

Oahu Civilian E9-1-1

Status Report

April 1, 2018 – April 30, 2018

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1. PSAP OPERATIONS

9-1-1 CALL VOLUME CIVILIAN PSAPS – APRIL 2018

(Source:) West Safety Services Viper system

(*) Totals are based on calls to Primary PSAP.

9-1-1 Primary PSAP Call Volume																	
Honolulu City & County PSAPs		Wireline		Wireless				VOIP		Calls With No ALI		Admin Calls		Abandoned Calls		Other Calls	
2018	Total 9-1-1 Calls Processed	No. of Wireline Calls	% of Total Calls	No. of Wireless Calls	% of Total Calls	% of Wireless WPH1 Calls	% of Wireless WPH2 Calls	No. of VoIP Calls	% of Total Calls	No. of Calls with No ALI	% of Total Calls	No. of Admin Calls	% of Total Calls	No. of 9-1-1 Abandoned	% of Total Calls	No. of Other Calls	% of Total Calls
April	87,434	17,600	20.13%	66,546	76.11%	47.91%	28.20%	3,235	3.70%	52	0.06%	1,840	2.10%	13,911	15.91%	542	0.62%

9-1-1 CALL VOLUME CIVILIAN PSAPS – CALENDAR YEAR 2018

9-1-1 Primary PSAP Call Volume																	
Honolulu City & County PSAPs		Wireline		Wireless				VOIP Calls		Calls with No ALI		Admin Calls		Abandoned Calls		Other Calls	
2018	Total 9-1-1 Calls Processed	No. of Wireline Calls	% of Total Calls	No. of Wireless Calls	% of Total Calls	% of Wireless WPH1 Calls	% of Wireless WPH2 Calls	No. of VoIP Calls	% of Total Calls	No. of Calls with No ALI	% of Total Calls	No. of Admin Calls	% of Total Calls	No. of 9-1-1 Abandoned	% of Total Calls	No. of Total Call Received	% of Total Calls
JAN	90,131	18,612	20.65%	68,004	75.45%	46.10%	29.35%	3,380	3.75%	135	0.15%	1,940	2.15%	15,491	17.19%	528	0.59%
FEB	79,937	16,707	20.90%	60,217	75.33%	45.46%	29.87%	2,998	3.75%	16	0.02%	1,738	2.17%	11,746	14.69%	520	0.65%
MAR	83,942	17,359	20.68%	63,359	75.48%	47.28%	28.20%	3,207	3.82%	17	0.02%	1,671	1.99%	11,777	14.03%	459	0.55%
APR	87,434	17,600	20.13%	66,546	76.11%	47.91%	28.20%	3,235	3.70%	52	0.06%	1,840	2.10%	13,911	15.91%	542	0.62%
MAY																	
JUNE																	
JULY																	
AUG																	
SEPT																	
OCT																	
NOV																	
DEC																	
YTD	341,444	70,278		258,126				12,820		220		7,189		52,925		2,049	
MON AVG	85,361	17,570	20.59%	64,532	75.59%	46.69%	28.91%	3,205	3.76%	55	0.06%	1,797	2.10%	13,231	15.46%	512	0.60%

NOTE:

- **911 Calls with No ALI for April 2018 = 0.06% - Statewide average for 2017 = 0.08%**
- **Total call volumes does not include Administrative Calls. Administrative calls = Calls originating on Administrative lines that required 911 service.**
- **Abandoned Calls represent the number of incoming 9-1-1 calls for which the caller had hung up before a call-taker answered. Dropped Calls are hang ups after transfers.**
- **Abandoned Calls are not included in the Wireline and Wireless total counts respectively.**
- **All VoIP (Voice over Internet Protocol) types of 911 calls are combined in the Call Volume statistic.**

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9-1-1 CALL VOLUME BY AGENCY – APRIL 2018

2018	9-1-1 Call Volume by Agency									
	Honolulu Police Department						Honolulu Fire Department			
	No. of Total Calls Received	% of Total Calls	Number of Emergency Calls	Number of Non Emergency Calls	Number of Admin Calls	Number of Dropped Calls	No. of Total Calls Received	% of Total Calls	Number of Admin Calls	Number of Dropped Calls
April	75,908	86.82%	19,865	41,279	853	13,911	2,358	2.70%	115	97

2018	9-1-1 Call Volume by Agency							
	Emergency Medical Services				Ocean Safety			
	Number of Total Calls Received	% of Total Calls	Number of Admin Calls	Number of Dropped Calls	Number of Total Calls Received	% of Total Calls	Number of Admin Calls	Number of Dropped Calls
April	8,583	9.82%	831	113	43	0.05%	41	6

9-1-1 CALL VOLUME BY AGENCY – CALENDAR YEAR 2018

2018	9-1-1 Call Volume by Agency																	
	Honolulu Police Department						Honolulu Fire Department				Emergency Medical Services				Ocean Safety			
	Number of Total Calls Received	% of Total Calls	No. of Emergency Calls	No. of Non Emergency Calls	No. of Admin Calls	No. of Dropped Calls	No. of Total Calls Received	% of Total Calls	No. of Admin Calls	No. of Dropped Calls	No. of Total Calls Received	% of Total Calls	No. of Admin Calls	No. of Dropped Calls	No. of Total Calls Received	% of Total Calls	No. of Admin Calls	No. of Dropped Calls
JAN	77,849	86.37%	19,571	41,680	1,107	15,491	2,881	3.20%	87	67	8,837	9.80%	710	125	36	0.04%	36	16
FEB	68,884	86.17%	18,037	38,149	952	11,746	2,245	2.81%	81	38	8,251	10.32%	669	76	37	0.05%	36	6
MAR	72,926	86.88%	19,213	41,054	882	11,777	2,556	3.04%	92	32	7,963	9.49%	661	164	38	0.05%	36	3
APR	75,908	86.82%	19,865	41,279	853	13,911	2,358	2.70%	115	97	8,583	9.82%	831	113	43	0.05%	41	6
MAY																		
JUNE																		
JULY																		
AUG																		
SEPT																		
OCT																		
NOV																		
DEC																		
YTD	295,567		76,686	162,162	3,794	52,925	10,040		375	234	33,634		2,871	478	154		149	31
MON AVG	73,892	86.56%	19,172	40,541	949	13,231	2,510	2.94%	94	59	8,409	9.86%	718	120	39	0.05%	37	8

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PSAP OPERATION NOTES:

- Total call volumes does not include Administrative Calls. Administrative calls = Calls originating on Administrative lines that required 911 service.
- Abandoned Calls represent the number of incoming 9-1-1 calls for which the caller had hung up before a call-taker answered. Dropped Calls are hang ups after transfers.
- Abandoned Calls **are** included in the Wireline and Wireless total counts respectively.
- All VoIP (Voice over Internet Protocol) types of 911 calls are combined in the Call Volume statistic.

FOR YOUR INFORMATION

FYI For Your Information						
PSAP Operations						
Statewide 911 Call Volumes						
PSAP	2017		2016		2015	
Oahu Civilian	1,022,818	72.16%	1,009,059	71.93%	1,019,402	70.94%
RDC Pearl Harbor	27,916	1.97%	N/A	N/A	N/A	N/A
Hawaii County	193,166	13.63%	205,412	14.64%	217,768	15.15%
Maui County	123,685	8.73%	137,333	9.80%	142,952	9.95%
Kauai County	49,902	3.52%	50,955	3.63%	56,874	3.96%
Total	1,417,487	100.00%	1,402,759	100.00%	1,436,997	100.00%
2016 & 2015 Statewide average does not include Military 911 calls.						

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TEXT TO 911 OAHU CIVILIAN PSAPS – CURRENT MONTH – APRIL 2018

NOTE:

- Although there is a “Text to 911” plot on the MapFlex, the location of the plot is not reliable. Text to 911 Dispatchers should use their skills to ascertain the exact location of the emergency response.

TEXT TO 911 Oahu Civilian PSAPs 2018						
Month	Total	HPD	HFD	EMS	OS	911 (handled)
January	145	115	3	0	0	27
February	144	131	1	2	0	10
March	170	144	4	5	0	17
April	155	127	2	11	0	15
May						
June						
July						
August						
September						
October						
November						
December						
YTD	614	517	10	18	0	69
Monthly Avg.	153.5	129.3	2.5	4.5	0.0	17.3

NOTE:

The 9-1-1 handled texts were incidents in which the Division conducted testing or the texter texted 911 in error.

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911 WIRELESS OAHU CIVILIAN PSAP TESTING – APRIL 2018

OAHU CIVILIAN - APRIL 2018						
Date	WSP	Sites Tested	Sectors Tested	Tested By:	Test Pass/Fail	Comments:
4/26/2018	Verizon	2	6	Oahu PSAP	Pass	2 testers

NOTES:

- There were two (2) scheduled Wireless 911 Test for the Oahu Civilian PSAP in April 2018.
- Verizon Wireless is currently migrating their Wireless network database from West to ComTech.

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2. MSAG (MASTER STREET ADDRESS GUIDE)

OAHU CIVILIAN MSAG TRANSACTIONS CURRENT MONTH/YEAR – APRIL 2018

OAHU CIVILIAN	9-1-1 TRANSACTIONS								
	Total	MSAG	ALI Submitted			Open ALI Discrepancy Records			Customer Addresses Affected
2018		MSAG (A)	TN CR (B)	ALI DR (C)	VoIP (D)	TNCR	ALI DR	VoIP DR	
JANUARY	33	14	19	0	0	0	0	0	1,198
FEBRUARY	10	6	3	1	0	0	0	0	982
MARCH	168	9	159	0	0	27	0	0	258
APRIL	15	3	12	0	0	108	0	0	110
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL YTD	226	32	193	1	0				2,548
AVG PER MONTH	57	8	48	0	0				637

Definitions

- (A) **Master Street Address Guide** - Represents corrections made to street records including, street names, address ranges, MSAG Communities and ESNs.
- (B) **Telephone Number Change Request** - Represents address corrections on a specific TN or group of TNs. These "invalid" TNs usually have an associated ESN 199 attached to them which indicates the need for validation.
- (C) **Automatic Location Information Discrepancy Record** - Represents an address discrepancy discovered during a live 9-1-1 call, from a landline. These record corrections are treated with a higher priority and should be processed within 48 hours as a general guideline.
- (D) **Voice over Internet Protocol Discrepancy Record** - Represents an address discrepancy discovered during a live 9-1-1 call, from a VoIP phone. These record corrections are treated with a higher priority and should be processed within 72 hours as a general guideline per Time Warner Operations Center. MSR tracking effective April 2014.

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OAHU CIVILIAN MSAG CURRENT MONTH NOTES:

A total of fifteen (15) MSAG transactions were processed in 9-1-1 Net during the current reporting month. Three (3) requests were processed relating to the MSAG database which include: changes to high – low street ranges, combining street records, deletion of invalid records, splitting street records to align with Police, Fire, EMS and Military response areas, and inserting new MSAG records.

There were 110 customer ANI/ALI (telephone/address) records updated as a direct result.

108 Dispatchable Location transactions were submitted and 10 were processed by West during the current month.

OAHU CIVILIAN TELEPHONE RECORD (ALI) TRANSACTIONS CURRENT MONTH NOTES:

12 Telephone Number Change Request (TN CR) transactions were processed and were corrected in 9-1-1 Net during the current month, two (2) relating to the ESN 199 project.

OAHU CIVILIAN OPEN TELEPHONE RECORD (ALI) DISCREPANCY STATUS:

- **There are one hundred-eight (108) Open TN CR Transactions as of March 31, 2018**
- **Refer to chart in the next section “TNCR Current Status”**
- **There are no Open ALI-DRs as of April 30, 2018**
- **There is no Open VoIP DRs as of April 30, 2018**

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TNCR (TELEPHONE NUMBER CHANGE REQUEST) CURRENT STATUS – APRIL, 2018

NOTE:

- 9-1-1 NET is a secure web-based application that provides access to request changes to the MSAG, ALI, TN, and ESN/ELT data supported and maintained by West Safety Services for the Telephone Company (TelCo).
- TNCRs are not requests to change Telephone Numbers (TNs); however, it is a corrective process within 9-1-1 NET to modify location information associated with an Automatic Location Identification (ALI) record to a valid MSAG address for 9-1-1 purposes.

PSAP 9-1-1 Telephone Number Location Change Request (Telephone Number Change Request (TNCR) Status)				
PSAP	TOTAL TNCR RECORDS SUBMITTED BY AKIMEKA	OPENED TNCRS PENDING FURTHER ACTION BY WEST SAFETY SERVICES (INTRADO)	OPENED TNCRS REFERRED TO TELCO BY WEST SAFETY SERVICES (INTRADO)	TOTAL UNOPENED TNCR RECORDS
OAHU CIVILIAN	108	0	0	108

STATUS
<u>TOTAL TNCRs SUBMITTED</u> - The total number of TNCR requests for modification that have been submitted in 9-1-1
<u>PENDING STATUS</u> - TNCRs assigned this status are requests which have been reviewed by the 9-1-1 Database Service Provider Data Analyst, and are pending investigation whether the request is valid or invalid, and/or whether the request requires additional information to validate.
<u>REFERRED STATUS</u> - TNCRs assigned this status are requests which have been reviewed by the 9-1-1 Database Service Provider Data Analyst, and the request requires additional information to validate. The West Safety Services Data Analysts assigns this status to a TNCR and the request is referred to the telephone service providers for further research.
<u>TOTAL UNOPENED TNCR RECORDS STATUS</u> - The request is submitted by Akimeka on behalf the PSAP; however, processing by the 9-1-1 Database Service Provider Data Analyst has not begun.

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DISPATCHABLE LOCATION – STATUS AS OF – APRIL 2018

NARRATIVE:

During the August 2015 State of Hawaii 911 Board meeting, Akimeka provided a “State of Hawaii PSAPs Proposed ALI Compliancy with FCC 15-9” presentation. Based on the 9-1-1 Board’s confirmation to add the “Dispatchable Location” information into the ALI database, Akimeka researched the format standards of each pertinent field, and tested the delivery of the data to the PSAP. After a few configuration adjustments (eliminating the TelCo comments field from appearing on the ALI Screen), Akimeka standardized an additional information data format to proceed with this project.

The “Dispatchable Location” data is entered into the “Driving Directions” field in the 9-1-1 Net system, and will display on the Viper Power 911 ALI Screen in the “Exact” field should a 911 call be received from that telephone number. The Windward Mall will be the pilot location starting in March 2018.

There were **108** transactions submitted and **10** processed in April 2018.

Dispatchable Location			
2018	Common Name Place MSAG Address	TNCR* Transactions Submitted	Transactions Processed**
Quarter 2			
Quarter 1 Carryover		160	150
April	Windward Mall, 460056 Kamehameha Hwy, Kaneohe	108	10
May			
June			
Quarter 2 Total		108	10
YTD Total		268	160

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SPECTRUM (CHARTER) 9-1-1 VOIP DATABASE VERIFICATION PROJECT – APRIL 2018

Akimeka received the Automatic Location Identification (ALI) records from Spectrum (formally known as Charter Communications) which is the predominant Voice over Internet Protocol (VoIP) provider in the State of Hawaii. As Akimeka has access to these ALI Records, Akimeka is researching and verifying the VoIP records against an MSAG valid address and the GIS data. This research is a validation of the ALI Record to ensure that the location as provided by the VoIP provider matches the GIS Information utilized by the Public Safety Agencies within their specific County 9-1-1 Service Area. This validation reduces the potential of address or location dispute during a 9-1-1 call.

The analysis of the database records indicates that there are invalid MSAG addresses utilized by the VoIP Provider. These records are being identified, and will be sent back to Spectrum for corrective action.

*Spectrum (Charter) 9-1-1 VoIP Database Verification Project					
PSAP	TOTAL RECORDS SUBMITTED BY SPECTRUM (A)	TOTAL RECORDS MATCHING & VERIFIED WITH 911 DATABASES (B)	TOTAL RECORDS NOT MATCHING	NON MATCHING RECORDS CORRECTED BY AKIMEKA (C)	PERCENT COMPLETED
HAWAII County	22,044	21,638 (98%)	406	406	100.00%
KAUAI County	8,936	8,695 (97%)	241	241	100.00%
MAUI County	18,256	17,517 (96%)	739	739	100.00%
OAHU Civilian	87,414	85,329 (98%)	2,085	700	33.57%
OAHU Military	3,663	710 (19%)	2,953	2,903	98.31%
TOTAL	140,313	**133,889	6,424	4,989	86.4%

* Spectrum VoIP Database received on June 21st, 2017

** Akimeka provided VoIP Records with Latitude/Longitude coordinates

(A)	VoIP Database records submitted by Spectrum to Akimeka for research and MSAG address validation.
(B)	Akimeka has researched and verified the VoIP record against an MSAG valid address and GIS data. Akimeka is tracking corrections needed to be performed by Spectrum. Addressing data will be updated or added in the GIS if the VoIP record is determined to be valid.
(C)	Verification Process Completed.

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3. GEOGRAPHIC INFORMATION SYSTEM (GIS) – APRIL 2018

MAPPING LAYERS UPDATED (PART I)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS			
Type of Layer	Akimeka GIS Server	Date GIS Delivered	Other/Remarks
	Date Created/ Edits Performed		
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)			
Address Points		04/27/18	
	4/19/2018		Added fifty-three (53) new Address Points in Airport.
	4/19/2018		Corrected spatial to two (2) Address Points in Airport.
	4/18/2018		Added forty-seven (47) new Address Points for Honowai ES in Waipahu.
	4/18/2018		Corrected spatial to one (1) Address Point for Honowai ES in Waipahu.
		04/13/18	
	4/12/2018		Corrected address for one (1) Address Point in Ewa Beach.
	4/11/2018		Added six (6) new Address Points in Ewa Beach.
	4/11/2018		Corrected address to one (1) Address Point in Ewa Beach.
	4/11/2018		Corrected spatial to seventy-one (71) Address Points in Ewa Beach.
	4/9/2018		Corrected Street Type for thirty-nine (39) Address Points in Ewa Beach.
	4/9/2018		Corrected Street Name for twenty-one (21) Address Points in Ewa Beach.
	4/9/2018		Added Routing ID for one (1) Address Point in Kaimuki.
	4/9/2018		Corrected spatial for three (3) Address Points in Makaha.
	4/9/2018		Corrected spatial for one (1) Address Points in Makua.
4/9/2018		Corrected spatial for two (2) Address Points in Downtown.	
4/9/2018		Updated Location Name for one (1) Address Point in Downtown.	
4/9/2018		Corrected Location Type for sixteen (16) Address Points in Ewa Beach.	
Airports			
AMR Response Areas			
Bridges			
Building Footprints			
Bus Stops			
Churches			
Coastal Names			
Coastline			
Common Places			
Correctional Facilities			
Emergency Callboxes			
Emergency Operation Centers			
Emergency Shelters			

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MAPPING LAYERS UPDATED (PART II)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS			
Type of Layer	Akimeka GIS Server	Date GIS Delivered	Other/Remarks
	Date Created/Edits Performed		
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)			
ESZ/ESN			
Fire Beats			
Fire Districts			
Fire Response Areas			
Fire Stations			
Food & Beverage			
Gas Stations			
Gate Codes			
Government Buildings			
Harbors			
Helipads			
Hiking Trails			
		04/27/18	
Hospitals	4/18/2018		Corrected spatial to one (1) Points of Interest in Kapolei.
Hydrants			
Hyrdology Layers			
Incident Response Areas			
Lodging			
Major Roads			
Medic Beats			
Medic Districts			
Medic Response Areas			
Medic Stations			
Medical Facilities			
Milepost Markers			
Military Response Areas			
MSAG Communities			
Net Junctions			
Ocean Rescue Boundaries			
Ocean Safety			
Parcels			
Parks			

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MAPPING LAYERS UPDATED (PART III)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS				
Type of Layer	Akimeka GIS Server	Date GIS Delivered	Other/Remarks	
	Date Created/ Edits Performed			
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)				
Parks Polygon				
Points of Interest	4/30/2018		Corrected name to one (1) Address Point in Ewa Beach.	
	4/30/2018		Added one (1) new Address Point in Mililani.	
	4/30/2018		Corrected address to one (1) Address Point in Pearl City.	
	4/30/2018		Corrected spatial to two (2) Address Points in Pearl City.	
	4/30/2018		Added one (1) new Address Point in Pearl City.	
	4/30/2018		Corrected name to one (1) Address Point in Waikiki.	
		04/27/18		
	4/27/2018		Corrected spatial to four (4) Points of Interest in Salt Lake.	
	4/27/2018		Corrected spatial to two (2) Points of Interest in Kaneohe.	
	4/18/2018		Corrected spatial for two Points of Interests in Waipahu.	
		04/13/18		
	4/13/2018		Corrected spatial to one hundred three (103) Points Of Interest in Kaneohe.	
	4/9/2018		Corrected spatial for one (1) Points Of Interest in Makaha.	
4/9/2018		Corrected spatial for two (2) Points Of Interest in MCBH.		
4/9/2018		Corrected spatial for seven (7) Points Of Interest in Ewa Beach.		
Police Beats				
Police Districts				
Police Response Areas				
Police Stations				
Post Offices				
Schools				
		04/27/18		
Street Centerlines	4/26/2018		Corrected parity to one (1) segment in Kaneohe.	
	4/20/2018		Corrected spatial for one (1) segment in Kalaeloa.	
	4/20/2018		Corrected range for two (2) segments in Ewa Beach.	
	4/19/2018		Added four (4) new Ingress in Waipahu.	
	4/19/2018		Split street and corrected range to four (4) segments in Waipahu.	
		04/13/18		
	4/12/2018		Corrected range and parity for one (1) Street Centerline in Ewa Beach.	
4/11/2018		Updated range to one (1) Street Centerline in Ewa Beach.		
Subdivisions				

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MAPPING LAYERS UPDATED (PART IV)

9-1-1 GIS layers provided by Akimeka to the PSAP are designed for use on E9-1-1 systems and NG9-1-1 systems.

OAHU CIVILIAN PSAPS			
Type of Layer	Akimeka GIS Server	Date GIS Delivered	Other/Remarks
	Date Created/ Edits Performed		
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)			
Tow Jurisdictions			
Tsunami Evacuation Zones			
Tsunami Heights			
Waste Water Plants			
WSP Cell Sectors		04/27/18	
	4/26/2018		Per Sprint CRS
	4/24/2018		Per Sprint CRS
	4/24/2018		Per Sprint CRS
		04/13/18	
	4/11/2018		Per AT&T CRS
	4/10/2018		Per Sprint CRS
	4/5/2018		Per Sprint CRS
	4/4/2018		Per AT&T CRS
	4/3/2018		Per Sprint CRS
WSP Cell Towers		04/27/18	
	4/26/2018		Per Sprint CRS
	4/24/2018		Per Sprint CRS
	4/24/2018		Per Sprint CRS
		04/13/18	
	4/11/2018		Per AT&T CRS
	4/10/2018		Per Sprint CRS
	4/5/2018		Per Sprint CRS
	4/4/2018		Per AT&T CRS
	4/3/2018		Per Sprint CRS

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GEOGRAPHIC INFORMATION SYSTEM (GIS) NARRATIVES

GIS KEY ACTIVITIES/UPDATES

- GIS Key activities include the events such as GIS deliverables, meetings, agreements, etc.

Date	Key Activities/Updates
4/27/2018	Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD.
4/27/2018	Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD
4/27/2018	Address Points, Common Places, Street Centerlines, Police Response Areas, Fire Response Areas, Medic Response Areas, Ocean Safety Response Areas, ESN, MSAG Communities, Cell Towers, Cell Sectors to the Honolulu MapFlex system for HPD, HFD, EMS, and Ocean Safety
4/13/2018	Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD.
4/13/2018	Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD
4/13/2018	Address Points, Common Places, Street Centerlines, Police Response Areas, Fire Response Areas, Medic Response Areas, Ocean Safety Response Areas, ESN, MSAG Communities, Cell Towers, Cell Sectors to the Honolulu MapFlex system for HPD, HFD, EMS, and Ocean Safety
4/13/2018	Address Points, Street Centerlines, Common Places, Fire Response Areas, Medic Response Areas, Ocean Safety Response Areas, AMR Response Areas to AMR for TriTech CAD

MAPFLEX SYSTEM

During the month of April 2018, the MapFlex system received updates manually as a result of MapFlex having several issues pertaining to the automated upload processes.

Considering that the MapFlex initiative being provided by Hawaiian Telecom and sub-contractor, West, was implemented across the State of Hawaii, in the below narrative there is some information pertaining to all of the Hawaiian Islands. For a record of historical information regarding the MapFlex system, please see MSRs during the 2015 through 2017 years.

1. Akimeka delivered GIS data to the MapFlex system on the following dates in April 2018
 - a. **Hawaii County** – April 10th, 2018 and April 27th, 2018
 - b. **Maui County** – April 11th, 2018 and April 27th, 2018
 - c. **Kauai County** – April 12st, 2018, and April 27th, 2018
 - d. **Honolulu** – April 13th, 2018, and April 27th, 2018

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MAPFLEX ISSUES

Below is a detailed list of issues regarding the MapFlex systems throughout the State of Hawaii.

DATE	ISSUE	DESCRIPTION	STATUS
8/2016	Wireless Addresses	MapFlex system began displaying wireless information incorrectly. MapFlex system is doing a reverse query for additional information in the GIS and this is overriding the ALI information with the closest address in the GIS.	Partially Resolved (Nov 2016) The overriding ALI with updated Lat/Longs from the GIS is still occurring
11/2016	Phase I Display	Wireless Phase I calls plotting at centroid of coverage area and landing in the ocean. After installation of new MapFlex version to correct other issues, the configurations for Wireless Phase I were not set up properly by West, in which the mapping did not point to the correct information in MapFlex.	Partially Resolved (Dec 2016) According to PSAPs, it's not fully resolved. The icon of the tower still doesn't plot for Phase I.
11/2016	Wireless Confidence	Sprint calls coming across with unusually high confidence. Coordination is taking place with Sprint and West. West provides the PDE services for Sprint.	Pending
3/22/2017	ArcGIS Address Locator	The locators in MapFlex have a configurations which does not include ESNs. A reported issue has occurred with the Sheraton in Waikiki. The address locator does not differentiate between the Sheraton hotel and the surf break and plots on the surf break. The bigger issue is that this same issue will occur with complexes that have same primary address.	Pending A new SP 5.4 update by West is aimed to correct this issue.
5/17/2017	VoIP Calls Plotting Incorrectly	Recognized in late April and early May 2017, the PSAPs have been receiving several VoIP calls which are plotting in the incorrect locations. After further research it was determined that it is because MapFlex is configured to plot the received Lat/Long. The problem is that these are not always maintained properly and that ideally the system should first choose to match with the GIS data based on the provided address. During the September 20, 2017 PSAP conference call, HT relayed there was confirmation that the Time Warner records were in fact passing through the West FMCC.	Partially Resolved – the Lat/Longs are no longer being plotted in MapFlex due to a software release.
5/17/2017	Landline Calls Producing X/Y on calls	It was determined that for normal landline calls, the X/Y coordinates are being sent. The PSAPs have asked where these are being generated and why would they be sent for landline calls.	West is looking into this (May - June 2017)

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STREET UTILITY CHECK

This is an ongoing project to correct the errors identified. A comparison of the raw CAD generated report from the Street Check Utility was performed between the Street Centerline GIS data on March 30, 2018 and April 30, 2018.

Street Utility Check				
	First Report 06/01/13	3/30/2018	4/30/2018	Improvements/Corrections
Total Number of GIS Records	26,602	31,132	31,144	Increased by 8 records
Errors Identified				
Zero Errors	5,112	0	2	Increased by 2 errors
Low > High Errors	3	0	0	No change
Mixed Parity Errors	1	0	0	No change
Changed Parity Errors	105	2	6	Increased by 4 errors
Address Gap Errors	2,629	1	15	Increased by 14 errors
Address Overlap Errors	423	0	5	Increased by 5 errors
Flipped Link Errors	1,030	2	6	Increased by 4 errors
Total Errors	9,303	5	34	Increased by 29 errors

In addition to Akimeka’s internal validation tools, Akimeka will continue to utilize the various CAD reports to further identify and correct the multitude of discrepancies in the GIS data. This is an ongoing and routine process which Akimeka has been using to improve the accuracy of the GIS data for Public Safety.

As a result of the GIS efforts within the military jurisdictional areas covered primarily by the RDC, the GIS data is undergoing several changes within the bases which will cause a fluctuation in the Street Check results, which is to be expected. Any discrepancies that are identified will be corrected in the following GIS deliverable.

TRITECH CAD ADDRESS POINT PROJECT

During the month of February 2018 after several months of discussion and testing, the Address Points were loaded into TriTech and moved into the HFD/EMS shared CAD. Since that time, HFD, EMS, and Akimeka have been working closely together to identify and update subaddress location for various complexes around Oahu. Several hundred new address points have been added to the GIS as a result of this collaboration.

During the month of March 2018, there were only a couple minor updates communicated and one issue identified with addresses within close proximity to the H1 freeway.

1. Akimeka ran an analysis and added routing information into more than 27,000 Address Points to resolve the geotolerance within TriTech.
2. During the month of April 2018, it was identified that the issue related to the H1 Fwy still remain and after investigation it was determined that a component within the SQL server for TriTech requires a potential update to allow for routing to be overridden based off of the Routing ID information.
 - a. A trouble ticket has been opened with TriTech who is further investigating the potential correction, outside of the GIS data.

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SPEED LIMIT UPDATES

Beginning in April 2017, and now that the Street Centerline data has achieved not only an above 98% synchronization rating but also a high degree of accuracy in the spatial accuracy, a new project to correct speed limits has begun. The project is beginning in Waimanalo and continuing in a counter-clockwise patten around the island of Oahu. The initial focus is on Highways, Freeways, and other major roads, but also not limited to additional corrections, especially those which are immediately identified to positively impact vehicle routing, etc.

All updates are shared directly with the PSAPs and the agency most affected (positively) is HFD since they actively use vehicle routing and this will assist in better CAD unit recommendations. During each GIS deliverable, a list of updates are being provided.

1. During the 2017 year, from April 2017 to December 2017, more than 4,200 street segments were updated to reflect posted speed limit restrictions from Waimanalo to Nanakuli.
2. During January 2018, 1,187 segments were updated in Maili, Nanakuli, and Kapolei.
3. Throughout the month of February 2018, 2,025 speed limits were updated in Ewa Beach, Makakilo, and Iroquois.
4. During March 2018, 3,743 street segments were updated across Makakilo, Kunia, Iroquois, Pearl Harbor, Waipahu, Wahiawa, Waialua, and Mililani.
5. During the month of April 2018, Akimeka held on the speed limit updates until HFD has had a chance to test out the TriTech and to ensure the routing is correct (see TriTech Address Points Project narrative above for further information on routing items).

HONOLULU EMS RESPONSE AREA

During the month of December 2017, EMS requested a high resolution map of the Honolulu Response Area which will likely be divided into 5 separate response areas to better support the EMS operations and ambulance response times.

1. With HPD's approval, Akimeka prepared a map of the requested area and provided to EMS on December 12, 2017.
2. Considering the additional response areas will certainly require the creation of additional ESZ/ESNs; HPD, EMS, and Akimeka will be coordinating so that the project can be mapped out on a timeline so that the changes can take place while maintaining an above 99% synchronization level between GIS, MSAG, and ALI.
3. An operational consideration has already begun a discussion, in that the military ESNs will likely be reallocated to a new numbering so that both civilian and military responses will have enough ESNs to support their individual operations.
4. During the first half of 2018, there will be further discussion on the creation of the new Response Areas, allocation of military ESNs, and create of new ESZs/ESNs.

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AMR-H

The American Medical Response Hawaii (AMR-H) Project is a joint venture by the Honolulu Emergency Services Department (HESD) to provide accurate address and location information to its other public safety agencies. This project is to ensure AMR-H is utilizing the same address and location information as the other HESD public safety agencies, and to ensure compliance with National 9-1-1 directives such as the FCC Docket 15-9 regarding location accuracy. The intent is to provide the same accurate location information to all the HESD public safety response agencies to help reduce response times to the 9-1-1 caller.

NOTE:

This work is performed under a separate contract.

AMERICAN MEDICAL RESPONSE (AMR) HAWAII PROJECT

Since the start of the GIS deliverable schedule with AMR, there have been no reported issues or concerns. In order to open up discussion on any operational improvements via the GIS data, or to identify any updates that can be made, AMR and Akimeka held a brief conference call on December 5, 2017.

1. During the discussion there was overwhelming agreement that the data provided by Akimeka is working great for the dispatchers and first responders at AMR.
2. There were some areas that were discussed where searching for certain addresses will prompt a list of invalid addresses.
 - a. Through the discussion it was identified that the CAD system is aggregating various data sources since they are dispatching throughout the State. The data that Akimeka provides for the island of Oahu is working great, however since the neighbor islands are using various sources of data in different formats, the accuracy of that data is greatly in question and is likely not fully supportive of the search requirements in the CAD.
3. A final topic of discussion was on training for the AMR dispatcher. Joe from AMR who was on the call, took this as an action item to prepare training material for searching criteria, especially intersections. Akimeka volunteered that they can make themselves available to collaborate on the training material if needed.
4. There are no follow up calls scheduled at this time, however Akimeka informed that any issues or improvements identified will be looked at immediately and to send the requests as they are identified.

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4. E9-1-1 OAHU CIVILIAN DATABASE SYNCHRONIZATION

(Reference: NENA 71-501, Version 1.1 – NENA Information Document for Synchronizing Geographic Information System databases with MSAG & ALI)

As part of Akimeka's value added services, Akimeka conducted a database synchronization audit for the Oahu Civilian PSAP on April 1, 2018.

The database synchronization effort included comparing Oahu Civilian's 9-1-1 MSAG received from the 911 Database provider, West Safety Servicers on April 1, 2018, against the PSAP's 911 GIS Street Centerline data. A total number of **7,789** 9-1-1 MSAG records were reviewed in the audit and analyzed. Results of the database synchronization audit completed on April 1, 2018 for the Oahu Civilian PSAP are reported below.

Database synchronization should be part of an ongoing and continuous process to ensure that the databases remain current and synchronized. Since neither database is static in nature, the synchronization process will never remain at a 100 percent match rate. It can be expected that the percentage will fluctuate by a small degree. As such, NENA's recommended minimum match rate is 98%.

The database synchronization process is essential to monitor and ensure the level of accuracy of the E9-1-1 databases and prepare for Next Generation 9-1-1 (NG9-1-1). As such, Akimeka will perform database synchronization audits on a quarterly basis as part of its ongoing maintenance process. Results of the database synchronization audit will be included and reported in the Monthly Status Report (MSR) accordingly.

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AUDIT SUMMARY RESULTS – 2018 - 2017

9-1-1 MSAG TO GIS STREET CENTERLINE AUDIT COMPARISON RESULTS	Notes	As of July 1, 2017		As of October 1, 2017		As of January 1, 2018		As of April 1, 2018	
		9-1-1 MSAG Dated 7-01-17		9-1-1 MSAG Dated 10-01-17		9-1-1 MSAG Dated 1-01-18		9-1-1 MSAG Dated 4-01-18	
		# of Records	%	# of Records	%	# of Records	%	# of Records	%
Total 9-1-1 MSAG Records Reviewed		7,782		7,783		7,783		7,789	
Less: 9-1-1 MSAG Exception Records	(1)	35	0.4%	35	0.4%	35	0.4%	42	0.5%
Net 9-1-1 MSAG Records Eligible for Comparison		7,747		7,748		7,748		7,747	
Total 9-1-1 MSAG Records Match (9-1-1 MSAG -- GIS Match -- No Corrections Required)		7,738	99.9%	7,737	99.9%	7,737	99.9%	7,741	99.9%
9-1-1 MSAG -- GIS No Match - Minor Correction Required	(2)	6	0.1%	8	0.1%	8	0.1%	5	0.1%
9-1-1 MSAG Record With No Matching GIS Record	(3)	3	0.0%	3	0.0%	3	0.0%	1	0.0%
Total 9-1-1 MSAG Records No Match		9	0.1%	11	0.1%	11	0.1%	6	0.1%

Objective: NENA Recommended Match Rate = 98%

The two-way (MSAG – GIS) database synchronization audit for the City & County of Honolulu (Civilian PSAPs) was completed as scheduled. The match rate remained consistent from April with a 99.9% Match Rate to a 99.9% Match Rate as of January 2018.

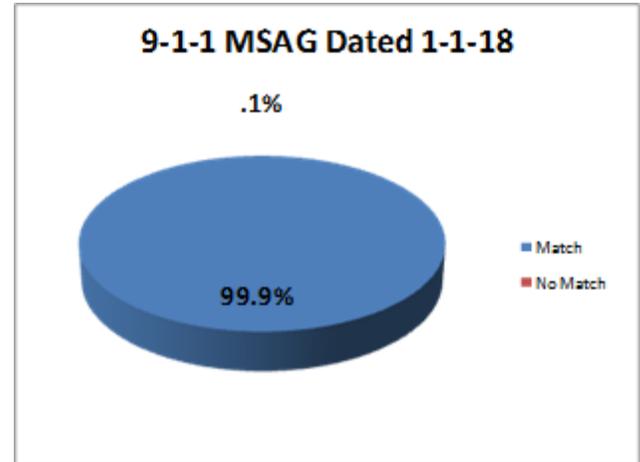
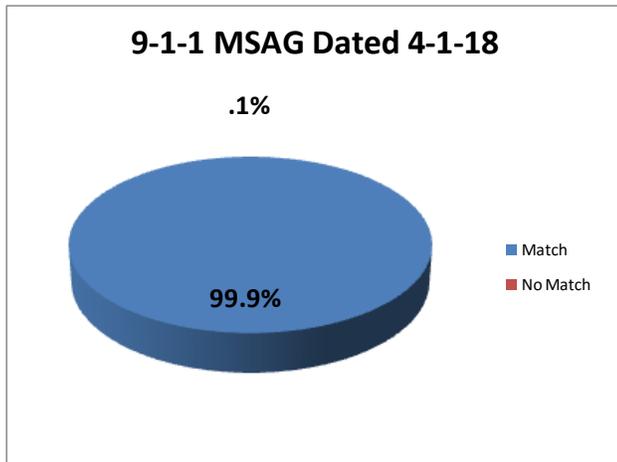
NOTES:

- (1) An MSAG Record that will not have a corresponding GIS Street Centerline Record but is required for the routing of E9-1-1 calls (i.e., Emergency Call Box, Foreign Exchange Records, Wireless Shell Records, etc.). No further action is required.
- (2) An MSAG Record that requires minor MSAG attention in 9-1-1Net to correct MSAG Records (i.e., Reassignment of an MSAG Community, modification of the Site Address Range, assignment of an ESN, performing a combine or insert of an existing MSAG Record, etc.).
- (3) An MSAG Record that does not have a corresponding GIS Record and will require additional research and validation. The GIS Section will assist with this effort.

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AUDIT SUMMARY RESULTS – APRIL 1, 2018 MSAG VS. JANUARY 1, 2018 MSAG



Oahu Civilian’s level of accuracy or 9-1-1 Match percentage remained consistent with a 99.9% as of April 1, 2018 compared to 99.9% as of January 1, 2018.

- ❖ As agreed between HPD PMT and Akimeka, Akimeka would initially focus on the existing MSAG and GIS records to produce a match which will benefit the PSAP in the interim.
- ❖ This effort would not include the MSAG Communities project to implement the new MSAG Communities and associated GIS Street Centerlines. This would be handled as a separate project as identified and agreed to.
- ❖ As a result of the MSAG Community and Street Segment Sweep project, the majority of the remaining discrepancies resides in the Honolulu MSAG Community and will be addressed during the Phase V effort.
- ❖ The previously completed MSAG Communities as a result of the MSAG Community and Street Segment Sweep project are now considered part of ongoing maintenance.
- ❖ “MSAG - GIS Minor Corrections” decreased (9 to 5) from January 2018 to April 2018. Low and high address ranges, odd/even combines, and street suffixes were adjusted in the MSAG to correspond with the GIS record. Although identified as a minor correction, customer telephone numbers (TNs) must be validated in 9-1-1Net prior to correcting the MSAG record to ensure the correction will not result in an orphan ALI Record or TN Fall-out.

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AUDIT SUMMARY RESULTS - APRIL 1, 2018 MSAG VS. JANUARY 1, 2017 MSAG CONTINUED

- ❖ MSAG Record with No GIS Record” decreased (3 to 1) from January 2018 to April 2018. MSAG records with no matching record were due primarily to the verification of the MSAG records against multiple GIS databases to determine if the roads are existing within City and County Honolulu.
- ❖ “GIS MSAG Records with No Matching E9-1-1 MSAG Record” decreased (11 to 9) from January 2018 to April 2018. Records with no matching record was due primarily to the verification of the MSAG records against the single source 9-1-1 GIS databases created by Akimeka from the multiple public safety agencies’ databases to determine if the roads exist within City & County of Honolulu and Military bases GIS records.
- ❖ “GIS –Minor Corrections” decreased (10 to 5) from January 2018 to April 2018. Low and high address ranges, street suffixes, and MSAG Community were adjusted in the GIS database to correspond with the MSAG record. The non-match condition is also a result in which MSAG transactions were not completed prior to the running of the end of month report.
- ❖ A constant effort to keep the databases synchronized and maintained are required to improve the level of accuracy of the E9-1-1 databases each time an MSAG or GIS record is “last modified”.
- ❖ Accurate location and GIS information will ensure proper dispatching and response in a timely manner for all Public Safety agencies.

All the hard work to maintain and synchronize the E9-1-1 databases is validated when a life and/or property is saved.

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INVALID MSAG STREETS AND ADDRESS RANGES – ESN X99 RECORDS

At the request of the Kauai County and Hawai'i County Chief of Police, Hawaiian Telcom, Inc. (HTI) provided all State of Hawai'i PSAPs and Akimeka, as the PSAP's agent, with access and visibility to the ESN x99 MSAG records which are "known" invalid streets and address ranges. Akimeka will be investigating and reporting on these ESN x99 MSAG records as a separate project and add-on to the Database Synchronization quarterly report.

Results of the Oahu Civilian data provided are as follows:

OAHU CIVILIAN	Invalid MSAG Records			
	9-1-1 MSAG Dated 01-01-18		9-1-1 MSAG Dated 04-01-18	
	Number of Records	% of Total Invalid MSAG Records	Number of Records	% of Total Invalid MSAG Records
ESN 199	12	0.2%	7	0.1%

These invalid MSAG records represent **0.1%** of the Total MSAG records for the City & County of Honolulu as of the April 1, 2018 MSAG. The individual ALI records associated with these records are provided below.

TN CRs are submitted by Akimeka when valid MSAG addresses are identified and validated against the GIS data. Akimeka will continue to investigate and report on these ESN 199 MSAG records as a separate project and add-on to the Database Synchronization quarterly report.

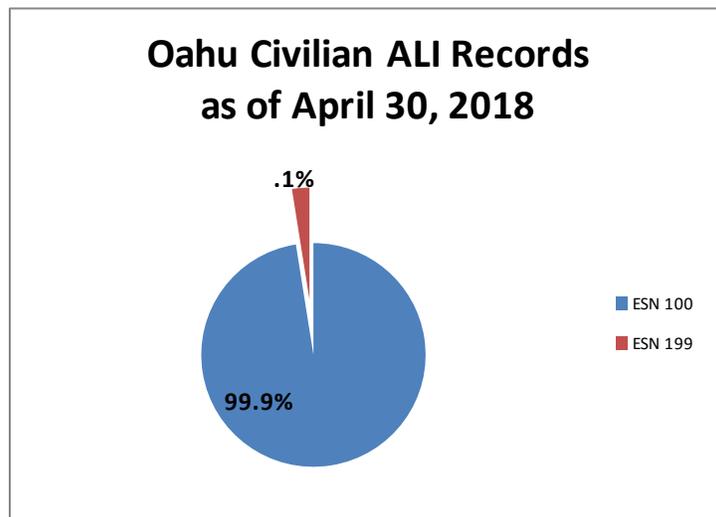
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AUTOMATIC LOCATION IDENTIFICATION (ALI) DATABASE DISCREPANCIES

As part of Akimeka’s ongoing database synchronization efforts, Akimeka reviewed and summarized the ALI discrepancies by community in 9-1-1Net for the City & County of Honolulu (Oahu Civilian). As of April 30, 2018, there are **30** ALI records with an assigned ESN of 199, representing **.1%** of the City & County of Honolulu (Oahu Civilian) total ALI records.

With Akimeka’s continuing MSAG Community and Street Segment Sweep effort, the percentage of ESN 199 records may increase as low and high address ranges and new communities are verified.



The number of Ali records with an ESN 199 records decreased by **41%** (12 to 7) from January 2018 to April 2018. The decrease was due primarily to Akimeka’s effort to identify the invalid MSAG records and verify their correct locations against current County GIS data.

Although the ESN 199 is a “valid” MSAG utilized for overflow addressing, the voice portion of the 9-1-1 call will still be routed to the PSAP. However, the address information will present an invalid address/location to the dispatcher or a “No Record Found” condition which may affect the processing of the 9-1-1 response and/or cause confusion or delay during the dispatch of 9-1-1 resources to the caller’s location.

The goal, which requires the cooperation among all service providers, is to clean-up all ESN 199 MSAG records to a valid City & County of Honolulu ESN 100 to ensure that all ALI records assigned to the City & County of Honolulu (Oahu Civilian) have an “MSAG valid address”.