Annual Report

November 1, 2016 – June 30, 2017

National Pollutant Discharge Elimination System
Permit HI S000052

Prepared By:
Hawaii Army National Guard
3949 Diamond Head Road
Honolulu, HI 96816

Table of Contents

1 Introduction 4
2 Requirements 4
3 Past Years Activities 4
3.1 Required Submittals 5
4 Future Activities 5
5 Resources 5
6 Modifications 5
7 Program Effectiveness Reporting 5
8 Annual Monitoring Report 5

Appendix A – Discharge Location Map
Appendix B – Water Quality Facility Assessment Checklist
Appendix C – Storm Water Management Plan Compliance Checklist
Appendix D – Lab Data Report, Chain of Custody, Field Notes
Appendix E – Discharge Monitoring Report
Appendix F – Exceedance Investigation Map

Acronyms

AASF1	Army Aviation Support Facility 1
BMP	Best Management Practices
C	Celsius
cfs	Cubic Feet per Second
COC	Chain of Custody
DMR	Discharge Monitoring Report
DOH	Department of Health
eMS	Environmental Management Systems
EPA	Environmental Protection Agency
HIARNG	Hawaii Army National Guard
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
ND	Non Detect
NGB	National Guard Bureau
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
pH	Potential Hydrogen
SWMP	Storm Water Management Plan
TSS	Total Suspended Solids

1 INTRODUCTION

The Hawaii Army National Guard (HIARNG) has prepared this Annual Report in accordance with Part G of National Pollutant Discharge Elimination System (NPDES) Permit No. HI S000052 issued on July 17, 2014 (herein referred to as the Permit). This Annual Report summarizes activities that occurred during the reporting period of November 1, 2016 through June 30, 2017. HIARNG is adjusting its reporting period to the State fiscal year.

2 REQUIREMENTS

HIARNG has remained in compliance with the Permit and the existing Storm Water Management Plan (SWMP), throughout the reporting period by preventing and reducing the amount of stormwater pollutants discharged from the HIARNG Municipal Separate Storm Sewer System (MS4) to the Maximum Extent Practicable (MEP). A copy of the Permit and SWMP are retained on site at each facility and at the HIARNG Environmental Office. All required submittals were provided to the Hawaii Department of Health (DOH), Clean Water Branch within their respective deadlines.

3 PAST YEARS ACTIVITIES

During the FY17 reporting period, HIARNG:

- Submitted the Annual Monitoring Plan on May 31, 2017 to the Hawaii DOH, Clean Water Branch through the e-Permitting system under submission #2FG-QV58-A9ZK.
- Issued and submitted to DOH the revised SWMP adding the newly constructed Army Aviation Support Facility at Kalaeloa (although to date not yet operational), as well as making minor and non-substantive administrative changes to the Plan. (Submission #HN7-SECA-WJB59, 9/13/2017)
- Issued and submitted to DOH the revised Construction, Repair, and maintenance Best Management Practices (BMP) Manual, including minor and non-substantive administrative changes to the Plan, included as Appendix E to the SWMP. (Submission #HN7-SECA-WJB59, 9/13/2017)
- Provided storm water and spill prevention and response training at seven HIARNG Environmental Officer Training classes for maintenance shop, military unit personnel, and facilities maintenance personnel, as well as one class geared to Construction and Facilities Management Office project managers and personnel.
- Continued to install drain placards on storm drains.
- Performed quarterly site inspection for Oahu facilities.

3.1 Required Submittals

Item Description	Permit Requirement	Submittal Date
2017 Annual Monitoring Plan	F.1.a.	May 31, 2017

4 FUTURE ACTIVITIES

HIARNG's future activities include implementing the Construction, Repair, and Maintenance BMP Manual, performing quarterly site inspections at all facilities covered under the Permit, performing monthly construction site inspections, providing stormwater training, preparing the 2018 Annual Monitoring Plan, and collecting water quality data at the AASF#1 industrial location during the period of July 1, 2017 – June 30, 2018.

5 RESOURCES

HIARNG's stormwater resources for implementing the Permit requirements are limited to existing staff and equipment at the HIARNG Environmental Office and are contingent upon program funding from the National Guard Bureau (NGB).

6 MODIFICATIONS

No modifications were made to the required NPDES submittals during this period.

7 PROGRAM EFFECTIVENESS REPORTING

HIARNG uses the Environmental Management System (eMS) as a strategy for determining the effectiveness of the SWMP. eMS is a process of Plan, Do, Check, Act that is incorporated into each regulatory subject area as a normal part of doing business. SWMP Program effectiveness is divided into two categories: Facility and Recordkeeping. Quarterly site assessment visits are used to evaluate facility compliance with the SWMP (Appendix B) and an annual evaluation checklist (Appendix C) is used to evaluate administrative and recordkeeping compliance with the SWMP.

8 ANNUAL MONITORING REPORT

In anticipation of a qualifying rain event, HIARNG mobilized on several occasions to collect a water sample at the designated discharge point at the AASF#1 in accordance with the permit; however, were unsuccessful in obtaining a sample due to insufficient rainfall/runoff.

As a follow-up action to further investigate the potential contributing sources for exceedances of copper, nickel, and zinc in the February 16, 2016 sample, as

well as the subsequent confirmation and exploratory samples taken on July 18, 2016 at four locations, two samples were taken on June 14, 2017. A composite sample was taken of flow directly from the copper downspouts of Buildings 829 and 832 fronting Santos Dumont Avenue, and a sheet flow sample was taken from the privately-owned vehicle (POV) parking lot which drains to the catch basins and drainage trench fronting Santos Dumont Avenue. Laboratory analyses report and chain of custody form are at Appendix A.

The results are shown below:

Exploratory Research Sample Results - June 14, 2017					
Parameter	**HAR 11-54 Effluent Limitations**	**Copper Downspouts (Total)**	**Copper Downspouts (Dissolved)**	**Parking Lot (Total)**	**Parking Lot (Dissolved)**
Copper	**6 µm/l**	**29**	**23 µm/l**	**14 µm/l**	**9 µm/l**
Nickel	**5 µm/l**	1	ND	**12 µm/l**	**11 µm/l**
Zinc	**22 µm/l**	**102**	**90 µm/l**	19 µm/l	10 µm/l

Confirmation and Exploratory Research Sample Results – July 18, 2016					
Parameter	**HAR 11-54 Effluent Limitations**	**Sample 01 Designated Point**	**Sample 02 Tarmac Catch Basin**	**Sample 03 Motorpool Sheet Flow**	**Sample 04 Bldgs. 829/832 Catch Basin**
Copper	**6 µm/l**	**37 µm/l**	2 µm/l	**9 µm/l**	**40 µm/l**
Nickel	**5 µm/l**	2 µm/l	ND	3 µm/l	ND
Zinc	**22 µm/l**	**48 µm/l**	5 µm/l	17 µm/l	**50 µm/l**

Above results indicate that the copper downspouts are a significant source of the of copper and zinc exceedances, while runoff from the POV parking lot is at least partially attributable for copper and nickel exceedances.

Appendix A

Laboratory Analyses Report
Chain of Custody Form
Sampling Site Map

FQ Labs

3170 Ualena Street, Unit A
Honolulu, HI 96819
Phone: 808-839-9444, Fax: 808-839-9744

Hawaii Army National Guard
3949 Diamond Head Road
Honolulu, HI, 96816
Attn: Lynne Nakamoto
Project Name: NPDES

CERTIFICATE OF ANALYSIS

Received: 06/15/2017 @ 9:48 AM
Completed: 06/26/2017 @ 6:47 PM
Project Number: 170615-1759-002
Temperature: 4.9 °C
Client Project No: AASF1

Sample ID: 170615-1759-002-01 | **Water Sample - 2** Stormwater AASF1-Downspouts | **Sampled: 6/14/2017 @ 5:45 AM** | **Sampler: Lynne Nakamoto**

Analysis	Results	Units	MDL	Test Method	Analyzed		By
Total Metals							
Copper	0.029	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Nickel	0.001	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Zinc	0.102	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Dissolved Metals							
Copper	0.023	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Nickel	Not Detected	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Zinc	0.090	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK

Sample ID: 170615-1759-002-02 | **Water Sample - 3** Stormwater AASF1-Parking Lot | **Sampled: 6/14/2017 @ 6:13 AM** | **Sampler: Lynne Nakamoto**

Analysis	Results	Units	MDL	Test Method	Analyzed		By
Total Metals							FK
Copper	0.014	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Nickel	0.012	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Zinc	0.019	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Dissolved Metals							
Copper	0.009	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Nickel	0.011	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK
Zinc	0.010	mg/L	0.001	EPA 3015/6020A	06/26/2017	2:41 PM	FK

Approved By: Imelda Q. Duarte
Wednesday, June 28, 2017

FQLabs
Analysts of Excellence
3170-A Ualena Street • Honolulu, HI 96819 • Tel: (808) 839-9444 • Fax: (808) 839-9744 • fql@fqlab.com
FOOD, WATER, SOIL & ENVIRONMENTAL TESTING & CONSULTING

METAL QC

Hawaii National Guard
91-1227 Enterprise Ave (Bldg. 175)
Kapolei, Hi 96707
Attn: Lynne Nakamoto
Project Name: NPDES HIS000052
Project Number: AASF116-736

Sample Id	Blank	RDL mg/L	*RSD*	*% Recovery*	LFB mg/L	*RSD*	*% Recovery*	Matrix Spikes (%Rec.)	Matrix Duplicates (RPD)
								Source: IWS 77	Source: IWS 77
Acquisition Time	6/26/2017 3:38:10 PM	6/26/2017 4:08:22 PM			6/26/2017 4:12:41 PM			6/26/2017 4:25:37 PM	6/26/2017 4:21:18 PM
Ni 60	ND	0.001	*4.4%*	*98.7%*	0.053	*3.5%*	*105.9%*	104.7%	1.5%
Cu 63	ND	0.001	*5.2%*	*95.9%*	0.054	*3.2%*	*107.8%*	105.7%	3.7%
Zn 66	ND	0.001	*2.9%*	*101.8%*	0.055	*1.4%*	*109.7%*	107.4%	4.2%

ND = Not Detected

NA = Not Aplicable

FQLabs
3170-A Ualena St.
Honolulu, HI 96819
Tel: 808-839-9444 Fax: 808-839-9744

CHAIN OF CUSTODY AND ANALYSIS REQUEST

DATE: _____ PAGE 1 OF 1

CUSTOMER NO. _____ LAB NO. _____

CLIENT NAME: Hawaii Army National Guard - ENV EMAIL: lynne.y.nakamoto.nfg@mail.mil

ADDRESS: 91-1227 Enterprise Ave. (Bldg. 175), Attn: L. Nakamoto

PROJECT NAME: NPDES HIS000052 PROJECT NO: AASF1 P.O. NO:

PROJECT MANAGER: Lynne Nakamoto PHONE NO: 808-672-1418 FAX NO: 808-672-1262

SAMPLER NAME: (Printed) Lynne Nakamoto (Signature)

TAT (Analytical Turn Around Time) 0 = Same day; 1 = 24 Hour; 2 = 48 Hour; (Etc.) N = Normal N

CONTAINER TYPES: B = Brass, G = Glass, P = Plastic, V = VOA Vial, O = Other:

ANALYSES REQUESTED:

AIRBILL NO: _____

COOLER TEMP: 4.9°C

PRESERVED: _____

REMARKS:

SAMPLE CONDITION/ COMMENTS:

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX WATER	MATRIX OTHER	CONTAINER #	CONTAINER TYPE	GRAB/ COMP	Copper Total/Dissolved	Nickel Total/Dissolved	Zinc Total/Dissolved			
#2 1	AASF1-DS (2)	6/14/2017	0545	Stormwater AASF1-Downspouts	X		1	P	Comp	X	X	X			
#3 2	AASF1-PL (3)	6/14/2017	0613	Stormwater AASF1-Parking Lot	X		1	P	Grab	X	X	X			
3															
4															
5															
6															
7															
8															
9															
10															

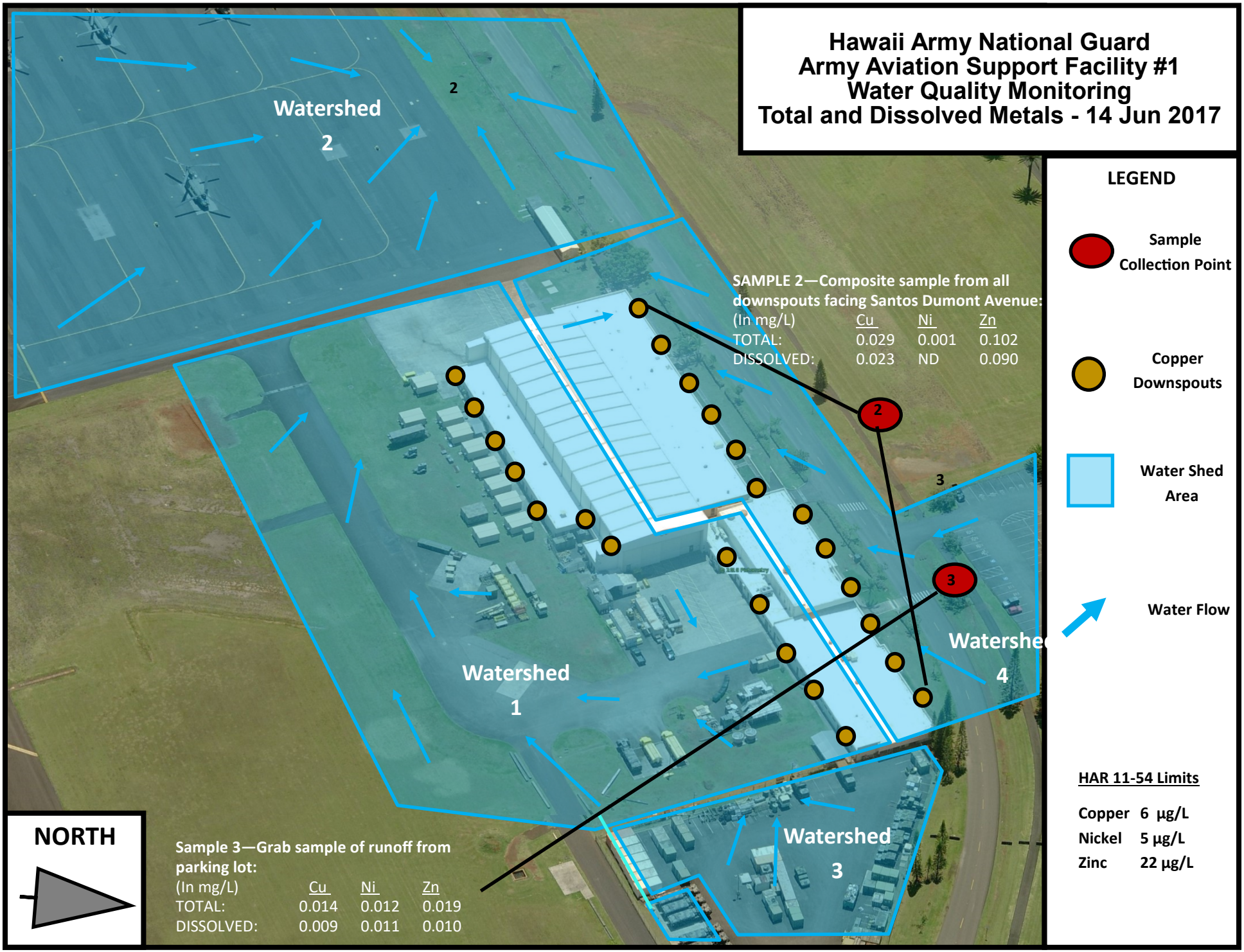
Relinquished By: (Signature and Printed Name)	Received By: (Signature and Printed Name)	Date:	Time:
David Brantley	Jessica Agena	6/15/17	9:48

SPECIAL INSTRUCTIONS: e-mail results to lynne.y.nakamoto.nfg@mail.mil

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____


Hawaii Army National Guard
Army Aviation Support Facility #1
Water Quality Monitoring
Total and Dissolved Metals - 14 Jun 2017
LEGEND
Sample Collection Point
Copper Downspouts
Water Shed Area
Water Flow
Watershed 2
Watershed 1
Watershed 3
Watershed 4
SAMPLE 2—Composite sample from all downspouts facing Santos Dumont Avenue:
(In mg/L) Cu Ni Zn
TOTAL: 0.029 0.001 0.102
DISSOLVED: 0.023 ND 0.090
Sample 3—Grab sample of runoff from parking lot:
(In mg/L) Cu Ni Zn
TOTAL: 0.014 0.012 0.019
DISSOLVED: 0.009 0.011 0.010
NORTH
HAR 11-54 Limits
Copper 6 µg/L
Nickel 5 µg/L
Zinc 22 µg/L

Appendix B

Discharge Monitoring Report

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*

NAME Hawaii Army National Guard
ADDRESS 3949 Diamond Head Rd
Honolulu, HI 96816

FACILITY Army Aviation Support Facility 1
LOCATION 1935 Santos Dumont Rd.
Schofield Barracks, HI 96854

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*

DISCHARGE MONITORING REPORT *(DMR)*

Form Approved
OMB No. 2040-0004

HIS000052	AASF1
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2016	11	01	TO	2017	06	30

NOTE: Read instructions before

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
No Discharge	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Karl Motoyama Supervisory Env Protection Spc	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	MOTOYAMA.KA RL.K.1392708606	808	672-1266	17	12	22
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS ***(Reference all attachments here)***

Although mobilized in anticipation of obtaining samples, unsuccessful in obtaining sample due to insufficient rainfall/runoff.

Appendix C

Inspections of Industrial Facilities

Hawaii Army National Guard

Water Quality Assessment Checklist

Facility Name:	Date:
AASF 1 Wheeler Air Field	28 June 17
Assessor Name:	**Assessor Signature:**
David Brentlinger	David A Brentlinger

Administrative Record Keeping

	Yes	No	NA	Comments
Is a copy of the SWMP is readily available on site at all Oahu Maintenance Shops (applicable only to AASF1, FMS1, FMS2, CSMS1, STMP, UTES)			✓	
Facility personnel responsible for site environmental activities have received periodic stormwater training?	✓			

Structural Best Management Practices

	Yes	No	NA	Comments
Are all structural BMP's in good condition?	✓			* Metal Socks Deployed List ID of Structural BMPs
Are the type and quantity of structural BMPs successful at mitigating impacts to stormwater to the maximum extent practicable? If not, explain.	✓			

Pollution Prevention and Good Housekeeping

	Yes	No	NA	Comments
Does the facility practice general good housekeeping?	✓			
Is facility free of trash and vegetative debris?	✓			
Are all dumpsters and trash bins closed and stored away from storm drain inlets?	✓			
Is maintenance being performed under cover when possible?	✓			

Spill Prevention and Response

	Yes	No	NA	Comments
Are all sanitary wastewater systems operational and maintained to prevent a discharge of wastewater?	✓			
Are pre-treatment devices operational and maintained to prevent a discharge of wastewater? (Oil level is no more than 25% of total level)		✓		* OWS not operational

Spill Prevention and Response				
	Yes	No	NA	Comments
Is a copy of the permit and log of operation and maintenance available on site for all City and County of Honolulu IWDP?	✓			
Have all spills been cleaned up?			✓	none Reported
Do all leaking vehicles have drip pans?			✓	none observed
Are spill kits stocked and placed near POL storage areas?	✓			
Is secondary containment being used for all hazadous substances stored outside?			✓	not a condition at site

Erosion and Sediment Control				
	Yes	No	NA	Comments
Is erosion occuring at the facility in the form of rills, gullies, or sloughing? If yes, identify where.		✓		
If erosion is occuring, has immediate action been taken to mitigate impacts to storm water until a permanent fix can be imlemented?		✓		
Are roadways free of sediment?	✓			
Is vegetation at the facility being maintained to prevent erosion?	✓			

MS4				
	Yes	No	NA	Specify amount in ft3 and location
Are catch basins, storm drains, and MS4 conveyances free of trash? If not, specify quantity in ft3			✓	none at site
Are catch basins and storm drains free of debris and vegetation? If not, specify quantity in ft3			✓	none at site
Are all MS4 features in tact, free of damage, and functional?	✓			

MS4 Effluent				
	Yes	No	NA	Comments
Is the MS4 effluent free of materials that will settle to form objectionable sludge or bottom deposits?	✓			
Is the MS4 effluent free of floating debris, oil, grease, scum, or other floating materials?	✓			
Is the MS4 effluent free of turbidity and suspended solids ?	✓			

Receiving Water				
	Yes	No	NA	Comments
Is the receiving water free of materials that will settle to form objectionable sludge or bottom deposits, turbidity, floating debris, oil, grease, scum, or other floating materials? Identify receiving water in comments.				

Identify location and extent of all deficiencies found during inspection:

FMS* OWS not operational, is receiving stormwater which is removed via unit representatives

Describe corrective action taken to address deficiencies:

Hawaii Army National Guard

Water Quality Assessment Checklist

Facility Name:	Date:
WAAF	27 DEC 2016
Assessor Name:	**Assessor Signature:**
Kaylen Brantlinger	Kaylen A Brantlinger

Administrative Record Keeping

	Yes	No	NA	Comments
Is a copy of the SWMP is readily available on site at all Oahu Maintenance Shops (applicable only to AASF1, FMS1, FMS2, CSMS1, STMP, UTES)	X			
Facility personnel responsible for site environmental activities have received periodic stormwater training?	X			

Structural Best Management Practices

	Yes	No	NA	Comments
Are all structural BMP's in good condition?	X			List ID of Structural BMPs
Are the type and quantity of structural BMPs successful at mitigating impacts to stormwater to the maximum extent practicable? If not, explain.	X			minimal BMP Required during time of assessment

Pollution Prevention and Good Housekeeping

	Yes	No	NA	Comments
Does the facility practice general good housekeeping?	X			
Is facility free of trash and vegetative debris?	X			Slight leaf litter North Point Compliance
Are all dumpsters and trash bins closed and stored away from storm drain inlets?	X			
Is maintenance being performed under cover when possible?	X			

Spill Prevention and Response

	Yes	No	NA	Comments
Are all sanitary wastewater systems operational and maintained to prevent a discharge of wastewater?	X			
Are pre-treatment devices operational and maintained to prevent a discharge of wastewater? (Oil level is no more than 25% of total level)	X			

Spill Prevention and Response

	Yes	No	NA	Comments
Is a copy of the permit and log of operation and maintenance available on site for all City and County of Honolulu IWDP?	X			
Have all spills been cleaned up?	X			as applicable
Do all leaking vehicles have drip pans?	X			
Are spill kits stocked and placed near POL storage areas?	X			
Is secondary containment being used for all hazadous substances stored outside?	X			

Erosion and Sediment Control

	Yes	No	NA	Comments
Is erosion occuring at the facility in the form of rills, gullies, or sloughing? If yes, identify where.		X		
If erosion is occuring, has immediate action been taken to mitigate impacts to storm water until a permanent fix can be imlemented?		X		
Are roadways free of sediment?	X			
Is vegetation at the facility being maintained to prevent erosion?	X			

MS4

	Yes	No	NA	Specify amount in ft3 and location
Are catch basins, storm drains, and MS4 conveyances free of trash? If not, specify quantity in ft3	X			Slight leaf litter North POC
Are catch basins and storm drains free of debris and vegetation? If not, specify quantity in ft3	X			
Are all MS4 features in tact, free of damage, and functional?	X			

MS4 Effluent

	Yes	No	NA	Comments
Is the MS4 effluent free of materials that will settle to form objectionable sludge or bottom deposits?	X			
Is the MS4 effluent free of floating debris, oil, grease, scum, or other floating materials?	X			
Is the MS4 effluent free of turbidity and suspended solids ?	X			

Receiving Water				
	Yes	No	NA	Comments
Is the receiving water free of materials that will settle to form objectionable sludge or bottom deposits, turbidity, floating debris, oil, grease, scum, or other floating materials? Identify receiving water in comments.			X	

Identify location and extent of all deficiencies found during inspection:

The catch Basin at North Point of Compliance has collected slight amount of leaf matter.

Describe corrective action taken to address deficiencies:

None at the time of Assessment