ACTION PLAN FOR EROSIONAL OUTFALLS

HONOLULU INTERNATIONAL AIRPORT
NPDES PERMIT NO. HI S000005

Prepared For:
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Honolulu International Airport
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TABLE OF CONTENTS

1.0 ACTION PLAN 1

1.1 INTRODUCTION 1
1.2 SELECTION OF EROSIONAL OUTFALLS 1
1.3 IDENTIFIED EROSIONAL OUTFALLS 1
1.4 IMPLEMENTATION SCHEDULE 2

ATTACHMENT – HNL Outfall Summary

1.0 ACTION PLAN

1.1 Introduction

The State of Hawaii Department of Transportation, Airports Division (DOTA) has completed this action plan for addressing erosion at its storm drain system outfalls within the Honolulu International Airport (HNL) in accordance with the National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer System (MS4) permit HI S000005, Part D.1.f.(3)(iv). The purpose of this plan is to reduce erosion from the outfalls that have a significant potential for water quality impacts by implementing appropriate permanent best management practices (BMP) or repairs. This plan includes the justification for the selection of erosional outfalls, identification of erosional outfalls, and an implementation schedule for correction.

1.2 Selection of Erosional Outfalls

In accordance with the *Storm Drain Outfall Inspection & Field Screening Plan* dated April 2009, an inspection was conducted for outfalls within HNL on June 2 and 4, 2015. All outfalls were inspected with the exception of 4388, 4387, and 4390 due to construction in the area. These outfalls have been previously inspected and were observed to connect directly from the main terminal parking garage to the underground MS4 pipeline; therefore, it is not anticipated that they would cause erosion. A summary of the outfalls inspected is provided in Attachment I.

Erosion at the outfalls was defined as the significant movement of soil particles due to the flow of water. Outfalls were determined to have significant potential for water quality impacts if evidence of erosional rilling or gullying was observed immediately below the outfall structure or if downstream areas had evidence of sediment transport and/or accumulation that could be attributed to that outfall.

1.3 Identified Erosional Outfalls

As a result of completed outfall inspections, adjacent outfalls 4555 and 4556, located at 21°19’58.8”N, 157°54’35.5”W, were identified to have erosion (photo below). EID 4555 is an approximately 6 inch diameter corrugated metal pipe and EID 4556 includes two approximately 6 inch diameter polyvinyl chloride (PVC) pipes encased in concrete. Both outfalls discharge into the Aolele Street canal, which flows to Keehi Lagoon, a Class A Embayment Water.

1.4 Implementation Schedule

Outfalls 4555 and 4556 will be studied in 2016 to determine the best course of action to remedy the erosion and final stabilization of the area will be completed no later than 2021.

ATTACHMENT I

HNL Outfall Summary

Honolulu International Airport Outfalls

Basin	EID	POI Location	POI Inspection Date	POI Outfall Risk Ranking	POI Latitude	POI Longitude
A1	4641	OUTFALL INTO KEEHI LAGOON	06/02/2015	Medium	[21 deg 19' 33.8'' N]	[157 deg 54' 3.2'' W]
A10	4105	OUTFALL BY ARFF #2 TO KEEHI LAGOON	06/02/2015	Medium	[21 deg 18' 44.2'' N]	[157 deg 55' 11.3'' W]
A10	4750	KEEHI LAGOON ABOVE TWY "RA"	06/02/2015	Medium	[21 deg 18' 38.1'' N]	[157 deg 55' 6.9'' W]
A10	4761	KEEHI LAGOON ABOVE TWY "RA"	06/02/2015	Medium	[21 deg 18' 38.1'' N]	[157 deg 55' 6.9'' W]
A10	4764	KEEHI LAGOON ABOVE TWY "RA"	06/02/2015	Medium	[21 deg 18' 37.6'' N]	[157 deg 55' 1.7'' W]
A10	4765	KEEHI LAGOON ABOVE TWY "RA"	06/02/2015	Medium	[21 deg 18' 37.7'' N]	[157 deg 54' 54.9'' W]
A10	4766	KEEHI LAGOON ABOVE TWY "RA"	06/02/2015	Medium	[21 deg 18' 37.7'' N]	[157 deg 54' 47.9'' W]
A10	4767	KEEHI LAGOON ABOVE TWY "RA"	06/02/2015	Medium	[21 deg 18' 37.8'' N]	[157 deg 54' 41.4'' W]
A10	7626	KEEHI LAGOON ABOVE TWY RA	06/02/2015	Medium	[21 deg 18' 37.7'' N]	[157 deg 54' 30.8'' W]
A10	12039	ARFF 2	06/02/2015	Low	[21 deg 18' 40.96'' N]	[157 deg 55' 11.99'' W]
A2	4695	LAGOON DRIVE ENTRANCE	06/02/2015	Medium	[21 deg 19' 27.8'' N]	[157 deg 54' 13.3'' W]
A2	4771	LAGOON DRIVE ENTRANCE	06/02/2015	Medium	[21 deg 19' 22.3'' N]	[157 deg 54' 19.6'' W]
A3	4622	OUTFALL INTO KEEHI LAGOON NEAR IOLANA PLACE	06/02/2015	Medium	[21 deg 19' 17.1'' N]	[157 deg 54' 27.5'' W]
A4	4728	KEEHI LAGOON BELOW CORPORATE AIR	06/02/2015	Medium	[21 deg 19' 7.3'' N]	[157 deg 54' 41.6'' W]
A4	4734	KEEHI LAGOON BELOW TAXILANE 2	06/02/2015	Medium	[21 deg 19' 8.9'' N]	[157 deg 54' 38.5'' W]
A6	4710	KEEHI LAGOON BELOW FEDERAL EXPRESS	06/02/2015	Medium	[21 deg 18' 59.1'' N]	[157 deg 54' 53.6'' W]
A6	4715	KEEHI LAGOON BELOW FEDERAL EXPRESS	06/02/2015	Medium	[21 deg 19' 1.1'' N]	[157 deg 54' 50.5'' W]
A6	4717	KEEHI LAGOON BELOW UPS	06/02/2015	Medium	[21 deg 19' 3.9'' N]	[157 deg 54' 46.1'' W]
A6	5751	KEEHI LAGOON BELOW FEDEX	06/02/2015	Medium	[21 deg 18' 56.6'' N]	[157 deg 54' 56.6'' W]
A7	4686	KEEHI LAGOON BELOW CONTINENTAL	06/02/2015	Medium	[21 deg 18' 53.1'' N]	[157 deg 55' 1.2'' W]
A8	4678	KEEHI LAGOON BELOW HCC	06/02/2015	Medium	[21 deg 18' 50.3'' N]	[157 deg 55' 6.4'' W]
A8	4679	KEEHI LAGOON BELOW CHELSEA	06/02/2015	Medium	[21 deg 18' 51.2'' N]	[157 deg 55' 4'' W]
A8	4687	KEEHI LAGOON BELOW LSG	06/02/2015	Medium	[21 deg 18' 54.8'' N]	[157 deg 54' 59.9'' W]
A8	5731	OUTFALL IN KEEHI LAGOON	06/02/2015	Medium	[21 deg 18' 48.5'' N]	[157 deg 55' 7.8'' W]
A9	4658	OUTFALL INTO KEEHI LAGOON	06/02/2015	Medium	[21 deg 18' 47.6'' N]	[157 deg 55' 9.9'' W]
A9	4756	SOUTH RAMP AREA END OF LAGOON DRIVE	06/02/2015	Low	[21 deg 18' 38.3'' N]	[157 deg 55' 20.6'' W]
A9	4757	SOUTH RAMP AREA END OF LAGOON DRIVE	06/02/2015	Low	[21 deg 18' 38.2'' N]	[157 deg 55' 20.5'' W]
B12	9709	MANUWAI CANAL FROM HA & AQ MAINTENANCE	06/02/2015	Low	[21 deg 19' 57.9'' N]	[157 deg 55' 45.2'' W]
B13	5061	DRAIN FROM HAWAIIAN AIR CARGO AND IIT RAMP	06/02/2015	Low		
B15	6461	AREA BEHIND ARFF #1	06/02/2015	Low	[21 deg 19' 52.4'' N]	[157 deg 55' 49.8'' W]
B16	12040	Ewa Hardstands	06/02/2015	Low	[21 deg 19' 40.15'' N]	[157 deg 56' 2.09'' W]
B3	4221	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B3	4744	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B3	4805	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B3	4807	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B3	4808	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B3	4810	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B3	4811	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B3	4815	AHUA POND	06/02/2015	Low	[21 deg 18' 36.3'' N]	[157 deg 56' 4.2'' W]
B3	4818	AHUA POND	06/02/2015	Low	[21 deg 18' 36.5'' N]	[157 deg 56' 11.9'' W]
B4	4747	AIRFIELD NEAR T HANGAR BUILDING	06/02/2015	Low	[21 deg 18' 42.4'' N]	[157 deg 55' 34.7'' W]
B6	9177	EVAPORATION POND SOUTH	06/02/2015	Low	[21 deg 19' 20'' N]	[157 deg 55' 20.3'' W]
B6	9180	EVAPORATION POND SOUTH	06/02/2015	Low	[21 deg 19' 19.9'' N]	[157 deg 55' 20.1'' W]

Honolulu International Airport Outfalls

Basin	EID	POI Location	POI Inspection Date	POI Outfall Risk Ranking	POI Latitude	POI Longitude
B6	9181	EVAPORATION POND SOUTH	06/02/2015	Low	[21 deg 19' 20.1'' N]	[157 deg 55' 22.5'' W]
B6	10272	OUTFALL END OF RWY 4L	06/02/2015	Low	[21 deg 19' 7.9'' N]	[157 deg 55' 28.1'' W]
B6	10274	OUTFALL AT SOUTH FENCE BY CONTROL TOWER	06/02/2015	Low	[21 deg 19' 11.7'' N]	[157 deg 55' 32.4'' W]
B6	10275	SERVICE ROAD AT BACK OF RWY 4L	06/02/2015	Low	[21 deg 19' 6.3'' N]	[157 deg 55' 34'' W]
B6	10276	SERVICE ROAD AT BACK OF RWY 4L	05/14/2010	Low	[21 deg 19' 5.4'' N]	[157 deg 55' 36.4'' W]
B7	9176	EVAPORATION POND NORTH	06/02/2015	Low	[21 deg 19' 22.2'' N]	[157 deg 55' 20.3'' W]
B7	9178	EVAPORATION POND NORTH	06/02/2015	Low	[21 deg 19' 21.8'' N]	[157 deg 55' 22.4'' W]
B7	9179	EVAPORATION POND NORTH	06/02/2015	Low	[21 deg 19' 22.2'' N]	[157 deg 55' 20.1'' W]
B7	9957	MANUWAI CANAL NEAR TWY A	06/02/2015	Low	[21 deg 19' 36.3'' N]	[157 deg 55' 45.5'' W]
B9	6456	MANUWAI CANAL	06/02/2015	Low	[21 deg 19' 40.6'' N]	[157 deg 55' 46'' W]
B9	7681	MANUWAI CANAL NEAR ARFF #1	06/02/2015	Low	[21 deg 19' 41'' N]	[157 deg 55' 46.7'' W]
C1	4812	OUTFALL SOUTH OF REEF RUNWAY	06/02/2015	Medium	[21 deg 18' 28.6'' N]	[157 deg 56' 16'' W]
C2	4785	MAMALA BAY	06/02/2015	Low	[21 deg 18' 56.1'' N]	[157 deg 56' 49.9'' W]
C2	4786	AHUA POND	06/02/2015	Low	[21 deg 18' 57.8'' N]	[157 deg 56' 45.8'' W]
C2	4787	MAMALA BAY	06/02/2015	Low	[21 deg 18' 55.2'' N]	[157 deg 56' 49'' W]
C2	4788	AHUA POND	06/02/2015	Low	[21 deg 18' 58.1'' N]	[157 deg 56' 45.9'' W]
C2	4789	MAMALA BAY	06/02/2015	Low	[21 deg 18' 53.3'' N]	[157 deg 56' 48.9'' W]
C2	4790	AHUA POND	06/02/2015	Low	[21 deg 18' 53.6'' N]	[157 deg 56' 45.7'' W]
C2	4791	MAMALA BAY	06/02/2015	Low	[21 deg 18' 50.8'' N]	[157 deg 56' 48.7'' W]
C2	4792	AHUA POND	06/02/2015	Low	[21 deg 18' 51.7'' N]	[157 deg 56' 45.3'' W]
C2	4793	MAMALA BAY	06/02/2015	Low	[21 deg 18' 48.8'' N]	[157 deg 56' 48.2'' W]
C2	4794	AHUA POND	06/02/2015	Low	[21 deg 18' 49.8'' N]	[157 deg 56' 44.9'' W]
C2	4795	MAMALA BAY	06/02/2015	Low	[21 deg 18' 47.3'' N]	[157 deg 56' 47.8'' W]
C2	4796	AHUA POND	06/02/2015	Low	[21 deg 18' 47.8'' N]	[157 deg 56' 44.8'' W]
C2	4797	MAMALA BAY	06/02/2015	Low	[21 deg 18' 45.1'' N]	[157 deg 56' 47.7'' W]
C2	4798	AHUA POND	06/02/2015	Low	[21 deg 18' 46'' N]	[157 deg 56' 44.5'' W]
C2	4799	MAMALA BAY	06/02/2015	Low	[21 deg 18' 43.3'' N]	[157 deg 56' 47.4'' W]
C2	4800	AHUA POND	06/02/2015	Low	[21 deg 18' 43.7'' N]	[157 deg 56' 44.2'' W]
C2	4801	MAMALA BAY	06/02/2015	Low	[21 deg 18' 41.4'' N]	[157 deg 56' 47.1'' W]
C2	4802	AHUA POND	06/02/2015	Low	[21 deg 18' 41.5'' N]	[157 deg 56' 43.9'' W]
C2	4803	MAMALA BAY	06/02/2015	Low	[21 deg 18' 40.5'' N]	[157 deg 56' 47'' W]
C2	4804	AHUA POND	06/02/2015	Low	[21 deg 18' 38.8'' N]	[157 deg 56' 43.3'' W]
C2	9747	TWY RB & B	06/02/2015	Low	[21 deg 19' 20.5'' N]	[157 deg 56' 34.5'' W]
D10	4363	NW CARGO PARKING LOT	06/02/2015	Low	[21 deg 19' 49.3'' N]	[157 deg 54' 53.2'' W]
D10	4502	AOLEWA PLACE NEAR ACCESS A	06/02/2015	Medium	[21 deg 19' 49'' N]	[157 deg 54' 51.4'' W]
D10	4503	AOLEWA PLACE NEAR ACCESS A	06/02/2015	Low	[21 deg 19' 49.4'' N]	[157 deg 54' 50.8'' W]
D10	4572	KALOALOA CANAL NEAR BASEYARD	06/02/2015	Low	[21 deg 19' 50.7'' N]	[157 deg 54' 25.5'' W]
D10	4573	KALOALOA CANAL NEAR BASEYARD	06/02/2015	Low	[21 deg 19' 50.2'' N]	[157 deg 54' 25.5'' W]
D10	5425	NORTHWEST CARGO AREA	06/02/2015	Medium	[21 deg 19' 49.5'' N]	[157 deg 54' 54.3'' W]
D10	5464	WIKI WIKI WASH RACK AREA	06/02/2015	Medium	[21 deg 19' 48.6'' N]	[157 deg 54' 47.2'' W]
D11	3909	OUTLET FROM 3908 IN BASEYARD PARKING LOT	06/02/2015	Low	[21 deg 19' 56.1'' N]	[157 deg 54' 22.6'' W]
D11	3917	OUTFALL FROM 3912 IN BASEYARD PARKING LOT	06/02/2015	Low	[21 deg 19' 56.7'' N]	[157 deg 54' 23.7'' W]

Honolulu International Airport Outfalls

Basin	EID	POI Location	POI Inspection Date	POI Outfall Risk Ranking	POI Latitude	POI Longitude
D11	4570	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 57.2'' N]	[157 deg 54' 26.4'' W]
D11	4571	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 57.1'' N]	[157 deg 54' 26.8'' W]
D11	4576	OUTFALL KALOALOA CANAL	06/02/2015	Low	[21 deg 19' 52.9'' N]	[157 deg 54' 21.3'' W]
D11	7586	AOLELE STREET NEAR BASEYARD	06/02/2015	Low	[21 deg 19' 57.2'' N]	[157 deg 54' 24.1'' W]
D11	7594	AOLELE STREET NEAR BASEYARD FROM CB 7590	06/02/2015	Low	[21 deg 19' 57.3'' N]	[157 deg 54' 25.1'' W]
D11	15107	OUTFALL KALOALOA CANAL	06/02/2015	Low	[21 deg 19' 51.3'' N]	[157 deg 54' 24.3'' W]
D11	15108	OUTFALL KALOALOA CANAL	06/02/2015	Low	[21 deg 19' 52'' N]	[157 deg 54' 23.3'' W]
D13	10096	AOLELE STREET & LAGOON DRIVE PARKING LOT FROM 10146	06/02/2015	Low	[21 deg 19' 52.1'' N]	[157 deg 54' 12.5'' W]
D14	10105	KALOALOA CANAL BY PERIMETER ROAD	06/02/2015	Low	[21 deg 19' 50.9'' N]	[157 deg 54' 13.7'' W]
D14	10220	KALOALOA CANAL BY PERIMETER ROAD	06/02/2015	Low	[21 deg 19' 50.9'' N]	[157 deg 54' 13.7'' W]
D14	10263	KALOALOA CANAL BY PERIMETER ROAD	06/02/2015	Low	[21 deg 19' 50.9'' N]	[157 deg 54' 13.7'' W]
D14	10269	KALOALOA CANAL BY PERIMETER ROAD	06/02/2015	Low	[21 deg 19' 50.9'' N]	[157 deg 54' 13.7'' W]
D14	10270	KALOALOA CANAL BY PERIMETER ROAD	06/02/2015	Low	[21 deg 19' 50.9'' N]	[157 deg 54' 13.7'' W]
D15	4590	OUTFALL NEAR KALEWA STREET	12/27/2012	Low	[21 deg 19' 51'' N]	[157 deg 54' 6.1'' W]
D15	4595	OUTFALL VISIBLE KALEWA STREET	06/02/2015	Low	[21 deg 19' 47'' N]	[157 deg 54' 3.9'' W]
D16	4599	OUTFALL VISIBLE KALEWA STREET	06/02/2015	Low	[21 deg 19' 42.7'' N]	[157 deg 54' 2.9'' W]
D5	4388	MAIN TERMINAL PARKING DRAIN PIPE	11/29/2012	Low	[21 deg 19' 59.6'' N]	[157 deg 55' 21.1'' W]
D7	4387	MAIN TERMINAL PARKING DRAIN PIPE	11/29/2012	Low	[21 deg 19' 59.6'' N]	[157 deg 55' 21.1'' W]
D7	4390	MAIN TERMINAL PARKING DRAIN PIPE	11/29/2012	Low	[21 deg 19' 57.6'' N]	[157 deg 55' 1'' W]
E	4481	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 20' 2.2'' N]	[157 deg 54' 53.3'' W]
E	4482	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 20' 1'' N]	[157 deg 54' 52.6'' W]
E	4484	OUTFALL AT AOLELE STREET/PAIEA STREET FROM CB 4483	06/02/2015	Low	[21 deg 20' 0.4'' N]	[157 deg 54' 52.4'' W]
E	4487	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 20' 1'' N]	[157 deg 54' 51.6'' W]
E	4488	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 20' 0.5'' N]	[157 deg 54' 50.2'' W]
E	4489	OUTFALL FROM DI 4490 IN HAWAIIAN TELCOM	06/02/2015	Low	[21 deg 20' 0.9'' N]	[157 deg 54' 48.8'' W]
E	4492	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 59.7'' N]	[157 deg 54' 47.1'' W]
E	4494	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 59.5'' N]	[157 deg 54' 45.5'' W]
E	4496	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 59.3'' N]	[157 deg 54' 44.1'' W]
E	4498	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 59.4'' N]	[157 deg 54' 42.3'' W]
E	4500	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 59.3'' N]	[157 deg 54' 40.6'' W]
E	4505	OUTFALL FROM DI 4511 AT GROUND TRANSPORTATION	06/02/2015	Low	[21 deg 19' 59.7'' N]	[157 deg 54' 42.5'' W]
E	4506	OUTFALL AT AOLELE STREET NEAR GROUND TRANSPORTATION	06/02/2015	Low	[21 deg 20' 0'' N]	[157 deg 54' 43.3'' W]
E	4507	OUTFALL AT AOLELE STREET NEAR GROUND TRANSPORTATION	06/02/2015	Low	[21 deg 20' 0.6'' N]	[157 deg 54' 43.1'' W]
E	4508	OUTFALL FROM DI 4512 AT GROUND TRANSPORTATION	06/02/2015	Low	[21 deg 19' 59.7'' N]	[157 deg 54' 40.8'' W]
E	4509	OUTFALL FROM DI 4513 AT GROUND TRANSPORTATION	06/02/2015	Low	[21 deg 19' 59.5'' N]	[157 deg 54' 39.5'' W]
E	4553	ROOF DRAIN FROM 3069 UALENA STREET	06/02/2015	Low	[21 deg 19' 58.9'' N]	[157 deg 54' 35.9'' W]
E	4555	OUTFALL FROM 3059 UALENA STREET DRAIN 4568	06/02/2015	Low	[21 deg 19' 58.5'' N]	[157 deg 54' 35.8'' W]
E	4556	OUTFALL FROM PUNALUU BUILDERS ROOF DRAINS	06/02/2015	Low	[21 deg 19' 58.8'' N]	[157 deg 54' 35.5'' W]
E	4557	OUTFALL FROM PUNALUU BUILDERS ROOF DRAINS	07/02/2007	Low	[21 deg 19' 58.7'' N]	[157 deg 54' 34.6'' W]
E	4558	OUTFALL FROM AIRPORT CENTER BASEMENT DRAIN	06/02/2015	Low	[21 deg 19' 58.6'' N]	[157 deg 54' 34.2'' W]
E	4559	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 58.4'' N]	[157 deg 54' 34.6'' W]
E	4560	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 58'' N]	[157 deg 54' 32.5'' W]
E	4562	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 57.9'' N]	[157 deg 54' 31.1'' W]

Honolulu International Airport Outfalls

Basin	EID	POI Location	POI Inspection Date	POI Outfall Risk Ranking	POI Latitude	POI Longitude
E	4564	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 57.6'' N]	[157 deg 54' 30'' W]
E	4566	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 57.4'' N]	[157 deg 54' 27.9'' W]
E	4567	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 57.5'' N]	[157 deg 54' 27.6'' W]
E	4574	OUTFALL FROM DI 4575 AT SW CORNER OF 3017 UALENA STREET	06/02/2015	Low	[21 deg 19' 58.4'' N]	[157 deg 54' 31.8'' W]
E	4585	OUTFALL INTO AOLELE STREET DITCH FROM DI 4586	06/02/2015	Low	[21 deg 19' 58.3'' N]	[157 deg 54' 31.6'' W]
E	4587	OUTFALL INTO AOLELE STREET DITCH	06/02/2015	Medium	[21 deg 19' 56.9'' N]	[157 deg 54' 19.8'' W]
E	4588	OUTFALL FROM BASEYARD DRAINAGE INLET 4569	06/02/2015	Low	[21 deg 19' 57.6'' N]	[157 deg 54' 27.5'' W]
E	5446	AOLELE STREET OUTFALL	06/02/2015	Low	[21 deg 19' 58.9'' N]	[157 deg 54' 39.3'' W]
E	7606	AOLELE STREET DITCH FROM DI 7602 AT DELTA AIR CARGO	06/02/2015	Low	[21 deg 19' 59.2'' N]	[157 deg 54' 39.6'' W]
E	9713	DRAINAGE DITCH ON AOLELE STREET NEAR PAIEA STREET	06/02/2015	Low	[21 deg 20' 0.6'' N]	[157 deg 54' 52.1'' W]