# 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This database is a compilation of published and unpublished surveys of water quality in surface waters and inshore marine waters on Guam.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 growndwater 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.

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#### 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	Mily try	Year	1979	toric acts
Site Fe	na Lake,	adjoining	rivers,	Туре	Aquatic
V th	Vithin, and ne Guam	and Frest d Limnolog Seashore Pacific No	gy and Study	Hydrolo Area ar	ogy of, nd the
Author	L. Raule	rson		and the	
Locatio	on BOP	i i all			
Esagua	псу Опсе				

Notes A third to half of current and proposed

in this area

endangered and threatened species found

ME D

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

	Misc
	S. Year
ar new was a few bulling as a fracer as	Days of the state

with published with a below on the first one in 1900, and one in 1900, and one in 1965.

#### 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, CO<sub>2</sub>, 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 SECT	OR	12 (M.2 E)
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 SE	CTOR	THE DITARION T
Agfayan River	1.50 igtir	1968-1972
Alatgue Springs	1	1965
Geus River	8	1970's-1991
narajan River	4	1970's-1990
a Sa Fua River	3	1974-1992
aelae River	2	1974-1992
iyog 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
Jmatac River	8	1965-1990
Ledigao River	1	1985

SITE	SURVEYS	YEARS
WEST AQUATIC SECTOR		
Agana Swamp, River, Springs	s 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
Taelayag 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	URVEYS	YEARS
EAST MARINE SECTOR	2	
Asiga Reef	1	1990
Coastal Waters	2	1990-1994
pan 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
Alig 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
afai Reef	5	1965, Ongoing
Iaputo Reef	1	1977
lilaan Reef	1	1984
anum Point Reef	1	1976
langilao 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
aguan Point Reef	1	1976
Canguisson Reef	21	1970, Ongoing
Tarague Reef	4	1977-1993
Tumon Bay	28	1965, Ongoing
Jruno 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	tara al mangra	Partial day token
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	to the last revi	1977
Piti Bay	12	1965, Ongoing
Piti Channel	11	1972-1981
Taleyfac Bay	1	1976
Tipalao Bay	4	1981, Ongoing
Trinchera Reef	10 10 m	1984
	real S	AND IN

#### 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	Cama	10
1.	Cora	15

- 2. Algae
- 3. Fish
- 4. Macros
- 5. Flora
- 6. Fauna
- 7. Temp
- 8. Solids

- 9. Nutr
- 10. Oxygen
- 11. Org
- 12. Inorg
- 13. PhysChem
- 14. Bact
- 15. Misc

# EAST AQUATIC SECTOR

	A TOWN	1-6	Politic				Parar	neter							
ocation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Alamagosa				-				х	x			x	x		
Asanite Cv							3.0	X	X	10000	-	X	X		-
Baza Grd		-					X	X		X		X	X	1	
Bona Sp								X	X			X	X		
Bubulao					х	x	x	x		x			x		1
Fena Lake					x	x	x	x	X	x	x	x	x	X	x
Imong Ladai*							х			3					
Lonfit				3	х	х	х	х	x	x	x	x	x	x	
Maagas						х	x	x	х	x	19		x	x	
Mahlac		-			x	x		×	x		x	7			
Manengon					x	х	x	х	x	x	x	W.	x		
Maulap							x	Α.					15	4	
Pago					X	X	X	x	X	X	X.	X	x	X	X
Sigua							х	x	X	x		x	x	x	
Sereno Av							x	х		17		X	x	19	
Talofofo						x	x	x	x	x	R		x	x	
Tarzan		1, 1			х	х	x	x	x		x	x	x		
Tepungan* Togcha					x	x			x	237	x		-13	STATE OF	215
Ugum	WIK	200	108	P	х	х	х	х	x	х	x	x	х	x	
Ylig					x	x_	x	x	X	x	_x	x	x		

# NORTH AQUATIC SECTOR

. ikisajjesi l					1		Parar	neter							
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Airport SD							х	х	x	х	х	х	х	х	1
Barrig SD							X	X	X	x	x	X	x	x	
Change Sp								x	X	_=		x	x		
Dededo SD						-1	x	х	х	X	x	x	X	X	701
Fadian Cv							X	х	X	x	x	x	x	x	
Hilaan Cen						, A.,	х	X_	X	x		X	X	x	
Janum Sp							A-0.50	x	x		4	x	x		
Latte SD							x	X	x	X	X	X	X	X	
Marbo Cv					x	x	х	x	x	x		x	x	x	
MarTer SD						,	х	х	X	x	x	X	x	x	
Perez SD				- =			х	x	X	x	х	x	x	x	
Snta Rs Sp								X	X			x	x		17
Tarague Cv					=		_ x	x	x	x		x	x	x	
Tarague Sp								x	x_			x	x		
Tumon SD	-						х	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

							Parar	neter							
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agfayan Alatgue Sp					х	х	х	х	x	х		x	x		
Geus Inarajan	L				x x	x x	x x	x x	x x	x	x	x x	x x	x	
Laelae La Sa Fua	Ē						x x	x x	x x	x	x	x x	x x	x	
Liyog* Madog							x	_ x_	x	x	17	x	х	x	
Malojloj Sp Piga Sp					A			x x	X X		12	x x	x x	y	
Pigua Siligin Sp							x	x x	x x	x		x x	x x		
Sumay* Tinago							x								
Toguan Umatac					x	x	x	x	x	x		x x	x		
Y Ledigao						1,400		x	x			x	x		

### WEST AQUATIC SECTOR

							Parar	neter			7544		2 10		
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agana Aguada*					х	х	х	х	x	х	x	х	х	x	
Asan River Asan Sp						x	x	_x	x	x		x	x x		1
Atantano				1			х	x	x	x			х	x	
Auau Sp Chaligan* Big Gautali			1		1	ï	x	x	Xx	x	- 11	X	x	x	 I <sub>2</sub>
CWR SD Chaot					x	_x	х	х	x	х	x	х	x x	x	
Dungca SD EAB SD	1						x x	x x	X X	x x	x	x	x x	x x	
Faata Sp Finile			- BA			-11	x	х	X			х	x		
Fonte Maina Sp	х	47					х	x x	X	х		= 1	x x	x x	1
Mao Sp Masso*	1	1				-		X	X				X	x	
Namo NAS SD	2.51 i	6	- 4				x x	X X	X	x x	x	x	x x	x x	

							Parar	neter						- 1	
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Pagachao Rvrs Agat			9	T   0			x x	х	x x	x			x	х	
Snta Rta Lk Snta Rta Sp			- 3					X X	X			x	х		
Sasa Taelayag	, de sans		r derine				х	х	х	x		х	х	x	
Taguac* Taleyfac							x	х	x_	x		х	х	х	
Tipalao WAB SD				7	х	x	x	x	x	x	x	x	х	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

E N							Parar	neter							
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Asiga Coastal W	x	x	x	х								x		х	
Ipan Mana	x	x	x											x	
Pago Tagachan	X	х	X	х			х	х	х	x		x	x	x x	х
Talofofo	x	x	x	x			х	x	X	x		x	x	x	l
Togcha	х	x	x	х		00							x	x	
Ylig	X	X	X	x		3	X	X	X	x		x	X		x

Coastal W = Coastal Waters (no specified locations)

# NORTH MARINE SECTOR

							Paran	aeter							
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Achae Amantes	х		- X 1			-21-1		-2	x	*	7	x	х		x
Coastal W												x		x	
Double	х	X	X	X			X	X	X	x			X	x	X
Fadian	x	x	x	x					x			x	x	1	x
Fafai	х	x	x	X			x	X	X	x		x	X	X	x
Haputo	x	x	x	x			7	7						16	x
Hilaan				1			x	X_	X	x		X	x	x	x
Janum	x	x	35					V.							
Mangilao	x	x						x	х	x	x	x	X		x
Many Loc									x			x		X /	
Marbo		х	х	x											
NE Coast	72 1	1	1	X			- 1		x	1 3		x	x		x
N Tanguis	16.1		x	1											
Pajon	x		1	-91			7			9			7	4 1	
Ritidian	x	x	x	х			7		X			x	x		x
Taguan	x	x		× 1		- 1		-					5		92
Tanguisson	х	x	x	x	. 1		x	x	х	x	x	x	x	x	x
Tarague	x	x	x	x	4	- 1		3	x	70		x	x	7.1	x
Tumon	x	x	x	x		2 - 10	x	x	x	x	x	x	x	x	x
Uruno	x	x	x	x					x			x	x	74 4	x

#### SOUTH MARINE SECTOR

E							Parar	neter						151	
ocation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Achang	х	х	х	х	Li		1						<b>†</b>		х
Achugao	х	х	х	х				Y							
Agfayan		-S are	x	х			×			x			x		
Ajayan	X	X	x	X			- 31								
Bile	x	x	х	x					00	i.					
Cetti	x	x	x	X							<u> </u>				
Coastal W												x		x	
Cocos Is Rf	x	X	x	X				X		8		-	l V		
Cocos Is S	x	x	х	x				x					1		
Cocos Lag	x	X	х	X			х	X	X	X		- 1	X	X	x
Fouha	x	x	x	х			х	x	x	x			x	x	x
Inarajan	х	х	x	X				x		x	x	x	x	x	7-4-
Inarajan P														x	1
Nomna	x	x	x	X			17					L			9
Pauliluc			x												
Sella	x	X	x	x			lar.								x
Toguan	х	x	х	x				х		x	x	x	х	х	х
Umatac	х	х	х	х			х	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

							Paran	neter				4 5			5 1
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agana	х	x	х	х			х	х	х	x	х	x	x	x	x
Agat	Χ_	x	X	х .			_x_	х	Х.	x	x	x		x	x
Apra	х	х	x	x			х	x	x	x	x	x	x	x	x
Asan	X_	х	_ x	X								A 10		x	
Cabras Isl		x	x				x	x	x		x	x	x	5	x
Cabras S	x	x	x	х								EIN	31 16		x
Coastal W												x	0	x	7
Luminao	х_	х	x	x	1 7		х	х	x				x		x
Orote Pt	x	x	x	x			x	x		x	1		x	18	x
Piti Bay	x	x	_x	x			x	X	X	X		x	x	x	x
Piti Chan	x	x	x				х	x	x	x		19 0	x		x
Taleyfac	x_	x											Bug.		2 8
Tipalao	x	x	х	x			x	x	x	x	x	x	x	x	x
Trinchera	. 1						х	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.

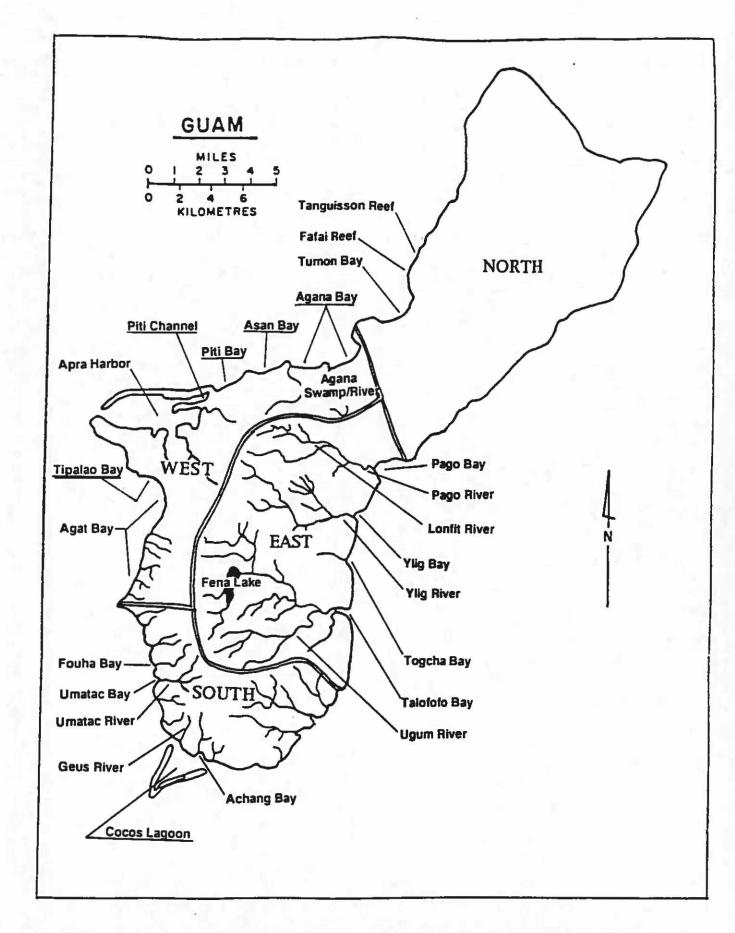
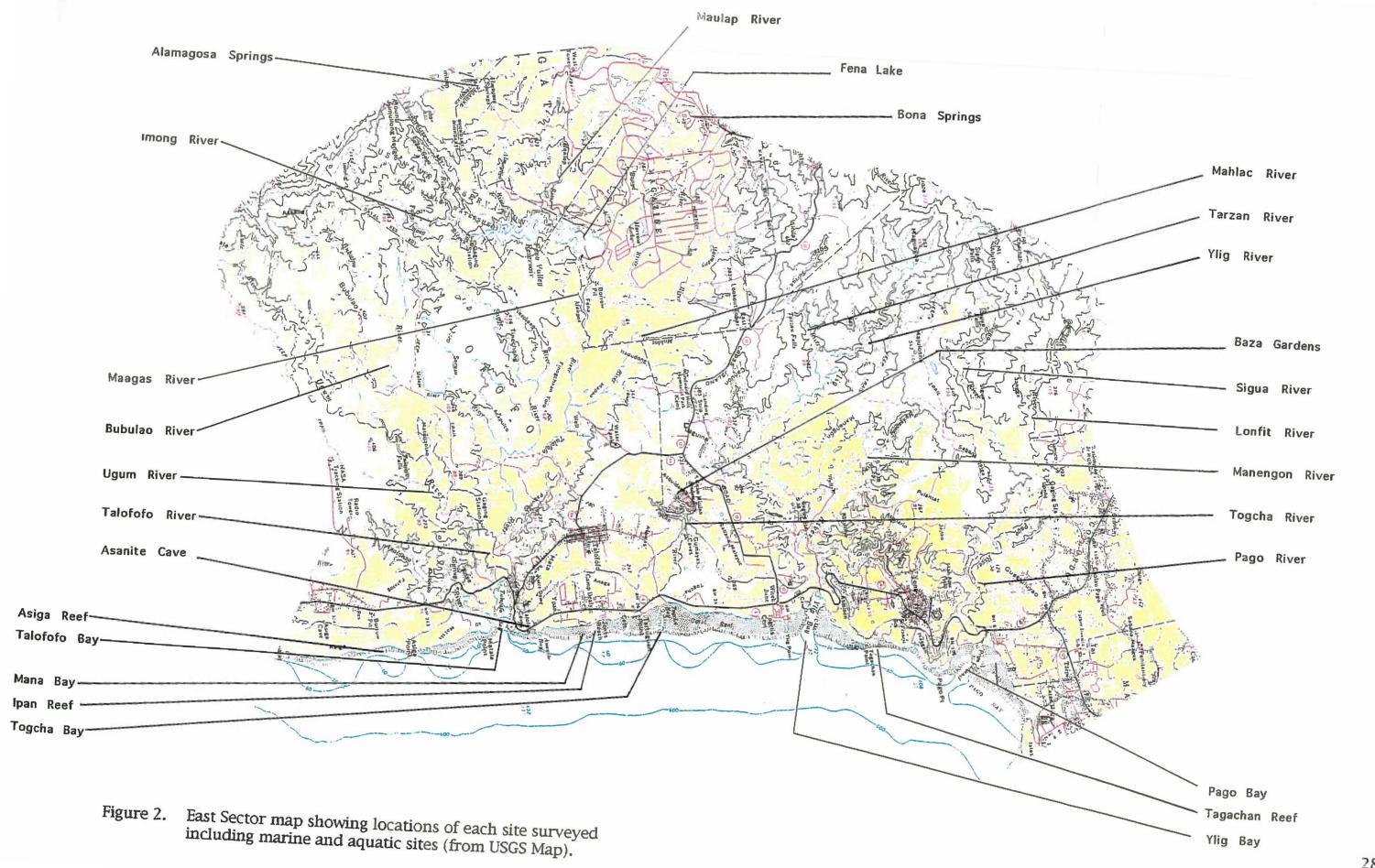
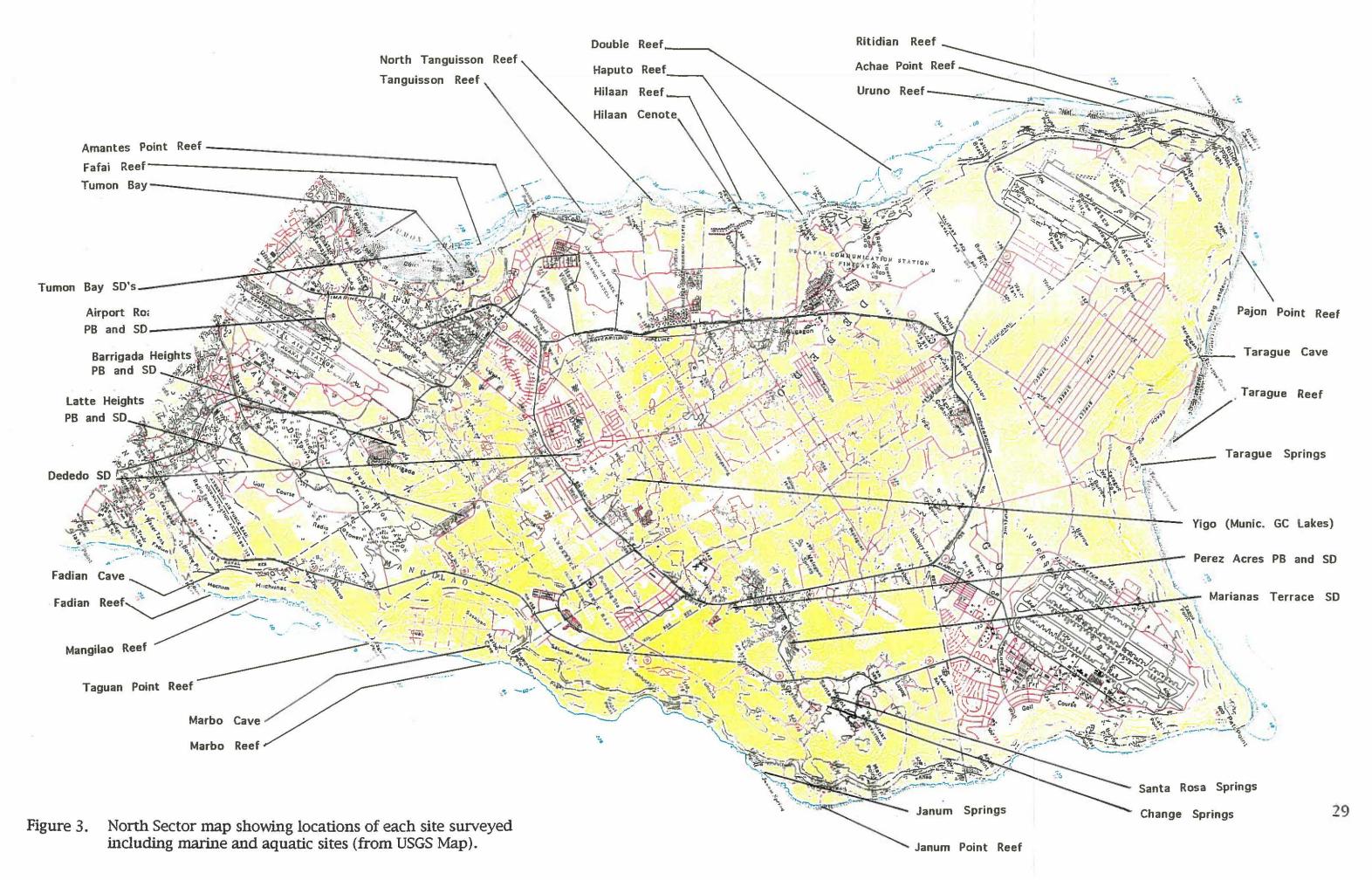
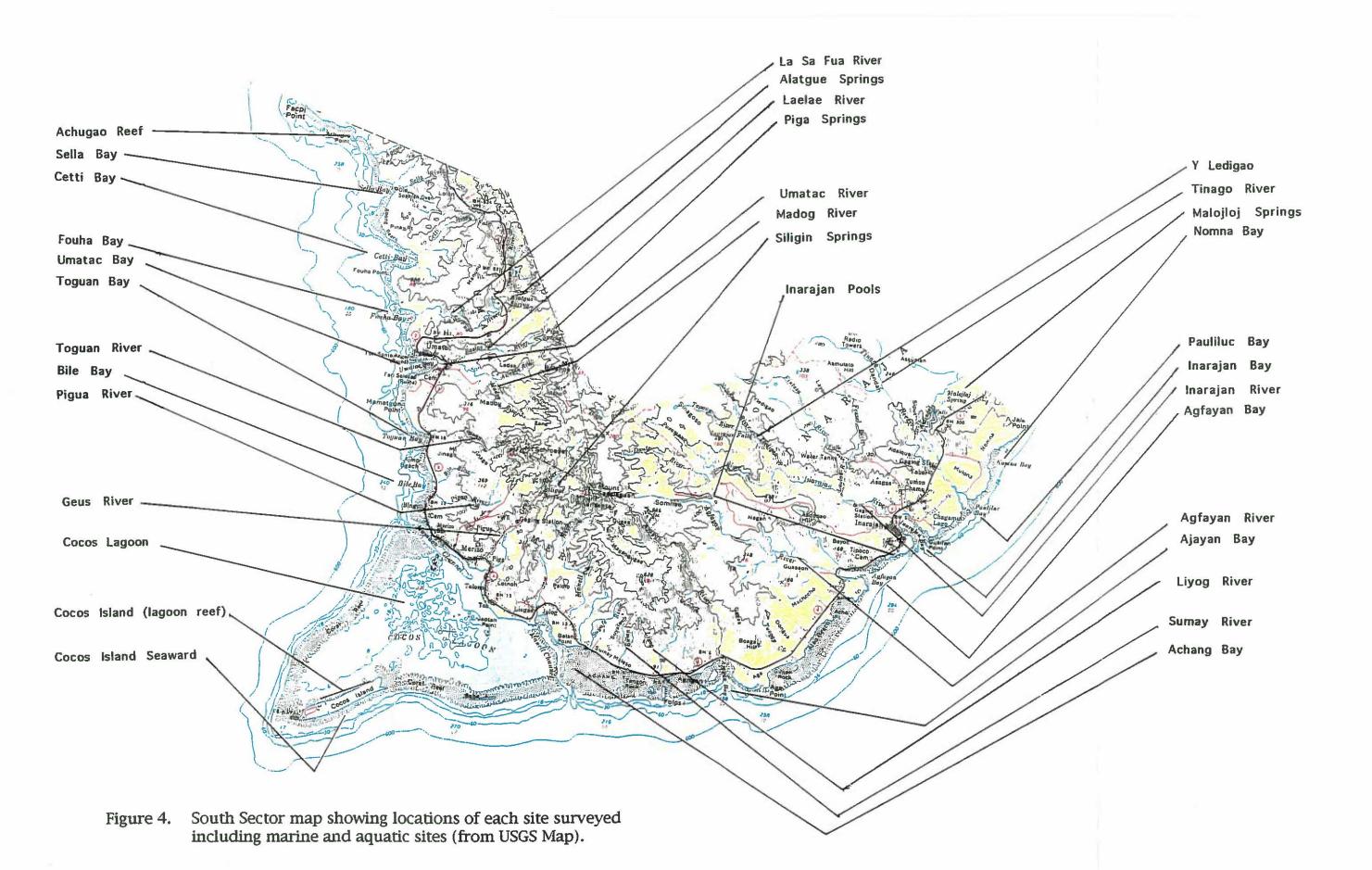
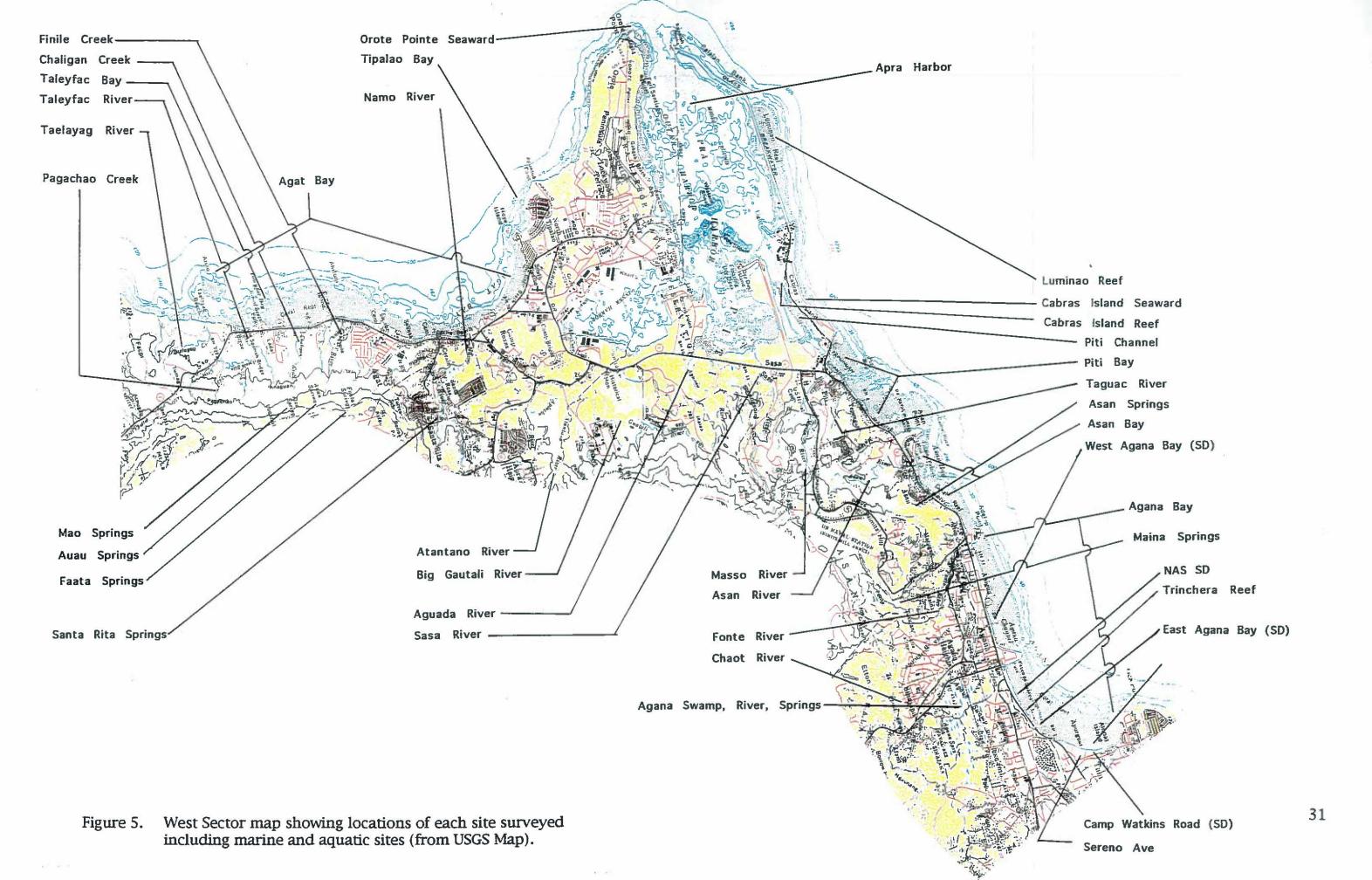


Figure 1. Map of Guam showing the four sectors of the database: North, South, East and West. Locations listed are those with five or more surveys profiled in the database.









#### 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 Reso and other Pacific A		ata for Hawaii
Author USGS Annual R Location USGS Frequency Irregularly So	<b>▼</b> 10 44 May 200	rs
Notes		

 $\exists$ 

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

Misc	* 14.00		

Sector East	Year	1965	· · · · · · · · · · · · · · · · · · ·
Site Asanite Cave		Туре	Aquatic
Title Hydrology of Gua Geological Surve		aper 403	-Н
Author P. E. Ward et. a	al.		
Location USGS			
Frequency Once			
Notes			

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

Misc				

Sector East	Year	1989 ongoing
site Baza Gardens		Type Aquatic
Title Baza Gardens ST Monitoring	P Receiv	ving Water
Author PUAG		
Location PUAG		
Frequency Monthly		
Notes		

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

Year	1989 C	ngoing
	Type	Aquatic
outfall		
aily to mo	nthly	
	outfall	

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

Misc		
	4	

sector East	Year	1965	- 51
site Bona Springs		Туре	Aquatio
Title Hydrology of Guam, Geological Survey F		er 403	-H
Author P. E. Ward et. al.		eT g /	
Location USGS			
Frequency Once			
Notes		10.0	

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

Sector East	Year 1989
site Bubulao River	Type Aquatic
Title Preliminary EIS Bubulao, Guam	-
Author PBEC	
Location PBEC	
Frequency Once	
Notes	Spanish and

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

Misc		
MISC		

Sector East	Year	In prog	ress
Site Bubulao River		Туре	Aquatic
Title In-Stream Monitorii Watershed	ng of the	e Ugum	River
E.			
Author B. Smith and S.	Nelson		
Location Marine Lab			
Frequency 4 times year		=	
Notes			

Corais	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 Aquation
Title Limnological S and Rivers of 0	urvey of the Major Streams Buam
Author DAWR Annu	al Reports
Location DAWR	
Frequency Yearly	
	fo considered more pristine onfit, Ylig and Umatac Rivers

Corais	Algae	
Fish	Macros	
Fiora	Fauna	
Yes	Yes	
Temp	Solids	
Yes	2 4 2	
Nutr	Oxygen	
Org	Inorg	
PhysChem	Bact	

Misc			

Sector East	Year Since	1978
site Fena Lake	Туре	Aquatic
Title Fena Water Trea Monitoring	tment Plant Water	Quality
Author Fena Lab	9697 267	
Location EPA Frequency Monthly on	going ear	
Notes	9011.9	

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

Misc		-	

Sector East	Year 1974
site Fena Lake	Type Aquatic
Title Fena Reservoir Wat Management Study	
Author Kennedy Enginee	ers
Location Fena Lab	
Frequency Three times 19	973

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

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

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 cyc	les only.

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

Misc	Yes		

Sector East	Year Since 1951
site Fena Lake	Type Aquatic
Title Fena Lake sou	rce water after chlorination
3.1	
1 /	
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	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
	Yes
PhysChem	Bact
Yes	Yes

Misc	Yes	-	

Sector East	Year 1985
Site Fena Lake	Type Aquatic
Title Survey of Fena Reco	
Author USGS, Report 8	3-4241
Location USGS	
Frequency Once	
Notes	margaring (1970)

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

Site	Fena Lake	Type Aquatic
Title	Sediment Survey MI, 1979	of Fena Reservoir, Guam,
Auth	or W. Curtis, USG	S, WR 1 R 84-4125
Loca	ition USGS	1963
Frequ	uency Once in 197	79

Notes Topographical survey for storage capacity.

1984

Year

Sector East

Corals	Algae
Fish Contamban (1)	Macros
Flora	Fauna
Тетр	Solids Yes
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

e Aquatic  roir, Guarn,  Flora  Temp
Flora Temp
Nutr
Org
e capacity.
Misc Yes
1
_

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

Misc	Yes				
		 		_	

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
STATE OF THE STATE OF	r L. Raulerson
	ency Once
Notes	A third to half of current and proposed endangered and threatened species found in this area

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

Misc			

site Fena Lake, adjoining rivers, Type Aqua	atic Corats	Algae
Title Terrestrial and Freshwater Organisms Within, and Limnology and Hydrology of	Fish	Macros
the Guam Seashore Study Area and the War In the Pacific National Historical Par		Fauna Yes
Author L. Raulerson	Тетр	Solids
Location BOP Frequency Once	Nutr	Oxygen
Frequency Onco	Org	inorg
Notes A third to half of current and proposed endangered and threatened species fo in this area.	und	Bact
- 68	Misc	
5 - 4070's 4000	N-1	11.1
The second secon	Corais	Algae
	Corais	Algae
Site Imong River Type Aqua	Corais	ay Printing
Type Aqua  Title USGS Water Resources Data for Hawaii and other Pacific Areas	Corais	Macros
Title USGS Water Resources Data for Hawaii and other Pacific Areas	Fish Flora Temp	Macros
Title USGS Water Resources Data for Hawaii and other Pacific Areas  Author USGS Annual Reports	Fish Flora Temp Yes	Macros Fauna Solids

Misc		
14,14		

Bact

PhysChem

Sector East Year	1980	
site Ladai Creek (at outfall)	Туре	Aquatic
Title Flooding and Drainage of	n Guam	
Author ACOE		
Author ACCE		
Location BOP		
Frequency		

Algae
Macros
Fauna
Solids
Охудеп
inorg
Bact

Misc					

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

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

Misc				

	Year 1989		
Site Lonfit River	туре Aquatic	Corals	Algae
programme and the programme an	rtain Pesticides in Ground ers Associated with Ordot	Fish County County	Macros
Landfill in the Pag	o River Basin, Guam, M.I.	Flora	Fauna
Author H. R. Wood	50 S	Temp	Solids
Location WERI (Tech 7		Nutr	Oxygen
	-pour J	Org Yes	Inorg
Notes Conductivity high landfill leachate. samples.	No pesticides in	PhysChem Yes	Bact
	ank .	Misc	
Sector East	Year 1990	Consta	T Albert
	Year 1990 Type Aquatic	Corais	Algae
and Abiotic Comp	- renewal	Corals	Algae
Site Lonfit River  Title The Determination	Type Aquatic	T N	south the fac

	10:	Mark to the second seco
	Misc	
1		

Oxygen

Inorg

Yes

Bact

Nutr

Org

PhysChem

Location WERI

Frequency Ongoing

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

Notes		1.00	
Frequency Yearly			
Location DAWR			
Author DAWR Annua	l Reports		
and Rivers of Gu	₹.	majo. o	
Title Limnological Su	vev of the i	Maior S	treams
Site Lonfit River		Type	Aquatic
Sector East	Year	1974-19	984

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 Aquation
Title EPA Monitoring, (0-20 ft)	Sites PGRL-1, PGRL-2
Author EPA	
Location EPA	
Frequency Monthly	
Notes	

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

Misc			
MISC			

Sector East	Year	1974 t	0 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	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
PhysChem	Bact
Yes	Yes

Misc		

Year	In prog	ress
na River)	Type	Aquatic
ring of the	e Ugum I	River
. Nelson		
		8100
	na River) ring of the	na River) Type ring of the Ugum

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

Misc			

Sector East	Year	1989	
	M		
Notes	7 3		71
		1	
Frequency Once			
Location PBEC			
Author PBEC			
12 & 16 Talofofo			JIC3 110.
Title EIA Slope Stabil	ization Pla	en for He	oles No.
site Mahlac River		Туре	Aquatic
Sector East	Year	1993	

Corais	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Nutr	Oxygen
org	Inorg
PhysChem	Bact

Frequency Once	
Location EPA	
Author PBEC	
Title Final EIA for Tale Guam	ofofo Golf Course, Talofofo
site Mahlac River	Type Aquatic
Sector East	Year 1989

Corals	Algae
ish	Macros
Flora	Fauna
Yes	Yes
Тетр	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

- Parkety		 		All -	-
Misc					
			4		

Fish Flora Yes Temp Nutr	Algae  Macros  Fauna Yes  Solids  Oxygen  Inorg
Fish Flora Yes Temp	Macros Fauna Yes Solids
Fish Flora Yes Temp	Macros Fauna Yes Solids
Fish Flora Yes Temp	Macros Fauna Yes Solids
Flora Yes	Macros Fauna Yes
Fish	Macros
it d	RIGISPHENE!
Corals	Algae
Corale	Alace
Misc	
PhysChem	Bact
Org Yes	Inorg
Yes	Oxygen
II	Solids
	Fauna
and with accusion	Macros
NA B	Algae
	Org Yes PhysChem

Sector East	Year	1990	
site Manengon River		Туре	Aquatic
Title Water Quality Ana River for the Mane			
Author Dames & Moore	•		
Location EPA			
Frequency Once			
Notes	77		

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

Misc			

Sector East Y	ear 1990
Site Manengon River	Type Aquatic
Aquatic Resources, Find Manengon Hills Deve	The state of the s
Author Dames & Moore	
Location EPA	VAP
Frequency Once	
Notes	

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

Misc			

Sector East	Year 1991 - 1993
site Manengon River	Type Aquatic
Title Water Quality Mon Hills Project	nitoring Report Manengor
Author PBEC	1940
Location EPA	
Frequency Weekly, mor	nthly, quarterly

Corais	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
Yes	
PhysChem	Bact
Yes	, Te

	 	*****	_
Misc			

Sector East	Year	1970's, 1980's
site Maulap River		Type Aquatic
Title USGS Water Re and other Pacific		ta for Hawaii
Author USGS Annual	Reports	
Location USGS		
Frequency Irregularly	some years	
Notes	morthsyr	

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

	-		 	
Misc				

Sector East	Year 1990		
site Pago River	Type Aquat	ic	
Title Final EIS for Guar Pulantat, Yona, G	n First Green Golf Cours uam	<b>3e</b>	
Author Duenas & Swar	vely		
Location EPA	72 A 10 10 10 10 10 10 10 10 10 10 10 10 10		
Frequency Once			
Notes			

Algae
Macros
Fauna
Yes
Solids
Oxygen
Inorg
Bact

Misc			
	-		

Sector East	Year	1979	10
Site Pago River		Туре	Aquatic
Title Water Resources Pacific Areas	Data for	Hawaii a	and Other
	-		
Author USGS Annual F	Reports		
Location USGS			
Frequency Once			
Notes	Tel.		

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

Sector East	Year 1974 to 1991	
site Pago River	Type Aquatic	
Title EPA Monitoring PGRP-1, PGRL	, Sites PGRP-2, PGEP, O	
nov.		
Author EPA		
Location EPA	Year	
Frequency Monthly	1. 100	
Notes	0445-84-9-1	

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

Misc		

Year	1990	
	туре Аф	uatic
911		
	n of Trace	Year 1990 Type Aq n of Trace Metals in E onents of the Major i

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

Misc	TO JUST I	

Notes	
Frequency Once	
Location PBEC	
Author PBEC	
Country Club	
	Proposed Guam Talofofo
site Pago River	Type Aquatic
Sector East	Year 1990

Corais	Algae
Fish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr	Oxygen
rg	Inorg
PhysChem	Bact

Type Aquation ommunities: Four Guam

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

Misc	814			

Sector East	Year 1992
site Pago River	Type Aquation
Title Manengon Hills-V Monitoring Repor	
Author MDI Corp.	2004
Location EPA	
Frequency Daily 4-9/92	
	100
Notes	

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

Misc		

Sector East	Year	1970's, 1980's
Site Pago River		Type Aquatic
Title USGS Water R and other Pacif		ata for Hawaii
Author USGS Annua	ul Reports	ri)
Location USGS Frequency Irregularly	some year	s
Notes		

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

Misc		

Sector East	Year 1974 to 1991
Site Sigua River	Type Aquatic
Title EPA Monitoring, Si	te PGRS
Author EPA	
Location EPA	
Frequency Monthly	
Notes	

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

Misc			

Sector East	Year	1990	**
site Sigua River		Type	Aquatic
Title The Determination and Abiotic Composed Guam			
Author G. R. W. Dento	n		
Location WERI			
Frequency Ongoing			
Notes Waters clean by highest near Or			metals

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

Misc			
	-		

Sector East	Year 1978 to 1991
Site Talofofo River	Type Aquation
Title EPA Monitoring,	Site TUETU (0,1,2 ft.)
4/14/	
Author EPA	
Location EPA	
Frequency Monthly	
Notes	

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

Sector East	Year 1974 to 1991
site Talofofo River	Type Aquatic
Title EPA Monitoring,	Sites TUETO, TURT 2
	p(p)
Author EPA	
Location EPA Frequency Monthly	
njont	9/0
Notes	

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

Misc		H H

Sector East	Year 1990
site Talofofo River	туре Aquatic
Title Draft EIA for the Country Club	Proposed Guam Talofofo
Author PBEC	
Location PBEC	
Frequency Once	
44	• 6 6
Notes	
Sector East	Year 1983
Sector East Site Talofofo River	Year 1983 Type Aquatic
	Type Aquatic Study of Stream
Site Talofofo River  Title Reconnaissance	Type Aquatic Study of Stream
Site Talofofo River  Title Reconnaissance Sediments, Sout	Type Aquatic Study of Stream
Site Talofofo River  Title Reconnaissance Sediments, Sout	Type Aquatic Study of Stream hern Guam
Site Talofofo River  Title Reconnaissance Sediments, Sout	Type Aquatic Study of Stream hern Guam

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

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	Corals	Algae
Title EIA for Lake Ag	at Golf Course Santa Rita,	Fish	Macros
AF 143		Flora	Fauna
	2	Yes	Yes
Author PBEC	418-11	Temp	Solids
Location EPA	367	Nutr	Oxygen
Frequency Once			ASC 4000
galate	The Table 1	Org	Inorg
Notes	THE SEASON STATES	PhysChem	Bact
		Misc	
Sector East	Year 1991		
Site Tarzan River	Type Aquatic	Corals	Algae
Title Water Quality M Guam Country	Ionitoring Plan for STT Club, Phase 1	Fish 4 max squires in the	Macros
	THE PART OF THE PA	Flora	Fauna
	1		
Author PBEC	White T	Temp	Solids Yes
Author PBEC Location EPA		Temp	
	AMON		Yes

Hisc		

Org

PhysChem

Inorg

Bact

Sector East	Year	1994	
site Tarzan River strea	ams	Туре	Aquatic
Title Environmental R Cascada Country			
17			
Author GMP Associate	es, Inc.		
Location EPA			
Frequency 2-3/1992, v	veekly/dai	ly	
Notes			

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Place settle
Org	Inorg
Yes	Yes
PhysChem	Bact
Yes	it.

Misc		

Sector East	Year 1980	
Site Tepungan River (a	at outfall) Type Aquat	ic
Title Flooding and Dra	ainage on Guam	
* # % 1 · ·		
Author ACOE		
Location BOP		
Frequency		
Notes Lists storm drain water quality da	Section of the sectio	

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

Misc			

Sector East Site Togcha River	Year 1989  Type Aquatic	Corals	T
	2001	Misc	
Notes	West, and the second	PhysChem	
Frequency Once	7,46	Org	1
Location EPA	200	Nutr	1
Author Duenas & Ass	ociates, Inc.	Temp	
Development, Ipa	an, raiototo	Flora Yes	
Title Biological Survey Guahan Golf Co	urse and Hotel	Fish	31
Site Togcha River	Type Aquatic	Corals	
Sector East	Year 1992		_

Corals	Algae
Manua II	and Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Algae

Macros

Fauna Yes Solids

Oxygen

Inorg

Bact

Title Final EIA for Talofofo Golf Course, Talofofo

Guam

Author PBEC

Location EPA

	Corals	Aless
Site Togcha River Type Aquatic	Corais	Algae
Title Quarterly Water Quality Monitoring Report Talofofo Golf Resort	Fish	Macros
	Flora	Fauna
Author Manda Corp	Temp	Solids
Author Maeda Corp.		NA P
Location EPA	Nutr-	Oxygen
Frequency 1993 ongoing, quarterly	Yes	
the desired and the second sec	Org	Inorg
	Yes	
Notes No pesticides detected, nitrates low.	PhysChem	Bact
	4110	
1-2'	Corals	Algae
1-2	Corals	Algae
1-2	Corals	Algae Macros
Site Togcha River (at outfall) Type Aquatic	W 1	601 = 8c 11
Site Togcha River (at outfall) Type Aquatic	Fish	Macros
Site Togcha River (at outfall)  Type Aquatic  Title Flooding and Drainage on Guam	Fish	Macros Fauna
Site Togcha River (at outfall)  Type Aquatic  Title Flooding and Drainage on Guam  Author ACOE	Flora	Macros Fauna Sotids

WIZC			
-			

Bact

PhysChem

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

1460

Sector East	Year 1989
site Ugum River	Type Aquatic
Title Draft EIA for the Development P	Ugum River Water Supply roject
Author ACOE	4001
Location BOP	
Frequency Once	
A York	410
Notes	2011/2019

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

Misc			 2

Sector East	Year 1980
site Ugum River	Type Aquatic
Title Ugum River Gua Rivers, Territory	am Interim EIS Harbor & of Guam
Pallet, 191	
Author ACOE	
Location BOP	
Frequency	
30.00	9-71
Notes	
	1 669

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

Misc				

Sector East	Year 1989
Site Ugum River	Type Aquatic
Development F	e Ugum River Water Supply Project
Author GMP Associa	ates, 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

Sector East	Year 1978 - 1979
Site Ugum River	Type Aquatic
Title Water Resource Pacific Areas	s Data for Hawaii and Other
Author USGS Annual	Report
Location USGS	
Frequency Once	
Notes	W 200

Corais	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	4500000
Org	Inorg
Yes	Yes
PhysChem	Bact
Yes	

Sector East	Year 1989
site Ugum River	Type Aquatic
Title Preliminary EIS Bubulao, Guam	
de Y	
Author PBEC	
Location PBEC	
Frequency Once	940
Notes	Manuacy est

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

Misc	
Misc	

Sector East	Year 1990
Site Ugum River	Type Aquatic
	ion of Trace Metals in Biotic nponents of the Major Rivers
Author G. R. W. Dent	on ·
Location WERI	
Frequency Ongoing	
Notes Waters clean thighest near C	oy world standards, metals Ordot landfill.

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

Misc			

Sector East	Year 1990	1 34
Site Ugum River	туре Aquatic	Corals
Title Draft EIA for the P Country Club	Proposed Guarn Talofofo	Fish
		Flora
Author PBEC	3	Temp
Location PBEC		Nutr:
Frequency Once		Org
Notes		PhysChem
	74. 7	Misc
	1000	<u> </u>
Sector East Site Ugum River	Year 1983  Type Aquatic	Corais
Title Vegetative and Ad Watersheds in So	quatic Communities: Four outhern Guam	Fish
		Flora

Corals	Algae
ish	Macros
Flora	Fauna Yes
Temp	Solids
Nutr -	Oxygen
)rg	Inorg
PhysChem	Bact

Misc		1.6.74	

Year 1983
Type Aquatic
Aquatic Communities: Four outhern Guam

Corais	Algae	
Fish	Macros	
Flora	Fauna	
Yes	Yes	
Гетр	Solids	
Nutr	Oxygen	
Org	Inorg	
PhysChem	Bact	

Misc				

Sector East	Year	In prog	ress
Site Ugum River		Туре	Aquatic
Title In-Stream Monitor Watershed	ing of the	e Ugum I	River
Author B. Smith and S.	. Neison		
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

Sector East	Year 1976-1984	1
site Ugum River	туре Аф	uatic
Title Limnological Sur and Rivers of Gu	-	ams
Author DAWR Annual	Reports	
Location DAWR		
Frequency Yearly		
The Book of the	b/5	W
Notes Above Talofofo than Geus, Lon	considered more pris fit, Ylig and Umatac Ri	

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

	 	- I desired	-	
lisc				
				444

Title Reconnaissance Study of Stream Sediments, Southern Guam	Fish
Site Ugum River Type Aquatic	Corals
Sector East Year 1983	
	Misc
Notes	PhysCher Yes
	Org
Frequency Once in 1984	Yes
Location EPA	Nutr
Author Bureau of Reclamation	Temp
Assessment	Flora
Title Potential Water Reservoir Development Guam, Special Report and Environmental	Fish
Site Ugum River Type Aquatic	Corals
Sector East Year 1985	

Author USGS Water Resources Investigation

Location USGS

Frequency Once

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids Yes
Nutr	Oxygen
Yes	- 10.1
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc		
miac		

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, 9 (0-20 ft)	Sites TURU-1, TURU-2
Author EPA	
Location EPA Frequency Monthly	
anemi e	pvů
Notes	

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

Sector East	Year 1991
site Ylig River	туре Aquatic
Title Final EIA for Gua Yona, Guam	am Takayama Golf Course,
Author PBEC	
Location ACOE	
Frequency Once	
Wall-	510
Notes	

Corais	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Nutr	Oxygen
)rg	Inorg
PhysChem	Bact

Misc Birds, Reptiles

Sector East	Year 1992
site Ylig River	Type Aquatic
Title EIA for the Man	engon 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	Bact
Yes	

Misc	 		

Sector East	Year 1989
site Ylig River	Type Aquatic
Title EBS Aquatic Flo Terrestrial Wildli	ora and Fauna and ife at Miyama Hills
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	1978
Site Ylig River		туре Aquatic
Title Water Resource Pacific Areas	es Data for	Hawaii and Other
Author USGS Annua	al Report	
Location USGS Frequency Once		
Notes		

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

Misc	 
MISC	

			4.1.2
Sector East	Year	1991 -	1993
site Ylig River		Туре	Aquatic
Title Water Quality Mon Hills Project	itoring R	leport M	anengon
Author PBEC			
Author PDEO			
Location EPA			
Frequency Weekly, mon	thly, qua	rterly	
Notes Turbidity high follopesticides in sam		orms, no	)

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

Misc		

Notes	PhysChem	Bact
Frequency Once	Org	inorg
Location PBEC	Nutr	Oxygen
Author PBEC		- III
	Flora Temp	Fauna Yes Solids
Title Draft EIA for the Proposed Guam Talofofo Country Club	Fish	Macros
sector East Year 1990 Site Ylig River Type Aquatic	Corals	Algae
	Misc	
Notes Waters clean by world standards, metals highest near Ordot landfill.	PhysChem	Bact
Frequency Ongoing	Org	inorg Yes
Location WERI	Nutr	Oxygen
Author G. R. W. Denton	Temp	Solids
Title The Determination of Trace Metals in Biotic and Abiotic Components of the Major Rivers of Guam	Flora	Fauna
The Determination of Trace Metals in Rights	Fish	Macros
Site Ylig River Type Aquatic		Algae

Sector East	Year 1983	Harrielle Verse	
Site Ylig River	Type Aquatic	Corais	Algae
Title Vegetative and A Watersheds in So	quatic Communities: Four buthern Guam	Fish	Macros
	8.07	Flora	Fauna
	May	Yes	Yes
Author ACOE	1.000	Тетр	Solids
Location BOP	The second second	Nutr	Oxygen
Frequency Once			
	100	Org	Inorg
Notes Surveyed potent	ial for reservoir sites.	PhysChem	Bact
			1
	ANN THE RESERVE TO TH	Misc	
Sector East	Year 1992	Misc	
Sector East Site Ylig River	Year 1992 Type Aquatic	Misc	Algae
	Type Aquatic	SIEV	Algae
Site Ylig River  Title Manengon Hills-V	Type Aquatic	Corais	- MilE più
Site Ylig River  Title Manengon Hills-V  Monitoring Repor	Type Aquatic Veekly Water Quality t	Corais	Macros
Site Ylig River  Title Manengon Hills-V  Monitoring Repor	Type Aquatic Veekly Water Quality t	Corais Fish Flora	Macros Fauna
Site Ylig River  Title Manengon Hills-V  Monitoring Repor	Type Aquatic Veekly Water Quality	Corais Fish Flora Yes	Macros Fauna Yes
Site Ylig River  Title Manengon Hills-V Monitoring Report  Author MDI Corp.  Location EPA	Type Aquatic Veekly Water Quality t	Corais  Fish  Flora Yes  Temp	Macros Fauna Yes
Site Ylig River  Title Manengon Hills-V  Monitoring Repor	Type Aquatic Veekly Water Quality t	Corais  Fish  Flora Yes  Temp Yes	Fauna Yes Solids Oxygen

Sector East	Year	1974-1984
site Ylig River		туре Aquatic
Title Limnological Su and Rivers of G		Major Streams
Author DAWR Annua	i Reports	
Location DAWR		
Frequency Yearly		
Notes		

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

Sector East	Year 1983
Site Ylig River	Type Aquatic
Title Reconnaissanc Sediments, Sou	A STATE OF THE STA
Author USGS Water	Resources Investigative
Location USGS	
Frequency Once	
- 48	10.00
Notes	

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

Misc				

Sector East	Year	1970's, 1980's
site Ylig River		Type Aquatic
Title USGS Water R and other Pacif		ata for Hawaii
Author USGS Annua	al Reports	
Location USGS		
Frequency Irregulariy	y some year	rs
Notes	- Mary mar	1

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

Misc		

Sector North	Year	1981	
Site Airport Road (PB)		Туре	Aquatic
Title Metal Concentratio	n in Gu	am Urba	an Runoff,
Ebest			
Author W. J. Zolan			
Location WERI (Tech 25	5)		
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	Solids
Yes	Yes
Nutr (8) chie	Oxygen
Org	Inorg
	Yes
PhysChem Yes	Bact

Misc	30	UL MI	Tip.	

Sector North	Year	1981	
site Airport Road (PB)		Туре	Aquatic
Title Diatom Assemblag Quality in Freshwar			
Author W. J. Zolan			
Location WERI (Tech 29	€)		
Frequency Sporadically	over tw	o weeks	
Notes Rainfall caused v	ariabilit	when 4	8 hours

before sampling.

algai blooms.

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

Misc Yes	

Sector North	Year 1978
site Airport Road (SD)	Type Aquatic
Title Urban Runoff Qual	ity in Northern Guam
Author J. A. Marsh and	R. H. F. Young
Location WERI (Tech 5)	ton- "T
Frequency Sporadically	1975-1977
the greatest threa	s, oil and grease pose ts. Runoff into nearshore as, causes odor and

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

Misc	1		T.	37		

Sector North	Year	1981
site Barrigada Heights (I	PB)	Type Aquatic
Title Metal Concentratio	n in Gua	am Urban Runoff
40 mg		
Author W. J. Zolan		
Location WERI (Tech 25	5)	to PL
Frequency 5 times 1975	-1977	
The Real Property of the Control of		

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

Misc			

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.

Sector North	Year	1978	
site Barrigada (SD)		Туре	Aquatic
Title Urban Runoff Qu	uality in No	orthern G	iuam
Author J. A. Marsh an	4 D H E	Vouna	
Location WERI (Tech		Toung	
Frequency Sporadical	lv 1975-1	977	

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

		1.0	
Misc			

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

Sector North Y	ear 1965
site Change Springs	Type Aquatic
Titie Hydrology of Guam, M Geological Survey Pro	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	
Notes	

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

Sector North	Year 1978
site Dededo (SD)	Type Aquatic
Title Urban Runoff Qu	uality in Northern Guam
Author I A March an	d D H E Vouna

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

Location WERI (Tech 5)

Frequency Sporadically 1975-1977

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

Misc				
			×	

Sector North	Year	1984	
site Fadian Cave		Type	Aquatic
Title Preliminary Stud Northern Guam	y of the H		logy of
Author W. J. Zolan  Location WERI (Tech	34)		
Frequency Twice a mo		Y No.	
Notes	wilde,		

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

Misc	100	-11

Sector North	Year	1984
Site Hilaan Cenote		Type Aquatic
Title Preliminary Study of Northern Guam	the H	ydrogeology of
Author W. J. Zolan	74	
Location WERI (Tech 34)		
Frequency Twice a month	1981	
Notes		

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

Misc			

Notes	
Frequency Once	
	(1001111)
Location Marine Lab	(Tech 14)
Author R. H. Randall a	and J. Holloman
Title Coastal Survey o	f Guam
site Janum Springs	Type Aquatic
Sector North	Year 1974

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

Misc		 	

Sector North	Year	1984	Y
Site Janum Springs		Type	Aquatic
Preliminary Study Northern Guam	of the H	ydrogeo	logy of
Author W. J. Zolan			
Location WERI (Tech 3	4)		
Frequency Twice a mon	th 1981		
Notes	Ju south		

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

Misc			T
	-		

Sector North	Year 1965
Site Janum Springs	Type Aquatic
Title Hydrology of Guar Geological Survey	n, MI Prof. Paper 403-H
	97,019
Author P. E. Ward et. al	gmat.
Location USGS	
Frequency Once	187
A STATE OF THE STA	LIND .
Notes	

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

Misc	10	

Sector North	Year	1981	, PAR
site Latte Heights (PB)		Type	Aquatic
Title Metal Concentratio	n in Gu	am Urba	ın Runoff
Author W. J. Zolan			
Location WERI (Tech 25	5)		
Frequency 5 times 1975	1977		

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

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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Aisc			

Sector North	Year 1978
site Latte Heights (SD)	туре Aquatic
Title Urban Runoff Quali	ty in Northern Guam
Author J. A. Marsh and F	R. H. F. Young
Location WERI (Tech 5)	

the greatest threats. Runoff into nearshore waters builds deltas, causes odor and

algal blooms.

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

8810.0	 	
Misc		

Sector North	Year 1989
site Marbo Cave	туре Aquatic
Title Draft EIS for the Resort, Barrigad	Proposed Marbo Cave a, Guam
Author PBEC	
Location EPA	
Frequency Once	
· 9-W 1	
Notes	

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

Misc		

Sector North	Year 1984
Site Marbo Cave	Type Aquatic
Title Preliminary Study Northern Guam	y of the Hydrogeology of
Author W. J. Zolan  Location WERI (Tech	34)
Frequency Twice a mo	
Notes	TORRESON A TOTAL

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

Misc		3 (1 to 1)	
	A REST		

site Marianas Terrace	(SD)	Туре	Aquatic
Title Urban Runoff Qu	ality in No	orthern G	uam
Author J. A. Marsh and Location WERI (Tech Frequency Sporadical	5)	er e	

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

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

	 	 ** 1	-
Misc			

Sector North	Year	1981
site Perez Acres (PB)		туре Aquatic
Title Metal Concentration	in Gu	am Urban Runoff
Author W. J. Zolan		
Location WERI (Tech 25)		
Frequency 5 times 1975-1	977	

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

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

Misc	-	

	Туре	Aquatic
		of Water luam
er two	weeks	
13.0		k,
	Habi	er two weeks

Notes	Rainfall caused variable before sampling.	lity when 4	18 hours

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

Misc	Yes	7,00	72	

Sector North	Year	1978	100
site Perez Acres (SD)	- 10	Туре	Aquatic
Title Urban Runoff Qua	ality in No	orthern G	Buam
		100	
Author J. A. Marsh and	R. H. F.	Young	
A WEDI /Took /	5)		
Location WERI (Tech	,		

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

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

Misc	1.00	 la francis	THE RES	
			-	
				4

Sector North	Year	1965
Site Santa Rosa Springs		Type Aquation
Title Hydrology of Guam, Geological Survey I		aper 403-H
		8-7
Author P. E. Ward et. al.		
Location USGS		
Frequency Once		
Notes	75	

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

Misc				

Sector North

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.

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

Misc		- No. 1	

Sector North Ye	ar 1981
Site Sereno Avenue (PB)	Type Aquatic
Title Diatom Assemblages as Quality in Freshwater H	
Author W. J. Zolan	
Location WERI (Tech 29)	
Frequency Sporadically over	two weeks
Notes Rainfall caused variab	

before sampling.

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

Misc	Yes			

Sector North	Year 1984
Site Tarague Cave	Type Aquation
Preliminary Stud Northern Guam	ly of the Hydrogeology of
men's	
Author W. J. Zolan	
Location WERI (Tech	34)
Frequency Twice a mo	onth 1981
Notes	and a second

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

Sector North	Year 1965
site Tarague Cave	Type Aquatic
Title Hydrology of Gua Geological Surve	m, MI y Prof. Paper 403-H
enve).	
Author P. E. Ward et. a	d.
Location USGS	
Frequency Once	
Notes	

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

Misc	umo	To hos	2

	Туре	Aquatic
Guam		
Author R. H. Randall and J. Hollom		
ech 14)		
	THE THE RESIDEN	

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

Misc		7.500

Sector North	Year	1978
Site Tumon E	Bay (five SD's)	Type Aquatic
Title Urban F	Runoff Quality in No	orthern Guam
Author J. A. I	Marsh and R. H. F.	Young
Location WE	RI (Tech 5)	
Frequency S	poradically 1975-1	977

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

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

Misc	 		

Sector North	Year	1993 - 1994	
site Yigo (Golf Course	lakes)	туре Ади	atio
International Cou Municipal GC)			n
Author PBEC			
Location EPA			
Frequency Monthly		0	
Notes	Josef Dega		

Corals	Algae	
Fish My supple	Macros	
Fiora	Fauna	
Temp	Solids	
	Yes	
Nutr	Oxygen	
Yes		
Org	Inorg	
Yes	Yes	
PhysChem	Bact	
Yes		

Misc	AS A.	* ** * **	

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

Corais	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
Yes	\$455 min
Nutr	Oxygen
	Yes
Org	Inorg
PhysChem	Bact
Yes	

2 V .	
Misc	

Notes	l- esc
Frequency Once	
C	
Location USGS	
Author P. E. Ward et. al.	
Geological Survey Pro	of. Paper 403-H
Title Hydrology of Guam, M	
site Alatgue Springs	туре Aquatio
Sector South Y	ear 1965

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

Sector South	Year 1974 to 1991
Site Geus River	Type Aquatic
Title EPA Monitoring,	Sites MZRG1, MZRG2
Author EPA	
Location EPA	
Frequency Monthly	
Notes	~ 265

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

Notes	m 112	(80	10
Frequency Once		930	
Location Marine Lab (T	ech 16)		
Author H. T. Kami et. al.			
Title Biological Study of	the Ge	us River	Basin
Site Geus River		Туре	Aquatic
Sector South	Year	1974	

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

Misc		III

Sector South	Year	1990		
Site Geus River		Type	Aquatic	di s
Title The Determinati and Abiotic Com of Guam			The state of the s	57
Author G. R. W. Dente	on			
Location WERI				
Frequency Ongoing				
Notes Waters clean b			metals	18 A

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

Misc			*	

Type A	quatic
Proposed Guam Tak	ofofo
	Call
	Type A

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

Misc			

Sector South	Year 1986
site Geus River	Type Aquation
	of Aluminum, Manganese, m in Four Southern Guam
Author W. J. Zolan a	ınd L. Ellis-Neill
Location WERI (Tec	h 64)
Frequency Monthly 1	984-1985
The second secon	cium higher than stateside.
	wer than stateside. 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	and Sense Rayle

Sector South Year 1974-1984		
Site Geus River Type Aquatic	Corals	Algae
Title Limnological Survey of the Major Streams and Rivers of Guam	Fish (####################################	Macros
ADMIN TO THE PERSON OF THE PER	Flora Yes	Fauna Yes
Author DAWR Annual Reports	Temp Yes	Solids
Location DAWR	Nutr	Oxygen
Frequency Yearly	Org	Inorg
Notes	PhysChem	Bact
asy atturi	Misc	
	<u> </u>	
Sector South Year 1970's, 1980's		
	Corats	Algae
ite Geus River Type Aquatic	Corats	Algae
Title USGS Water Resources Data for Hawaii	s0 7. s	Carolina de la companya de la compan
Title USGS Water Resources Data for Hawaii	Fish	Macros

Org

PhysChem

Inorg

Bact

Frequency Irregularly some years

Notes

Sector South Year 1981		
Site Geus River Type Aquatic	Corais	Algae
Title Diatom Assemblages as Indicators of Water Quality in Freshwater Habitats of Guam	Fish	Macros
	Flora	Fauna
	Temp	Solids
Author W. J. Zolan	Yes	Yes
Location WERI (Tech 29)	Nutr	Oxygen
Frequency Sporadically over two weeks	Yes	Yes
	Org	Inorg
Deinfoll aguard maighilite mhan 40 hanna	Yes	Yes
Notes Rainfall caused variability when 48 hours before sampling.	PhysChem	Bact
Doloro ozimpinig.	Yes	Yes
	Misc Yes	
Sector South Year 1990 Site Inarajan River Type Aquatic	Corals	Algae
Site Inarajan River Type Aquatic	Corals	Algae
Title Draft EIA for the Proposed Guam Talofofo		
Title Draft EIA for the Proposed Guam Talofofo	Fish	Macros
Title Draft EIA for the Proposed Guam Talofofo Country Club	Fish Flora Temp Nutr	Fauna Yes Solids Oxygen
Title Draft EIA for the Proposed Guam Talofofo Country Club  Author PBEC Location PBEC	Fish Flora Temp	Macros Fauna Yes Solids
Title Draft EIA for the Proposed Guarn Talofofo Country Club  Author PBEC	Fish Flora Temp Nutr	Fauna Yes Solids Oxygen

Sector South	Year 1983
ite Inarajan River	Type Aquatio
Vegetative and A Watersheds in S	Aquatic Communities: Four outhern Guam
Author ACOE	
Location BOP	
Frequency Once	
Notes Surveyed poten	tial for reservoir sites.

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

Misc	

Sector South	Year	1985	1 3
site Inarajan River		Type	Aquatic
Title Potential Water I Guam, Special F Assessment		A STATE OF THE PARTY OF THE PAR	
Author Bureau of Rec	lamation		
Location EPA			
Frequency Once in 19	84		
[6.04/8]	(10)		1
Notes			Table .

est Side

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

Misc		

Notes	in the	
Frequency Irregularly	some yea	rs
Location USGS		
	Поролю	
Author USGS Annual	Reports	
and other Pacific	Areas	
Title USGS Water Re		ata for Hawaii
site Inarajan River		Type Aquatic
Sector South	Year	1970's, 1980's

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

Year	1974 to 1991
	Type Aquatic
Sites ULF	RL1, ULRL2
19 maril	

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

	 	 	_	 	_
Misc					

Sector South	Year	1990	
site La Sa Fua River		Туре	Aquatic
Title The Determination and Abiotic Composition of Guam	The same of the sa		
Author G. R. W. Dento	on		
Location WERI			

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

- tota - voi		- Internal Control	
Misc			
110000000000000000000000000000000000000			

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

Sector South	Year 1981
site La Sa Fua River	Type Aquatic
	ges as Indicators of Water ater Habitats of Guam
Author W. J. Zolan	4 440
Location WERI (Tech 2	9)
Frequency Sporadically	over two weeks

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

Notes Rainfall caused variability when 48 hours before sampling.

Misc Yes

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

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

Mi	SC			

Type Aquation in Watershed Environments of uam: Part 1, Baseline Study of one and Speciation
uam: Part 1, Baseline Study of
grist Jr. and G. R. W. Denton
ar

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

Sector South	Year 1980
site Liyog River (at outfa	ull) Type Aquatic
Title Flooding and Drain	nage on Guam
Author ACOE	
Location BOP	
Frequency	

Aigae
Macros
Fauna
Solids
Oxygen
Inorg
Bact

sector South	Year 1974 to 1991
ite Madog River	Type Aquatic
ritte EPA Monitoring	, Sites ULRU2, ULRM
45,45	T MAN TO SERVE STATE OF THE SERV
Author EPA	2885
Location EPA	The state of the s
requency Monthly	
Votes	

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

Misc	

Sector South	Year 1991-2
Site Madog River	Type Aquatic
	atershed Environments of Part 1, Baseline Study of and Speciation
Author H. G. Siegrist J	r. and G. R. W. Denton
Location WERI	
Frequency Irregular	
Notes	
Sector South	Year 1990

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

Misc			

	1990	
	Type	Aquatic
n 🖃		
		n of Trace Metals conents of the Ma

Algae
Macros
Fauna
Solids
Oxygen
Inorg
Yes
Bact

Misc				

Sector South	Year 1965
site Malojloj Springs	Type Aquation
Title Hydrology of Guam Geological Survey	
Author P. E. Ward et. al.	
Location USGS	
Frequency Once	all all
Notes	

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

Misc	131	THE TON	-	
misc				

Sector South	Year	1965	
site Piga Springs		Type	Aquatic
Title Hydrology of Guam Geological Survey		aper 403	<b>3-H</b>
Author P. E. Ward et. al.	700		
Location USGS			
Frequency Once			
Chapt	1	1/3	
Notes			

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

Misc				7.0

Sector South	Year 1986	
site Pigua River	туре Аф	uatic
Title Concentrations o Iron and Calcium Rivers	f Aluminum, Mangane in Four Southern Gu	0.50
Author W. J. Zolan and	d L. Ellis-Neill	
Location WERI (Tech	64)	
Frequency Monthly 19	84-1985	
	um higher than states er than stateside. o 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		

Notes	Charlet or A
Frequency Once	114 1
Location USGS	
Author P. E. Ward et. al.	
Title Hydrology of Guam, M Geological Survey Pr	
Site Siligin Springs	Type Aquatic
Sector South	Year 1965

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

	The state of the last of the l	 184	 _
Misc			

Sector South	Year	1980	
site Sumay River (at	outfall)	Type	Aquatic
Title Flooding and Dr	ainage on	Guam	
Author ACOE			
Location BOP			
Frequency			

water quality data.

Corais	Algae
Fish	Macros
Fiora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Sector South	Year	1970's, 1980's
site Tinago River		Type Aquatic
Title USGS Water Re and other Pacific		ata for Hawaii
Author USGS Annua	l Reports	
Location USGS		
Frequency Irregularly	some year	rs
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 Corats	_
Southern Guam: F	tershed Environments of art 1, Baseline Study of	
Sources, Sink and	Speciation	
Author H. G. Siegrist Jr	and G. R. W. Denton	
Location WERI	Nutr	
Frequency Irregular	Org	
Notes	PhysCI	hem
	Misc	
Sector South	Year 1990	
Site Toguan River	Type Aquatic Corats	i.
	of Trace Metals in Biotic conents of the Major Rivers	

Corals	Algae
Fish	Macros
Fiora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Yes

Misc	-		

Algae
Macros
Fauna
Solids
Oxygen
Inorg
Yes
Bact

Misc			

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

of Guam

Author G. R. W. Denton

Location WERI

Sector South	Year	1980	1
site Toguan River (a	t outfall)	Type	Aquatic
Title Flooding and D	rainage on	Guam	
Author ACOE			
Location BOP			
Frequency			

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

Sector South	Year	1990
site Umatac River		Type Aquatic
Title The Determinate and Abiotic Comof Guam		e Metals in Biotic f the Major Rivers
Author G. R. W. Dent	on	
Location WERI		
Frequency Ongoing		

Corals	Aigae	
Fish	Macros	
Fiora	Fauna	
Temp	Solids	
Nutr	Oxygen	
Org	inorg Yes	
PhysChem	Bact	

Misc		
WIZC		

Sector South	Year 1990
site Umatac River	Type Aquatio
Title Draft EIA for the I Country Club	Proposed Guam Talofofo
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	туре Aquatic
	of Aluminum, Manganese, n in Four Southern Guam
Author W. J. Zolan ar	nd L. Ellis-Neill
Location WERI (Tech	64)
Frequency Monthly 19	984-1985
Notes Aluminum, calc	ium higher than stateside.

Manganese lower than stateside. Variability due to rain 48 hours prior to

sampling.

Corais	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 Umatac River		Type Aquatic
Title Limnological Sur and Rivers of Gu		Major Streams
Author DAWR Annual	Reports	
Frequency Yearly		
Notes	granti-	

Corals	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Yes	E Ward
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Sector South	Year 1965
Site Umatac River	Type Aquatic
Title Hydrology of Gua Geological Surve	m, Mi y Prof. Paper 403-H
Author P. E. Ward et. a	ı.
Location USGS	trial
Frequency Once	
The Month	fed 1
Notes	

Corals	Aigae
Fish	Macros
Flora	Fauna
Temp	Solids
	Yes
Nutr	Oxygen
Yes	55565
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc			
misc			

Sector South	Year	1965	
Site Umatac River		Туре	Aquatio
Title Geology and Hydrol Geological Survey I			
Author P. E. Ward et. al.			
Location USGS			
Frequency Once			
Notes			

	A STATE OF THE OWNER,
Corais	Algae
Fish	Macros
Flora	Fauna
Тетр	Solids Yes
Nutr	Oxygen
Yes	The second
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc	-		200-000

site Umatac River	Type Aquatic
Title USGS Water Resour and other Pacific Are	
Author USGS Annual Rep	orts
Location USGS	
Frequency Irregularly some	e years
Notes	

Year

Sector South

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

Misc			

1970's, 1980's

Sector South	Year	1980	
site Umatac River (at	outfall)	Туре	Aquatic
Title Flooding and Di	rainage on	Guam	
		7	
Author ACOE			
Location BOP			

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

Sector South	Year	1985	
Site Y Ledigao River		Type	Aquatic
Guam, Special Re Assessment		A STATE OF THE PARTY OF THE PAR	
Author Bureau of Recla	amation		
Location EPA			
Frequency Once in 198	4		
Notes	ANTOLO		

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

Misc			

Sector West Y	'ear 1977	Corals	Algae
Site Agana River	Type Aquatic	001813	- mil = j pr
Title Final Environmental S and Rivers in Territory		Fish	Macros
		Flora	Fauna Yes
Author ACOE		Temp	Solids
Location EPA		Nutr	Oxygen
Frequency Once	- 1-	Org	Inorg
Notes Ten bird species liste frequent area.	ed as endangered that	PhysChem	Bact
	- 3	Misc	
			- 3
Sector West Y	Year 1985		
	rear 1985  Type Aquatic	Corals	Algae
Site Agana River  Title General Design Memo	Type Aquatic	Corais	Algae
Site Agana River	Type Aquatic orandum and Flood Control	(F)	1 = 1 .
Site Agana River  Title General Design Memoral Supplemental EIS for	Type Aquatic orandum and Flood Control	Fish	Macros
Site Agana River  Title General Design Memoral Supplemental EIS for Improvements-Agana	Type Aquatic orandum and Flood Control	Fish	Macros Fauna Yes
Site Agana River  Title General Design Memorial EIS for Improvements-Agana  Author ACOE	Type Aquatic orandum and Flood Control River	Fish Flora Temp	Macros Fauna Yes Solids
Title General Design Memor Supplemental EIS for Improvements-Agana  Author ACOE  Location EPA	Type Aquatic orandum and Flood Control River	Fish Flora Temp Nutr	Fauna Yes Solids

Sector West	Year 1974 to 1991
Site Agana River	Type Aquation
Title EPA Monitoring,	Sites AGRA2, AGRA3
53007 687	1000
Author EPA	
Location EPA	
Frequency Monthly	
Notes	000
	Mente da carro

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

	 0.000,000
Misc	- 1 - 5

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

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

Misc		===		

Year 1990
туре Aquatic
Proposed Guam Talofofo

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

Sector West	Year	1980	4
site Agana River (at or	utfall)	Туре	Aquatic
Title Flooding and Dra	ainage on	Guam	
2007			
Author ACOE			1
Location BOP			
Frequency			
10. 0			

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

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

Misc	

Sector West	Year	1981	
site Agana Springs		Type	Aquatic
Title Water Quality Asso Springs	essment	for Agar	na
Author T. L. Smalley an	d W. J. 2	Zolan	
Author T. L. Smalley an		Zolan	

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

Sector West	Year 1978 to 1991	
site Agana Springs	Type Aqua	tic
Title EPA Monitoring, S	lite AGRA	
29		
Author EPA	small	
Location EPA		
Frequency Monthly		
The plant	1100	
Notes		Ī

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

Misc		

Notes	3-412-7
21	
Frequency Once	
Location USGS	
Author P. E. Ward et. al.	
Title Hydrology of Guam, Geological Survey F	
No. of the last	
site Agana Springs	Type Aquatic
Sector West	Year 1965

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

	 	-	 
Misc			
m13C			

Sector West	Year	1978	1
site Agana Swamp		Type	Aquatic
Title Environmental Su Site in Agana Sw		Propos	ed Fill
Author B. D. Smith and	d S. E. He	dlund	
Location Randall (Mar	ine Lab E	SR 18)	
Frequency Once			
Notes	e elle		

Corals	Algae
Fish	Macros
Flora	Fauna
Yes	Yes
Temp	Solids
	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
PhysChem	Bact
Yes	1 -

-		 West wo	 	 	 _	_
Mis	С					

Sector West	Year 1985
site Agana Swamp	Type Aquation
Title General Design Mem Supplemental EIS for Improvements-Agana	Flood Control
Author ACOE	
Location EPA	
Frequency Several surveys	s, 1984
Notes	100,400

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

Sector West	Year	1983	
site Agana Swamp		Туре	Aquatic
Title Hydrological Inve Swamp, Northern		of Agana	1
Author J. F. Ayers and	R. N. Clay	shulte	
Location WERI (Tech	40)		
Frequency Once 1978			
Notes	Based Stry 194		

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

	 	7.0
Misc		
M12C		

Site Asan River  Type Aquatic  Title Asan Village Flood Control Study, Asan Guam  Author ACOE  Location MARC  Frequency Once	Fish  Flora  Temp Yes  Nutr  Org  PhysChem Yes	Algae  Macros  Fauna Yes  Solids  Oxygen Yes  Inorg
Title Asan River  Title Asan Village Flood Control Study, Asan Guam  Author ACOE  Location MARC	Fish  Flora  Temp  Yes  Nutr	Fauna Yes Solids Oxygen Yes
Title Asan River  Title Asan Village Flood Control Study, Asan Guam  Author ACOE  Location MARC	Fish Flora Temp Yes	Macros Fauna Yes Solids Oxygen
Title Asan River  Title Asan Village Flood Control Study, Asan Guam  Author ACOE	Fish Flora Temp Yes	Macros Fauna Yes Solids
Title Asan River  Type Aquatic  Title Asan Village Flood Control Study, Asan  Guam	Fish Flora Temp	Macros Fauna Yes
Site Asan River Type Aquatic  Title Asan Village Flood Control Study, Asan	Fish	Macros Fauna Yes
Site Asan River Type Aquatic  Title Asan Village Flood Control Study, Asan	Fish	Macros Fauna
Site Asan River Type Aquatic  Title Asan Village Flood Control Study, Asan	Fish	Macros
Site Asan River Type Aquatic		en' etc.
7,6	Corals	Algae
Sector Woot Tear 1901		
Sector West Year 1981		
	Misc	
Notes Lists storm drain discharge points, no water quality data.	PhysChem	Bact
	Org	Inorg
Location BOP Frequency	Nutr	Oxygen
Author ACOE		American Complete Com
8.1	Temp	Solids
	Flora	Fauna
O 55	Fish	Macros
Title Flooding and Drainage on Guam	U. 19	- State of the state
Site Aguada River (at outfall) Type Aquatic  Title Flooding and Drainage on Guam	· · · · · · · · · · · · · · · · · · ·	

Sector West	Year 1965	
Site Asan Springs	Type Aquatio	
Title Hydrology of Gua Geological Surve	im, MI by Prof. Paper 403-H	
Author P. E. Ward et. a	al.	
Location USGS		
Frequency Once		
AT INSAN STATE	100	
Notes		

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

Misc		

Site Atantano River Type Aquat  Title EPA Monitoring, Sites APEA, APRA2  Author EPA  Location EPA	Sector West	Year 1975 to 199	)1
Author EPA	Site Atantano River	туре Ади	atio
Author EPA	Title EPA Monitoring, S	ites APEA, APRA2	
35.2 MeV			
26 MeV. 667			
Location EPA	Author EPA	g16.97	
	Location EPA		
Frequency Monthly	F Monthly		

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

Misc			
niac			

Year 1965
Type Aquati
am, MI ey Prof. Paper 403-H
al.
All a

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

		dian
		Misc

Sector West	Year	1975 to	1991
site Big Gautali River		Type	Aquatic
Title EPA Monitoring, S	ite APR	A1	
Author EPA			
Location EPA			
Frequency Monthly			
Notes			

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

Misc			******		

Sector West	Year	1978	
site Camp Watkins R	oad (SD)	Type	Aquatic
Title Urban Runoff Q	uality in No	orthern G	Buam
title 1			
1.4.44	40 U.E.	V	
Author J. A. Marsh ar	10 H. H. F.	Young	
Location WERI (Tech	15)		
Frequency Sporadica	lly 1975-1	977	
Notes Soaps, deterge the greatest the waters builds of	eats. Run	off into r	earshore

aigal blooms.

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

Misc	7	

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

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

Misc		
74		

Sector West	Year 1985
site Chaot River	Type Aquatic
Supplemental E Improvements-A	IS for Flood Control
Author ACOE	
Location EPA	
Frequency Several su	urveys, 1984
Notes	

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

	lisc

Sector West	Year 1974
Site Chaot River	туре Aquatic
Titte Field Ecological River Basin	Survey of the Agana-Chao
Author R. H. Randall	at al
Location Marine Lab	
Frequency Once	
Notes	Magazine in the contract of

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

disc		

Sector West	Year 1990
site Chaot River	Type Aquatio
Title Draft EIA for the Country Club	Proposed Guam Talofofo
trus.	1 10 FW
Author PBEC	ges-
Location PBEC	
Frequency Once	
Notes	

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

Sector West	Year	1978 to 1991
site Dungca's Beach (S	(D)	Type Aquatic
Title EPA Monitoring, S	ite AGR	D
Author EPA		
Location EPA	31	
Frequency Monthly		
Notes		

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

Misc		 	 	 
	Misc			

Sector West	Year 1978
site East Agana Bay (SD)	Type Aquatic
Title Urban Runoff Qualit	y in Northern Guam
Author J. A. Marsh and R	. H. F. Young
Location WERI (Tech 5)	
Frequency Sporadically 1	975-1977
Notes Soaps, detergents, the greatest threats	oil and grease pose s. Runoff into nearshore

waters builds deltas, causes odor and

algal blooms.

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

Misc			***	
	4	 11 726		

0.0
Type Aquation
MI Prof. Paper 403-H

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

Misc				

Sector West	Year	1970's, 1980's
site Finile Creek		Type Aquatic
Title USGS Water R and other Pacif		ata for Hawaii
Author USGS Annua	al Reports	
Frequency Irregularly	y some yea	rs
Notes	9-6-18-q	eli -

Algae
Macros
Fauna
Solids
Oxygen
Inorg
Bact

Misc		

Sector West	Year	1978 to 1991
Site Fonte River		Type Aquatic
Title EPA Monitoring, S	Sites AGR	F2, AGRF1
		4
Author EPA		
Location EPA		
Frequency Monthly		
Boom!		10
Notes		

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

Misc	
MISC	

Sector West Year 1980	Corais	Algae
Site Fonte River (at outfall) Type Aquatic	600	The Thirty
Title Flooding and Drainage on Guam	Fish	Macros
	Flora	Fauna
ACCE	Temp	Solids
Author ACOE  Location BOP	Nutr	Oxygen
Frequency		/ 50
	Org	Inorg
Notes Lists storm drain discharge points, no water quality data.	PhysChem	Bact
	Misc	
Sector West Year 1965		
Sector West Year 1965 Site Maina Springs Type Aquatic	Misc	Algae
100		Algae
Site Maina Springs Type Aquatic  Title Hydrology of Guam, MI	Corals	427
Site Maina Springs Type Aquatic  Title Hydrology of Guam, MI	Corals	Macros Fauna Solids
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H	Corals Fish Flora	Macros
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H  Author P. E. Ward et. al.  Location USGS	Corals  Fish  Flora  Temp	Macros Fauna Solids Yes
Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H  Author P. E. Ward et. al.	Corals  Fish  Flora  Temp	Fauna Solids Yes

Title Hydrology of Guam, MI Geological Survey Prof. Paper 403-H  Author P. E. Ward et. al.  Location USGS	Sector West	Year 1965
Geological Survey Prof. Paper 403-H  Author P. E. Ward et. al.  Location USGS	Site Mao Springs	туре Aqua
Location USGS	Geological Survey I	Prof. Paper 403-H
	Frequency Once	
	E Val	
Name of the last o		

Corais	Aigae
Fish	Macros
Flora	Fauna
Тетр	Solids Yes
Nutr Yes	Oxygen
Org	Inorg Yes
PhysChem Yes	Bact

Misc		

l) Type Aqua ge on Guam	atic
an on Guam	
ge on Guain	
267	
	Light awat eav was

Algae	
Macros	
Fauna	
Solids	
Oxygen	
Inorg	
Bact	

Misc	
misc	
1	

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	Solids		
Yes	Yes		
Nutr	Oxygen		
Yes	Yes		
Org	Inorg		
PhysChem	Bact		
Yes	Yes		

the same	-		 	 -
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 (Ter	ch 5)
Frequency Sporadio	eally 1975-1977

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

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

Misc			

Sector West	Year 1974 to 1991
Site Pagachao Creek	Type Aquatic
Title EPA Monitoring, S	Site ATRT1
Author EPA	6/541
Location EPA	
Frequency Monthly	
Notes	

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

Sector West	Year	1981	7
site Rivers in Agat		Туре	Aquatic
Title Effects of Land C Watershed n Sou	A CONTRACTOR OF THE PARTY OF TH		II
Author C. P. Neubaue Location WERI (Tech			
Frequency Twice week	dy 1980		
Notes	Parist in	64	

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

	 	_
861		
Misc		

Notes	
Frequency Twice a week 199	90
Location PBEC	
Author PBEC	
Country Club, Santa Ri Golf Course)	
site Santa Rita Lakes	Type Aquatic
Sector West Ye	ear 1990

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

Misc	

Sector West	Year	1965
Site Santa Rita Springs		Type Aquatic
Title Hydrology of Guam Geological Survey		aper 403-H
Author P. E. Ward et. al.		
Location USGS		
Frequency Once		g-d
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	туре Aquatio
Title EPA Monitoring	, Sites APRS1, APRS2
Author EPA	
Location EPA Frequency Monthly	
Notes	
Notes	Mentors lin

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

Sector West	Year	1991-2
Site Taelayag River		Type Aquatic
Title Manganese in W Southern Guam: Sources, Sink ar	Part 1, Ba	aseline Study of
Author H. G. Siegrist J	Ir. and G.	R. W. Denton
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 o	outfall) Type Aquatic
Title Flooding and Dra	ainage on Guam
Author ACOE	
Location BOP	
Frequency	

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

Sector West	Year	1974 to 1991
Site Taleyfac River		Type Aquatic
Title EPA Monitoring,	Site ATR	Γ2
Author EPA		
Location EPA		
Frequency Monthly		
34 H		
Notes		

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

Misc	in Co			

Sector West Year 1991-2		
site Taleyfac River Type Aquatic	Corals	Algae
Title Manganese in Watershed Environments of Southern Guam: Part 1, Baseline Study of	Fish	Macros
Sources, Sink and Speciation	Flora	Fauna
Author H. G. Siegrist Jr. and G. R. W. Denton	Temp	Solids
Location WERI	Nutr	Oxygen
Frequency Irregular	Org	tnorg Yes
Notes	PhysChem	Bact
	Table 1	
\$60 m	Misc	
	Corals	Algae
Site Taleyfac River (at outfall) Type Aquatic		Algae Macros
Site Taleyfac River (at outfall) Type Aquatic	Corals	Cantail and
Site Taleyfac River (at outfall)  Type Aquatic  Title Flooding and Drainage on Guam	Corals	Macros

predi li litare	Org	Inorg
Lists storm drain discharge points, no water quality data.	PhysChem	Bact
	Misc	nenio o sa

Frequency

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

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

Sector West	Year 1978
site West Agana Bay (SC	) Type Aquatic
Title Urban Runoff Quali	ty in Northern Guam
Author J. A. Marsh and F	R. H. F. Young
Location WERI (Tech 5)	
Frequency Sporadically	1975-1977
Notes Soaps, detergents the greatest threat	, oil and grease pose s. Runoff into nearshore

waters builds deltas, causes odor and

algal blooms.

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

Misc		

Sector East	Year 1990
site Asiga Reef	туре Marine
Title Reef Flat Basel Malojloj and Ina	ine Survey Taotao Resort arajan, Guam
Author PBEC	
Location PBEC Frequency Once	than
Notes	100
laser /	

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

Year	1990-1	994
	Type	Marine
	Address of the Control of the Contro	Bacteria
00 1000	irrogula	
	r and Pat al Sedime	

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

Sector East Year 1994		
Site Coastal Waters Type Marine	Corals	Algae
Title Impact of Wastewater Discharge and Urban Stormwater Runoff on the Heavy Metal	Fish	Macros
Loading of Guam's Coastal Water Resources	Flora	Fauna
Author G. R. W. Denton and R. Wood	Тетр	Solids
Location WERI	Nutr	Oxygen
Frequency Just starting.	Org	Inorg
		Yes
Notes Locations and frequency not yet decided.	PhysChem	Bact
	Misc	
	Misc	
	Corats	Algae
	Corals	
	- 131	Algae Macros
Site Ipan Reef Type Marine	Corals	
Site Ipan Reef Type Marine	Corals	Macros
Site Ipan Reef Type Marine  Title EPA Monitoring of Recreational Waters	Corats Fish Flora	Macros Fauna
Title EPA Monitoring of Recreational Waters  Author EPA	Corats Fish Flora Temp	Macros Fauna Solids
Site Ipan Reef Type Marine  Title EPA Monitoring of Recreational Waters  Author EPA  Location EPA	Corats Fish Flora Temp	Macros Fauna Solids
Site Ipan Reef Type Marine  Title EPA Monitoring of Recreational Waters  Author EPA  Location EPA	Corals  Fish  Flora  Temp	Macros Fauna Solids Oxygen
Site Ipan Reef  Title EPA Monitoring of Recreational Waters  Author EPA  Location EPA  Frequency Weekly	Corais  Fish  Fiora  Temp  Nutr	Fauna Solids Oxygen Inorg

Sector East	Year 1987
site Mana Bay	Type Marine
	ment to the Existing Reef at Jones Beach Resort
20,007	E10-1
Author PBEC	910
Location PBEC	12070
Frequency Once	
pteri	trick in the
Notes	

-	Corals	Algae
١	Yes	Yes
Ī	Fish	Macros
1	Yes	Tell Market
Ī	Flora	Fauna
	Temp	Solids
	Nutr	Oxygen
	Org	Inorg
ŀ	PhysChem	Bact

ite PGMR	Туре 1	Marine
ite PGMR		
10		
medzina		E.F
	quat Sput grid grid grid grid grid grid grid grid	quat Tuli 3/6

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

Misc	

Sector East	Year 1980-1990
site Pago Bay	туре Marine
PGMPE (0-20	g Sites PGMPW, PGMPM, ft)
Author EPA	
Location EPA	
Frequency Monthly	
Notes	

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

Misc	Yes			-	

Sector East	Year	1993	
Site Pago Bay		Туре	Marine
Title Abundance Dist a Windward and Reef		II no les especiales de actividades	
A Vomet al			
Author A. Kerr et. al.			
Location Bulletin of	Marine Sci	ence 52(	2) 1993
Frequency Once			
Notes Species richne	ss slightly	higher in	Tumon

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

Misc				

Title EIA of Typhoo	Ties Tieston and Tieston and Tieston	Yes	+
site Pago Bay	Type Marine	Corals	
Sector East	Year 1976		
	3.2[66]	Misc	
	Military and Control of the Control	Yes	
Notes		PhysChem	+
grent .	1. 19.0	Org	
Frequency Once in	1988-1990	Yes	
Location Micronesi	ca 24(1) 1991	Nutr	$\top$
Author E. A. Matson	n en	Temp	
	AND TO		
Guam	nistry of the Coastal Waters of	Fiora	et t
Site Pago Bay	Type Marine	Fish	1
Sector East	Year 1991	Corals	T

Author EPA, Marine Lab, DPR, DOA

Location BOP

Frequency Once

Notes

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

Algae

Macros

Fauna

Solids

Oxygen Yes

Inorg Yes Bact

Misc			40

Sector East	Year 1970 o	ngoing
site Pago Bay	Туре	Marine
Title EPA Monitoring	of Recreational Wa	iters
Author EPA		
Location EPA		
Frequency Weekly		Į.
Notes		

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

Misc		

Author D. R. Bultitude	
1 P	
Community Mon Guam	itoring Stations Around
Marine Benthic	
Title First (2nd and 3r	d) Annual Report on the
Site Pago Bay	Type Marin

Corals	Algae
Yes	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
non-	410/7
Author EPA	
Location EPA	
Frequency Weekly	
1-5(80)	
Notes	

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

Sector East	Year 1974
site Talofofo Bay	туре Marin
Title Talofofo Bay C	Coastal Survey
Author R. H. Randal	II gra
Location Marine La	b (Tech 13)
Frequency Once	

and rare <u>Barringtonia racemosa</u>.

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

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

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

Misc		

Sector East	Year	1991	4
site Talofofo Bay		Туре	Marine
Title Nutrient Chemist Guam	ry of the C	Coastal V	Vaters of
Author E. A. Matson			
Location Micronesica	24(1) 19	91	
Frequency Once in 19	88-1990		
			-
Notes			

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

Misc		

				Misc
Notes	mendeyn	-		Phys
Traducticy Divisionly		0		Org
Frequency Biweekly	Nutr			
Author DAWR Annual Reports				
				Tem
			T He	Flor
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)				
site Talofofo Bay		Туре	Marine	Con
Sector East	Year	1965 to	present	Cora

Corals	Algae	
Fish Yes	Macros	
Flora	Fauna	
Temp	Solids	
Nutr	Oxygen	
Organia scale s	Inorg	
PhysChem	Bact	

Sector East	Year	1970 ongoing
site Talofofo Bay		Type Marine
Title EPA Monitoring	of Recreat	tional Waters
Author EPA		
Location EPA		
Frequency Weekly		1 1
M. Albert	- 18	
Notes		

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

Misc	D 49

Sector East Year 1992 Site Togcha Bay Type Marine	Corals Yes
	d man
	Misc
Notes	PhysCher
Traducticy /trollago office a year	Org
Frequency Average once a year	Nutr
Author D. R. Bultitude	
	Temp
Community Monitoring Stations Around Guam	Flora
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral	Fish
Site Talofofo Bay Type Marine	Yes
Sector East Year 1981, 1983,	Corals

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

Misc		

Sector East	Year 1992
Site Togcha Bay	Type Marine
Guahan Golf Co Development, Ip	/
Author Duenas & Ass	sociates, Inc.
Location EPA	
Frequency Once	
1 6 64	3 1 1
Notes	

Corals	Algae
Yes	Yes
Fish	Macros
Yes	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 Co Country Club, T	oco Palms Golf Course and Fogcha, Guam
	0.00
Author Duenas & Sv	wavely
Location EPA	
Frequency Once	
Notes	75.7

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

Sector East	Year	1965 to presen
site Togcha Bay		Type Marine
Title Survey of Guam Fishing Methods		
Author DAWR Annua	l Reports	
Location DAWR		
Frequency Biweekly		
gloni		10
Notes		
1400		

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

Misc	-11	Cal	

Sector East	Year 1976		
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Corals	T
site Togcha Bay	Type Marine	Yes	
Title EIA of Typhoon	Pamela	Fish	
	Deci I	Flora	T
	- e A		
Author EPA, Marine L	.ab, DPR, DOA	Temp	
Location BOP		Nutr	T
Frequency Once			
	1	Org	
Notes		PhysChem	T
		Misc	
Sector East	Year 1970 ongoing	Corals	Т
Site Togcha Bay	Type Marine		
Title EPA Monitoring	of Recreational Waters	Fish	
		Flora	T
	a 1990 I	T	+

Author EPA

Notes

Location EPA

Frequency Weekly

Corais	Algae	
Yes	Yes	
Fish .	Macros	
	4 44-63	
Flora	Fauna	
Temp	Solids	
Nutr	Oxygen	
Org	inorg	
PhysChem	Bact	

Misc		٦

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

Misc		

ector East	Year 1993
ite Ylig Bay	Type Marine
title EIA for Hotel Acc	cion Guam, Ylig Bay, Guam
	Wro. Y
Author PBEC	. 366
Location EPA	
requency Once	
lotes	
test :	

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

Sector East	Year	1978	
site Ylig Bay		Туре	Marine
Title Guam's Reefs a Sedimentation Ylig Bay			ay and
Author R. H. Randall	l and c. Birk	land	
Location Marine Lab	(Tech 47)		
Frequency Once			
Notes			

Corals	Algae	
Yes		
Fish	Macros	
Marie State of	Malana .	
Flora	Fauna	
Temp	Solids	
Yes	Yes	
Nutr	Oxygen	
Yes	signidospina	
Org	Inorg	
PhysChem	Bact	
Yes	1.0	

841-0		
Misc		

10103	
Notes	
Frequency Once in 19	988-1990
Location Micronesica	24(1) 1991
Author E. A. Matson	
Guam	
Title Nutrient Chemis	try of the Coastal Waters of
site Ylig Bay	туре Marine
Sector East	Year 1991

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

Sector East	Year	1978	1
Site Ylig Bay		Туре	Marine
Title Guam's Reefs an Studies	d Beache	s Part II	Transect
Author R. H. Randall e	t. al.		
Location Marine Lab (	Tech 48)		
Frequency Once			

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

Misc Substrate

Year 1975	C
Type Marine	Line.
Biology of the Reef Fishes of	Fi Ye
200,000	F
AND T	Te
b (Tech 49)	N
210	Or
Englishers	Ph
900	Mis
	Type Marine Biology of the Reef Fishes of

Corals	Algae
Fish Yes	Macros
Flora	Fauna
Тетр	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 Fishing Methods	's Fish Population and (Inshore Creel Census)
Author DAWR Annual	Reports
Location DAWR	[48]
Frequency Biweekly	18 0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	18 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Corals	Algae
Fish	Macros
Yes	TOTAL S
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 Ritidian Point Coas		
Author R. H. Randall an	ıd Baker	
Location WERI		
Frequency Once 1982		
Notes		

The state of the s	
Algae	
VE 15 11	
Macros	
Fauna	ŀ
Solids	
Oxygen	
Inorg	
Bact	
	Macros Fauna Solids Oxygen Inorg

Misc		W-5%=		

Sector North Year	1991
Site Amantes Point Reef	Type Marine
Title Nutrient Chemistry of the Guam	Coastal Waters of
Author E. A. Matson	
Location Micronesica 24(1) 19	991
Frequency Sporadically in 198	8-1990
Notes	

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

Misc Productivity

Sector North Year 1990-1994		T
site Coastal Waters Type Marine	Corals	Algae
Title Pollution Indicator and Pathogenic Bacteria in Guam's Coastal Sediments	Fish	Macros
4(4)(5)	Flora	Fauna
Author E. A. Matson	Temp	Solids
Location WERI	Nutr	Oxygen
Frequency Ongoing since 1990, irregular.	Org	Inorg
Notes Bacteria washes in with heavy rains and stays in sediments at least 4 days.	PhysChem	Bact Yes
0,6181	Misc	
Sector North Year 1994		
PAINT OF THE PARTY	Corals	Algae
PARK TO THE PARK T	Corals	Algae
Site Coastal Waters Type Marine  Title Impact of Wastewater Discharge and Urban	O. I.	and the Major Labor

Colais	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
	Yes
PhysChem	Bact

Misc	r r	la e	

Location WERI

Frequency Just starting.

Notes Locations and frequency not yet decided.

Year	1978 to	1990
	Туре	Marine
Site DRM		
		ii de
	Site DRM	Site DRM

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

Misc		

Notes		
Frequency Average of	nce a year	
Location EPA		
Author D. R. Bultitude	9	
Marine Benthic Community Mod Guam	Algae and	Coral
Site Double Reef		Type Marine
Sector North	Year	1981, 1983,

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

Misc				

THE STATE OF THE PARTY OF THE P			Fish
Site Double Reef	Туре	Marine	Corals Yes
Sector North	Year 1976		
Estat, pres	laurės vytu		Misc Endangere
Notes	Personal		PhysChem
Frequency Once	610	1	Org
Location Marine Lab (	Tech 40)		Nutr <sub>(CC (CO))</sub>
Author J. O. Stojkovich			Temp
Communities of G	Suam	17	Flora
Title Survey and Speci Representative P			Fish Yes
Site Double Reef	Туре	Marine	Corals Yes
Sector North	Year 1977		

Corals	Algae	
Yes	Yes	
Fish	Macros	
Yes	Yes	
Flora	Fauna	
Temp	Solids	
Nutr	Oxygen	
Org	inorg	
PhysChem	Bact	
Nisc Endangere	d species	
Yes	Yes	
	Macros	

Author EPA, Marine Lab, DPR, DOA  Location BOP  Frequency Once  Notes			
Location BOP Frequency Once			
Location BOP	Notes	ano.	
Location BOP	Frequency Once	es Y	
Author EPA, Marine Lab, DPR, DOA	Location BOP		
	Author EPA, Marine L	ab, DPR, DOA	
No. 7	The Table		

Corals	Algae
Yes	Yes
Fish	Macros
Flora	Fauna
Тетр	Solids
Nutr <sub>e (1)</sub> AS some	Oxygen
Org	Inorg
PhysChem	Bact

disc		

Year 1977					
Туре	Marine				
cies Inventory of Pristine Marine Guam					
Author J. O. Stojkovich					
					Location Marine Lab (Tech 40)
11 July 200					
	Type cies Inventory of Pristine Marine Guam				

Corais	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Misc Endangered species

Sector Nor	th Y	ear 1991	
site Fadia	n Reef (aquifer be	ach Type	Marine
Title Nutri Gua	ent Chemistry of to m	he Coastal V	Vaters of
Author E.	A. Matson		- 1
Location	Micronesica 24(1)	1991	
Frequency	Sporadically 198	8-1990	ja "
	rient levels higher aquifers.	from NW the	an from

Corals	Algae
Fish :	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Yes	the same of the same
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc		 

Sector North Site Fafai Reef	Year 1989 Type Marine	Corals Yes
	764	Misc
Notes	29Y	PhysChem
Frequency Once	200	Org
Location EPA	ae A.	Nutr
Author Duenas &	Associates, Inc.	Temp
Digital Subm	the Landing of High Capacity parine Telephone Cables at Tumon, Guam	Yes Flora
Site Fafai Reef	Type Marine	Yes
Sector North	Year 1993	A

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

Sector North	Year 1989
site Fafai Reef	Type Marine
Title Final EBS Nans Tumon	ay Hotel, Fafai Beach,
	81879
Author PBEC	
Location EPA	
Frequency Once	
Notes	are reports

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

Misc	 	

Sector North	Year	1978 to	1991
Site Fafai Reef		Туре	Marine
Title EPA Monitoring	Site GBM	т	
Author EPA			
Location EPA			
Frequency Monthly			
		*	***
Notes		4	

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

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

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

Misc Productivity

Sector North Year 1981, 1983,	Address of the same	
Make 20	Corals	Algae
Site Fafai Reef Type Marine	Yes	Yes
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral	Fish	Macros
Community Monitoring Stations Around Guam	Flora	Fauna
Author D. R. Bultitude	Temp	Solids
Location EPA	Nutr	Oxygen
Frequency Average once a year	Org	Inorg
Notes	PhysChem	Bact
ASMAGLE 1 - National National I	Misc	
	Misc	
Sector North Year 1965, Ongoing	Misc	Aigae
Sector North Year 1965, Ongoing Site Fafai Reef Type Marine		Aigae
Sector North  Year 1965, Ongoing  Site Fafai Reef  Type Marine  Title Survey of Guam's Fish Population and	Corals	EUR MEIR
Sector North  Year 1965, Ongoing  Site Fafai Reef  Type Marine  Title Survey of Guam's Fish Population and	Corals Fish Yes	Macros
Sector North  Year 1965, Ongoing  Site Fafai Reef  Type Marine  Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	Corals  Fish  Yes  Flora	Macros Fauna

lisc		

Inorg

Bact

Org

PhysChem

Notes

Sector North	Year	1977	
Site Haputo Reef		Туре	Marine
Title Survey and Spec Representative F Communities of	Pristine Ma		
Author J. O. Stojkovic	h		
Location Marine Lab	(Tech 40)		
Frequency Once			
Notes			

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

Misc Endangered species

Sector North	Year	1984	
Site Hilaan Reef		Туре	Marine
Title Preliminary Study Northern Guam	of the H	ydrology	of
Author W. J. Zolan			
Location WERI (Tech	34)		
Frequency Biweekly 19	981		
Notes Tested freshwat	er seepa	ge and a	rea 5m

away.

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

Misc Yes

Sector North	Year	1976	
site Janum Point Reef		Туре	Marine
Title EIA of Typhoon Pa	mela		
Author EPA, Marine Lab	, DPR, I	DOA	
Location BOP			
Frequency Once		N I	
Notes		10	7

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

Misc	

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

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

Misc	Yes			

Sector North Year 1990-1992		
Site Mangilao Reef Type Marine	Corals	Aigae
Title Mangilao Golf Course Water Quality Monitoring Pre-Construction and	Fish	Macros
Construction Phase	Flora	Fauna
Author PBEC	Temp	Solids
Author PBEC		Yes
Location EPA	Nutr	Oxygen
Frequency Sporadic	Yes	
	Org	Inorg
Mo modicides (Suppl	Extensive	Yes
Notes No pesticides found.	PhysChem	Bact
	Yes	
	Misc Yes	
Sector North Year 1976		
	Corals	Algae
Sector North Year 1976 Site Mangilao Reef Type Marine		Algae Yes
	Corais	
Site Mangilao Reef Type Marine	Corais Yes	Yes
Site Mangilao Reef Type Marine	Corais Yes Fish	Yes Macros
Site Mangilao Reef Type Marine Title EIA of Typhoon Pamela	Corals Yes Fish	Yes Macros Fauna
Title EIA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA	Corais Yes Fish Flora	Yes Macros Fauna Solids
Title EIA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA  Location BOP	Corais Yes Fish Flora Temp Nutr	Yes Macros Fauna Solids Oxygen

Author E. A. Matson  Location Limnological Oceanography 38(2)  Frequency Sporadically over two years  Notes  Sector North Year 1989  Site Marbo Reef Type Marine
Author E. A. Matson  Location Limnological Oceanography 38(2)  Frequency Sporadically over two years
Author E. A. Matson  Location Limnological Oceanography 38(2)  Frequency Sporadically over two years
Author E. A. Matson  Location Limnological Oceanography 38(2)
Author E. A. Matson  Location Limnological Oceanography 38(2)
Author E. A. Matson
Author E. A. Matson
the Coastal Zone of Guam
the Coastal Zone of Guam
the Coastal Zone of Guam
Title Nutrient Flux Through Soils and Aquifers to the Coastal Zone of Guam
site Many locations Type Marine
APRIM DE DO
in in

Corals	Algae
Fish	Macros
Fiora	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 Pro	oposed Marbo Cave Resort
Author PBEC	
Location EPA	
Frequency Once	
Notes	

Corals	Algae
	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr 11 Mary 1	Oxygen
Org	Inorg
PhysChem	Bact

Misc		
		-

Notes			
Frequency Once			
Location MARC			
Author DPR			
Tanguisson Po	int, Guam		
Title Final EIS Gilan		relopme	nt,
site North Tanguisso	n Reef	Type	Marine
engle.	Year		

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

Misc				

Site	Northeast coast (no location)	Type	Marine
Title	Nutrient Chemistry of the Coa	astal V	Vaters of
Auth	or E. A. Matson		
Loc	ation Micronesica 24(1) 1991		
Freq	uency Sporadically in 1988-1	990	
Node			

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

Misc Productivity

Year 1989
Type Marine
l Biological Survey of the astal Region of Guam
and Baker
400
BARCAVON TO A

Corals	Algae
Yes	TRAFF YELLER I
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Misc		

Year	1991	
	Type	Marine
ry of the C	Coastal V	Vaters of
24(1) 199	91	
ly in 1988	-1990	
-8480.0		
	ry of the C	ry of the Coastal V

Corais	Algae
Fish	Macros
Fiora	Fauna
Temp	Solids
Nutr	Oxygen
Yes	A STATE OF THE STA
Org	Inorg
	Yes
PhysChem Yes	Bact

Misc Productivity

Sector North Year 1977	Corals	Algae
Site Ritidian Reef Type Marine	Yes	Yes
Title Survey and Species Inventory of	Fish	Macros
Representative Pristine Marine	Yes	Yes
Communities of Guam	Flora	Fauna
Author J. O. Stojkovich	Temp	Salids
Location Marine Lab (Tech 40)	Nutr	Oxygen
Frequency Once		
Traducticy Office	Org	Inorg
Notes	PhysChem	Bact
	Misc Endangere	d species
Sector North Year 1989	Misc Endangere	ed species
Substitution of the substi	Corals	ed species Algae
Company of the Company of Company	Corals Yes	
	Corals	
Site Ritidian Reef Type Marine  Title A Geological and Biological Survey of the	Corals Yes	Algae
Title A Geological and Biological Survey of the Ritidian Point coastal Region of Guam	Corals Yes Fish	Algae
Site Ritidian Reef Type Marine  Title A Geological and Biological Survey of the	Corals Yes Fish	Algae Macros Fauna
Title A Geological and Biological Survey of the Ritidian Point coastal Region of Guam	Corals Yes Fish	Algae Macros Fauna
Title A Geological and Biological Survey of the Ritidian Point coastal Region of Guam  Author R. H. Randall and Baker	Corals Yes Fish Flora	Algae Macros Fauna Solids
Title A Geological and Biological Survey of the Ritidian Point coastal Region of Guam  Author R. H. Randall and Baker  Location WERI	Corais Yes Fish Flora Temp Nutr	Algae  Macros  Fauna  Solids  Oxygen

Sector North Year 1973 Site Tanguisson Reef Type	Corals
	Misc
Notes	PhysChem
Frequency Once	Org
Location BOP	Nutr
Author EPA, Marine Lab, DPR, DOA	Temp
gauta Faut	Flora
Title EIA of Typhoon Pamela	Fish
Site Taguan Point Reef Type	Marine Yes
Sector North Year 1976	Corals

Corals Yes	Algae
ish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
org	Inorg
PhysChem	Bact

Algae Yes Macros

Fauna

Solids

Oxygen

inorg

Bact

Frequency Irregular during 1970-1971

Title Coral Reef Recovery Following Extensive Damage by "Crown of Thorns " Starfish

Author R. H. Randall

Location Marine Lab

Sector North Year	1973
site Tanguisson Reef	Type Marine
Distribution of Corals Afte planci (L.) Infestation at T	
Author R. H. Randall	
Location Micronesica 9(2) 197	73
Frequency Once	

Notes Compares Tumon Reef to Tanguisson

Reef.

Corals	Algae
Yes	The state of the
Fish	Macros
Flora	Fauna
Тетр	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc

Sector North	Year	1976
Site Tanguisson Reef		Type Marine
Title Biological Impact Tropical Reef	Caused	by Changes on a
Author R. S. Jones et. a	al.	
Location Marine Lab (1	Tech 28)	
Frequency Once		
Notes Effect of heated of following A. plane along reef margin A. planei. All other	<u>ci</u> . Efflu n which i	ent killing corals was unaffected by

Corals	Algae
Yes	Yes
Fish	Macros
Yes	V 200
Flora	Fauna
Temp	Solids
Yes	
Nutr	Oxygen
	Yes
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc Currents

Sector North

Year 1976

Site Tanguisson Reef

Type Marine

Title Effects of Thermal Effluent on the Coral Reef Community at Tanguisson

Location Marine Lab (Tech 30)

Frequency Once

Area of coral kill by effluent not expanding.

Area about 600 m long along reef margin,
most dead.

Corals	Algae
Yes	n maintain.
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	Algae
Yes	a broad ma
Fish	Macros
Yes	Second A
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Plate recruitment studies, coral growth surveys.

Tear	1973	
	Туре Ма	arine
	ındall	
ech 7)		
- 11		
	al Impa	Type Ma al Impact Caused b nduced Changes or R. H. Randall

Corals	Algae
Yes	Yes
Fish	Macros
Yes	and committee
Flora	Fauna
Temp	Solids
Yes	TO THE
Nutr	Oxygen
	Yes
Org	Inorg
	Yes
PhysChem	Bact
Yes	

Misc Currents

Sector North	Year 1992
Site Tanguisson Reef	Type Marine
	ramework Bioerosion, t of Thermal Effluent at
Author R. H. Randall et. a	<b>L</b> .
Location Marine Lab (Ted	ch 98)
Frequency Once	
Notes Some rebound sind less kill area. Incre algae around efflue	ase in blue-green

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

Misc			
			_

Year	1971, Ongoing
	Type Marine
	pH Monitoring at land Outfall Sites
-DA	
Oft)	
Aldaly	
	ture and Cabras Is

Corals	Algae
Fish	Macros
Flora	Fauna
Temp Yes	Solids
Nutr 6	Oxygen
Org	Inorg
PhysChem Yes	Bact

Sector North	Year	1971, Ongoing
site Tanguisson Reef		Type Marine
Title Biological Monitorin Effluent form Tang Power Plants on G	uisson a	
Author Marine Lab	ğarı İ	
Location Marine Lab, Pi Frequency Quarterly	UAG	
Notes	0	970

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

Misc Toxicity of effluent to juvenile Tilapia.

Notes	
Frequency Quarterly	
Location Marine Lab, PUAC	3
Author Marine Lab	
Power Plants on Guan	n
Effluent from Tanguiss	on and Cabras
Title Biological Monitoring of	of Cooling Water
Site Tanguisson Reef	Type Marine
Sector North Y	ear 1971, Ongoing

Algae
Macros
Fauna
Solids
Oxygen
Inorg
Bact

Misc Sea urchin sperm/fertilization bioassays.

Sector North	Year	1970 ongoing
site Tanguisson Reef		Type Marine
Title EPA Monitoring of	Recreat	tional Waters
Author EPA		
Location EPA		
Frequency Weekly		
Notes		

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

Misc			
			-

Toal	1989 o	ngoing
at outfall)	Type	Marine
STP Recei	ving Wa	ater
me div		
	at outfall)	at outfall) Type

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

Misc			

Sector North	Year	1989 ongoing
Site Tanguisson Reef	(at outfall)	Type Marine
Title Northern District	STP Wast	ewater Effluent
Author Marine Lab		
Location PUAG		
Frequency Quarterly (I	monthly fed	cal coliform)
Frequency Quarterly (	monany rec	sai comorni)
Notes		

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

Misc		

Notes			
Frequency Quarterly			
Location PUAG, Ma			
torres BUAC Me	nina I ab		
Author R. H. Richmo	nd		
Sewage Outfall	Zones on G	uam	
Title Floral and Faur	All and the second of the seco		9
site Tanguisson Ree	f (at outfall)	Type	Marine
Sector North	Year	1994	

Algae
Yes
Macros
Yes
Fauna
Solids
Oxygen
lnorg
Bact

Misc Substrate

Sector North	Year	1993	
site Tanguisson Reef	(at outfall)	Туре	Marine
Title Fecal Pollution is and Sediments	n Guam's (	Coastal	Waters
Author E. A. Matson			
Location Micronesica	26(2)		
Frequency 1989 ongo	oing		
		4	
Notes			

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

Misc				

Sector North	Year	Ongoir	ng
site Tanguisson Reef (a	it outfall)	Type	Marine
Title Tanguisson Power	r Plant ef	fluent m	nonitoring
		1	
48/63			
Author EPA			
Location EPA			
Frequency Daily, weekly	and mo	nthly	
Notes (24)	in Allin	7	

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Anna Anna Anna Anna Anna Anna Anna Anna
Org	Inorg
Yes	Yes
PhysChem	Bact
Yes	10 TH

Secto	or North	Year	1994	14.5	
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.

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

Misc Substrate

Sector North	Year	1994	
site Tanguisson Reef	(at outfall)	Туре	Marine
Title Guam Island Wie Plan, Draft Final	[일	ater Fa	cilities
Author Duenas & Ass	., Inc.		
Location EPA			
Frequency Irregularly	during 198	0's	
Notes Summarizes re	ceiving wat	ers sin	ce 1985.

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

Misc			

Sector North	Year	1991	
site Tanguisson Reef	(at outfall)	Туре	Marine
Title Nutrient Chemis Guam	try of the Co	astal V	Vaters of
Author E. A. Matson			
Location Micronesica	a 24(1) 1991	l.	
Frequency Quarterly			
Notes			

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

Misc			٦

Sector North	Year	1989 O	ngoing
site Tanguisson Ree	ef (at outfall)	Туре	Marine
Title Monitoring STP	receiving w	aters	
		9.	
Author PUAG			
Location EPA			
Frequency Monthly to	quarterly		
Notes	(Alton)	8	

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

Year	1989	Ongoing
(at outfall)	Туре	Marine
outfall		
40		
aily to mor	ithly	
	(at outfall) outfall	Year 1989 (at outfall) Type outfall

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

Misc	 	

Sector North	Year	1993
site Tarague Reef		Type Marine
Title AAFB Marine Re Baseline Survey		The state of the s
Author S. S. Amesbur	y et. al.	
Location Marine Lab	(ESR 27)	
Frequency Once		
Notes Rich in marine s	species.	

Corals	Algae	
Yes	Yes	
Fish	Macros	
Yes	Yes	
Fiora	Fauna	
Тетр	Solids	
Nutr	Oxygen	
Org	Inorg	
PhysChem	Bact	

Misc Sediments

Sector North	Year	1977	
Site Tarague Reef		Туре	Marine
Title Survey and Spe Representative I Communities of	Pristine Ma		
Author J. O. Stojkovic	h		
Location Marine Lab	(Tech 40)		
Frequency Once			
Notes			37.0°

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

Misc Endangered species

Sector North	Year	1977	
site Tarague Reef		Туре	Marine
Representative F Communities of	Pristine Ma		
Author J. O. Stojkovic	h		
Location Marine Lab	(Tech 40)		
Frequency Once			
Notes	- transfer	N2/ - 1	

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

Misc Endangered species

Sector	North	Year	1991	1
Site 7	arague Reef	(aquifer bead	: Туре	Marine
Title	Nutrient Chen Guam	nistry of the C	Coastal V	Vaters of
Autho	or E. A. Matso	n	-	
Loca	tion Micrones	ica 24(1) 19	91	
Frequ	ency Sporadi	cally 1988-1	990	
Notes	Nutrient leve		n NW th	an from

Corals	Algae
Fish	Macros
Fiora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Org	inorg Yes
PhysChem Yes	Bact

Misc			

Sector North	Year	1988	
site Tumon Bay		Туре	Marine
Title EIS Microdredging	of Tum	on Bay	
Author Barrett Consultin	g Group	o, Inc.	
Location EPA			
Frequency Once			
4			
Notes	1 . 1		
Sector North	Year	1973	
Sector North Site Tumon Bay	Year		Marine
	and Di	Type stributio m, Befo	n of re
Site Tumon Bay  Title Reef Physiography Corals at Tumon B	and Di	Type stributio m, Befo	n of re
Site Tumon Bay  Title Reef Physiography Corals at Tumon B Crown-of-Thorns S	and Di ay, Gua Starfish	Type stributio m, Befo Predatio	n of re
Site Tumon Bay  Title Reef Physiography Corals at Tumon B Crown-of-Thorns S  Author R. H. Randall	and Di ay, Gua Starfish	Type stributio m, Befo Predatio	n of re
Title Reef Physiography Corals at Tumon B Crown-of-Thorns S  Author R. H. Randall Location Micronesica 9	and Di ay, Gua Starfish	Type stributio m, Befo Predatio	n of re
Title Reef Physiography Corals at Tumon B Crown-of-Thorns S  Author R. H. Randall Location Micronesica 9 Frequency Once	and Di ay, Gua Starfish	Type stributio m, Befo Predatio	n of re

Corals	Algae
res es	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Тетр	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc		

Corals	Algae
Yes	6/4
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Sector North	Year	1992	
site Tumon Bay		Type	Marine
Title Tumon Bay Co	mprehensiv		у
Author S. S. Amesbu	ury et. al.		
Location Marine Lab	(ESR 26)		
Frequency 8-9/92, or	nce		
Notes	4194.50	A1 1	
	9.7		

The state of the s	
Corais	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Sector North	Year 1992
site Tumon Bay	Type Marine
Title Tumon Bay Con	nprehensive Survey
Author S. S. Amesbu	ry et. al.
Location Marine Lab Frequency 11-12/92,	The state of the s
Notes	magnizzania sen

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

Misc		

Sector North	Year 1993
site Tumon Bay	Type Marine
Title Biological Comr 1977-1991	nunities in Tumon Bay,
Author S. Amesbury	et. al.
Location Marine Lab	(Tech 99)
Frequency Once in 19	977 and 1991
	•
Notes No significant (	decrease except in fish

Algae	
Yes	
Macros	
Yes	
Fauna	
Solids	
Oxygen	-
Inorg	
Bact	
	Yes Macros Yes Fauna Solids Oxygen Inorg

Sector North	Year	1994	
Site Tumon Bay		Туре	Marine
Fecal Bacteria 7 Groundwater to	ransported	d via	r-Born
Author T. M. Collins			
Location Marine Lab	(Thesis)		
Frequency Monthly fo	r one year		
Notes Bacteria leachi			

Corais	Algae
Fish	et M
rish	Macros
Fiora	Fauna
Тетр	Solids
Nutr	Oxygen
Yes	
Org	Inorg
	Yes
PhysChem	Bact
Yes	Yes

Misc				

Sector North	Year 1991
site Tumon Bay	Type Marine
Title Water Chemist "Blood of San V Tide	ry and Hydrology of the Vitores" a Micronesian Red
Author E. A. Matson	
Location Micronesic	ca 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		
		2	

Sector North	Year 1992
site Tumon Bay	Type Marine
Title EPP for the Insta Tumon Bay, Gua	allation of Storm Moorings, am
#1EV#1	
Author PBEC	Qual .
Location PBEC	
Frequency Once	
Official Control	216
Notes	The state of the s

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

Misc	Currents
-	

Sector North	Year 1988	
site Tumon Bay	туре Ма	rine
	Assessment for Construys in Tumon Bay	ction
Author PBEC		
Location PBEC		
Frequency Once		
Notes		

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

Sector North	Year 1991
Site Tumon Bay	Type Marine
Title EBS Tumon Pla Dewatering Proj	za Hotel Foundation ect, Tumon Bay, Guam
Author PBEC	
Location PBEC	
Frequency Twice	
Notes	

Algae
Yes
Macros
Yes
Fauna
Solids
Yes
Oxygen
Inorg
Bact

Misc Currents

Notes	nivi Daya u
Frequency 1989 ongoing	
Location Micronesica 26	(2)
Author E. A. Matson	gett
Title Fecal Pollution in Grand Sediments	uam's Coastal Waters
ite Tumon Bay	Type Marine
ector North	Year 1993

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

Year	Ongoir	ng
	Type	Marine
Coliform	in Coas	tal
. 60		
3 (1)	Ŷ	
		Year Ongoir Type Coliform in Coas

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr Yes	Oxygen
Drg	inorg Yes
PhysChem	Bact Yes

Misc			

Notes	PhysCher
	Org
Frequency Once	Yes
Location WERI (Tech 70)	Nutr
Author E. A. Matson	Temp
Guam	Flora
Title Significance of Runoff and Terrestrial Erosion to Nutrient Status of Estuaries of	Fish
Site Tumon Bay Type Marine	Corals
Sector North Year 1990	W 400 A
	Misc
Notes	PhysChe
Frequency Irregularly 1974-1976	Yes Org
Location MARC (Coral Reef Symposium #3)	Nutr
Author J. A. Marsh	Temp
(6)	Flora
Title Terrestrial Inputs of Nitrogen and Phosphorus on Fringing Reefs of Guam	Fish
Site Tumon Bay Type Marine	· .
	Corais

Corals	Algae	
ish	Macros	
lora	Fauna	
emp	Solids	
utr	Oxygen	
es	Inorg	
hysChem	Bact	
hysChem		

Misc	 ***	

Algae		
Macros		
Fauna		
Solids		
Oxygen		
Inorg Yes		
Bact		

Misc		

Year 1993
Type Marine
tribution of Holothuroids on d Leeward Fringing Coral
Marine Science 52(2) 1993

Corals	Algae
Fish	Macros
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 Studies	Beaches Part II Transect
Author R. H. Randall et.	al.
Location Marine Lab (To	ech 48)
Notes	n/Antigapia

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

Misc Substrate

Sector North	Year 1975
Site Tumon Bay	туре Marine
Title Studies of the B Guam	iology of the Reef Fishes of
Author S. Amesbury	
Location Marine Lab	(Tech 49)
Frequency Once	
Notes	
Sector North	Year 1965 to present
Sector North Site Tumon Bay	Year 1965 to present
site Tumon Bay  Title Survey of Guan	
site Tumon Bay  Title Survey of Guan	Type Marine
site Tumon Bay  Title Survey of Guan	Type Marine I's Fish Population and Is (Inshore Creel Census)
Site Tumon Bay  Title Survey of Guan  Fishing Methods	Type Marine I's Fish Population and Is (Inshore Creel Census)

Notes

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

Misc Fish larvae also.

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

Misc		 	

	Corais	Algae
Site Tumon Bay Type Marine	Land A Brasser with	
Title Survey of Edible Marine Shellfish and Sea	Fish	Macros
Urchins on Guam	Kiry of the Charles 114	Yes
about Tracks	Flora	Fauna
Author J. O. Stojkovich and B. D. Smith	Temp	Solids
Location DAWR (Tech 2)	Nutr	Oxygen
	1807 1185 0	Hind Will more
Frequency Office	Org Sust Man	Inorg
Notes Sea urchin densities high here.	PhysChem	Bact
	Misc Bivalves ar	nd sea urchins.
Sector North Year 1970 ongoing		
	Corats	Algae
Site Tumon Bay Type Marine	self de Silvers	
Site Tumon Bay Type Marine	Corais	Algae
Site Tumon Bay Type Marine	self de Silvers	
Title EPA Monitoring of Recreational Waters	Fish	Macros
Title EPA Monitoring of Recreational Waters  Author EPA	Fish Flora Temp	Macros Fauna Solids
Title EPA Monitoring of Recreational Waters  Author EPA  Location EPA	Fish	Macros
Title EPA Monitoring of Recreational Waters  Author EPA  Location EPA	Fish Flora Temp Nutr	Macros Fauna Solids
Title EPA Monitoring of Recreational Waters  Author EPA Location EPA Frequency Weekly	Fish Flora Temp Nutr	Macros  Fauna  Solids  Oxygen
Title EPA Monitoring of Recreational Waters  Author EPA  Location EPA  Frequency Weekly	Fish Flora Temp Nutr Org	Macros  Fauna  Solids  Oxygen  Inorg
Title EPA Monitoring of Recreational Waters  Author EPA Location EPA Frequency Weekly	Fish Flora Temp Nutr Org	Macros Fauna Solids Oxygen Inorg

Year	1991	
ifer beach	Type	Marine
stry of the C	oastal V	Vaters of
a 24(1) 199	1	
ily 1988-19	90	
higher from	NW th	an from
	a 24(1) 199	Year 1991 ifer beach Type stry of the Coastal V a 24(1) 1991 illy 1988-1990 higher from NW thi

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

Misc		

Sector North	Year	1972
Site Tumon Bay	(Gognga Beach	n) Type Marine
Title A Marine S	Survey for the O	kura Hotel Project
Author R. S. Jor	nes and R. H. Ra	andall
Location Randa	ull (ESR 4)	
Frequency Once		4
Mean		

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

Misc Currents

Sector North	Year 1984
site Tumon Bay (Gog	nga Beach) Type Marin
Preliminary Stud Northern Guam	dy of the Hydrology of
Author W. J. Zolan	
Location WERI (Tech	1 34)
Frequency Biweekly 1	1981
	A SWIETE AND

away.

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	100
site Tumon Bay (Hilto	n area)	Туре	Marine
Title A Marine Survey Hotel Dredging I		roposed	Hilton
Author R. H. Randall a	and R. S.	lones	
Location BOP (Marine	e Lab ESF	7)	
Frequency Once			
92 (a)		R III	
Notes Mid-bay region	richest.		7

Corais	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org of Clay	Inorg
PhysChem	Bact

Misc Currents

Sector North	Year	1989	
site Tumon Bay (Ypao	Beach)	Туре	Marine
Title Studies of Recrea	ationally li	mportant	Reef
Author DAWR Annual	Report		
Location DAWR			
Frequency Monthly			
Notes			

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

ich)	Type	Marine
	•	
orts		
00 ft	depths	
2.00		
	Investigation on the control of the	Investigations nanent Transe

Corais	Algae
Fish	Macros
Yes	7 (0 12)
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	lnorg
PhysChem	Bact

Sector North	Year	1976	
site Tumon Bay (Ypa	Beach)	Туре	Marine
Title EIA of Typhoon	Pamela		
Author EPA, Marine L	ab DPR I	DOA	
Location BOP			
Frequency Once			
Notes		-0	
ROLES			

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

Misc			

Sector North	Year	1984	
Site Tumon Bay (Y	oao Beach)	Туре	Marine
Title Preliminary St Northern Gua		drology	of
		4.	
Author W. J. Zolan			
Location WERI (Te	ech 34)		
Frequency Biweekly	y 1981		
Notes Tested fresh	water seepag	e and a	rea 5m

away.

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

Misc	Yes			

Sector North	Year	1975	
site Uruno Reef		Туре	Marine
Title A Candidate M. Survey of the U Guam, MI			
Author R. E. Dickins	on and R. T	. Tsuda	
Location Marine Lat	(Tech 19)		

Yes
Macros
Yes
Fauna
Solids
Oxygen
Inorg
Bact

Misc Currents

Year	1991	
	Туре	Marine
of the C	Coastal V	Vaters of
4(1) 199	<del>)</del> 1	
in 1988	-1990	
	of the C	

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

Misc Productivity

Sector North	Year	1977	Ī
site Uruno Reef		Type Marin	ne
Title Survey and Spe Representative Communities of	Pristine Ma		
Author J. O. Stojković	ch		
Location Marine Lab	(Tech 40)		
Frequency Once			
Notes			

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

Misc Endangered species

Sector South	Year	1973	
site Achang Bay		Туре	Marine
Title A Marine Surve	y for the A	chang Ba	ay Marina
Smit*			
Author R. H. Randall	et. al.		
Location Randall (M	arine Lab E	SR 10)	
Frequency Once			
Notes Mannel Chann	nel area ric	hest ove	rall.
	n share		100

Corais	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Misc Currents

Sector South	Year	1974	
site Achang Bay		Туре	Marine
Title EIA for Achang Basin	Bay Chanr	nel and E	3oat
Author H. Faucett			
Location BOP			
Frequency Once			
1 14 7 7		1	
Notes		10/	h

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

Sector South	Year	1975	4
Site Achang Bay		Туре	Marine
Title Studies of the B Guam	iology of th	e Reef F	ishes of
Author S. Amesbury			
Location Marine Lab	(Tech 49)		
Frequency Once			
Notes Fish larvae and here.	d adult fish	densitie	s high

DESCRIPTION OF THE PARTY OF THE

Corais	Algae
Fish	Macros
Yes	
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Misc Fish larvae also.

Sector South	Year	1979	
Site Achang Bay		Туре	Marine
Title Marine Biologic Guam Seashore the Pacific Natio	Study Area	and th	ne War in
Author L. G. Eldredg	e milita		
Location Marine Lab	(Tech 57)		

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

Misc		***	

Secto	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
Autho	or R. H. Randall and L. G. Eldredge
Loca	tion BOP (Marine Lab ESR 13)
Frequ	ency Once
Notes	
	A SAME AND ADDRESS TO A SAME AS A SAME A S

Corais	Algae
<b>Yes</b>	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc	Currents	

Sector South Year 1979		The state of the s
site Achugao Reef Type Marine	Corais	Algae
	Yes	Yes
Title Marine Biological Resources Within the	Fish	Macros
Guam Seashore Study Area and the War in	Yes	Yes
the Pacific National Historical Park	Flora	Fauna
Author L. G. Eldredge	Temp	Solids
Location Marine Lab (Tech 57)	Nutr	Oxygen
Frequency Once	Org	Inorg
Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.	PhysChem	Bact
	Misc	
Sector South Year 1968-1972		
	Corais	Algae
	Corais	Algae
Site Agfayan Bay Type Marine	Corais	Algae
Site Agfayan Bay Type Marine		Y
Site Agfayan Bay Type Marine	Fish	Macros
Site Agfayan Bay Type Marine	Fish Yes Flora	Macros Yes Fauna
	Fish Yes Flora	Macros Yes
Title Ecological Study of the Estuaries of Guam  Author DAWR Annual Report	Fish Yes Flora Temp Yes	Macros Yes Fauna Solids
Title Ecological Study of the Estuaries of Guam  Author DAWR Annual Report  Location DAWR	Fish Yes Flora	Macros Yes Fauna
Title Ecological Study of the Estuaries of Guam  Author DAWR Annual Report	Fish Yes Flora Temp Yes	Macros Yes Fauna Solids Oxygen
Title Ecological Study of the Estuaries of Guam  Author DAWR Annual Report  Location DAWR	Fish Yes Flora Temp Yes Nutr	Macros Yes Fauna Solids Oxygen Yes
Title Ecological Study of the Estuaries of Guam  Author DAWR Annual Report  Location DAWR  Frequency Monthly	Fish Yes Flora Temp Yes Nutr	Macros Yes Fauna Solids Oxygen Yes Inorg
Title Ecological Study of the Estuaries of Guam  Author DAWR Annual Report  Location DAWR  Frequency Monthly	Fish Yes Flora Temp Yes Nutr Org	Macros Yes Fauna Solids Oxygen Yes Inorg

Sector South	Year 1965, Ongoing  Type Marine	Corats
	a en la companya de	Misc Fish larva
Notes Fish larvae den	sities high here.	PhysChem
evidi	60	Org
Frequency Once	(Tech 49)	Nutr
Author S. Amesbury		ALCO TO SE
		Temp
	81675	Fiora
Title Studies of the Bi Guam	ology of the Reef Fishes of	Fish Yes
Site Ajayan Bay	Type Marine	M
Sector South	Year 1975	Corais

Corais	Algae
Fish	Macros
Yes	OCUS AT AL
Fiora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

ae also.

Title Survey of Guam's F Fishing Methods (In		nd
		100
Author DAWR Annual Re	ports	
Frequency Biweekly		
Notes	a Sagara Ta	THE

Corats	Algae
Fish Yes	Macros
Flora	Fauna
Тетр	Solids
Nutr AB car page	Oxygen
Org	Inorg
PhysChem	Bact

Misc			-	

Sector South	Year 1979
site Ajayan Bay	Type Marine
Guam Seashore	Resources Within the Study Area and the War in hal Historical Park
Author L. G. Eldredge	
Location Marine Lab	(Tech 57)
Frequency Once	= 8
Notes Seagrasses rich Cocos Lagoon.	in Ajayan Bay, corals in

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

Notes Seagrasses rick Cocos Lagoon.		n Bay, co	orals in
Frequency Once			4
Location Marine Lab	(Tech 57)		
Author L. G. Eldredge			
Guam Seashore the Pacific Nation	Study Are	a and th	ne War ir
Site Bile Bay .		Туре	Marine
Sector South	Year	1979	

Algae	
10.00	
Yes	
Macros	
Yes	
Fauna	
Solids	
Oxygen	
Inorg	
Bact	
	Macros Yes Fauna Solids Oxygen Inorg

	 	 	 -
Misc			

	Corais	Alcon
Site Cetti Bay Type Marine	Yes	Yes
Title Survey and Species Inventory of Representative Pristine Marine	Fish Yes	Macros Yes
Communities of Guam	Flora	Fauna
Author J. O. Stojkovich	Temp	Solids
Location Marine Lab (Tech 40)	Nutr	Oxygen
Frequency Once	Org	Inorg
Notes	PhysChem	Bact
	Misc Endangere	d species
	Misc Endangere	d species
Sector South Year 1976		
	Misc Endangere  Corals  Yes	Algae Yes
	Corals	Algae
Site Cetti Bay Type Marine Title EIA of Typhoon Pamela	Corals Yes	Algae Yes
Site Cetti Bay Type Marine Title EIA of Typhoon Pamela	Corals Yes Fish	Algae Yes Macros
Site Cetti Bay Type Marine Title EIA of Typhoon Pamela	Corais Yes Fish Flora	Algae YeS Macros Fauna Solids
Title EIA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA	Corals Yes Fish	Algae Yes Macros

PhysChem

Misc

Bact

Notes

00.45			
Sector South Year 1979 Site Cetti Bay Type Marine	Corais Yes	Algae Yes	
Marine Biological Resources Within the Guam Seashore Study Area and the War in	Fish Yes	Macros Yes Fauna	
the Pacific National Historical Park	Flora		
Author L. G. Eldredge	Temp	Solids	
Location Marine Lab (Tech 57)	Nutr		
Frequency Once	Org	Inorg	
Congress sich in Aiguen Bour gerele in			
Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.	PhysChem	Bact	
	Misc		

Sector South	Year	1990-1994
Site Coastal Waters		Type Marine
Pollution Indicator in Guam's Coasta		
Author E. A. Matson		
Location WERI		
Frequency Ongoing sin	ce 1990,	irregular.
Notes Bacteria washes stays in sedimen		•

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

Misc	***		HI STATE OF THE ST
		(61)	

			Misc
Notes Locations and fr	equency not yet o	decided.	PhysChem
Talant d	- 14 MA		Org
Location WERI Frequency Just starting	of View		Nutr
Author G. R. W. Dento	n and R. Wood		Temp
Resources	17419		
Stormwater Runo Loading of Guam	ff on the Heavy M		Flora
Site Coastal Waters		Marine	Fish
Sector South	Year 1994		Corais

Corais	Algae
res	Yes
ish	Macros
/es	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
)rg	inorg
PhysChem	Bact

Algae

Macros

Fauna

Solids

Oxygen

Yes Bact

site Cocos Island (lagoon reef) Type Marine

Title EIA Cocos Island Resort Renewal Project

Author PBEC

Location EPA

and Merizo Staging Area and Parking Lot

Sector South	Year	1993
site Cocos Island (lag	oon reef)	Type Marine
Title Water Quality M Island Reclamat		teport Cocos ging Operations)
Author PBEC		
Location EPA		
Frequency Weekly 9-	12/92	
Notes		

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

Misc			

Sector South	Year	1991	
site Cocos Island (lago	on reef)	Туре	Marine
Cocos Island Res Merizo Staging A	ort Rene	wal Proje	ect and
Author PBEC			
Location EPA			
Frequency Once			
Notes			

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

Misc		

Sector South Year 1992	Corals	Algae
Site Cocos Island seaward Type Marine	Yes	Yes
Title Environmental Protection and Water Quality Monitoring Plan for the Pilar Galleon	Fish Yes	Macros
Salvage Project	Fiora	Fauna
Author PBEC	Temp	Solids
Location EPA	Nutr	Oxygen
Frequency Once	Org	Inorg
Notes	PhysChem	Bact
AND PROPERTY.	Misc	
	Misc	Algae
Sector South Year 1992-1993		Algae
Sector South Year 1992-1993	Misc	Algae
Sector South  Year 1992-1993  Site Cocos Island seaward  Title Water Quality Monitoring Results for the	Misc	1109612 1349
Sector South Year 1992-1993  Site Cocos Island seaward Type Marine  Title Water Quality Monitoring Results for the Pilar Galleon Salvage Project	Corals	Macros
Sector South  Year 1992-1993  Site Cocos Island seaward  Type Marine  Title Water Quality Monitoring Results for the Pilar Galleon Salvage Project	Corals Fish Flora	Macros Fauna Solids
Sector South Year 1992-1993 Site Cocos Island seaward Type Marine Title Water Quality Monitoring Results for the Pilar Galleon Salvage Project  Author PBEC	Corals Fish Flora Temp	Macros Fauna Solids Yes

Sector South	Year	1992	
site Cocos Island seaw	ard	Туре	Marine
Title Environmental As Galleon Salvage		t for the	Pilar
Author PBEC			
Location EPA			
Frequency Once			
		i Kiji	
Notes			

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

Sector South	Year	1980 to	1990
site Cocos Lagoon		Туре	Marine
Title EPA Monitoring, S MZMG, MZMCW,			MCN,
Author EPA			
Location EPA			
Frequency Monthly			
Notes			

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

Sector South	Year 1991
site Cocos Lagoon	Type Marine
	ss Addendum to EIA sort Renewal Project and trea and Parking Lot
Author PBEC Location EPA	
Frequency Once	

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

Misc			

Sector South	Year	1982
site Cocos Lagoon		Type Marine
Title Resurvey of Coco	s Lagoor	n, Guam
Fewer C.		1 1000
Author R. H. Randall a	ind T. S.	Sherwood
Location Marine Lab (	Tech 80)	
Frequency Once		
Notes Recovery since	_	

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

Misc Currents

Sector South	Year 1992
site Cocos Lagoon	Type Marine
	a of the Shipwrecked Salleon Nuestra Senora antiago
Author PBEC	
Location PBEC	
Frequency Once	
Notes	

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

Misc Yes

Sector South	Year	1975	
site Cocos Lagoon		Туре	Marine
Title Community Struc Fishes in an Encl in Guam			
Author R. S. Jones and	d J. A. Ch	ase	
Location Micronesica	11(1) 197	75	
Frequency Once			
Notes Lower diversity in juvenile fishes.	than expe	cted, hig	gh in

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

	Service Service	 	
Misc			

Sector South	Year	1975	
site Cocos Lagoon		Туре	Marine
Title Marine Biologica Barrier Reefs an			
Author R. H. Randall e	et. al.		
Location Marine Lab	(Tech 17)		

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

Misc Yes

Sector South	Year	1991	
site Cocos Lagoon	R) 4,012	Туре	Marine
Title Nutrient Chemist Guam	ry of the C	Coastal V	Vaters of
Author E. A. Matson			
Location Micronesica	24(1) 199	91	
Frequency Sporadical	y 1988-1	990	
Notes			1,

Corals	Aigae	
Fish	Macros	
Fiora	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 Fishing Methods		
Author DAWR Annual	Reports	
Location DAWR		
Frequency Biweekly		
Notes		

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

Sector South Year 1977	
site Cocos Lagoon Type Marin	le
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	Algae	
Yes	Yes	
Fish	Macros	
Yes	Yes	
Flora	Fauna	
Temp	Solids	
Nutr	Oxygen	
Org	Inorg	
PhysChem	Bact	

Misc Endangered species

The second secon		
Site Cocos Lagoon Type Marine	Corais	Algae
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	Fish Department (1988)	Macros Yes
Annual and a second of the sec	Flora	Fauna
Author J. O. Stojkovich and B. D. Smith	Temp	Solids
		A Dignis
Location DAWR (Tech 2)	Nutr	Oxygen
Frequency Once	Org	inorg
Notes Bivalve densities high in seagrass beds, Trochus densities high here.	PhysChem	Bact
	Misc Bivalves ar	nd sea urchins.
Sector South Year 1976		
	Corals Yes	Algae Yes
Site Cocos Lagoon Type Marine	Yes	Yes
Site Cocos Lagoon Type Marine Title EIA of Typhoon Pamela	Yes	Yes Macros
Title ElA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA	Yes Fish Flora	Yes Macros Fauna Solids
Site Cocos Lagoon Type Marine  Title EIA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA  Location BOP	Yes Fish Flora	Yes Macros Fauna
Title ElA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA  Location BOP  Frequency Once	Yes Fish Flora	Yes Macros Fauna Solids
Site Cocos Lagoon Type Marine  Title ElA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA  Location BOP	Yes Fish Flora Temp Nutr	Yes Macros Fauna Solids Oxygen

Sector South	Year	1970 c	ngoing
Site Cocos Lagoon		Туре	Marine
Title EPA Monitoring of	Recreat	tional Wa	aters
Author EPA			
Location EPA			
Frequency Weekly			
Notes			
			, 1

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

Misc			===	==7	

Sector South	Year	1980 to 1990
site Cocos Lagoon		Type Marine
Title EPA Monitoring, S MZMG, MZMCW,		
Author EPA		
Location EPA		
Frequency Monthly		

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

Misc				

Occasional and Marian	Corais	Algae
site Cocos Lagoon Type Marine	Yes	Yes
Title Marine Biological Resources Within the	Fish	Macros
Guam Seashore Study Area and the War in	Yes	Yes
the Pacific National Historical Park	Flora	Fauna
Author L. G. Eldredge	Temp	Solids
Location Marine Lab (Tech 57)	Nutr	Oxygen
Frequency Once	Org	Inorg
Notes Seagrasses rich in Ajayan Bay, corals in Cocos Lagoon.	PhysChem	Bact
	Misc	
sector South Year 1981, 1983,		
	Corals	Algae
	Corals Yes	Algae Yes
		TELL DIE LINE
Title First (2nd and 3rd) Annual Report on the	Yes	Yes
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around	Yes	Yes
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam	Yes Fish Flora	Yes Macros Fauna
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral Community Monitoring Stations Around Guam  Author D. R. Bultitude	Yes Fish Flora Temp	Yes Macros Fauna Solids
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	Yes Fish Flora	Yes Macros Fauna Solids
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	Yes Fish Flora Temp	Yes Macros Fauna Solids
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	Yes Fish  Flora  Temp  Nutr	Yes Macros Fauna Solids Oxygen Inorg

Sector South	Year	1975
site Cocos Lagoon	(ManellChn)	Type Marine
Title Studies of the Guam	Biology of th	e Reef Fishes of
		-
Author S. Amesbur	у	
Location Marine La	ab (Tech 49)	
Frequency Once		
Notes Fish larvae a	and adult fish	densities high

 here.	_		4	el.	3

Algae
Macros
Fauna
Solids
Oxygen
inorg
Bact

Misc Fish larvae also.

Sector South	Year	1983	
site Cocos Lagoon	(Merizo area	l) Type	Marine
Title Merizo Small I Guam, Draft E		Territory	of of
Author ACOE			
Location EPA			
Frequency Once			
Notes			

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

Notes	- leaves	
A 1031		18.
Frequency Once		
Location BOP		
Author R. S. Jones	and R. H. Ra	ındali
Marina		
Title A Marine Sur	vey for the Pro	oposed Merizo
Site Cocos Lagoon	(Merizo area	) Type Marine
Sector South	Year	1973

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

Misc	

Sector South	Year 1989
site Cocos Lagoon (	Merizo area) Type Marine
	Assessment for a Merizo t Channel for Cocos Lagoon Corp.
Author PBEC	
Location BOP	
Frequency Once	
g/but	rate except for Mamaon

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

Misc		 	
MISC			

Notes	
Frequency Once	
Location BOP (Ma	arine Lab ESR 1)
Author R. H. Rand	all and R. S. Jones
the Proposed	rironmental Impact Survey for I Merizo Pier
Site Cocos Lagoon	(Merizo area) Type Marine
Sector South	Year 1972

Corais	Algae
Yes	<u>l</u>
Fish	Macros
Yes	V/ 454
Flora	Fauna
Temp 🖔 🛝	Solids
Yes	Yes
Nutr	Oxygen
	Yes
Org	Inorg
PhysChem	Bact
	Yes

Misc Currents

Sector South	Year	1980 t	0 1990	
site Fouha Bay		Туре	Marin	е
Title EPA Monitoring, S	ites ULN	AF (0-10	ft)	
Author EPA				
Location EPA				
Frequency Monthly				
riequency monthly				
				_

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

Sector South	Year	1978	- 1
site Fouha Bay		Туре	Marine
Guam's Reefs a Sedimentation S Ylig Bay			ay and
Author R. H. Randall			
Frequency Once			
Notes	alad	PARTY.	

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

Sector South	Year	1978	
site Fouha Bay		Туре	Marine
Title 'Guam's Reefs a Studies	and Beache	s Part II	Transect
Author R. H. Randall	et. al.		
Location Marine Lab	(Tech 48)		
Frequency Once			
Notes			

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

Misc Substrate

Year	1975	Ÿ
	Туре	Marine
ology of th	e Reef F	Fishes of
Tech 49)		
	ology of th	Type

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		Туре	Marine
Guam Seashore the Pacific Nation	Study Are	a and th	ne War in
Author L. G. Eldredge	е		
Location Marine Lab	(Tech 57)		
Frequency Once			
Notes Seagrasses ric		n Bay, co	orals in

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

Site Fouha Bay Type Marine	Corais	Algae
	Yes	Yes
Title First (2nd and 3rd) Annual Report on the Marine Benthic Algae and Coral	Fish	Macros
Community Monitoring Stations Around Guam	Flora	Fauna
Author D. R. Bultitude	Temp	Solids
Location EPA	Nutr	Oxygen
Frequency Average once a year	Org	Inorg
Notes	PhysChem	Bact
Frank Edward Committee Com	yeonom	
	Misc	
Sector South Year 1965, Ongoing		
Sector South Year 1965, Ongoing Site Inarajan Bay Type Marine	Corals	Aigae
site Inarajan Bay Type Marine	Corais	Algae
	to make	Hilling of
Site Inarajan Bay Type Marine  Title Survey of Guam's Fish Population and	Fish	Hilling of
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	Fish Yes	Macros
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	Fish Yes Flora	Macros
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports	Fish Yes Flora Temp Nutr	Macros Fauna Solids Oxygen
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR  Frequency Biweekly	Fish Yes Flora	Macros Fauna Solids
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR  Frequency Biweekly	Fish Yes Flora Temp Nutr	Macros Fauna Solids Oxygen
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR  Frequency Biweekly	Fish Yes Flora Temp Nutr	Macros Fauna Solids Oxygen Inorg

The Lift monitoring of Frootoational Waters	Flora
Title EPA Monitoring of Recreational Waters	Fish
Site Inarajan Bay Type Marine	Corais
Sector South Year 1970 ongoing	Corals
	Ĺ
	Misc
Notes	PhysCher
	O.y
Frequency Once	Org
Location BOP	Nutr
Author EPA, Marine Lab, DPR, DOA	
	Temp
	Flora
Title EIA of Typhoon Pamela	OIL W.
	Yes
Site Inarajan Bay Type Marine	Corals
Sector South Year 1976	

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

Misc	***		
		 	_

Sector South	Year 1970	ongoing
site Inarajan Bay	Тур	e Marine
Title EPA Monitoring of	f Recreational V	Vaters
Author EPA		
Location EPA Frequency Weekly		
Notes		

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

Misc			
MISC			

Site Inarajan Pools Type Marine	Corals
Sector South Year 1970 ongoing	
	Misc
EAST TO THE PROPERTY OF THE PARTY OF THE PAR	Yes
Notes	PhysChem
Troquency in oguiar, daily to monthly	Org Yes
Frequency Irregular, daily to monthly	Nutr
Author PUAG	
PULA	Temp
ROMA L. KANAGA	Flora
Title Monitoring STP outfall	ورودون فعطسا أكلاه
The sales of the s	Fish
Site Inarajan Bay (at outfall) Type Marine	Corals

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

Misc			

Sector South	Year	1970 c	ngoing
site Inarajan Pools		Туре	Marine
Title EPA Monitoring of	of Recreat	ional Wa	aters
T N. M.			
Author EPA			
Location EPA			
Frequency Weekly			
L avues	1 , 00		
Notes			1
1944 . ·			

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

	 _	 	 _
Misc			

Sector South Year 1990	Corais
Site Nomna Bay Typ	e Marine Yes
Title Reef Flat Baseline Survey Taotao Malojloj and Inarajan, Guam	Resort Yes
	Flora
Author PBEC	Temp
Location PBEC	Nutr
Frequency Once	Org
Notes	PhysChem
	Misc
Sector South Year 1965	,Ongoing
	e Marine Corals
	Fish
Title Survey of Guam's Fish Populatio	n and
Title Survey of Guam's Fish Population Fishing Methods (Inshore Creel (	n and
	n and
	Census) Yes

Location DAWR

Notes

Frequency Biweekly

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

Misc			

Corals	Aigae
Fish Yes	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Misc			

Year	1965, Ongoing
	Type Marine
	pulation and Creel Census)
Reports	
	The Control of the Co
	s Fish Po (Inshore

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

Sector South	Year 1971
site Sella Bay	Type Marine
	t of the Biological an Ammunition Pier at Sella EIS Sella Bay)
Author J. Caperon e	t. al.
Frequency Once	
Notes	

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

Misc Sediments

Sector South		Year	1976	
site Sella Bay			Туре	Marine
Title EIA of Typhoo	n Pa	mela		
Author EPA, Marine Location BOP Frequency Once	Lab	, DPR,	DOA	
Notes			***	
110103				

Corais	Algae
<b>Yes</b>	Yes
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr-	Oxygen
Org	Inorg
PhysChem	Bact

Misc		)/80		

Sector South	Year	1979	
site Sella Bay.		Туре	Marine
Title Marine Biologica Guam Seashore the Pacific Nation	Study Are	ea and th	ne War in
Author L. G. Eldredge			
Frequency Once	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Notes Seagrasses rick	n in Ajaya	n Bay, c	orals in
Cocos Lagoon.			

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

Misc		"		

Site Toguan Bay Type Marine	Corais Yes	Algae	
Title An Investigation of the Biological and	Fish	Macros	
Oceanographic Suitability of Toguan Bay,	Yes	Design Age	
Guam as a Potential Site for an Ocean Outfall	Fiora	Fauna Solids	
Author R.S. Jones et. al.	Temp		
Location Marine Lab (Tech 11)	Nutr	Oxygen	
Frequency Once	Org	inorg	
		- A STATE OF THE PARTY OF THE P	
Notes Possibly new wrasse species, only two coral species.	PhysChem	Bact	
	Misc Currents		
Sector South Year 1965, Ongoing		Alone	
	Corals	Aigae	
Site Toguan Bay Type Marine		Algae	
	Corals		
Site Toguan Bay  Type Marine  Title Survey of Guam's Fish Population and	Corais		
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	Corais Fish Yes	Macros	
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports	Corals  Fish Yes Flora  Temp	Macros Fauna Solids	
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR	Corais  Fish Yes Fiors	Macros	
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR	Corals  Fish Yes Flora  Temp	Macros Fauna Solids	
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR	Corals  Fish Yes Flora  Temp	Macros Fauna Solids Oxygen	

Year 1974

Sector South

Sector South	Year	1970 ongoing
Site Toguan Bay		Type Marine
Title EPA Monitoring	of Recreat	tional 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 Marin	8
Title Marine Biologi Guam Seasho the Pacific Nat	re Study Are	ea and the War	in
Author L. G. Eldred	ge		
Location Marine La	b (Tech 57)		
Frequency Once			

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

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

	-	 -	arrer-	 _
Misc				
miac				

Sector South	Year Ongoing
site Toguan Bay (at	Umatac Bay) Type Marine
Title Monitoring STF	outfall
Author PUAG	
Location EPA	
Frequency Irregular,	daily to monthly
1 10	
Notes	

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

Sector South	Year 1974	
site Umatac Bay	туре Marin	е
Title A Marine Biolog Umatac Sewer	gical Survey at the Propos Outfall Site	ec
Author R. H. Randall	and M. Gawel	
Location Randall (ES	SR 15)	
Frequency Once		

Corais	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Fiora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc			

Sector South	Year	1980 to 1990
site Umatac Bay		Type Marine
Title EPA Monitoring, (0-20ft)	Sites ULI	MUE, ULMUW,
Author EPA		
Location EPA		
Frequency Monthly		
Notes		

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

Year 1975
Type Marine
iology of the Reef Fishes o
(Tech 49)

Corals	Algae
Fish	Macros
Yes	5- P
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 Recreat	tional Waters
Author EPA		
Location EPA Frequency Weekly		čine :
Notes		

Corais	Aigae
Fish	Macros
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact Yes

Misc	0 =	

Sector South	Year	1979	
Site Umatac Bay	- 1	Туре	Marine
Guam Seashore the Pacific Nation	e Study Are	ea and the	ne War in
Author L. G. Eldredg	е		
Location Marine Lab	(Tech 57)		
Frequency Once			
Notes Seagrasses ric Cocos Lagoor		n Bay, c	orals in

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

Misc		 	

Sector South	Year 1981, 1983,
Sector Court	1001, 1000,
Site Umatac Bay	Type Marine
Marine Benthic A	d) Annual Report on the Algae and Coral itoring Stations Around
Author D. R. Bultitude	
Location EPA	
Frequency Average or	nce a year
Notes	

Algae
Yes
Macros
Fauna
Solids
Oxygen
inorg
Bact

Misc				

Sector South	Year	1989 ongoing
site Umatac Bay (at c	outfall)	Type Marine
Title Umatac Merizo Monitoring	STP Recei	ving Water
Author PUAG		
Location PUAG		
Frequency Monthly		* *
Notes		

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

ACCOUNT OF THE			
Miec			
Misc			

Sector West Year Ongoing		
Site Agana Bay Type Marine	Corais	Algae
Title Analysis of Fecal Coliform in Coastal Waters of Guam	Fish	Macros
	Flora	Fauna
Author E. A. Matson	Temp	Solids
Location Marine Lab	Nutr	Oxygen
Frequency Biweekly	Yes	200 St. 1 - Steeler 1
	Org	Inorg Yes
Notes Tumon deteriorating.	PhysChem	Bact Yes
	Misc	
Sector West Year 1990 Site Agana Bay Type Marine	Corals	Algae
Site Agana Bay Type Marine  Title Significance of Runoff and Terrestrial	Fish	Macros
Erosion to Nutrient Status of Estuaries of Guam	Flora	Fauna
Author E. A. Matson	Temp	Solids
Location WERI (Tech 70)	Nutr	Oxygen
Frequency Once	Yes	
Trequency Office	Org	inorg Yes
Notes	PhysChem	Bact
	Misc	

Sector West Year 1965, Ongoing	Corals
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	Fish Yes
	Flora
Author DAWR Annual Reports	Temp
Location DAWR Frequency Biweekly	Nutr
	Org
Notes	PhysChen
	Misc
Sector West Year 1970 ongoing	Corals
Site Agana Bay Type Marine	
Title EPA Monitoring of Recreational Waters	Fish
	92.05

Corals	Algae
Fish	Macros
Yes	- 22
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Corals	Algae
Fish	Macro
Flora	Fauna

Nutr

Org

**PhysChem** 

Misc

Oxygen

Inorg

Bact

Yes

Title EPA Monitoring of Re	creational Waters
Author EPA	
Location EPA	40
Frequency Weekly	
Notes	
	T0
4-2	

Sector West	Year 1981, 1983,
Site Agana Bay	Type Marine
Marine Benthic	3rd) Annual Report on the Algae and Coral onitoring Stations Around
Author D. R. Bultitud	ie
Location EPA	
Frequency Average	once a year
Notes	Page 2 agrid

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

Sector West	Year 1991
site Agana Bay (Adei	upe area) Type Marin
Environmental (	oring Report Water and Quality Adelupe Swimhole Beach Dredge Sites
- Photogram	
Author PBEC	
Location EPA	
Frequency Once	
Notes	E-STATES T

Corals	Algae
Yes	Yes
Fish	Macros
Yes	e a pompro
Flora	Fauna
Temp	Solids
	Yes
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Misc Substrate

Sector West	Year	1991	
site Agana Bay (Adelu	ipe area)	Туре	Marine
Monitoring Report Quality, Adelupe	rt Water a	nd Envir	
Author PBEC			
Location EPA			
Frequency Weekly for	a month		
Notes			

Corals	Algae
//Yes	Yes
Fish	Macros
Yes	78 (277) 778
Flora	Fauna
Temp	Solids
	Yes
Nutr-	Oxygen
Org	Inorg
PhysChem	Bact

M	sc		-		 

Sector West	Year	1971	7
site Agana Bay (at outfa	all)	Type	Marine
Chemical and Oce Associated with the	anogra	phic Phe	nomena
Author R. S. Jones and	R. H. Ra	andall	
Location Marine Lab (T	ech 1)		
Frequency Once			
Notes Algae as indicato	r specie	s.	

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

Misc	Yes		

	ngoing
site Agana Bay (at outfall) Type	Marine
Title Agana STP Receiving Water Monito	oring
Author PUAG	
Location PUAG	
requency Monthly	
lotes	

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

Misc	100		LASIAZ	
			-	

Sector West	Year	1989 c	ngoing
site Agana Bay (at outfall	)	Туре	Marine
Title Agana STP Wastew	ater Ef	fluent	
P. No.			
Author Marine Lab			
Location PUAG			
Frequency Quarterly (mor	nthly fe	cal colifo	orm)
Notes			

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

Misc		

е

Algae
Yes
Macros
Yes
Fauna
Solids
Oxygen
inorg
Bact

Misc Substrate

Marine Waters
Waters

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

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.

Corais	Aigae
Yes	Yes
Fish To to to	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.

Frequency Irregularly during 1980's

Location EPA

Notes Summarizes receiving waters since 1985.

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

Misc		

Notes			
Frequency Quarterly 19	89		
		7.6	
Location Micronesica 2	4(1) 19	91	
Author E. A. Matson			
Titie Nutrient Chemistry Guam	of the (	Coastal V	Vaters of
Site Agana Bay (at outfa	ali)	Туре	Marine
Sector West		1991	

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 m	onthly
Notes	

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

Misc	 		

Sector West	Year	1989 (	Ongoing
site Agana Bay (at outfall)		Type	Marine
Title Monitoring STP rece	iving v	waters	
project			
Author PUAG			
Location EPA			
Frequency Monthly to qua	rterly		
Notes	e day	15	
		197	

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

Misc			

Sector West	Year	1980 to 1990
site Agana Bay (central	)	Type Marine
Title EPA Monitoring, S (0-20 ft)	ites AGM	X-1, AGMX-2,
Author EPA	4-67	
Location EPA Frequency Monthly	and a	
Notes	(A) (C) (A) (A) (A) (A) (A) (A) (A) (A) (A) (A	Till Till Till Till Till Till Till Till

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

Misc		***	

site Agana Bay (central)	Type Marine	Corais
Sector West	Year 1976	Corais
		Misc
Notes	H-W -1 , F	PhysChem
Frequency Once		Org
Location EPA	t-	Nutr
Author ACOE		Temp
		Flora
Title Draft Feasibility Repo	ort and EIS Agana	Yes
Site Agana Bay (central)	Type Marine	Yes
Sector West	Year 1989	Corals

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

Sector West	Year	1976	
site Agana Bay (central)		Type	Marine
Title Report on the Coral Bay Reef Flat	Surve	y of the	Agana
Author R. H. Randall and	L. G. I	Eldredge	
Location ACOE			
Frequency Once	*		
			1 454
Notes Inner reef flat more flat, channel margin			ter reef

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

Misc				
		-	-	

Sector West	Year	1986	
site Agana Bay (central)		Туре	Marine
Title EIA Agana Deep Dr Reclamation Projec		bor and	
Author J. P. Carpio & Ass	soc., Ind	<b>3.</b>	
Location BOP			
Frequency Once			
Notes			

Corals	Algae
Yes	Yes
Fish	Macros
Yes	mules most half
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, Site	es AGN	AL (0-20 ft)
English 1		
Author EPA		
Location EPA		
Frequency Monthly		
Notes		

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

Misc		***	

Type Marine
iMX (0-20 ft)

Corais	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	inorg
PhysChem	Bact
Yes	Yes

Sector West	Year 1974
Site Agana Ba	y (Dungca's Beach Type Marine
Title A Marine Marina	Survey for the Sleepy Lagoon
3.4	
Author R. H. f	Randall and L. G. Eldredge
Location Ran	dall (ESR 14)
Frequency On	сө
Notes	

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

Misc		

Sector West Year 1993		1.00
site Agana Bay (Dungca's Beach Type Marine	Corals Yes	Algae Yes
Water Quality and Environmental Quality Monitoring Beach Lagoon Cleanup Project	Fish	Macros
	Flora	Fauna
Author PBEC	Temp	Solids Yes
Location EPA Frequency Weekly for two months	Nutr	Oxygen Yes
	Org	Inorg
Notes Approximately 1	PhysChem	Bact
	Yes	
	Misc	
Sector West Year 1991		
		Algae
	Misc	Algae Yes
	Misc	
Site Agana Bay (Dungca's Beach Type Marine  Title Onward Agana Beach Hotel Dredge Project	Corais Yes	Yes
Site Agana Bay (Dungca's Beach Type Marine  Title Onward Agana Beach Hotel Dredge Project	Corals Yes Fish	Yes
Title Onward Agana Beach Hotel Dredge Project Monthly Construction Monitoring Reports	Corals Yes Fish	Yes Macros Fauna Solids
Site Agana Bay (Dungca's Beach Type Marine  Title Onward Agana Beach Hotel Dredge Project Monthly Construction Monitoring Reports  Author PBEC  Location EPA	Corals Yes Fish Temp	Yes Macros Fauna Solids Yes

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-	1	,,,

Notes

Org

Misc

PhysChem

Inorg

Bact

Sector West	Year 1989
Site Agana Bay (Du	ingca's Beach Type Marine
Title Final EIS for S East Agana B	Sunset Beach Hotel Dredging ay, Guam
	12 T
Author PBEC	
Location BOP, EPA	<b>L</b>
Frequency Once	
Notes	

Corals	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
	Yes
Nutr	Oxygen
	L 70 L 9
Org	Inorg
PhysChem	Bact

Misc	Currents	*****	

Sector West	Year 1991
site Agana Bay	(Dungca's Beach Type Marine
Environme	Ionitoring Report Water and Intal Quality Adelupe Swimhole ca's Beach Dredge Sites
Author PBEC	
Location EPA	
Frequency Once	
Notes	

Corals	Algae
Yes	Yes
Fish	Macros
Yes	
Flora	Fauna
Temp	Solids
	Yes
Nutr	Oxygen
I MARK	TO THE LINE
Org	Inorg
PhysChem	Bact

Misc Substrate

Sector West	Year 1991	Consta
site Agana Bay (Dun	gca'sBeach) Type Marine	Corais
Title EIA Onward Ag Platform	ana Beach Hotel Floating	Fish Yes
		Flora
Author GMP Assoc.,	Inc.	Temp
Location EPA Frequency Once		Nutr
Frequency Once	Sent	Org
Notes	water party and the same of th	PhysChe
HOLD WITH	MC198ET TANET	Misc
Sector West	Year 1992	

Corais	Algae
	Yes
Fish	Macros
Yes	Bás mym?
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Sector West	Year	1992
site Agana Bay (Dungca	'sBeacl	h) Type Marine
Title EIA Onward Agana Raft	Beach	Hotel Floating
	1900	
Author GMP Assoc., Inc.		
Location EPA		7
Frequency Once		
Notes		
Notes		

Corals	Algae
	Yes
Fish	Macros
Yes	EIA SELLY
Fiora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc	 1	~ .	

Site Agana Bay (Dungcas Beach) Type Marine	Corals	Algae
Title Survey of Edible Marine Shellfish and Sea Urchins on Guam	Fish	Macros Yes
	Flora	Fauna
Author J. O. Stojkovich and B. D. Smith	Temp	Solids
Location DAWR (Tech 2)	Nutr	Oxygen
Frequency Once	Org	Inorg
Notes Sea urchin densities high here.	PhysChem	Bact
	Misc Bivalves ar	nd sea urchins.
	Corals	Algae
Site Agana Bay (Dungcas Beach) Type Marine	Corals Yes Fish	Algae Yes Macros
Site Agana Bay (Dungcas Beach) Type Marine	Yes	Yes
Title EIA of Typhoon Pamela	Yes	Yes
Sector West  Site Agana Bay (Dungcas Beach) Type Marine  Title EIA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA  Location BOP	Yes Fish Flora	Yes Macros Fauna
Author EPA, Marine Lab, DPR, DOA	Yes Fish Flora Temp	Yes Macros Fauna Solids
Author EPA, Marine Lab, DPR, DOA  Location BOP	Yes Fish Flora Temp	Yes Macros Fauna Solids Oxygen

Sector West	Year	1984	1
site Agana Bay (Dungca	s Beac	h) Type	Marine
Title Preliminary Study of Northern Guam	of the H	ydrology	of
Author W. J. Zolan			
Location WERI (Tech 34	4)	-10	
Frequency Biweekly 198	11	er spe	
0.4041		200 L	

away.

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

Misc Yes

Sector West	Year	1980 to 1990
site Agana Bay (east)		Type Marine
Title EPA Monitoring, Si AGMT, AGMS, AG		
VOICE .		0.7
Author EPA		
Location EPA		
Frequency Monthly		
Disease of the last of the las		
Notes		

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

Misc		

Notes			<del></del>
Frequency Once			
Location EPA			
Author PBEC			
Alupang Beach Cl			
Title EIA for Dredging a	nd Bead	ch Nouri	shment
site Agana Bay (east)		Туре	Marine
Sector West	Year	1991	

Corals	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Тетр	Solids
	Yes
Nutr	Oxygen
	P P - 1
Org	Inorg
PhysChem	Bact
	Yes

Misc Yes

	1978
	Type Marine
l Beache	s Part II Transect
3-4-6	
al.	
ech 48)	
	al.

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

Misc Substrate

Sector West Site Agana Bay (west)	Year 1980 to 1990	Corals
No.	4000 1- 4000	
	2015	Misc Fish larv
VVEN BOW		PhysChem
Notes		
Frequency Once	167	Org
Location Marine Lab (T	ech 49)	Nutr
Author S. Amesbury		
		Temp
-		Flora
Title Studies of the Biok	ogy of the Reef Fishes	of Yes
site Agana Bay (east)	Type Marir	18
Sector West	Year 1975	Corals

Corals	Algae	
Fish	Macros	
Yes	te lectority, year	
Flora	Fauna	
Temp	Solids	
Nutr	Oxygen	
Org	Inorg	
PhysChem	Bact	

vae also.

Sector West	Year	1980 to 1990
site Agana Bay (west)		Type Marine
Title EPA Monitoring, Si AGMZ (0-20 ft)	tes AGN	MF, AGMI, AGMB,
100		
Author EPA		
Location EPA Frequency Monthly		
B 2010E( - ))	- 0	No.
Notes		-4 7

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

Misc		3/1

Sector West	Year	1980 to 1990
site Agana Bay (west)		туре Marine
Title EPA Monitoring, Si (0-20 ft)	tes AGN	1Y, AGMW,
Author EPA		
Location EPA Frequency Monthly		
Notes		

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

Sector West	Year	1977	
Site Agat Bay		Туре	Marine
Title Marine Survey of	Agat Bay		
Author L. G. Eldredge	et. al.		
Location Marine Lab (	Tech 31)		
Frequency Once		20	
Notes			

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

Misc Currents

Sector West	Year	1977
site Agat Bay		туре Marine
Title Marine Recon Proposed Site Agat Bay		survey of Il Boat Harbor in
Author M. I. Cherni	n et. al.	
Location Marine La	ab (Tech 39)	
Frequency Once		
Notes Visual turbidi areas. Gaan Channel mos	site least di	leyfac and Nimit verse, Nimitz

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

Sector West	Year	1980 to 1990
site Agat Bay		Type Marine
ATMO, ATMA, ATMO, 60-5 ft)		IP, ATMN, ATMB
Author EPA		
Location EPA Frequency Monthly	3111	
Notes	- 12	

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

Misc		

Sector West	Year 1975
Site Agat Bay	Type Marine
Title Studies of the E Guam	iology of the Reef Fishes of
Author S. Amesbury	
Location Marine Lab	(Tech 49)
Frequency Once	
Notes Highest fish de	ensities here. High fish
larvae in Nimi	

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

Misc Fish larvae also.

	1979
	Type Marine
	es Within the ea and the War in cal Park
	2
Tech 57)	
	Study Are al Histori

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

Sector West	Year	1965, Ongoing
site Agat Bay		туре Marine
Title Survey of Gua Fishing Metho		pulation and Creel Census)
Author DAWR Ann	ual Reports	
Frequency Biweeki	у	
Notes	Seilere	

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

Sector West	Year 1978
Site Agat Bay	Type Marine
Title Survey of Edit Urchins on Gu	ole Marine Shellfish and Sea am
Author J. O. Stojkov	vich and B. D. Smith
Location DAWR (To	ech 2)
Frequency Once	
Notes Trochus den	sities high here.

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

Misc Bivalves and sea urchins.

10 / Feb 10		
Sector West Year 1976	Corais	Algae
site Agat Bay Type Marine	Yes	Yes
Title EIA of Typhoon Pamela	Fish	Macros
	Flora	Fauna
	Temp	Solids
Author EPA, Marine Lab, DPR, DOA		Jones
Location BOP	Nutr	Oxygen
Frequency Once		4-1
	Org	Inorg
Notes	PhysChem	Bact
	Misc	
Sector West Year 1970, Ongoing	·	-
Site Agat Bay Type Marine	Corals	Algae
Title EPA Monitoring of Recreational Waters	Fish	Macros
	Flora	Fauna
	Temp	Solids
Author EPA	1 Gruh	301103
Location EPA	Nutr	Oxygen
Frequency Weekly	Org	± 0 = 0 = 0.7
	i Ura	Inorg

Misc		

Bact Yes

PhysChem

Notes

site Agat Bay		Туре	Marine	Yes
Title First (2nd and 3nd Marine Benthic	Algae and	Coral		Fish
Community Mon Guam	itoring Sta	tions Aro	und	Flor
Author D. R. Bultitude	ļ			Tem
Location EPA				Nutr
Frequency Average of	nce a year			075
	1-216-116			Org
Notes	ě			Phys
.4				Misc

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

		-
Misc		

Sector West	Year	1993	
site Agat Bay (Anae pato	h reefs)	Type	Marine
Title EIA for Sunset Club	Guam,	Agat G	uam
Author PBEC			
Location EPA			
Frequency Once			
Notes Outer reef rich, ree	ef flat de	pauper	ate.

Corals	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact
8 1	

Misc	Currents	

Sector West Year 1977

Site Agat Bay (Anae patch reefs) Type Marine

Title Survey and Species Inventory of Representative Pristine Marine Communities of Guarn

Author J. O. Stojkovich

Location Marine Lab (Tech 40)

Frequency Once

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

Misc Endangered species

site Agat Bay (at outfall)	Type Marine
Title Agat Sewage Treatment Secondary Treated Efflu Coastal Waters	•
Author R. T. Tsuda and D. A. Location Marine Lab (Tech 3 Frequency 10-24 times 1977	
Notes No effect on corals or fi	ish, rich algae on

reef flat from phosphates.

1977

Year

Sector West

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

Misc Zooplankton

Sector West	Year	1989,	Ongoing
site Agat Bay (at outfall)		Туре	Marine
Title Agat STP Receiving	Water	Monitor	ring
group.			
Author PUAG			
Location PUAG			
Frequency Monthly			
Notes	20		

Corals	Algae		
Fish	Macros		
Flora	Fauna		
Temp	Solids		
Yes	Yes		
Nutr	Oxygen		
	Yes		
Org (19)	Inorg		
PhysChem	Bact		
Yes	Yes		

Year	1989,	Ongoing
	Туре	Marine
er Efflu	uent	
thly fe	cal colife	orm)
	er Effic	Year 1989, Type er Effluent

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

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

Misc

Sector West	Year	1994	
site Agat Bay (at outfal	1)	Туре	Marine
Final Report: Biol Sewage Outfalls Results of the Mo 1990, and Recom	on Guam onitoring F	: A Disci Program	ussion of Since
Author R. Richmond et	. al.		
Location Marine Lab			
Frequency Quarterly, 0	- 50 m fr	om outfa	All
Notes Increasing bare	substrate	. decrea	se turf

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

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

Misc Substrate

Sector West Year 1994	A	
Site Agat Bay (at outfall) Type Marine	Corals	Algae
Title Guam Island Wide Wastewater Facilities Plan, Draft Final Report	Fish	Macros
links and the second	Flora	Fauna
Author Duenas & Ass., Inc.	Temp Yes	Solids Yes
Location EPA	Nutr Yes	Oxygen Yes
Frequency Irregularly during 1980's	Org	Inorg
Notes Summarizes receiving waters since 1985.	PhysChem	Bact
	Yes	Yes
	Yes	Yes
Sector West Year 1991		Yes
		Yes
Site Agat Bay (at outfall) Type Marine	Misc	
Title Nutrient Chemistry of the Coastal Waters of	Misc	Algae
Title Nutrient Chemistry of the Coastal Waters of Guam	Corais	Algae

PhysChem	Bact
Yes	- Service
Misc	

Inorg Yes

Org

Frequency Quarterly 1989

Notes

Sector West	Year	1989,	Ongoing
site Agat Bay (at outfall)		Туре	Marine
Title Monitoring STP out	fall		
-			
Author PUAG			
Location EPA			
Frequency Irregular, daily	to mo	nthly	
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 (Nimit	z Beach area) Type Marine
Title Draft Detailed I Environmental Harbor	Project Report and Statement Agat Small Boat
Author ACOE	
Location MARC	
Frequency Once	
Notes	

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

Misc			

Sector West	Year	1979	100
site Agat Bay (Nimit	z Beach are	a) Type	Marine
Title Marine Biologic Guam Seashor the Pacific Nat	re Study Are	ea and th	ne War in
Author L. G. Eldredg	ge		
Location Marine La	b (Tech 57)		
Frequency Once			
Notes Seagrasses ri Cocos Lagoo		n Bay, c	orals in

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

ache		Marine Transect
ache	s Part II	Transect
10 (F)		
1 48)		
	1 48)	1 48)

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

Misc Substrate

Notes			
Frequency Once			
Location EPA			
Author Marine Resea	rch Consu	ıltants	
Station, Guam, N		of the US	Naval
site Apra Harbor		Туре	Marine
Sector West	Year	1992	

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

Misc Yes

Sector West	Year 1982
site Apra Harbor	Type Marine
Title Interim Survey F Statement (Fina	Report and Environmental in 1983)
10 T/10 31	
Author ACOE	
Location MARC	
Frequency Once	
Notes	discussion.

Corals	Algae
Yes	Yes
Fish	Macros
Yes	1 1
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
Yes	Yes
PhysChem	Bact
Yes	Yes

Misc Zooplankton

Sector West	Year 1988
site Apra Harbor	Type Marine
	Assessment for Proposed ne Operating Terminal, Guam
Author PBEC	
Location PBEC Frequency Once	Start

Corals	Algae	
Yes	Yes	
Fish	Macros	
Yes	2 th Oavilla	
Flora	Fauna	
Тетр	Solids	
Nutr	Oxygen	
Org	inorg	
PhysChem	Bact	

Misc Currents

Sector West	Year	1991
Site Apra Harbor		Type Marine
Title Nutrient Chemis Guam	try of the C	Coastal Waters of
Author E. A. Matson  Location Micronesical  Frequency Sporadical		
Notes	mercanie	

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

Misc Productivity

De la Contraction de la Contra

Notes	
Frequency Once	
Location DAWR (Tech	12)
Author J. O. Stojkovich	and B. D. Smith
Urchins on Guam	Marine Shellfish and Sea
14.70	
Site Apra Harbor	Type Marine
Sector West	Year 1978

Macros Yes
163
Fauna
Solids
Oxygen
Inorg
Bact

Misc Bivalves and sea urchins.

Sector West	Year 1	970, Ongoing
Site Apra Harbor		Type Marine
Title EPA Monitoring	of Recreation	nal Waters
Author EPA		
Location EPA		
Frequency Weekly		
Notes		

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

Misc

APMD (0-20ft)	WINE TO SERVICE STREET	Flora
Author EPA	grint	Temp Yes
Location EPA Frequency Monthly	100,025	Nutr Yes
ned .		Org
Notes	And Copper	PhysChem Yes
	Taking I	Misc

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

Misc			
	14	A 1. 9	

Sector West	Year	1981, 1983,
site Apra Harbor		Type Marine
Title First (2nd and 3 Marine Benthic Community Mor Guam	Algae and	Coral
Author D. R. Bultitude	9	
Location EPA	1	
Frequency Average o	nce a year	100
Notes		

Corals	Algae
Yes	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 Tre	atment Outfall
Author Navy	
Location EPA	
Frequency Daily (metals, pestion ongoing.	cides monthly),
Notes	

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

Misc		12.0	

Sector West	Year 1975
site Apra Harbor (at ou	tfall) Type Mari
Title Monitoring Apra H	larbor STP outfall
Author PUAG	
Location EPA	
Frequency Irregular, da	ily to monthly, ongoing

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

Misc		

Sector West Year 1992	Corals	Alees
site Apra Harbor (Commrcl Port) Type Marine	M Swi (neglemin	Algae
Title Water Quality Monitoring Results for the Commercial Port Berthing Facilities Bottom	Fish	Macros
Leveling Project	Flora	Fauna
Author PBEC	Temp	Solids Yes
Location PBEC Frequency Several times over two months	Nutr	Oxygen
Prequency Several times over two months	Org	Inorg
Notes Windows and Market State of the Control of th	PhysChem	Bact
	Misc	
	Misc	
	Misc	Algae
Sector West Year 1991 Site Apra Harbor (Commrcl Port) Type Marine		Algae Yes
Site Apra Harbor (Commrcl Port) Type Marine  Title Flora and Fauna Assessment Bottom	Corals	
Site Apra Harbor (Commrcl Port) Type Marine	Corals Yes	Yes
Site Apra Harbor (Commrcl Port) Type Marine  Title Flora and Fauna Assessment Bottom Leveling Project Commercial Port Berthing Facilities  Author PBEC	Corais Yes Fish	Yes Macros Yes
Site Apra Harbor (Commrcl Port) Type Marine  Title Flora and Fauna Assessment Bottom Leveling Project Commercial Port Berthing Facilities	Corais Yes Fish	Yes Macros Yes Fauna Solids Yes
Site Apra Harbor (Commrcl Port) Type Marine  Title Flora and Fauna Assessment Bottom Leveling Project Commercial Port Berthing Facilities  Author PBEC	Corais Yes Fish Flora Temp	Yes Macros Yes Fauna Solids Yes

Sector West	Year	1992	
site Apra Harbor (Coi	mmrci Port)	Туре	Marine
Title EPP for Comme Bottom Leveling			Facilities
Author PBEC			
Location PBEC	: 47		
Frequency Once			
Notes	ay +		

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

Misc			
	11		

Sector West	Year	1977	
site Apra Harbor (0	Commrcl Port)	Type	Marine
	onmental Base Port, Apra Harb		• U 10 PP
Author S. S. Ames	bury et. al.		
Location Marine L	ab (Tech 34)		
Frequency Once			
			4
Notes Two coral s	pecies unique t		

less sol

Corals	Algae
The state of the s	
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
PhysChem	Bact
Yes	

Misc		 		_

Sector West	Year	1980 to	o 1990
site Apra Harbor (Com	mrcl Port	Туре	Marine
Title EPA Monitoring,	Site APM	C (0-20f	t)
Author EPA			
Location EPA			
Frequency Monthly			
4 TOWN		iid	100
Notes			

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

Sector West	Year	1990	100
site Apra Harbor (Do	gleg Reef)	Туре	Marine
Title Studies of Recr Fish	eationally In	nportant	Reef
Author DAWR Annua	al Report		
Location DAWR			
Frequency Monthly			
6100		0	
Notes	- Lawrence	-	1
307			
		aid.	

Corals	Algae		
Fish	Macros		
Yes	POLICE PARTY		
Flora	Fauna		
Temp	Solids		
Nutr	Oxygen		
Org	inorg		
PhysChem	Bact		

	to the second	 _	 	
Misc				

or West	Year 1979	
Apra Harbor (Harbor	Refuge) Type M	arine
Detailed Project Re Statement, Harbor		
hor ACOE		
ation MARC		
quency Once		
<u> </u>		
18		
or West	Year 1980 to 1	990
Apra Harbor (Inner h		
Apra Hargor (Infrei 1	iaibor)) Type W	41111
<ul> <li>EPA Monitoring, Sit</li> </ul>	es APMA, APMS	0-20
EPA Monitoring, Sit	es APMA, APMS	(0

Author EPA

Notes

Location EPA

Frequency Monthly

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

Misc		

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

Misc		W.G. SV	

Shoals) Type	Marine
oc. 4997	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A.
	hase II Seawate nental Resource

Corals	Algae
Call Sales and	Yes
Fish	Macros
Yes	STA Wand in
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	inorg
PhysChem	Bact

Misc Yes

Sector West	Year	1977	
site Apra Harbor (Jad	le Shoals)	Type	Marine
Title Marine Environm Commercial Por			
Author S. S. Amesbu	ry et. al.		
Location Marine Lab	(Tech 34)		
Frequency Once			
Notes			
0.0000			

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

Misc		

Sector West	Year	1980 to	1990
site Apra Harbor (Jade	Shoals)	Туре	Marine
Title EPA Monitoring, S	Site APM.	(0-20ft)	1
Author EPA			
Location EPA			
Frequency Monthly			
Notes		700	

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

Misc		

Year	1980	
ıas River)	Туре	Marine
		Spill on
	of the Go	Year 1980  Las River) Type  of the Gorco Oil S  prove Community

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

, F	Misc	
	1	

Sector West	Year 1975		
site Apra Harbor (N	vl Suply Dpot) Type Marine	Corals	
Title Naval supply E conditions	Depot effluent and ambient	Fish	
	# AC	Flora	
		Temp	
Author Navy		Yes	
Location EPA		Nutr	11
Frequency Monthly,	ongoing.		,
Traduction morning,		Org	
Notes	100 min 10 gyr 10 11	PhysChem	
	Service Convers	Misc	
		<u> </u>	
Sector West	Year 1974		
site Apra Harbor (of	f Cabras Isl) Type Marine	Corals Yes	31
Title Marine Survey	for the Proposed Dredging	Fish	
and he Oaksaal	late and Tanania at the Adapti	Vac	

at the Cabras Island Terminal for Mobil

Petroleum Co.

Author L. G. Eldredge et. al.

Location Randall (ESR 16)

Frequency Once

Notes

hysChem	Bact
org such cast to	Inorg
Nutr	Oxygen
Temp	Solids
Flora	Fauna
Yes	Staud Wall V
Fish	Macros
Corals Yes	Algae

Algae

Macros

Fauna

Yes Oxygen

Inorg

Bact

Sector West	Year 1993
site Apra Harbor (off C	abras Isl) Type Marine
Title EIA for the Mobil Cabras Island	Fire Fighting System,
Author PBEC	
Location PBEC	
Frequency Once	
	*
Notes	

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

Misc Currents

Secto	r West	Year	1993
Site	Apra Harbor (	off Cabras Isl	) Type Marine
Title			abras Terminal
Auth	or PBEC		
Loca	ition PBEC		
Frequ	uency Weekly	for two mont	hs
Nete			
Notes	•		

Corats	Algae	
Yes	Yes	
Fish	Macros	
Flora	Fauna	
Тетр	Solids	
	Yes	
Nutr	Oxygen	
Org	Inorg	
PhysChem	Bact	

Misc Currents

Sector West	Year	1981
site Apra Harbor (Ord	ote area)	Type Marine
Title Draft EIS for an Apra Harbor, Go		•
Author Dept. of the N	lavy, VTN F	acific
Frequency Once		
Notes	(88 T 38) L	

Corals	Algae	
Yes	Yes	
Fish	Macros	
Yes	Yes	
Flora	Fauna	
Temp	Solids	
Yes	Yes	
Nutr	Oxygen	
	Yes	
Org	Inorg	
PhysChem	Bact	
Yes	(4)	

Misc Turtles

Sector	West	Y	ear	1977	
Site A	pra Harbor	(Orote are	a)	Туре	Marine
	Survey and Representa Communitie	tive Pristin	e Ma	-	
	r J. O. Stoj ion Marine		40)		
Freque	ency Once				
Notes		Falls	VIL		

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

Misc Endangered species

Sector West	Year	1977	
site Apra Harbor (Sas	a Bay)	Туре	Marine
Title Marine Environm Commercial Port			•
	· 4		
Author S. S. Amesbur	y et. al.		1
Location Marine Lab	(Tech 34)	• 11	
Frequency Once			
Notes			

Corals	Algae	
Yes	Yes	
Fish	Macros	
Yes	Yes	
Flora	Fauna	
Temp	Solids	
Yes	Yes	
Nutr	Oxygen	
Yes	Yes	
Org	Inorg	
4 -		
PhysChem	Bact	
Yes		

Notes			
Frequency Once	400		
Location Marine Lab	(Tech 40)		
Author J. O. Stojkovi	ch		
Communities of		ailie	
Title Survey and Spo Representative			
site Apra Harbor (Sa	sa Bay)	Туре	Marine
Sector West	Year	1977	

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

Misc Endangered species

Sector West	Year 1975	Occale	41-22
site Apra Harbor (ShipRep	pairFac) Type Marine	Corals	Algae
Title Ship Repair Facility F effluent and ambient		Fish	Macros
	and the second	Flora	Fauna
Author Navy	Sure F	Temp	Solids
		Yes	Yes
Location EPA	155.6	Nutr	Oxygen
Frequency Monthly, ongoin	ng.		
gren s		Org	Inorg
Notes	istración de la company	PhysChem	Bact
	500	Misc	
		Misc	
Sector West	Year 1981		
	Year 1981 Type Marine	Misc	Algae Yes
Site Asan Bay	Type Marine		
Sector West  Site Asan Bay  Title Asan Village Flood C  Guam-Environmenta	Type Marine	Corals	Yes
Site Asan Bay Title Asan Village Flood C	Type Marine	Corals	Yes
Site Asan Bay  Title Asan Village Flood C  Guam-Environmenta	Type Marine Control Study, Asan, I Statement	Corals Fish Yes	Yes Macros Yes

Inorg

Org

Frequency Once

Notes

Sector West Year 1979	Cossia	A1
Site Asan Bay Type Marine	Corals Yes	Algae Yes
Title Marine Biological Bossumes Within the	Fish	Macros
Marine Biological Resources Within the Guam Seashore Study Area and the War in	Yes	Yes
the Pacific National Historical Park	Flora	Fauna
	Temp	Solids
Author L. G. Eldredge		C 40
Location Marine Lab (Tech 57)	Nutr-	Oxygen
Frequency Once	Org	Inorg
		-
Notes Rich coral communities here.	PhysChem	Bact
	Misc	<u>.                                    </u>
		21
Sector West Year 1965, Ongoing		*
Sector West Year 1965, Ongoing Site Asan Bay Type Marine	Corals	Algae
Site Asan Bay Type Marine	Corals	Algae
Site Asan Bay Type Marine  Title Survey of Guam's Fish Population and	Fish	
Site Asan Bay Type Marine  Title Survey of Guam's Fish Population and	Fish Yes Flora	Macros
Site Asan Bay Type Marine  Title Survey of Guam's Fish Population and	Fish Yes	Macros
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)	Fish Yes Flora	Macros Fauna Solids
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports	Fish Yes Flora Temp Nutr	Macros Fauna Solids Oxygen
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR	Fish Yes Flora Temp	Macros Fauna Solids
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR	Fish Yes Flora Temp Nutr	Macros Fauna Solids Oxygen
Title Survey of Guam's Fish Population and Fishing Methods (Inshore Creel Census)  Author DAWR Annual Reports  Location DAWR  Frequency Biweekly	Fish Yes Flora Temp Nutr	Macros Fauna Solids Oxygen Inorg

ector West	Year 1970 ongoing
site Asan Bay	Type Marine
Title EPA Monitoring of	of Recreational Waters
No. of	
Author EPA	CM+
Location EPA	THE RESERVE OF THE PERSON OF T
Frequency Weekly	
Sicili.	
Notes	merchant

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

Misc		117	
	-		
-			

Sector West	Year	1981-1	982
site Asan Bay (Asan	Point)	Type	Marine
Title Reef Fish Popul Through Use of		-	
Author DAWR Annua	l Reports		
Frequency Monthly, 1	5 to 100 ft	depths	
Notes Fish increase i	n spring, si	ummer, r	nax
March to July, of rain.	also increa	ise with i	ncrease

religiation of the second

Corals	Algae
Fish	Macros
Yes Flora	Fauna
Temp	Solids
Nutr <sub>E AND</sub> .ds.	Oxygen
Org	Inorg
PhysChem	Bact

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Misc				
miec				
				- 3

Sector West	Year	1974,	Ongoing
Site Cabras Island re	eef (at outfal	) Type	Marine
Title Monthly Tempe Tanguisson an			
Author Marine Lab	F.3		
Location Marine La	b, EPA		
Frequency Monthly (	(0-50ft)		
Notes			

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

Sector West	Year	1974, Ongoing
site Cabras Island ree	f (at outfal	l) Type Marine
Effluent from Tar Power Plants on	nguisson a	
Author Marine Lab		
Location Marine Lab,	PUAG	
Frequency Quarterly		
Notes		

Corais	Algae
Fish	Macros
Flora	Fauna
Тетр	Solida
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc Sea urchin sperm/fertilization bioassays.

Sector West Year 1981 Site Cabras Island reef (at outfall) Type Marine	Corals
Title Summary Report Phase II Seawater SO2 Scrubber Environmental Resource Program	Fish Yes
for GPA	Flora
Author R. W. Beck & Assoc.	Temp
Location Marine Lab	Nutr
Frequency Monthly	Org
Notes	PhysChem
	Misc Yes
Sector West Year 1974, Ongoing Site Cabras Island reef (at outfall) Type Marine	Corals

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

Misc	Yes			

Sector West	Year 1974, Ongoing
site Cabras Island re	ef (at outfall) Type Marine
Title Cabras Power	Plant effluent monitoring
6000	2014
Author EPA	No. 82
Location EPA	5000
Frequency Daily, we	ekly and monthly
Notes	miniposition in the contract of

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

Misc		

Notes			
Frequency Once	=	•	
Location BOP (Marin	e Lab ESR	2)	
Author J. H. Rupp an	d H. K. Lars	on	
Title A Marine Enviro Gorco DeBallas Island			
site Cabras Island se	award reef	Туре	Marine
Sector West	Year	1972	

Algae
Yes
Macros
Fauna
Solids
Oxygen
Inorg
Bact

Misc	
50.04.0.04.00	

Sector West Year 1978	
site Cabras Island seaward reef Type Marin	9
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	Algae
Yes	Yes
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Misc				
				Ì

Year 1981	- 1
seaward reef Type	Marine
ort Phase II Seawate ronmental Resource	
k Assoc.	
b	
aparl beyon	Tion
	М
	seaward reef Type ort Phase II Seawate ronmental Resource

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

Misc Yes

Year	1990-1994
	Type Marine
and Pati Sedime	hogenic Bacter ents
Sign	
.16.3	
e 1990,	irregular.
	and Pat Sedime

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

Misc	- <del> </del>	H a s

Sector West Year 1994		
Site Coastal Waters Type Marine	Corals	Algae
Title Impact of Wastewater Discharge and Urban Stormwater Runoff on the Heavy Metal	Fish	Macros
Loading of Guam's Coastal Water Resources	Flora	Fauna
Author G. R. W. Denton and R. Wood	Temp	Solids
Location WERI	Nutr	Oxygen
Frequency Just starting.	Org	Inorg Yes
Notes Locations and frequency not yet decided.	PhysChem	Bact
	Misc	
Sector West Year 1979	- (m )	Lit.
	Corals	Algae
Site Luminao Reef Type Marine  Title Oceanographic Conditions in the Vicinity of	Corals	Algae Macros
Site Luminao Reef Type Marine		i= n
Title Oceanographic Conditions in the Vicinity of Cabras Island and Glass Breakwater for the	Fish	Macros
Title Oceanographic Conditions in the Vicinity of Cabras Island and Glass Breakwater for the Potential Development of OTEC on Guam	Fish Flora Temp Yes Nutr	Macros Fauna Solids Oxygen
Title Oceanographic Conditions in the Vicinity of Cabras Island and Glass Breakwater for the Potential Development of OTEC on Guam  Author D. R. Lassuy	Fish  Flora  Temp  Yes  Nutr  Yes	Macros Fauna Solids Oxygen Yes
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)	Fish Flora Temp Yes Nutr	Macros Fauna Solids Oxygen
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)	Fish  Flora  Temp  Yes  Nutr  Yes	Macros Fauna Solids Oxygen Yes

Sector West	Year 1982
site Luminao Reef	Type Marine
	he Shoalwater the Vicinity of the Development at Cabras
Author R. H. Randall	and L. G. Eldredge
Location Marine Lab	(Tech 79)
Frequency Once	
Notes	William Territoria

	т
Corals	Algae
Yes	A 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Fish	Macros
Yes	Yes
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Yes	Yes
Org	inorg
PhysChem	Bact
Yes	

Misc currents

Year	1982-1985
	Type Marine
ationally I	mportant Reef
Reports	2
	is i
	ationally I

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	Corais
Title Survey and Species Inventory of Representative Pristine Marine	Fish Yes
Communities of Guam	Flora
Author J. O. Stojkovich	Temp
Location Marine Lab (Tech 40)	Nutr -
Frequency Once	Org
Notes	PhysChem
	Misc Endang
H.	Corals
	Yes
Site Orote Point (seaward)  Type Marine  Title Draft EIS for the Ammunition Port Facilities	Yes
Site Orote Point (seaward)  Type Marine  Title Draft EIS for the Ammunition Port Facilities	Yes Fish Yes
Site Orote Point (seaward)  Type Marine  Title Draft EIS for the Ammunition Port Facilities  Orote Point, Guam, MI	Yes Fish Yes Flora

Frequency Once

Notes

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

Misc Endangered species

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

Misc	*1	· ·	

Sector West	Year 1965, Ongoing
site Pago Bay	Type Marine
	n's Fish Population and ls (Inshore Creel Census)
Author DAWR Annua	al Reports
Location DAWR	Land M
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 F	Piti Power Plant storm water
1000	1007
Author Navy	9817
Location EPA	
Frequency Monthly,	ongoing.
Notes	100 March 100 Ma

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

Mis			
00113			

Sector West Year 1965 to present	Corals	Algae
Site Piti Bay Type Marine	e e	Aigae
Title Survey of Guam's Fish Population and	Fish	Macros
Fishing Methods (Inshore Creel Census)	Yes	
(1600)	Flora	Fauna
Author DAWR Annual Reports	Temp	Solids
		1 0 1
Location DAWR	Nutr	Oxygen
Frequency Biweekly	Org	Inorg
Notes	PhysChem	Bact
	Misc	
Sector West Year 1976		
A SECOND CONTRACTOR OF THE PROPERTY OF THE PRO	Corals	Algae
Site Piti Bay Type Marine	Corals Yes	Yes
	Corals	
Site Piti Bay Type Marine	Corals Yes	Yes
Site Piti Bay Type Marine	Corais Yes Fish	Yes Macros Fauna
Site Piti Bay Type Marine	Corais Yes Fish	Yes Macros
Site Piti Bay Type Marine Title ElA of Typhoon Pamela	Corais Yes Fish	Yes Macros Fauna
Title ElA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA	Corais Yes Fish Flora Temp	Yes Macros Fauna Solids
Title EIA of Typhoon Pamela  Author EPA, Marine Lab, DPR, DOA  Location BOP	Corais Yes Fish Flora	Yes Macros Fauna Solids

Sector West	Year 1970, Ongoing
Site Piti Bay	туре Marine
Title EPA Monitoring	g of Recreational Waters
arts 1	
Author EPA	
Location EPA	100
Frequency Weekly	
Notes 1088	and the same

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

Year	1977
	туре Marine
	ne Environment II, Guam
ech 38)	
	the Mari Channe

Corals	Algae	
Transplant	<b>一日,四里</b> 月日	
Fish	Macros	
Yes		
Flora	Fauna	
Temp	Solids	
Yes	3364 16	
Nutr	Oxygen	
Org	Inorg	
PhysChem	Bact	

Misc Yes

Sector West	Year	1991		Cora
		a	-	Misc
		.6		Yes
Notes		1177		Phys
Frequency Weekly	91	* 1		Org
Location EPA				Nutr
Author Navy				Yes
				Tem
		•		Flor
Title Monitoring of Piti F effluent	Power F	lant disc	charge	Fish
site Piti Bay (at outfall)	+	Туре	Marine	447
Sector West	Year	Ongoir	ng	Cor

Corals	Algae
Fish	Macros
Flora	Fauna
Тетр	Solids
Yes Nutr	Oxygen
	u 1 =
Org	Inorg Yes
PhysChem Yes	Bact

Misc	 	
		-

Sector West	Year 1991
Site Piti Bay (east)	Type Marine
Title EIA for the Guarr	Underwater Observatory
Author PBEC	
Frequency Once	
Notes	we g

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

Misc	Yes		

Year 1977	
Тура	Marine
100	
h 38)	
100	-1 M
ula Signata	

Corals	Algae
Transplant	THE DAY AND DE
Fish	Macros
Yes	
Flora	Fauna
Temp	Solids
Yes	rimi VoA. Lone
Nutr (B. (BE)	Oxygen
Org	Inorg
PhysChem	Bact

Sector West	Year 1978
site Piti Bay (east)	Type Marine
Title Survey of Edible Urchins on Guan	Marine Shellfish and Sea
Author J. O. Stojkovic	ch and B. D. Smith
Location DAWR (Tech	h 2)
Frequency Once	
Frequency Office	

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

Misc Bivalves and sea urchins.

Sector West	Year 1	974
Site Piti Bay (west)		Type Marine
Title Marine Environments and Power Plant Cor and Piti Channel, Gu	struction	
Author J. A. Marsh and G.	D. Gordo	on
Location Marine Lab (Ted	h 8)	
Frequency Once		
Notes	E E	
- '		
Sector West	Year 1	972
Sector West Site Piti Bay (west)		972 Type Marine
	ntal Surv	Type Marine
Site Piti Bay (west)  Title A Marine Environme	ntal Surv	Type Marine
Site Piti Bay (west)  Title A Marine Environme	ntal Surv am for G	Type Marine ey of Piti Bay PA
Site Piti Bay (west)  Title A Marine Environme and Piti Channel, Gu	ntal Surv am for G D. Gorde	Type Marine ey of Piti Bay PA
Site Piti Bay (west)  Title A Marine Environme and Piti Channel, Gu	ntal Surv am for G D. Gorde	Type Marine ey of Piti Bay PA
Site Piti Bay (west)  Title A Marine Environme and Piti Channel, Gu  Author J. A. Marsh and G.  Location BOP (Marine La	ntal Surv am for G D. Gorde	Type Marine ey of Piti Bay PA

Corals	Algae
Fish	Macros
Flora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	lnorg
PhysChem	Bact
Yes	1

Misc	Yes				

Corais	Algae
Yes	Yes
Fish	Macros
Yes	1 - 5 2-
Flora	Fauna
Temp	Solids
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Sector West  Site Piti Bay (west)	Year 1975  Type Marine	Corals Yes	Algae Yes
	d Marine Environment:	Fish	Macros
	vations in Piti Bay and Piti	Full Lincold by	Yes
Channel	WWW.H	Flora	Fauna
Author J. A. Marsh and	d.I.F. Doty	Temp	Solids
		Yes	Yes
Location Marine Lab	(Tech 21)	Nutr	Oxygen
Frequency Once	N.C.		(100)
		Org	Inorg
Notes Tepungan Char since power pla	nnel and reefs recolonized nt construction.	PhysChem	Bact
			1
Sector West	Year 1979	Misc Yes	
94.00		Corals	Algae
Site Piti Channel	Year 1979 Type Marine	Corals Yes	/email3 in
Site Piti Channel  Title Detailed Project	Year 1979	Corals	Algae
Site Piti Channel  Title Detailed Project	Year 1979  Type Marine  Report and Environmental	Corals Yes	/email3 in
Site Piti Channel  Title Detailed Project  Statement, Harbo	Year 1979  Type Marine  Report and Environmental or of Refuge, Apra Harbor	Corais Yes Fish	Macros Fauna Solids
Site Piti Channel  Title Detailed Project Statement, Harbo  Author ACOE	Year 1979  Type Marine  Report and Environmental or of Refuge, Apra Harbor	Corais Yes Fish Flora	Macros Fauna Solids
Statement, Harbo	Year 1979  Type Marine  Report and Environmental or of Refuge, Apra Harbor	Corais Yes Fish	Macros Fauna Solids
Site Piti Channel  Title Detailed Project Statement, Harbo  Author ACOE	Year 1979  Type Marine  Report and Environmental or of Refuge, Apra Harbor	Corais Yes Fish Flora	Macros Fauna Solids
Site Piti Channel  Title Detailed Project Statement, Harbo  Author ACOE  Location MARC	Year 1979  Type Marine  Report and Environmental or of Refuge, Apra Harbor	Corais Yes Fish  Flora  Temp	Macros Fauna Solids Oxygen

		u i V <sub>e</sub> N	
Notes			
Frequency Once	¥		Y
Location Marine Lat	(Tech 38)	3.0	
Author J. A. Marsh e	t. al.		
		è	
in Piti Bay and	Pitti Chann	ei, Guam	
Title Power Plants a			1.57
Site Piti Channel		Туре	Marine
Sector West	Year	1977	

Corals	Algae
Yes	Personal Property
Fish	Macros
Yes	F. 317, 137-1
Flora	Fauna
Temp	Solids
Yes	_ TY
Nutr	Oxygen
Org	Inorg
PhysChem	Bact

Secto	West	Year	1973	
Site f	Piti Channel		Туре	Marine
Title	Thermal Study of Adjacent Areas, a Plant Operations Environment	ind the In	fluence	
Autho	or J. A. Marsh and	G. D. Go	ordon	
Loca	tion Marine lab (T	ech 6)		
Frequ	ency Once			
Notes	Temperature eff effects rare but p effluent kills fish.	pronounc		

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

Misc Currents

Sector West	Year 1972	2
site Piti Channel	Тур	e Marine
Title A Marine Environ and Piti Channel		
Author J. A. Marsh an	33-1	
Frequency Once	1 MY	
Notes	Physicade	

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

Sector West	Year 1974
site Piti Channel	Type Marine
	mental Effects of Dredging at Construction in Piti Bay al, Guam
Author J. A. Marsh ar	nd G. D. Gordon
Location Marine Lab	(Tech 8)
Frequency Once	3.54
0.85	0.0
Notes	Mintosynt Com

Corals	Algae
Fish	Macros
Fiora	Fauna
Temp	Solids
Yes	Yes
Nutr	Oxygen
Yes	Yes
Org	Inorg
PhysChem	Bact
Yes	- TO BOTH

Misc Yes

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Notes	PIE DI A
Frequency Once	78 80 8
Location Marine Lab (Te	ech 8)
Author J. A. Marsh and (	G. D. Gordon
Title Marine Environment and Power Plant Coand Piti Channel, G	onstruction in Piti Bay
Site Piti Channel	Type Marine
Sector West	Year 1974

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

Sector West	Year 1975
site Piti Channel	Type Marine
	d Marine Environment: vations in Piti Bay and Piti
	ARTURAL TO
Author J. A. Marsh and	d J.E. Doty
Location Marine Lab	(Tech 21)
Frequency Once	
Notes Tepungan Chai since power pla	nnel and reefs recolonized int construction.

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

Misc Yes

Sector West	Year 1976
Site Piti Channel	туре Marine
Title Influence of Power Marine Environmen	
Author J. A. Marsh and J	J.E. Doty
Location Marine Lab (To	ech 26)
Notes	Frankis grifs

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

Misc Coral transplants

Sector West	Year 1980		
site Piti Channel	Type Marine		
Title Trophic Relations	ships in Piti Channel		
The Atlanta	Euc.P.		
	The state of the s		
Author J. A. Marsh			
Location Randall			
Frequency Once			
ptent	915		
Notes -	machine 1		

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

Misc					

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PA		
	-	
W. Beck & Asso	c.	
Marine Lab		
Monthly	*	Au.
la		
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st	Year 1977	
hannel	Тур	e Marine
ne Environment mercial Port, Ap		
S. Amesbury et.	. al.	
Marine Lab (Ted		
	(1)	
	Girls	
Once	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Corals	Algae
	Yes
ish	Macros
es es	n to have the
Flora	Fauna
Гетр	Solids
lutr	Oxygen
rg	lnorg
PhysChem	Bact

Misc	Yes		

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

Misc			
95 1			

	Year	1976	Cr.
		Туре	Marine
n Pa	mela		
3)		als T	38
e Lab	, DPR, I	DOA	
	- ÷	pri)	
	ranit e	ani -	
	3,	n Pamela	Туре

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

Sector West	Year	1992	
site Tipalao Bay		Туре	Marine
Title Marine EIA in th Station, Guam, I	AND THE RESERVE OF THE PARTY OF	f the US	Naval
207063	0161		
Author Marine Resea	arch Consu	Itants	1968
Location EPA			
Frequency Once	¥.e.	*	
Dente	e W		
Notes	WEIGHT	u T	
		1	

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

Misc Yes...

Sector West Year 1	330	Corals	Algae
site Tipalao Bay	Type Marine	Yes	Yes
	*		
Title Dept. of the Army Permit App		Fish	Macros
Construction of Ocean Outfal	l and Diffuser	Yes	
in Tipalao Bay, Guam		Fiora	Fauna
Durana G Assaulta		Temp	Solids
Author Duenas & Assoc., Inc.			
Location ACOE	98	Nutr	Oxygen
Frequency Once	We want		
Frequency Office		Org	Inorg
Notes		PhysChem	Bact
		Misc	
		Misc	
Sector West Year 1	993		Alaca
	993 Type Marine	Corals	Aigae
		Corals Yes	Yes
site Tipalao Bay  Title Seashore Clearance Applica	Type Marine	Corais Yes Fish	Yes Macros
Title Seashore Clearance Applica Construction of Ocean Outfal	Type Marine	Corais Yes Fish Yes	Yes
Site Tipalao Bay  Title Seashore Clearance Applica	Type Marine	Corais Yes Fish	Yes
Title Seashore Clearance Applica Construction of Ocean Outfal	Type Marine	Corais Yes Fish Yes Flora	Yes Macros Yes Fauna
Title Seashore Clearance Applica Construction of Ocean Outfal	Type Marine	Corais Yes Fish Yes	Yes Macros Yes
Title Seashore Clearance Applica Construction of Ocean Outfal Bay, Santa Rita	Type Marine	Corais Yes Fish Yes Flora	Yes Macros Yes Fauna
Title Seashore Clearance Applica Construction of Ocean Outfal Bay, Santa Rita  Author Duenas & Assoc., Inc.	Type Marine	Corais Yes Fish Yes Flora Temp	Yes Macros Yes Fauna Solids Oxygen
Title Seashore Clearance Applica Construction of Ocean Outfal Bay, Santa Rita  Author Duenas & Assoc., Inc.  Location EPA	Type Marine	Corais Yes Fish Yes Flora	Yes Macros Yes Fauna
Title Seashore Clearance Applica Construction of Ocean Outfal Bay, Santa Rita  Author Duenas & Assoc., Inc.  Location EPA	Type Marine	Corais Yes Fish Yes Flora Temp	Yes Macros Yes Fauna Solids Oxygen

Misc

Sector West	Year	1981 ongoing
site Tipalao Bay (at outfa	all)	Type Marine
Title Naval Station sewa Tipalao Bay	ige efflu	uent outfall into !
Author Fena Lab		
Location Fena Lab, EPA	١.	
Frequency Daily (metals	monthly	y) .
Notes	-	

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

Misc

Sector West	Year	1984	_ 1
site Trinchera Reef		Туре	Marine
Title Preliminary Study of Northern Guam	the H	ydrology	of
Author W. J. Zolan	-		i ere
Location WERI (Tech 34)			
Frequency Biweekly 1981			
Notes Tested freshwater	seepac	e and a	rea 5m
away.	Joopas	,0 4 4	

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

Misc. Yes