1986
Site Geus River	Type Aquatic
Title Concentrations of Aluminum, Manganese, Iron and Calcium in Four Southern Guam Rivers	
Author W. J. Zolan and L. Ellis-Neill	
Location WERI (Tech 64)	
Frequency Monthly 1984-1985	

Notes Aluminum, calcium higher than stateside. Manganese lower than stateside. Variability due to rain 48 hours prior to sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc

Sector South	Year 1974-1984
Site Geus River	Type Aquatic
Title Limnological Survey of the Major Streams and Rivers of Guam	
Author DAWR Annual Reports	
Location DAWR	
Frequency Yearly	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1970's, 1980's
Site Geus River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1981
Site Geus River	Type Aquatic
Title Diatom Assemblages as Indicators of Water Quality in Freshwater Habitats of Guam	
Author W. J. Zolan	
Location WERI (Tech 29)	
Frequency Sporadically over two weeks	

Notes Rainfall caused variability when 48 hours before sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector South	Year 1990
Site Inarajan River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofoto Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1983
Site Inarajan River	Type Aquatic
Title Vegetative and Aquatic Communities: Four Watersheds in Southern Guam	
Author ACOE	
Location BOP	
Frequency Once	

Notes Surveyed potential for reservoir sites.
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Corals	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1985
Site Inarajan River	Type Aquatic
Title Potential Water Reservoir Development Guam, Special Report and Environmental Assessment	
Author Bureau of Reclamation	
Location EPA	
Frequency Once in 1984	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
	Yes
Nutr	Oxygen
Yes	
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc

Sector South	Year 1970's, 1980's
Site Inarajan River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Sector South	Year 1974 to 1991
Site La Sa Fua River	Type Aquatic
Title EPA Monitoring, Sites ULRL1, ULRL2	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1990
Site La Sa Fua River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1981
Site La Sa Fua River	Type Aquatic
Title Diatom Assemblages as Indicators of Water Quality in Freshwater Habitats of Guam	
Author W. J. Zolan	
Location WERI (Tech 29)	
Frequency Sporadically over two weeks	

Notes Rainfall caused variability when 48 hours before sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector South	Year 1974 to 1991
Site Laelae River	Type Aquatic
Title EPA Monitoring, Site ULRU1	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1991-2
Site Laelae River	Type Aquatic
Title Manganese in Watershed Environments of Southern Guam: Part 1, Baseline Study of Sources, Sink and Speciation	
Author H. G. Siegrist Jr. and G. R. W. Denton	
Location WERI	
Frequency Irregular	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1980
Site Liyog River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1974 to 1991
Site Madog River	Type Aquatic
Title EPA Monitoring, Sites ULRU2, ULRM	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1991-2
Site Madog River	Type Aquatic
Title Manganese in Watershed Environments of Southern Guam: Part 1, Baseline Study of Sources, Sink and Speciation	
Author H. G. Siegrist Jr. and G. R. W. Denton	
Location WERI	
Frequency Irregular	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1990
Site Madog River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1965
Site Malojloj Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1965
Site Piga Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1986
Site Pigua River	Type Aquatic
Title Concentrations of Aluminum, Manganese, Iron and Calcium in Four Southern Guam Rivers	
Author W. J. Zolan and L. Ellis-Neill	
Location WERI (Tech 64)	
Frequency Monthly 1984-1985	

Notes Aluminum, calcium higher than stateside. Manganese lower than stateside. Variability due to rain 48 hours prior to sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1965
Site Siligin Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1980
Site Sumay River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	
Notes Lists storm drain discharge points, no water quality data.	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact
Misc	

Sector South	Year 1970's, 1980's
Site Tinago River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact
Misc	

Sector South	Year 1991-2
Site Toguan River	Type Aquatic
Title Manganese in Watershed Environments of Southern Guam: Part 1, Baseline Study of Sources, Sink and Speciation	
Author H. G. Siegrist Jr. and G. R. W. Denton	
Location WERI	
Frequency Irregular	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1990
Site Toguan River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	

Notes Waters clean by world standards, metals highest near Ordot landfill.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1980
Site Toguan River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	
Notes Lists storm drain discharge points, no water quality data.	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1990
Site Umatac River	Type Aquatic
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	
Author G. R. W. Denton	
Location WERI	
Frequency Ongoing	
Notes Waters clean by world standards, metals highest near Ordot landfill.	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1990
Site Umatac River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofoto Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1986
Site Umatac River	Type Aquatic
Title Concentrations of Aluminum, Manganese, Iron and Calcium in Four Southern Guam Rivers	
Author W. J. Zolan and L. Ellis-Neill	
Location WERI (Tech 64)	
Frequency Monthly 1984-1985	

Notes Aluminum, calcium higher than stateside. Manganese lower than stateside. Variability due to rain 48 hours prior to sampling.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1974-1984
Site Umatac River	Type Aquatic
Title Limnological Survey of the Major Streams and Rivers of Guam	
Author DAWR Annual Reports	
Location DAWR	
Frequency Yearly	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1965
Site Umatac River	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1965
Site Umatac River	Type Aquatic
Title Geology and Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector South	Year 1970's, 1980's
Site Umatac River	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1980
Site Umatac River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1985
Site Y Ledigao River	Type Aquatic
Title Potential Water Reservoir Development Guam, Special Report and Environmental Assessment	
Author Bureau of Reclamation	
Location EPA	
Frequency Once in 1984	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1977
Site Agana River	Type Aquatic
Title Final Environmental Statement, Harbors and Rivers in Territory of Guam	
Author ACOE	
Location EPA	
Frequency Once	

Notes Ten bird species listed as endangered that frequent area.
--

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1985
Site Agana River	Type Aquatic
Title General Design Memorandum and Supplemental EIS for Flood Control Improvements-Agana River	
Author ACOE	
Location EPA	
Frequency Several surveys, 1984	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1974 to 1991
Site Agana River	Type Aquatic
Title EPA Monitoring, Sites AGRA2, AGRA3	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1974
Site Agana River	Type Aquatic
Title Field Ecological Survey of the Agana-Chaot River Basin	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 12)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1990
Site Agana River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofof Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1980
Site Agana River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1981
Site Agana Springs	Type Aquatic
Title Water Quality Assessment for Agana Springs	
Author T. L. Smalley and W. J. Zolan	
Location WERI Tech 22)	
Frequency Weekly 3-8/80	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1978 to 1991
Site Agana Springs	Type Aquatic
Title EPA Monitoring, Site AGRA	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1965
Site Agana Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1978
Site Agana Swamp	Type Aquatic
Title Environmental Survey of a Proposed Fill Site in Agana Swamp	
Author B. D. Smith and S. E. Hedlund	
Location Randall (Marine Lab ESR 18)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1985
Site Agana Swamp	Type Aquatic
Title General Design Memorandum and Supplemental EIS for Flood Control Improvements-Agana River	
Author ACOE	
Location EPA	
Frequency Several surveys, 1984	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1983
Site Agana Swamp	Type Aquatic
Title Hydrological Investigation of Agana Swamp, Northern Guam	
Author J. F. Ayers and R. N. Clayshulte	
Location WERI (Tech 40)	
Frequency Once 1978	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1980
Site Aguada River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1981
Site Asan River	Type Aquatic
Title Asan Village Flood Control Study, Asan Guam	
Author ACOE	
Location MARC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp Yes	Solids
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1965
Site Asan Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1975 to 1991
Site Atantano River	Type Aquatic
Title EPA Monitoring, Sites APEA, APRA2	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1965
Site Auau Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1975 to 1991
Site Big Gautali River	Type Aquatic
Title EPA Monitoring, Site APRA1	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1978
Site Camp Watkins Road (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1980
Site Chaligan Creek (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1985
Site Chaot River	Type Aquatic
Title General Design Memorandum and Supplemental EIS for Flood Control Improvements-Agana River	
Author ACOE	
Location EPA	
Frequency Several surveys, 1984	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1974
Site Chaot River	Type Aquatic
Title Field Ecological Survey of the Agana-Chaot River Basin	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 12)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1990
Site Chaot River	Type Aquatic
Title Draft EIA for the Proposed Guam Talofoto Country Club	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1978 to 1991
Site Dungca's Beach (SD)	Type Aquatic
Title EPA Monitoring, Site AGRD	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1978
Site East Agana Bay (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1965
Site Faata Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1970's, 1980's
Site Finile Creek	Type Aquatic
Title USGS Water Resources Data for Hawaii and other Pacific Areas	
Author USGS Annual Reports	
Location USGS	
Frequency Irregularly some years	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1978 to 1991
Site Fonte River	Type Aquatic
Title EPA Monitoring, Sites AGRF2, AGRF1	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1980
Site Fonte River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1965
Site Maina Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1965
Site Mao Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1980
Site Masso River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1974 to 1991
Site Namo River	Type Aquatic
Title EPA Monitoring, Sites ATRN1, ATRN2	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1978
Site NAS (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1974 to 1991
Site Pagachao Creek	Type Aquatic
Title EPA Monitoring, Site ATRT1	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1981
Site Rivers in Agat	Type Aquatic
Title Effects of Land Clearing on a Small Watershed n Southern Guam	
Author C. P. Neubauer	
Location WERI (Tech 24)	
Frequency Twice weekly 1980	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr Yes	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1990
Site Santa Rita Lakes	Type Aquatic
Title Impacts of Dam Construction at Guam Country Club, Santa Rita, Guam (Lake Agat Golf Course)	
Author PBEC	
Location PBEC	
Frequency Twice a week 1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1965
Site Santa Rita Springs	Type Aquatic
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1975 to 1991
Site Sasa River	Type Aquatic
Title EPA Monitoring, Sites APRS1, APRS2	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1991-2
Site Taelayag River	Type Aquatic
Title Manganese in Watershed Environments of Southern Guam: Part 1, Baseline Study of Sources, Sink and Speciation	
Author H. G. Siegrist Jr. and G. R. W. Denton	
Location WERI	
Frequency Irregular	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector West	Year 1980
Site Taguac River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1974 to 1991
Site Taleyfac River	Type Aquatic
Title EPA Monitoring, Site ATRT2	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1991-2
Site Taleyfac River	Type Aquatic
Title Manganese in Watershed Environments of Southern Guam: Part 1, Baseline Study of Sources, Sink and Speciation	
Author H. G. Siegrist Jr. and G. R. W. Denton	
Location WERI	
Frequency Irregular	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector West	Year 1980
Site Taleyfac River (at outfall)	Type Aquatic
Title Flooding and Drainage on Guam	
Author ACOE	
Location BOP	
Frequency	

Notes Lists storm drain discharge points, no water quality data.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1993
Site Tipalao (at outfall)	Type Aquatic
Title Final EIA of the Area IV-Agat Santa Rita Wastewater Facilities Project in Guam	
Author Duenas & Assoc., Inc.	
Location EPA, BOP	
Frequency Once	

Notes

Sector West	Year 1978
Site West Agana Bay (SD)	Type Aquatic
Title Urban Runoff Quality in Northern Guam	
Author J. A. Marsh and R. H. F. Young	
Location WERI (Tech 5)	
Frequency Sporadically 1975-1977	

Notes Soaps, detergents, oil and grease pose the greatest threats. Runoff into nearshore waters builds deltas, causes odor and algal blooms.

Corals	Algae
Fish	Macros
Flora Yes	Fauna Yes
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1990
Site Asiga Reef	Type Marine
Title Reef Flat Baseline Survey Taotao Resort Malojloj and Inarajan, Guam	
Author PBEC	
Location PBEC	
Frequency Once	
Notes	

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1990-1994
Site Coastal Waters	Type Marine
Title Pollution Indicator and Pathogenic Bacteria in Guam's Coastal Sediments	
Author E. A. Matson	
Location WERI	
Frequency Ongoing since 1990, irregular.	
Notes Bacteria washes in with heavy rains and stays in sediments at least 4 days.	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector East	Year 1994
Site Coastal Waters	Type Marine
Title Impact of Wastewater Discharge and Urban Stormwater Runoff on the Heavy Metal Loading of Guam's Coastal Water Resources	
Author G. R. W. Denton and R. Wood	
Location WERI	
Frequency Just starting.	

Notes Locations and frequency not yet decided.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector East	Year 1970 ongoing
Site Ipan Reef	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector East	Year 1987
Site Mana Bay	Type Marine
Title EIA for Improvement to the Existing Reef Swimming Hole at Jones Beach Resort	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1980 to 1990
Site Pago Bay	Type Marine
Title EPA Monitoring, Site PGMR	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1980-1990
Site Pago Bay	Type Marine
Title EPA Monitoring Sites PGMPW, PGMPM, PGMPE (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc Yes

Sector East	Year 1993
Site Pago Bay	Type Marine
Title Abundance Distribution of Holothuroids on a Windward and Leeward Fringing Coral Reef	
Author A. Kerr et. al.	
Location Bulletin of Marine Science 52(2) 1993	
Frequency Once	

Notes Species richness slightly higher in Tumon.

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1991
Site Pago Bay	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Once in 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1976
Site Pago Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1970 ongoing
Site Pago Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector East	Year 1981, 1983,
Site Pago Bay	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1970 ongoing
Site Tagachan Reef	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector East	Year 1974
Site Talofoto Bay	Type Marine
Title Talofoto Bay Coastal Survey	
Author R. H. Randall	
Location Marine Lab (Tech 13)	
Frequency Once	

Notes Unique well developed Nypa swamps, and rare <u>Barringtonia racemosa</u> .

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1980 to 1986
Site Talofofo Bay	Type Marine
Title EPA Monitoring, Sites TUMW, TUMM, TUME (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector East	Year 1991
Site Talofofo Bay	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Once in 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1965 to present
Site Talofofo Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1970 ongoing
Site Talofofo Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector East	Year 1981, 1983,
Site Talofofo Bay	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Sector East	Year 1992
Site Togcha Bay	Type Marine
Title Biological Survey Proposed Kurason Guahan Golf Course and Hotel Development, Ipan, Talofofo	
Author Duenas & Associates, Inc.	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1991
Site Togcha Bay	Type Marine
Title Final EIA for Coco Palms Golf Course and Country Club, Togcha, Guam	
Author Duenas & Swavely	
Location EPA	
Frequency Once	
Notes	

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem Yes	Bact
Misc	

Sector East	Year 1965 to present
Site Togcha Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	
Notes	

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact
Misc	

Sector East	Year 1976
Site Togcha Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1970 ongoing
Site Togcha Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector East	Year 1993
Site Ylig Bay	Type Marine
Title EIA for Hotel Accion Guam, Ylig Bay, Guam	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector East	Year 1978
Site Ylig Bay	Type Marine
Title Guam's Reefs and Beaches Part II Sedimentation Studies at Fouha Bay and Ylig Bay	
Author R. H. Randall and c. Birkland	
Location Marine Lab (Tech 47)	
Frequency Once	

Notes

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector East	Year 1991
Site Ylig Bay	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Once in 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector East	Year 1978
Site Ylig Bay	Type Marine
Title Guam's Reefs and Beaches Part II Transect Studies	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 48)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector East	Year 1975
Site Ylig Bay	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector East	Year 1965, Ongoing
Site Ylig Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1989
Site Achae Point Reef	Type Marine
Title A Geological and Biological Survey of the Ritidian Point Coastal Region of Guam	
Author R. H. Randall and Baker	
Location WERI	
Frequency Once 1982	

Notes

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1991
Site Amantes Point Reef	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically in 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Productivity

Sector North	Year 1990-1994
Site Coastal Waters	Type Marine
Title Pollution Indicator and Pathogenic Bacteria in Guam's Coastal Sediments	
Author E. A. Matson	
Location WERI	
Frequency Ongoing since 1990, irregular.	

Notes Bacteria washes in with heavy rains and stays in sediments at least 4 days.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector North	Year 1994
Site Coastal Waters	Type Marine
Title Impact of Wastewater Discharge and Urban Stormwater Runoff on the Heavy Metal Loading of Guam's Coastal Water Resources	
Author G. R. W. Denton and R. Wood	
Location WERI	
Frequency Just starting.	

Notes Locations and frequency not yet decided.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector North	Year 1978 to 1990
Site Double Reef	Type Marine
Title EPA Monitoring, Site DRM	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1981, 1983,
Site Double Reef	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1977
Site Double Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector North	Year 1976
Site Double Reef	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1977
Site Fadian Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector North	Year 1991
Site Fadian Reef (aquifer beach	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically 1988-1990	

Notes Nutrient levels higher from NW than from NE aquifers.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1993
Site Fafai Reef	Type Marine
Title Final EIA for the Landing of High Capacity Digital Submarine Telephone Cables at Gum Beach, Tumon, Guam	
Author Duenas & Associates, Inc.	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1989
Site Fafai Reef	Type Marine
Title Final EBS Nansay Hotel, Fafai Beach, Tumon	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1978 to 1991
Site Fafai Reef	Type Marine
Title EPA Monitoring, Site GBMT	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1991
Site Fafai Reef	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically in 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Productivity

Sector North	Year 1981, 1983,
Site Fafai Reef	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1965, Ongoing
Site Fafai Reef	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1977
Site Haputo Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Sector North	Year 1984
Site Hilaan Reef	Type Marine
Title Preliminary Study of the Hydrology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Biweekly 1981	

Notes Tested freshwater seepage and area 5m away.
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Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector North	Year 1976
Site Janum Point Reef	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	
Notes	

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1993 ongoing
Site Mangilao Reef	Type Marine
Title Water Quality Monitoring Results Mangilao Golf Course	
Author PBEC	
Location EPA	
Frequency Monthly (quarterly pesticides only)	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact

Misc Yes

Sector North	Year 1990-1992
Site Mangilao Reef	Type Marine
Title Mangilao Golf Course Water Quality Monitoring Pre-Construction and Construction Phase	
Author PBEC	
Location EPA	
Frequency Sporadic	

Notes No pesticides found.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org Extensive	Inorg Yes
PhysChem Yes	Bact

Misc Yes

Sector North	Year 1976
Site Mangilao Reef	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1993
Site Many locations	Type Marine
Title Nutrient Flux Through Soils and Aquifers to the Coastal Zone of Guam	
Author E. A. Matson	
Location Limnological Oceanography 38(2)	
Frequency Sporadically over two years	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector North	Year 1989
Site Marbo Reef	Type Marine
Title Draft EIS for Proposed Marbo Cave Resort	
Author PBEC	
Location EPA	
Frequency Once	
Notes	

Corals	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1976
Site North Tanguisson Reef	Type Marine
Title Final EIS Gilan Beach Development, Tanguisson Point, Guam	
Author DPR	
Location MARC	
Frequency Once	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1991
Site Northeast coast (no location)	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically in 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Productivity

Sector North	Year 1989
Site Pajon Point Reef	Type Marine
Title A Geological and Biological Survey of the Ritidian Point coastal Region of Guam	
Author R. H. Randall and Baker	
Location WERI	
Frequency Once 1982	

Notes

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1991
Site Ritidian Reef	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically in 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Productivity

Sector North	Year 1977
Site Ritidian Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector North	Year 1989
Site Ritidian Reef	Type Marine
Title A Geological and Biological Survey of the Ritidian Point coastal Region of Guam	
Author R. H. Randall and Baker	
Location WERI	
Frequency Once 1982	

Notes

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1976
Site Taguan Point Reef	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1973
Site Tanguisson Reef	Type Marine
Title Coral Reef Recovery Following Extensive Damage by "Crown of Thorns" Starfish	
Author R. H. Randall	
Location Marine Lab	
Frequency Irregular during 1970-1971	

Notes Coral recovery occurring.

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1973
Site Tanguisson Reef	Type Marine
Title Distribution of Corals After <u>Acanthaster planci</u> (L.) Infestation at Tanguisson Point, Guam	
Author R. H. Randall	
Location Micronesica 9(2) 1973	
Frequency Once	

Notes Compares Tumon Reef to Tanguisson Reef.
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Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1976
Site Tanguisson Reef	Type Marine
Title Biological Impact Caused by Changes on a Tropical Reef	
Author R. S. Jones et. al.	
Location Marine Lab (Tech 28)	
Frequency Once	

Notes Effect of heated effluent on recovery following <u>A. planci</u> . Effluent killing corals along reef margin which was unaffected by <u>A. planci</u> . All other areas recovering well.

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc Currents

Sector North	Year 1976
Site Tanguisson Reef	Type Marine
Title Effects of Thermal Effluent on the Coral Reef Community at Tanguisson	
Author S. Neudecker	
Location Marine Lab (Tech 30)	
Frequency Once	

Notes Area of coral kill by effluent not expanding. Area about 600 m long along reef margin, most dead.

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Also coral recruitment on settling plates.

Sector North	Year 1977
Site Tanguisson Reef	Type Marine
Title Development and Environmental Quality of Coral Reef Communities near the Tanguisson Power Plant	
Author S. Neudecker	
Location Marine Lab (Tech 41)	
Frequency Regular surveys	

Notes Significant decrease in growth rate near effluent, diversity and density of fish lower near outfall.

Corals Yes	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Plate recruitment studies, coral growth surveys.

Sector North	Year 1973
Site Tanguisson Reef	Type Marine
Title A Study of Biological Impact Caused by Natural and Man-Induced Changes on a Tropical Reef	
Author R. S. Jones and R. H. Randall	
Location Marine Lab (Tech 7)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc Currents

Sector North	Year 1992
Site Tanguisson Reef	Type Marine
Title A Reassessment of Reef Building Corals, An Assessment of Framework Bioerosion, and a Reassessment of Thermal Effluent at Tanguisson Point, Guam	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 98)	
Frequency Once	

Notes Some rebound since last survey, 15 % less kill area. Increase in blue-green algae around effluent areas.

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1971, Ongoing
Site Tanguisson Reef	Type Marine
Title Monthly Temperature and pH Monitoring at Tanguisson and Cabras Island Outfall Sites	
Author Marine Lab	
Location Marine Lab, EPA	
Frequency Monthly (0-50ft)	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector North	Year 1971, Ongoing
Site Tanguisson Reef	Type Marine
Title Biological Monitoring of Cooling Water Effluent form Tanguisson and Cabras Power Plants on Guam	
Author Marine Lab	
Location Marine Lab, PUAG	
Frequency Quarterly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Toxicity of effluent to juvenile Tilapia.

Sector North	Year 1971, Ongoing
Site Tanguisson Reef	Type Marine
Title Biological Monitoring of Cooling Water Effluent from Tanguisson and Cabras Power Plants on Guam	
Author Marine Lab	
Location Marine Lab, PUAG	
Frequency Quarterly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Sea urchin sperm/fertilization bioassays.

Sector North	Year 1970 ongoing
Site Tanguisson Reef	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector North	Year 1989 ongoing
Site Tanguisson Reef (at outfall)	Type Marine
Title Northern District STP Receiving Water Monitoring	
Author PUAG	
Location PUAG	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1989 ongoing
Site Tanguisson Reef (at outfall)	Type Marine
Title Northern District STP Wastewater Effluent	
Author Marine Lab	
Location PUAG	
Frequency Quarterly (monthly fecal coliform)	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1994
Site Tanguisson Reef (at outfall)	Type Marine
Title Floral and Faunal Analysis of Three Sewage Outfall Zones on Guam	
Author R. H. Richmond	
Location PUAG, Marine Lab	
Frequency Quarterly	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector North	Year 1993
Site Tanguisson Reef (at outfall)	Type Marine
Title Fecal Pollution in Guam's Coastal Waters and Sediments	
Author E. A. Matson	
Location Micronesica 26(2)	
Frequency 1989 ongoing	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year Ongoing
Site Tanguisson Reef (at outfall)	Type Marine
Title Tanguisson Power Plant effluent monitoring	
Author EPA	
Location EPA	
Frequency Daily, weekly and monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org Yes	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1994
Site Tanguisson Reef (at outfall)	Type Marine
Title Final Report: Biological Monitoring of Three Sewage Outfalls on Guam: A Discussion of Results of the Monitoring Program Since 1990, and Recommendations for Action	
Author R. Richmond et. al.	
Location Marine Lab	
Frequency Quarterly, 0 - 50 m from outfall	

Notes Increasing bare substrate, decrease turf algae, increasing macroalgae.

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector North	Year 1994
Site Tanguisson Reef (at outfall)	Type Marine
Title Guam Island Wide Wastewater Facilities Plan, Draft Final Report	
Author Duenas & Ass., Inc.	
Location EPA	
Frequency Irregularly during 1980's	

Notes Summarizes receiving waters since 1985.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1991
Site Tanguisson Reef (at outfall)	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Quarterly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1989 Ongoing
Site Tanguisson Reef (at outfall)	Type Marine
Title Monitoring STP receiving waters	
Author PUAG	
Location EPA	
Frequency Monthly to quarterly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1989 Ongoing
Site Tanguisson Reef (at outfall)	Type Marine
Title Monitoring STP outfall	
Author PUAG	
Location EPA	
Frequency Irregular, daily to monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1993
Site Tarague Reef	Type Marine
Title AAFB Marine Resources Preserve, Baseline Survey of Marine Reserve	
Author S. S. Amesbury et. al.	
Location Marine Lab (ESR 27)	
Frequency Once	

Notes Rich in marine species.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Sediments

Sector North	Year 1977
Site Tarague Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector North	Year 1977
Site Tarague Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector North	Year 1991
Site Tarague Reef (aquifer beach)	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically 1988-1990	

Notes Nutrient levels higher from NW than from NE aquifers.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Notes

Misc

Notes

Misc

Sector North	Year 1992
Site Tumon Bay	Type Marine
Title Tumon Bay Comprehensive Survey	
Author S. S. Amesbury et. al.	
Location Marine Lab (ESR 26)	
Frequency 8-9/92, once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1992
Site Tumon Bay	Type Marine
Title Tumon Bay Comprehensive Survey	
Author S. S. Amesbury et. al.	
Location Marine Lab (ESR 28)	
Frequency 11-12/92, once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1993
Site Tumon Bay	Type Marine
Title Biological Communities in Tumon Bay, 1977-1991	
Author S. Amesbury et. al.	
Location Marine Lab (Tech 99)	
Frequency Once in 1977 and 1991	

Notes No significant decrease except in fish (-30%).

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1994
Site Tumon Bay	Type Marine
Title Site and Occurrence of Stormwater-Born Fecal Bacteria Transported via Groundwater to Tumon Bay	
Author T. M. Collins	
Location Marine Lab (Thesis)	
Frequency Monthly for one year	

Notes Bacteria leaching through groundwater through percolation field into bay.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector North	Year 1991
Site Tumon Bay	Type Marine
Title Water Chemistry and Hydrology of the "Blood of San Vitores" a Micronesian Red Tide	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Irregular samples 1987-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Yes

Sector North	Year 1992
Site Tumon Bay	Type Marine
Title EPP for the Installation of Storm Moorings, Tumon Bay, Guam	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector North	Year 1988
Site Tumon Bay	Type Marine
Title Environmental Assessment for Construction of Mooring Buoys in Tumon Bay	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1991
Site Tumon Bay	Type Marine
Title EBS Tumon Plaza Hotel Foundation Dewatering Project, Tumon Bay, Guam	
Author PBEC	
Location PBEC	
Frequency Twice	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector North	Year 1993
Site Tumon Bay	Type Marine
Title Fecal Pollution in Guam's Coastal Waters and Sediments	
Author E. A. Matson	
Location Micronesica 26(2)	
Frequency 1989 ongoing	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector North	Year Ongoing
Site Tumon Bay	Type Marine
Title Analysis of Fecal Coliform in Coastal Waters of Guam	
Author E. A. Matson	
Location Marine Lab	
Frequency Biweekly	

Notes Tumon deteriorating.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem	Bact Yes

Misc

Sector North	Year 1977
Site Tumon Bay	Type Marine
Title Terrestrial Inputs of Nitrogen and Phosphorus on Fringing Reefs of Guam	
Author J. A. Marsh	
Location MARC (Coral Reef Symposium #3)	
Frequency Irregularly 1974-1976	

Notes

Sector North	Year 1990
Site Tumon Bay	Type Marine
Title Significance of Runoff and Terrestrial Erosion to Nutrient Status of Estuaries of Guam	
Author E. A. Matson	
Location WERI (Tech 70)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector North	Year 1993
Site Tumon Bay	Type Marine
Title Abundance Distribution of Holothuroids on a Windward and Leeward Fringing Coral Reef	
Author A. Kerr et. al.	
Location Bulletin of Marine Science 52(2) 1993	
Frequency Once	
Notes Species richness slightly higher in Tumon.	

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1978
Site Tumon Bay	Type Marine
Title Guam's Reefs and Beaches Part II Transect Studies	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 48)	
Frequency Once	
Notes	

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector North	Year 1975
Site Tumon Bay	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector North	Year 1965 to present
Site Tumon Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1978
Site Tumon Bay	Type Marine
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	
Author J. O. Stojkovich and B. D. Smith	
Location DAWR (Tech 2)	
Frequency Once	

Notes Sea urchin densities high here.
--

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Bivalves and sea urchins.

Sector North	Year 1970 ongoing
Site Tumon Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector North	Year 1991
Site Tumon Bay (aquifer beach)	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically 1988-1990	

Notes Nutrient levels higher from NW than from NE aquifers.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector North	Year 1972
Site Tumon Bay (Gognga Beach)	Type Marine
Title A Marine Survey for the Okura Hotel Project	
Author R. S. Jones and R. H. Randall	
Location Randall (ESR 4)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector North	Year 1984
Site Tumon Bay (Gognga Beach) Type Marine	
Title Preliminary Study of the Hydrology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Biweekly 1981	

Notes Tested freshwater seepage and area 5m away.
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Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
	Yes
PhysChem	Bact
Yes	Yes

Misc Yes

Sector North	Year 1973
Site Tumon Bay (Hilton area)	Type Marine
Title A Marine Survey for the Proposed Hilton Hotel Dredging Project	
Author R. H. Randall and R. S. Jones	
Location BOP (Marine Lab ESR 7)	
Frequency Once	

Notes Mid-bay region richest.

Corals	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector North	Year 1989
Site Tumon Bay (Ypao Beach)	Type Marine
Title Studies of Recreationally Important Reef Fish	
Author DAWR Annual Report	
Location DAWR	
Frequency Monthly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1981-1982
Site Tumon Bay (Ypao Beach)	Type Marine
Title Reef Fish Population Investigations Through Use of Permanent Transects	
Author DAWR Annual Reports	
Location DAWR	
Frequency Monthly, 15 to 100 ft depths	

Notes Fish increase in spring, summer, max March to July, also increase with increase of rain.

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1976
Site Tumon Bay (Ypao Beach)	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year 1984
Site Tumon Bay (Ypao Beach)	Type Marine
Title Preliminary Study of the Hydrology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Biweekly 1981	

Notes Tested freshwater seepage and area 5m away.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector North	Year 1975
Site Uruno Reef	Type Marine
Title A Candidate Marine Environmental Impact Survey of the Uruno Point Reef Area on Guam, MI	
Author R. E. Dickinson and R. T. Tsuda	
Location Marine Lab (Tech 19)	
Frequency Once	

Notes Undisturbed, pristine area.
--

Sector North	Year 1991
Site Uruno Reef	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically in 1988-1990	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Productivity

Sector North	Year 1977
Site Uruno Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector South	Year 1973
Site Achang Bay	Type Marine
Title A Marine Survey for the Achang Bay Marina	
Author R. H. Randall et. al.	
Location Randall (Marine Lab ESR 10)	
Frequency Once	

Notes Mannel Channel area richest overall.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector South	Year 1974
Site Achang Bay	Type Marine
Title EIA for Achang Bay Channel and Boat Basin	
Author H. Faucett	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1975
Site Achang Bay	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes Fish larvae and adult fish densities high here.
--

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector South	Year 1979
Site Achang Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1974
Site Achang Bay (Mamaon Chan)	Type Marine
Title A Marine Survey, Part I, and a Current Survey, Part II, for the Proposed Guam Marine Marina	
Author R. H. Randall and L. G. Eldredge	
Location BOP (Marine Lab ESR 13)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector South	Year 1979
Site Achugao Reef	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1968-1972
Site Agfayan Bay	Type Marine
Title Ecological Study of the Estuaries of Guam	
Author DAWR Annual Report	
Location DAWR	
Frequency Monthly	

Notes

Corals	Algae
Fish Yes	Macros Yes
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector South	Year 1975
Site Ajayan Bay	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes Fish larvae densities high here.

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector South	Year 1965, Ongoing
Site Ajayan Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1979
Site Ajayan Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1979
Site Bile Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1977
Site Cetti Bay	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector South	Year 1976
Site Cetti Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1979
Site Cetti Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1990-1994
Site Coastal Waters	Type Marine
Title Pollution Indicator and Pathogenic Bacteria in Guam's Coastal Sediments	
Author E. A. Matson	
Location WERI	
Frequency Ongoing since 1990, irregular.	

Notes Bacteria washes in with heavy rains and stays in sediments at least 4 days.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector South	Year 1994
Site Coastal Waters	Type Marine
Title Impact of Wastewater Discharge and Urban Stormwater Runoff on the Heavy Metal Loading of Guam's Coastal Water Resources	
Author G. R. W. Denton and R. Wood	
Location WERI	
Frequency Just starting.	

Notes Locations and frequency not yet decided.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector South	Year 1990
Site Cocos Island (lagoon reef)	Type Marine
Title EIA Cocos Island Resort Renewal Project and Merizo Staging Area and Parking Lot	
Author PBEC	
Location EPA	
Frequency Once	

Notes Few living organisms nearshore.
--

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1993
Site Cocos Island (lagoon reef)	Type Marine
Title Water Quality Monitoring Report Cocos Island Reclamation (Dredging Operations)	
Author PBEC	
Location EPA	
Frequency Weekly 9-12/92	

Notes

Sector South	Year 1991
Site Cocos Island (lagoon reef)	Type Marine
Title Post Typhoon Russ Addendum to EIA Cocos Island Resort Renewal Project and Merizo Staging Area and Parking Lot	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1992
Site Cocos Island seaward	Type Marine
Title Environmental Protection and Water Quality Monitoring Plan for the Pilar Galleon Salvage Project	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1992-1993
Site Cocos Island seaward	Type Marine
Title Water Quality Monitoring Results for the Pilar Galleon Salvage Project	
Author PBEC	
Location PBEC	
Frequency Weekly during spring, summer	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1992
Site Cocos Island seaward	Type Marine
Title Environmental Assessment for the Pilar Galleon Salvage Project	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Sector South	Year 1980 to 1990
Site Cocos Lagoon	Type Marine
Title EPA Monitoring, Sites MZMCL, MZMCN, MZMG, MZMCW, MZMM (0-20ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals Yes	Algae
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1991
Site Cocos Lagoon	Type Marine
Title Post Typhoon Russ Addendum to EIA Cocos Island Resort Renewal Project and Merizo Staging Area and Parking Lot	
Author PBEC	
Location EPA	
Frequency Once	

Notes Mooring buoy sites in lagoon center.

Sector South	Year 1982
Site Cocos Lagoon	Type Marine
Title Resurvey of Cocos Lagoon, Guam	
Author R. H. Randall and T. S. Sherwood	
Location Marine Lab (Tech 80)	
Frequency Once	

Notes Recovery since survey following Crown-of-thorns infestations.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector South	Year 1992
Site Cocos Lagoon	Type Marine
Title EIA for the Replica of the Shipwrecked Spanish Manila Galleon Nuestra Senora de Saragosa Y Santiago	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector South	Year 1975
Site Cocos Lagoon	Type Marine
Title Community Structure and Distribution of Fishes in an Enclosed High Island Lagoon in Guam	
Author R. S. Jones and J. A. Chase	
Location Micronesica 11(1) 1975	
Frequency Once	

Notes Lower diversity than expected, high in juvenile fishes.
--

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1975
Site Cocos Lagoon	Type Marine
Title Marine Biological Survey of the Cocos Barrier Reefs and Enclosed Lagoon	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 17)	
Frequency Once	

Notes Juvenile fish nursery, turtles, Dugong sited, not particularly rich in fish species.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector South	Year 1991
Site Cocos Lagoon	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically 1988-1990	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Productivity

Sector South	Year 1965, Ongoing
Site Cocos Lagoon	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1977
Site Cocos Lagoon	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector South	Year 1978
Site Cocos Lagoon	Type Marine
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	
Author J. O. Stojkovich and B. D. Smith	
Location DAWR (Tech 2)	
Frequency Once	

Notes Bivalve densities high in seagrass beds, Trochus densities high here.
--

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Bivalves and sea urchins.

Sector South	Year 1976
Site Cocos Lagoon	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1970 ongoing
Site Cocos Lagoon	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector South	Year 1980 to 1990
Site Cocos Lagoon	Type Marine
Title EPA Monitoring, Sites MZMCL, MZMCN, MZMG, MZMCW, MZMM (0-20ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1979
Site Cocos Lagoon	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1981, 1983,
Site Cocos Lagoon	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1975
Site Cocos Lagoon (ManellChn)	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes Fish larvae and adult fish densities high here.
--

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector South	Year 1983
Site Cocos Lagoon (Merizo area)	Type Marine
Title Merizo Small Boat Harbor Territory of Guam, Draft EIA	
Author ACOE	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem	Bact Yes

Misc

Sector South	Year 1973
Site Cocos Lagoon (Merizo area)	Type Marine
Title A Marine Survey for the Proposed Merizo Marina	
Author R. S. Jones and R. H. Randall	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1989
Site Cocos Lagoon (Merizo area)	Type Marine
Title Environmental Assessment for a Merizo Wharf and Boat Channel for Cocos Lagoon Development Corp.	
Author PBEC	
Location BOP	
Frequency Once	

Notes Area depauperate except for Mamaon Channel walls.
--

Corals	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1972
Site Cocos Lagoon (Merizo area)	Type Marine
Title A Marine Environmental Impact Survey for the Proposed Merizo Pier	
Author R. H. Randall and R. S. Jones	
Location BOP (Marine Lab ESR 1)	
Frequency Once	

Notes

Sector South	Year 1980 to 1990
Site Fouha Bay	Type Marine
Title EPA Monitoring, Sites ULMF (0-10ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals Yes	Algae
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem	Bact Yes

Misc Currents

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1978
Site Fouha Bay	Type Marine
Title Guam's Reefs and Beaches Part II Sedimentation Studies at Fouha Bay and Ylig Bay	
Author R. H. Randall and c. Birkland	
Location Marine Lab (Tech 47)	
Frequency Once	

Notes

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector South	Year 1978
Site Fouha Bay	Type Marine
Title Guam's Reefs and Beaches Part II Transect Studies	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 48)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector South	Year 1975
Site Fouha Bay	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes Highest fish densities here.

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector South	Year 1979
Site Fouha Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1981, 1983,
Site Fouha Bay	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1965, Ongoing
Site Inarajan Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1976
Site Inarajan Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1970 ongoing
Site Inarajan Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector South	Year 1989 Ongoing
Site Inarajan Bay (at outfall)	Type Marine
Title Monitoring STP outfall	
Author PUAG	
Location EPA	
Frequency Irregular, daily to monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1970 ongoing
Site Inarajan Pools	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector South	Year 1990
Site Nomna Bay	Type Marine
Title Reef Flat Baseline Survey Taotao Resort Malojloj and Inarajan, Guam	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1965,Ongoing
Site Nomna Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1965, Ongoing
Site Pauliluc Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1971
Site Sella Bay	Type Marine
Title An Assessment of the Biological Implications of an Ammunition Pier at Sella Bay, Guam (In: EIS Sella Bay)	
Author J. Caperon et. al.	
Location MARC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Sediments

Sector South	Year 1976
Site Sella Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1979
Site Sella Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1974
Site Toguan Bay	Type Marine
Title An Investigation of the Biological and Oceanographic Suitability of Toguan Bay, Guam as a Potential Site for an Ocean Outfall	
Author R.S. Jones et. al.	
Location Marine Lab (Tech 11)	
Frequency Once	

Notes Possibly new wrasse species, only two coral species.

Corals Yes	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector South	Year 1965, Ongoing
Site Toguan Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1970 ongoing
Site Toguan Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector South	Year 1979
Site Toguan Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year Ongoing
Site Toguan Bay (at Umatac Bay)	Type Marine
Title Monitoring STP outfall	
Author PUAG	
Location EPA	
Frequency Irregular, daily to monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
	Yes
Nutr	Oxygen
	Yes
Org	Inorg
Yes	Yes
PhysChem	Bact
Yes	Yes

Misc

Sector South	Year 1974
Site Umatac Bay	Type Marine
Title A Marine Biological Survey at the Proposed Umatac Sewer Outfall Site	
Author R. H. Randall and M. Gawel	
Location Randall (ESR 15)	
Frequency Once	

Notes Rich in corals.

Corals	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1980 to 1990
Site Umatac Bay	Type Marine
Title EPA Monitoring, Sites ULMUE, ULMUW, (0-20ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector South	Year 1975
Site Umatac Bay	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes Fish larvae densities high here.

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector South	Year 1970, Ongoing
Site Umatac Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector South	Year 1979
Site Umatac Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1981, 1983,
Site Umatac Bay	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector South	Year 1989 ongoing
Site Umatac Bay (at outfall)	Type Marine
Title Umatac Merizo STP Receiving Water Monitoring	
Author PUAG	
Location PUAG	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year Ongoing
Site Agana Bay	Type Marine
Title Analysis of Fecal Coliform in Coastal Waters of Guam	
Author E. A. Matson	
Location Marine Lab	
Frequency Biweekly	
Notes Tumon deteriorating.	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem	Bact Yes

Misc

Sector West	Year 1990
Site Agana Bay	Type Marine
Title Significance of Runoff and Terrestrial Erosion to Nutrient Status of Estuaries of Guam	
Author E. A. Matson	
Location WERI (Tech 70)	
Frequency Once	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector West	Year 1965, Ongoing
Site Agana Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1970 ongoing
Site Agana Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector West	Year 1981, 1983,
Site Agana Bay	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1991
Site Agana Bay (Adelupe area)	Type Marine
Title Baseline Monitoring Report Water and Environmental Quality Adelupe Swimhole and Dungca's Beach Dredge Sites	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1991
Site Agana Bay (Adelupe area)	Type Marine
Title Construction and Post-Construction Monitoring Report Water and Environmental Quality, Adelupe Swimhole	
Author PBEC	
Location EPA	
Frequency Weekly for a month	

Notes

Corals //Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1971
Site Agana Bay (at outfall)	Type Marine
Title An Annual Cycle Study of Biological, Chemical and Oceanographic Phenomena Associated with the Agana Ocean Outfall	
Author R. S. Jones and R. H. Randall	
Location Marine Lab (Tech 1)	
Frequency Once	

Notes Algae as indicator species.
--

Corals	Algae Yes
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc Yes

Sector West	Year 1989 ongoing
Site Agana Bay (at outfall)	Type Marine
Title Agana STP Receiving Water Monitoring	
Author PUAG	
Location PUAG	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1989 ongoing
Site Agana Bay (at outfall)	Type Marine
Title Agana STP Wastewater Effluent	
Author Marine Lab	
Location PUAG	
Frequency Quarterly (monthly fecal coliform)	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1994
Site Agana Bay (at outfall)	Type Marine
Title Floral and Faunal Analysis of Three Sewage Outfall Zones on Guam	
Author R. H. Richmond	
Location PUAG, Marine Lab	
Frequency Quarterly	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1993
Site Agana Bay (at outfall)	Type Marine
Title Fecal Pollution in Guam's Coastal Waters and Sediments	
Author E. A. Matson	
Location Micronesica 26(2)	
Frequency 1989 ongoing	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1994
Site Agana Bay (at outfall)	Type Marine
Title Final Report: Biological Monitoring of Three Sewage Outfalls on Guam: A Discussion of Results of the Monitoring Program Since 1990, and Recommendations for Action	
Author R. Richmond et. al.	
Location Marine Lab	
Frequency Quarterly, 0 - 50 m from outfall	

Notes Increasing bare substrate, decrease turf algae, increasing macroalgae.

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1994
Site Agana Bay (at outfall)	Type Marine
Title Guam Island Wide Wastewater Facilities Plan, Draft Final Report	
Author Duenas & Ass., Inc.	
Location EPA	
Frequency Irregularly during 1980's	

Notes Summarizes receiving waters since 1985.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1991
Site Agana Bay (at outfall)	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Quarterly 1989	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1989 Ongoing
Site Agana Bay (at outfall)	Type Marine
Title Monitoring STP outfall	
Author PUAG	
Location EPA	
Frequency Irregular, daily to monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1989 Ongoing
Site Agana Bay (at outfall)	Type Marine
Title Monitoring STP receiving waters	
Author PUAG	
Location EPA	
Frequency Monthly to quarterly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1980 to 1990
Site Agana Bay (central)	Type Marine
Title EPA Monitoring, Sites AGMX-1, AGMX-2, (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1989
Site Agana Bay (central)	Type Marine
Title Draft Feasibility Report and EIS Agana Bayfront	
Author ACOE	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1976
Site Agana Bay (central)	Type Marine
Title Report on the Coral Survey of the Agana Bay Reef Flat	
Author R. H. Randall and L. G. Eldredge	
Location ACOE	
Frequency Once	

Notes Inner reef flat more corals than outer reef flat, channel margin or slopes.
--

Corals Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1986
Site Agana Bay (central)	Type Marine
Title EIA Agana Deep Draft Harbor and Reclamation Project	
Author J. P. Carpio & Assoc., Inc.	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1980 to 1990
Site Agana Bay (central)	Type Marine
Title EPA Monitoring, Sites AGML (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1980 to 1990
Site Agana Bay (central)	Type Marine
Title EPA Monitoring, Sites AGMX (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1974
Site Agana Bay (Dungca's Beach	Type Marine
Title A Marine Survey for the Sleepy Lagoon Marina	
Author R. H. Randall and L. G. Eldredge	
Location Randall (ESR 14)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1993
Site Agana Bay (Dungca's Beach	Type Marine
Title Water Quality and Environmental Quality Monitoring Beach Lagoon Cleanup Project	
Author PBEC	
Location EPA	
Frequency Weekly for two months	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1991
Site Agana Bay (Dungca's Beach	Type Marine
Title Onward Agana Beach Hotel Dredge Project Monthly Construction Monitoring Reports	
Author PBEC	
Location EPA	
Frequency Weekly for nine months	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1989
Site Agana Bay (Dungca's Beach Type Marine	
Title Final EIS for Sunset Beach Hotel Dredging East Agana Bay, Guam	
Author PBEC	
Location BOP, EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector West	Year 1991
Site Agana Bay (Dungca's Beach Type Marine	
Title Baseline Monitoring Report Water and Environmental Quality Adelupe Swimhole and Dungca's Beach Dredge Sites	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1991
Site Agana Bay (Dungca's Beach)	Type Marine
Title EIA Onward Agana Beach Hotel Floating Platform	
Author GMP Assoc., Inc.	
Location EPA	
Frequency Once	

Notes

Corals	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1992
Site Agana Bay (Dungca's Beach)	Type Marine
Title EIA Onward Agana Beach Hotel Floating Raft	
Author GMP Assoc., Inc.	
Location EPA	
Frequency Once	

Notes

Corals	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1978
Site Agana Bay (Dungcas Beach) Type Marine	
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	
Author J. O. Stojkovich and B. D. Smith	
Location DAWR (Tech 2)	
Frequency Once	

Notes Sea urchin densities high here.
--

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Bivalves and sea urchins.

Sector West	Year 1976
Site Agana Bay (Dungcas Beach) Type Marine	
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1984
Site Agana Bay (Dungcas Beach)	Type Marine
Title Preliminary Study of the Hydrology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Biweekly 1981	

Notes Tested freshwater seepage and area 5 m away.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector West	Year 1980 to 1990
Site Agana Bay (east)	Type Marine
Title EPA Monitoring, Sites AGMQ, AGMP, AGMT, AGMS, AGMR, AGMD	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1991
Site Agana Bay (east)	Type Marine
Title EIA for Dredging and Beach Nourishment Alupang Beach Club Condominium	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc Yes

Sector West	Year 1978
Site Agana Bay (east)	Type Marine
Title Guam's Reefs and Beaches Part II Transect Studies	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 48)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1975
Site Agana Bay (east)	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector West	Year 1980 to 1990
Site Agana Bay (west)	Type Marine
Title EPA Monitoring, Sites AGMF, AGMI, AGMB, AGMZ (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1980 to 1990
Site Agana Bay (west)	Type Marine
Title EPA Monitoring, Sites AGMY, AGMW, (0-20 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Sector West	Year 1977
Site Agat Bay	Type Marine
Title Marine Survey of Agat Bay	
Author L. G. Eldredge et. al.	
Location Marine Lab (Tech 31)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector West	Year 1977
Site Agat Bay	Type Marine
Title Marine Reconnaissance Survey of Proposed Sites for a Small Boat Harbor in Agat Bay	
Author M. I. Chernin et. al.	
Location Marine Lab (Tech 39)	
Frequency Once	

Notes Visual turbidity high in Taleyfac and Nimitz areas. Gaan site least diverse, Nimitz Channel most diverse.
--

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1980 to 1990
Site Agat Bay	Type Marine
Title EPA Monitoring, Sites ATMNC, ATMTC, ATMO, ATMA, ATMS, ATMP, ATMN, ATMB (0-5 ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1975
Site Agat Bay	Type Marine
Title Studies of the Biology of the Reef Fishes of Guam	
Author S. Amesbury	
Location Marine Lab (Tech 49)	
Frequency Once	

Notes Highest fish densities here. High fish larvae in Nimitz Channel
--

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Fish larvae also.

Sector West	Year 1979
Site Agat Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Rich seagrass communities here.
--

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1965, Ongoing
Site Agat Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1978
Site Agat Bay	Type Marine
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	
Author J. O. Stojkovich and B. D. Smith	
Location DAWR (Tech 2)	
Frequency Once	

Notes Trochus densities high here.

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Bivalves and sea urchins.

Sector West	Year 1976
Site Agat Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1970, Ongoing
Site Agat Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector West	Year 1981, 1983,
Site Agat Bay	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Sector West	Year 1993
Site Agat Bay (Anae patch reefs)	Type Marine
Title EIA for Sunset Club Guam, Agat Guam	
Author PBEC	
Location EPA	
Frequency Once	

Notes Outer reef rich, reef flat depauperate.
--

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector West	Year 1977
Site Agat Bay (Anaa patch reefs)	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector West	Year 1977
Site Agat Bay (at outfall)	Type Marine
Title Agat Sewage Treatment Plant: Impact of Secondary Treated Effluent on Guam Coastal Waters	
Author R. T. Tsuda and D. A. Grosenbaugh	
Location Marine Lab (Tech 3)	
Frequency 10-24 times 1977	

Notes No effect on corals or fish, rich algae on reef flat from phosphates.
--

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact Yes

Misc Zooplankton

Sector West	Year 1989, Ongoing
Site Agat Bay (at outfall)	Type Marine
Title Agat STP Receiving Water Monitoring	
Author PUAG	
Location PUAG	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1989, Ongoing
Site Agat Bay (at outfall)	Type Marine
Title Agat STP Wastewater Effluent	
Author Marine Lab	
Location PUAG	
Frequency Quarterly (monthly fecal coliform)	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1993
Site Agat Bay (at outfall)	Type Marine
Title Fecal Pollution in Guam's Coastal Waters and Sediments	
Author E. A. Matson	
Location Micronesica 26(2)	
Frequency 1989 ongoing	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1994
Site Agat Bay (at outfall)	Type Marine
Title Final Report: Biological Monitoring of Three Sewage Outfalls on Guam: A Discussion of Results of the Monitoring Program Since 1990, and Recommendations for Action	
Author R. Richmond et. al.	
Location Marine Lab	
Frequency Quarterly, 0 - 50 m from outfall	

Notes Increasing bare substrate, decrease turf algae, increasing macroalgae.

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1994
Site Agat Bay (at outfall)	Type Marine
Title Guam Island Wide Wastewater Facilities Plan, Draft Final Report	
Author Duenas & Ass., Inc.	
Location EPA	
Frequency Irregularly during 1980's	

Notes Summarizes receiving waters since 1985.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1991
Site Agat Bay (at outfall)	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Quarterly 1989	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1989, Ongoing
Site Agat Bay (at outfall)	Type Marine
Title Monitoring STP outfall	
Author PUAG	
Location EPA	
Frequency Irregular, daily to monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1980
Site Agat Bay (Nimitz Beach area)	Type Marine
Title Draft Detailed Project Report and Environmental Statement Agat Small Boat Harbor	
Author ACOE	
Location MARC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1979
Site Agat Bay (Nimitz Beach area)	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1978
Site Agat Bay (north)	Type Marine
Title Guam's Reefs and Beaches Part II Transect Studies	
Author R. H. Randall et. al.	
Location Marine Lab (Tech 48)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1992
Site Apra Harbor	Type Marine
Title Marine EIA in the Vicinity of the US Naval Station, Guam, MI	
Author Marine Research Consultants	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector West	Year 1982
Site Apra Harbor	Type Marine
Title Interim Survey Report and Environmental Statement (Final in 1983)	
Author ACOE	
Location MARC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc Zooplankton

Sector West	Year 1988
Site Apra Harbor	Type Marine
Title Environmental Assessment for Proposed Tourist Submarine Operating Terminal, Cabras Island, Guam	
Author PBEC	
Location PBEC	
Frequency Once	
Notes	

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector West	Year 1991
Site Apra Harbor	Type Marine
Title Nutrient Chemistry of the Coastal Waters of Guam	
Author E. A. Matson	
Location Micronesica 24(1) 1991	
Frequency Sporadically 1988-1990	
Notes	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc Productivity

Sector West	Year 1978
Site Apra Harbor	Type Marine
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	
Author J. O. Stojkovich and B. D. Smith	
Location DAWR (Tech 2)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Bivalves and sea urchins.

Sector West	Year 1970, Ongoing
Site Apra Harbor	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector West	Year 1980 to 1990
Site Apra Harbor	Type Marine
Title EPA Monitoring, Sites APMW, APME, APMD (0-20ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1981, 1983,
Site Apra Harbor	Type Marine
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	
Author D. R. Bultitude	
Location EPA	
Frequency Average once a year	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1975
Site Apra Harbor (at outfall)	Type Marine
Title Apra Harbor Sewage Treatment Outfall	
Author Navy	
Location EPA	
Frequency Daily (metals, pesticides monthly), ongoing.	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1975
Site Apra Harbor (at outfall)	Type Marine
Title Monitoring Apra Harbor STP outfall	
Author PUAG	
Location EPA	
Frequency Irregular, daily to monthly, ongoing.	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1992
Site Apra Harbor (Commrci Port)	Type Marine
Title Water Quality Monitoring Results for the Commercial Port Berthing Facilities Bottom Leveling Project	
Author PBEC	
Location PBEC	
Frequency Several times over two months	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1991
Site Apra Harbor (Commrci Port)	Type Marine
Title Flora and Fauna Assessment Bottom Leveling Project Commercial Port Berthing Facilities	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1992
Site Apra Harbor (Commrci Port)	Type Marine
Title EPP for Commercial Port Berthing Facilities Bottom Leveling Project Phase II	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1977
Site Apra Harbor (Commrci Port)	Type Marine
Title Marine Environmental Baseline Report Commercial Port, Apra Harbor, Guam	
Author S. S. Amesbury et. al.	
Location Marine Lab (Tech 34)	
Frequency Once	

Notes Two coral species unique here, Jade shoals stressed with silt, Western Shoals less so!

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1980 to 1990
Site Apra Harbor (Commrci Port)	Type Marine
Title EPA Monitoring, Site APMC (0-20ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1990
Site Apra Harbor (Dogleg Reef)	Type Marine
Title Studies of Recreationally Important Reef Fish	
Author DAWR Annual Report	
Location DAWR	
Frequency Monthly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1979
Site Apra Harbor (Harbor Refuge)	Type Marine
Title Detailed Project Report and Environmental Statement, Harbor of Refuge, Apra Harbor	
Author ACOE	
Location MARC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1980 to 1990
Site Apra Harbor (Inner harbor))	Type Marine
Title EPA Monitoring, Sites APMA, APMS (0-20ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1981
Site Apra Harbor (Jade Shoals)	Type Marine
Title Summary Report Phase II Seawater SO2 Scrubber Environmental Resource Program for GPA	
Author R. W. Beck & Assoc.	
Location Marine Lab	
Frequency Monthly	

Notes

Corals	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1977
Site Apra Harbor (Jade Shoals)	Type Marine
Title Marine Environmental Baseline Report Commercial Port, Apra Harbor, Guam	
Author S. S. Amesbury et. al.	
Location Marine Lab (Tech 34)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1980 to 1990
Site Apra Harbor (Jade Shoals)	Type Marine
Title EPA Monitoring, Site APMJ (0-20ft)	
Author EPA	
Location EPA	
Frequency Monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact Yes

Misc

Sector West	Year 1980
Site Apra Harbor (Laguas River)	Type Marine
Title Biological Effects of the Gorco Oil Spill on the Laguas Mangrove Community	
Author EPA	
Location EPA	
Frequency Once	

Notes Percent living and dead mangroves following spill.

Corals	Algae
Fish	Macros
Flora Yes	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1975
Site Apra Harbor (Nvl Suply Dpot) Type Marine	
Title Naval supply Depot effluent and ambient conditions	
Author Navy	
Location EPA	
Frequency Monthly, ongoing.	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1974
Site Apra Harbor (off Cabras Isl) Type Marine	
Title Marine Survey for the Proposed Dredging at the Cabras Island Terminal for Mobil Petroleum Co.	
Author L. G. Eldredge et. al.	
Location Randall (ESR 16)	
Frequency Once	

Notes

Corals Yes	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1993
Site Apra Harbor (off Cabras Isl)	Type Marine
Title EIA for the Mobil Fire Fighting System, Cabras Island	
Author PBEC	
Location PBEC	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector West	Year 1993
Site Apra Harbor (off Cabras Isl)	Type Marine
Title Water Quality and Environmental Monitoring for the Mobil Cabras Terminal Shoreline Protection Plan	
Author PBEC	
Location PBEC	
Frequency Weekly for two months	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Currents

Sector West	Year 1981
Site Apra Harbor (Orote area)	Type Marine
Title Draft EIS for an Ammunition Wharf in Outer Apra Harbor, Guam, MI	
Author Dept. of the Navy, VTN Pacific	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc Turtles

Sector West	Year 1977
Site Apra Harbor (Orote area)	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector West	Year 1977
Site Apra Harbor (Sasa Bay)	Type Marine
Title Marine Environmental Baseline Report Commercial Port, Apra Harbor, Guam	
Author S. S. Amesbury et. al.	
Location Marine Lab (Tech 34)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1977
Site Apra Harbor (Sasa Bay)	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector West	Year 1975
Site Apra Harbor (ShipRepairFac) Type Marine	
Title Ship Repair Facility Floating Dry Dock effluent and ambient conditions	
Author Navy	
Location EPA	
Frequency Monthly, ongoing.	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1981
Site Asan Bay	Type Marine
Title Asan Village Flood Control Study, Asan, Guam-Environmental Statement	
Author ACOE	
Location MARC	
Frequency Once	

Notes

Corals	Algae
	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1979
Site Asan Bay	Type Marine
Title Marine Biological Resources Within the Guam Seashore Study Area and the War in the Pacific National Historical Park	
Author L. G. Eldredge	
Location Marine Lab (Tech 57)	
Frequency Once	

Notes Rich coral communities here.

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1965, Ongoing
Site Asan Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1970 ongoing
Site Asan Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector West	Year 1981-1982
Site Asan Bay (Asan Point)	Type Marine
Title Reef Fish Population Investigations Through Use of Permanent Transects	
Author DAWR Annual Reports	
Location DAWR	
Frequency Monthly, 15 to 100 ft depths	

Notes Fish increase in spring, summer, max March to July, also increase with increase of rain.

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1974, Ongoing
Site Cabras Island reef (at outfall)	Type Marine
Title Monthly Temperature and pH Monitoring at Tanguisson and Cabras Island Outfall Sites	
Author Marine Lab	
Location Marine Lab, EPA	
Frequency Monthly (0-50ft)	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1974, Ongoing
Site Cabras Island reef (at outfall)	Type Marine
Title Biological Monitoring of Cooling Water Effluent from Tanguisson and Cabras Power Plants on Guam	
Author Marine Lab	
Location Marine Lab, PUAG	
Frequency Quarterly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Sea urchin sperm/fertilization bioassays.

Sector West	Year 1981
Site Cabras Island reef (at outfall) Type Marine	
Title Summary Report Phase II Seawater SO2 Scrubber Environmental Resource Program for GPA	
Author R. W. Beck & Assoc.	
Location Marine Lab	
Frequency Monthly	

Notes

Corals	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1974, Ongoing
Site Cabras Island reef (at outfall) Type Marine	
Title Cabras Power Plant effluent monitoring	
Author EPA	
Location EPA	
Frequency Daily, weekly and monthly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org Yes	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1972
Site Cabras Island seaward reef	Type Marine
Title A Marine Environmental Survey for the Gorco DeBallasting Facility Outfall, Cabras Island	
Author J. H. Rupp and H. K. Larson	
Location BOP (Marine Lab ESR 2)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1978
Site Cabras Island seaward reef	Type Marine
Title A Marine Environmental Survey for the Gorco DeBallasting Discharge, Cabras Island	
Author S. Neudecker et. al.	
Location Randall (Marine Lab ESR 19)	
Frequency Once	

Notes More algae than prior to discharge.
--

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1981
Site Cabras Island seaward reef	Type Marine
Title Summary Report Phase II Seawater SO2 Scrubber Environmental Resource Program for GPA	
Author R. W. Beck & Assoc.	
Location Marine Lab	
Frequency Monthly	

Notes

Corals	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1990-1994
Site Coastal Waters	Type Marine
Title Pollution Indicator and Pathogenic Bacteria in Guam's Coastal Sediments	
Author E. A. Matson	
Location WERI	
Frequency Ongoing since 1990, irregular.	

Notes Bacteria washes in with heavy rains and stays in sediments at least 4 days.
--

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector West	Year 1994
Site Coastal Waters	Type Marine
Title Impact of Wastewater Discharge and Urban Stormwater Runoff on the Heavy Metal Loading of Guam's Coastal Water Resources	
Author G. R. W. Denton and R. Wood	
Location WERI	
Frequency Just starting.	

Notes Locations and frequency not yet decided.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem	Bact

Misc

Sector West	Year 1979
Site Luminao Reef	Type Marine
Title Oceanographic Conditions in the Vicinity of Cabras Island and Glass Breakwater for the Potential Development of OTEC on Guam	
Author D. R. Lassuy	
Location Marine Lab (Tech 53)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1982
Site Luminao Reef	Type Marine
Title Assessment of the Shoalwater Environments in the Vicinity of the Proposed OTEC Development at Cabras Island, Guam	
Author R. H. Randall and L. G. Eldredge	
Location Marine Lab (Tech 79)	
Frequency Once	

Notes

Sector West	Year 1982-1985
Site Luminao Reef	Type Marine
Title Studies of Recreationally Important Reef Fish	
Author DAWR Annual Reports	
Location DAWR	
Frequency Monthly	

Notes

Corals Yes	Algae
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc currents

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1977
Site Luminao Reef	Type Marine
Title Survey and Species Inventory of Representative Pristine Marine Communities of Guam	
Author J. O. Stojkovich	
Location Marine Lab (Tech 40)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Endangered species

Sector West	Year 1977
Site Orote Point (seaward)	Type Marine
Title Draft EIS for the Ammunition Port Facilities, Orote Point, Guam, MI	
Author US Naval Magazine	
Location MARC	
Frequency Once	

Notes

Corals Yes	Algae
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1965, Ongoing
Site Pago Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1975
Site Piti Bay	Type Marine
Title Monitoring of Piti Power Plant storm water runoff	
Author Navy	
Location EPA	
Frequency Monthly, ongoing.	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1965 to present
Site Piti Bay	Type Marine
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	
Author DAWR Annual Reports	
Location DAWR	
Frequency Biweekly	

Notes

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1976
Site Piti Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1970, Ongoing
Site Piti Bay	Type Marine
Title EPA Monitoring of Recreational Waters	
Author EPA	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc

Sector West	Year 1977
Site Piti Bay (at outfall)	Type Marine
Title Power Plants and the Marine Environment in Piti Bay and Piti Channel, Guam	
Author J. A. Marsh et. al.	
Location Marine Lab (Tech 38)	
Frequency Once	

Notes

Corals Transplant	Algae
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year Ongoing
Site Piti Bay (at outfall)	Type Marine
Title Monitoring of Piti Power Plant discharge effluent	
Author Navy	
Location EPA	
Frequency Weekly	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc

Sector West	Year 1991
Site Piti Bay (east)	Type Marine
Title EIA for the Guam Underwater Observatory	
Author PBEC	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem Yes	Bact

Misc Yes

Sector West	Year 1977
Site Piti Bay (east)	Type Marine
Title Power Plants and the Marine Environment in Piti Bay and Piti Channel, Guam	
Author J. A. Marsh et. al.	
Location Marine Lab (Tech 38)	
Frequency Once	

Notes

Corals Transplant	Algae
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1978
Site Piti Bay (east)	Type Marine
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	
Author J. O. Stojkovich and B. D. Smith	
Location DAWR (Tech 2)	
Frequency Once	

Notes Sea urchin densities high here.
--

Corals	Algae
Fish	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Bivalves and sea urchins.

Sector West	Year 1974
Site Piti Bay (west)	Type Marine
Title Marine Environmental Effects of Dredging and Power Plant Construction in Piti Bay and Piti Channel, Guam	
Author J. A. Marsh and G. D. Gordon	
Location Marine Lab (Tech 8)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
PhysChem	Bact
Yes	

Misc Yes

Sector West	Year 1972
Site Piti Bay (west)	Type Marine
Title A Marine Environmental Survey of Piti Bay and Piti Channel, Guam for GPA	
Author J. A. Marsh and G. D. Gordon	
Location BOP (Marine Lab ESR 3)	
Frequency Once	

Notes

Corals	Algae
Yes	Yes
Fish	Macros
Yes	
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1975
Site Piti Bay (west)	Type Marine
Title Power Plants and Marine Environment: Additional Observations in Piti Bay and Piti Channel	
Author J. A. Marsh and J.E. Doty	
Location Marine Lab (Tech 21)	
Frequency Once	

Notes Tepungan Channel and reefs recolonized since power plant construction.

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1979
Site Piti Channel	Type Marine
Title Detailed Project Report and Environmental Statement, Harbor of Refuge, Apra Harbor	
Author ACOE	
Location MARC	
Frequency Once	

Notes

Corals Yes	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1977
Site Piti Channel	Type Marine
Title Power Plants and the Marine Environment in Piti Bay and Piti Channel, Guam	
Author J. A. Marsh et. al.	
Location Marine Lab (Tech 38)	
Frequency Once	

Notes

Corals Yes	Algae
Fish Yes	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1973
Site Piti Channel	Type Marine
Title Thermal Study of Piti Channel, Guam, and Adjacent Areas, and the Influence of Power Plant Operations on the Marine Environment	
Author J. A. Marsh and G. D. Gordon	
Location Marine lab (Tech 6)	
Frequency Once	

Notes Temperature effects minimal, chemical effects rare but pronounced, chlorine effluent kills fish.

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr	Oxygen Yes
Org	Inorg
PhysChem	Bact

Misc Currents

Sector West	Year 1972
Site Piti Channel	Type Marine
Title A Marine Environmental Survey of Piti Bay and Piti Channel, Guam for GPA	
Author J. A. Marsh and G. D. Gordon	
Location BOP (Marine Lab ESR 3)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1974
Site Piti Channel	Type Marine
Title Marine Environmental Effects of Dredging and Power Plant Construction in Piti Bay and Piti Channel, Guam	
Author J. A. Marsh and G. D. Gordon	
Location Marine Lab (Tech 8)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc Yes

Sector West	Year 1974
Site Piti Channel	Type Marine
Title Marine Environmental Effects of Dredging and Power Plant Construction in Piti Bay and Piti Channel, Guam	
Author J. A. Marsh and G. D. Gordon	
Location Marine Lab (Tech 8)	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc Yes

Sector West	Year 1975
Site Piti Channel	Type Marine
Title Power Plants and Marine Environment: Additional Observations in Piti Bay and Piti Channel	
Author J. A. Marsh and J.E. Doty	
Location Marine Lab (Tech 21)	
Frequency Once	

Notes Tepungan Channel and reefs recolonized since power plant construction.

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1976
Site Piti Channel	Type Marine
Title Influence of Power Plant Operations on the Marine Environment in Piti Channel	
Author J. A. Marsh and J.E. Doty	
Location Marine Lab (Tech 26)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Coral transplants

Sector West	Year 1980
Site Piti Channel	Type Marine
Title Trophic Relationships in Piti Channel	
Author J. A. Marsh	
Location Randall	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1981
Site Piti Channel	Type Marine
Title Summary Report Phase II Seawater SO2 Scrubber Environmental Resource Program for GPA	
Author R. W. Beck & Assoc.	
Location Marine Lab	
Frequency Monthly	

Notes

Corals	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Yes

Sector West	Year 1977
Site Piti Channel	Type Marine
Title Marine Environmental Baseline Report Commercial Port, Apra Harbor, Guam	
Author S. S. Amesbury et. al.	
Location Marine Lab (Tech 34)	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg
PhysChem Yes	Bact

Misc

Sector West	Year 1976
Site Taleyfac Bay	Type Marine
Title EIA of Typhoon Pamela	
Author EPA, Marine Lab, DPR, DOA	
Location BOP	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1992
Site Tipalao Bay	Type Marine
Title Marine EIA in the Vicinity of the US Naval Station, Guam, MI	
Author Marine Research Consultants	
Location EPA	
Frequency Once	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes

Sector West	Year 1993
Site Tipalao Bay	Type Marine
Title Dept. of the Army Permit Application: Construction of Ocean Outfall and Diffuser in Tipalao Bay, Guam	
Author Duenas & Assoc., Inc.	
Location ACOE	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1993
Site Tipalao Bay	Type Marine
Title Seashore Clearance Application: Construction of Ocean Outfall in Tipalao Bay, Santa Rita	
Author Duenas & Assoc., Inc.	
Location EPA	
Frequency Once	

Notes

Corals Yes	Algae Yes
Fish Yes	Macros Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector West	Year 1981 ongoing
Site Tipalao Bay (at outfall)	Type Marine
Title Naval Station sewage effluent outfall into N. Tipalao Bay	
Author Fena Lab	
Location Fena Lab, EPA	
Frequency Daily (metals monthly)	

Notes

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen Yes
Org Yes	Inorg Yes
PhysChem	Bact Yes

Misc

Sector West	Year 1984
Site Trinchera Reef	Type Marine
Title Preliminary Study of the Hydrology of Northern Guam	
Author W. J. Zolan	
Location WERI (Tech 34)	
Frequency Biweekly 1981	

Notes Tested freshwater seepage and area 5m away.
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Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids Yes
Nutr Yes	Oxygen Yes
Org	Inorg Yes
PhysChem Yes	Bact Yes

Misc Yes
