Maui County E9-1-1 Status Report

December 1, 2018 – December 31, 2018

TABLE OF CONTENTS

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

1. PSAP OPERATIONS

9-1-1 CALL VOLUME MAUI PSAP – DECEMBER 2018

(Source: West Safety Services Viper system

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

9-1-1 Call Volume															
MAUI PSAP		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	Other Calls	% of Total Calls
DEC	11,632	1,630	14.01%	8,465	72.77%	60.32%	39.68%	329	2.83%	5	0.04%	0	0.00%	1,203	10.34%	0	0.00%

CALL VOLUME MAUI PSAP NOTES:

*Calls with No ALI for December 2018 = 0.04% - Statewide average for 2018 = 0.09%

9-1-1 CALL VOLUME MAUI PSAP – CALENDAR YEAR 2018

9-1-1 Call Volume															
MAUI PSAP		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	Other Calls	% of Total Calls
JAN	11,856	1,891	15.95%	8,242	69.52%	57.12%	42.88%	383	3.23%	17	0.14%	0	0.00%	1,323	11.16%	0	0.00%
FEB	10,111	1,693	16.74%	6,986	69.09%	56.84%	43.16%	309	3.06%	1	0.01%	0	0.00%	1,122	11.10%	0	0.00%
MAR	10,600	1,685	15.90%	7,424	70.04%	57.26%	42.74%	306	2.89%	14	0.13%	0	0.00%	1,171	11.05%	0	0.00%
APR	10,358	1,579	15.24%	7,242	69.92%	59.42%	40.58%	363	3.50%	14	0.14%	0	0.00%	1,160	11.20%	0	0.00%
MAY	10,881	1,546	14.21%	7,858	72.22%	57.42%	42.58%	335	3.08%	11	0.10%	0	0.00%	1,131	10.39%	0	0.00%
JUNE	11,072	1,539	13.90%	7,981	72.08%	56.94%	43.06%	317	2.86%	10	0.09%	0	0.00%	1,225	11.06%	0	0.00%
JULY	12,314	1,751	14.22%	8,979	72.92%	54.12%	45.88%	338	2.74%	6	0.05%	0	0.00%	1,240	10.07%	0	0.00%
AUG	12,190	1,789	14.68%	8,847	72.58%	60.22%	39.78%	325	2.67%	6	0.05%	0	0.00%	1,223	10.03%	0	0.00%
SEPT	10,726	1,527	14.24%	7,824	72.94%	57.32%	42.68%	284	2.65%	4	0.04%	0	0.00%	1,087	10.13%	0	0.00%
OCT	11,264	1,661	14.75%	8,124	72.12%	57.57%	42.43%	336	2.98%	6	0.05%	0	0.00%	1,137	10.09%	0	0.00%
NOV	10,865	1,515	13.94%	7,936	73.04%	57.71%	42.29%	313	2.88%	0	0.00%	0	0.00%	1,101	10.13%	0	0.00%
DEC	11,632	1,630	14.01%	8,465	72.77%	60.32%	39.68%	329	2.83%	5	0.04%	0	0.00%	1,203	10.34%	0	0.00%
YTD	133,869	19,806		95,908				3,938		94		0		14,123		0	
MON AVG	11,156	1,651	14.81%	7,992	71.60%	57.69%	42.31%	328	2.95%	8	0.07%	0	0.00%	1,177	10.56%	0.00	0.00%

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

9-1-1 CALL VOLUME MOLOKAI PSAP – DECEMBER 2018

9-1-1 Call Volume																	
MOLOKAI PSAP	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	Other Calls	% of Total Calls
DEC	480	144	30.00%	268	55.83%	69.03%	30.97%	0	0.00%	0	0.00%	0	0.00%	68	14.17%	0	0.00%

CALL VOLUME MOLOKAI PSAP NOTES:

* Calls with No ALI for December 2018 = 0.00% - Statewide average for 2018 = 0.09%

9-1-1 CALL VOLUME MOLOKAI PSAP – CALENDAR YEAR 2018

9-1-1 Call Volume																	
MOLOKAI PSAP	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	Other Calls	% of Total Calls
JAN	619	171	27.63%	367	59.29%	70.57%	29.43%	5	0.81%	3	0.48%	0	0.00%	73	11.79%	0	0.00%
FEB	631	242	38.35%	299	47.39%	67.22%	32.78%	15	2.38%	2	0.32%	0	0.00%	73	11.57%	0	0.00%
MAR	567	154	27.16%	312	55.03%	66.35%	33.65%	0	0.00%	3	0.53%	0	0.00%	98	17.28%	0	0.00%
APR	588	195	33.16%	319	54.25%	57.68%	42.32%	0	0.00%	2	0.34%	0	0.00%	72	12.24%	0	0.00%
MAY	627	174	27.75%	370	59.01%	60.81%	39.19%	5	0.80%	1	0.16%	0	0.00%	77	12.28%	0	0.00%
JUNE	522	151	28.93%	309	59.20%	60.19%	39.81%	2	0.38%	5	0.96%	0	0.00%	55	10.54%	0	0.00%
JULY	670	202	30.15%	378	56.42%	48.41%	51.59%	0	0.00%	3	0.45%	0	0.00%	87	12.99%	0	0.00%
AUG	322	95	29.50%	190	59.01%	54.74%	45.26%	1	0.31%	0	0.00%	0	0.00%	36	11.18%	0	0.00%
SEPT	503	142	28.23%	294	58.45%	67.01%	32.99%	1	0.20%	1	0.20%	0	0.00%	65	12.92%	0	0.00%
OCT	507	144	28.40%	289	57.00%	69.90%	30.10%	1	0.20%	2	0.39%	0	0.00%	71	14.00%	0	0.00%
NOV	430	107	24.88%	259	60.23%	62.16%	37.84%	4	0.93%	1	0.23%	0	0.00%	59	13.72%	0	0.00%
DEC	480	144	30.00%	268	55.83%	69.03%	30.97%	0	0.00%	0	0.00%	0	0.00%	68	14.17%	0	0.00%
YTD	6,466	1,921		3,654				34		23		0		834		0	
MON AVG	539	160	29.51%	305	56.76%	62.84%	37.16%	2.83	0.50%	2	0.34%	0	0.00%	69.5	12.89%	0	0.00%

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

9-1-1 CALL VOLUME (COMBINED MAUI & MOLOKAI PSAPS) – DECEMBER 2018

		Wireline		Wireless				VOIP Calls		Calls With No ALI		Admin Calls		Abandoned Calls		Other Calls	
MAUI COUNTY PSAPs																	
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	Other Calls	% of Total Calls
DEC	12,112	1,774	14.65%	8,733	72.10%	60.59%	39.41%	329	2.72%	5	0.04%	0	0.00%	1,271	10.49%	0	0.00%

9-1-1 CALL VOLUME (COMBINED MAUI & MOLOKAI PSAPS) – CALENDAR YEAR 2018

		Wireline		Wireless				VOIP		Calls with No ALI		Admin Calls		Abandoned Calls		Other Calls	
MAUI COUNTY PSAPs																	
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	Other Calls	% of Total Calls
JAN	12,475	2,062	16.53%	8,609	69.01%	57.70%	42.30%	388	3.11%	20	0.16%	0	0.00%	1,396	11.19%	0	0.00%
FEB	10,742	1,935	18.01%	7,285	67.82%	57.27%	42.73%	324	3.02%	3	0.03%	0	0.00%	1,195	11.12%	0	0.00%
MAR	11,167	1,839	16.47%	7,736	69.28%	57.63%	42.37%	306	2.74%	17	0.15%	0	0.00%	1,269	11.36%	0	0.00%
APR	10,946	1,774	16.21%	7,561	69.08%	59.34%	40.66%	363	3.32%	16	0.15%	0	0.00%	1,232	11.26%	0	0.00%
MAY	11,508	1,720	14.95%	8,228	71.50%	57.57%	42.43%	340	2.95%	12	0.10%	0	0.00%	1,208	10.50%	0	0.00%
JUNE	11,594	1,690	14.58%	8,290	71.50%	57.06%	42.94%	319	2.75%	15	0.13%	0	0.00%	1,280	11.04%	0	0.00%
JULY	12,984	1,953	15.04%	9,357	72.07%	53.88%	46.12%	338	2.60%	9	0.07%	0	0.00%	1,327	10.22%	0	0.00%
AUG	12,512	1,884	15.06%	9,037	72.23%	60.11%	39.89%	326	2.61%	6	0.05%	0	0.00%	1,259	10.06%	0	0.00%
SEPT	11,229	1,669	14.86%	8,118	72.29%	57.67%	42.33%	285	2.54%	5	0.04%	0	0.00%	1,152	10.26%	0	0.00%
OCT	11,771	1,805	15.33%	8,413	71.47%	57.99%	42.01%	337	2.86%	8	0.07%	0	0.00%	1,208	10.26%	0	0.00%
NOV	11,295	1,622	14.36%	8,195	72.55%	57.85%	42.15%	317	2.81%	1	0.01%	0	0.00%	1,160	10.27%	0	0.00%
DEC	12,112	1,774	14.65%	8,733	72.10%	60.59%	39.41%	329	2.72%	5	0.04%	0	0.00%	1,271	10.49%	0	0.00%
YTD	140,335	21,727		99,562				3,972		117		0		14,957		0	
MON AVG	11,695	1,811	15.50%	8,297	70.91%	57.89%	42.11%	331	2.84%	10	0.08%	0.00	0.00%	1,246	10.67%	0	0.00%

PSAP OPERATION NOTES:

- **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) 911 calls are combined in the Call Volume statistic.**
- **Outgoing 911 calls are included in the totals. These are ringback or callback 911calls made from the Viper System.**

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

FOR YOUR INFORMATION

FYI…………For Your Information								
PSAP Operations								
Statewide 911 Call Volumes								
PSAP	2018		2017		2016		2015	
Oahu Civilian	1,034,190	70.62%	1,022,818	72.16%	1,009,059	71.93%	1,019,402	70.94%
RDC Pearl Harbor	37,068	2.53%	27,916	1.97%	N/A	N/A	N/A	N/A
Hawaii County	206,648	14.11%	193,166	13.62%	205,412	14.64%	217,768	15.15%
Maui County	133,869	9.14%	123,685	8.73%	137,333	9.80%	142,952	9.95%
Kauai County	52,623	3.60%	49,902	3.52%	50,955	3.63%	56,874	3.96%
Total	1,464,398	100.00%	1,417,487	100.00%	1,402,759	100.00%	1,436,996	100.00%
*2016 & 2015 Statewide average does not include Military 911 calls								

TEXT TO 911 – CURRENT MONTH – DECEMBER 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 Maui County PSAPs 2018		
Month	Received at Maui	Received at Molokai
January	13	2
February	19	0
March	24	6
April	19	12
May	12	7
June	7	4
July	23	4
August	15	9
September	19	2
October	7	1
November	11	0
December	8	0
YTD	177	47
Monthly Avg.	15	4

State of Hawaii 2018	
TEXT TO 911	
Oahu Civilian	1,660
RDC Pearl Harbor	77
Hawaii County	289
Maui County	224
Kauai County	78
*Total	2,328
*Totals may include PSAP training, testing, and 911 Texting errors	

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

WIRELESS PSAP TESTING – DECEMBER 2018

MAUI COUNTY - DECEMBER 2018						
Date	WSP	Sites Tested	Sectors Tested	Tested By:	Test Pass/Fail	Comments:
12/13/2018	Verizon	1	1	Maui PSAP	Pass	CDMA Test
12/13/2018	Verizon	1	1	Molokai PSAP	Pass	CDMA Test
12/14/2018	Verizon	1	3	Maui PSAP	Pass	

NOTES:

- There were three (3) scheduled Wireless 911 tests conducted in December 2018 for the Maui and Molokai PSAPs.
- Verizon Wireless has completed migrating their Wireless network database from West to ComTech.

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

2. MSAG (MASTER STREET ADDRESS GUIDE)

MSAG TRANSACTIONS CURRENT MONTH/YEAR – DECEMBER 2018

MAUI COUNTY	9-1-1 TRANSACTIONS									
	Total	Dispatchable Location Transactions Submitted	MSAG	ALI Submitted			Open ALI Discrepancy Records			Customer Addresses Affected
2018		DL (A)	MSAG (B)	TN CR (C)	ALI DR (D)	VoIP DR (D)	TNCR	ALI DR	VoIP DR	
JANUARY	198	180	13	2	3	0	138	0	0	220
FEBRUARY	210	205	5	0	0	0	134	0	0	234
MARCH	334	150	18	1	2	0	163	1	0	380
APRIL	386	135	33	7	2	0	209	1	0	724
MAY	189	123	62	4	0	0	244	0	0	627
JUNE	148	72	76	0	0	0	253	0	0	868
JULY	138	109	29	0	0	0	144	1	0	411
AUGUST	178	128	49	0	1	0	238	1	0	340
SEPTEMBER	137	45	85	6	1	0	203	1	0	689
OCTOBER	213	128	71	13	1	0	354	1	0	857
NOVEMBER	239	223	14	0	1	1	60	0	0	13
DECEMBER	63	27	0	33	3	0	32	0	0	36
TOTAL YTD	2,433	1,525	455	66	14	1				5,399
AVG PER MONTH	203	127	38	6	1	1				450

Definitions
(A) **D**ispatchable **L**ocation - is defined in the FCC 15-9 Docket as the verified or corroborated street address of the calling party plus additional information such as floor, suite, apartment or similar information that may be needed to adequately identify the location of the calling party. Please see Dispatchable Location Section for more information.
(B) **M**aster **S**treet **A**ddress **G**uide - Represents corrections made to street records including, street names, address ranges, MSAG Communities and ESNs.
(C) **T**elephone **N**umber **C**hange **R**equest - Represents address corrections on a specific TN or group of TNs. These "invalid" TNs usually have an associated ESN 399 attached to them which indicates the need for validation.
(D) **A**utomatic **L**ocation **I**nformation **D**iscrepancy **R**ecord - Represents an address discrepancy discovered during a live 9-1-1 call, from a landline OR a VoIP phone. These record corrections are treated with a higher priority and should be processed within 48 hours if wireline, and 72 hours if a VoIP phone, as a general guideline.

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

MSAG CURRENT MONTH NOTES:

A total of **63** MSAG transactions were processed in 9-1-1 Net during the current month. Changes include: changes to high – low street ranges, combining street records, deletion of invalid records, splitting street records to align with Police, Fire, EMS, and inserting new MSAG records.

36 customer ANI/ALI (telephone number/address) records updated as a direct result.

27 Dispatchable Location transactions were submitted during the current month.

TELEPHONE RECORD (ALI) TRANSACTIONS CURRENT MONTH NOTES:

33 Telephone Number Change Requests (TN CR) transactions were processed in 9-1-1 Net with valid MSAG addresses, as a result of the ESN 399 clean-up effort and the Dispatchable Location Project. ESN 399 TN CRs must be validated against HT records and approved by the end user Hawaiian Telcom customer before updating the ALI record. One **(1)** ALI DR was submitted as the result of a 9-1-1 call made from a business in Kahului and two **(2)** ALI DR were submitted for a resident callers in Kaunakakai. Molokai PSAP submitted this change requests to Akimeka to update the customer information and the discrepancy was corrected in 9-1-1 Net.

OPEN TELEPHONE RECORD (ALI) DISCREPANCY STATUS:

- **There are currently 54 Open TN CR Transactions.**
- **Refer to chart in the next section "TNCR Current Status"**

54 Open TN CR transactions are a direct result of the ESN 399/359 clean-up and are awaiting approval from Hawaiian Telcom, Inc. Once a telephone number is submitted to West for correction, it must be verified against HT records and/or approved by the customer. West's internal process requires calling each telephone customer individually for approval to update an address in the 9-1-1 database.

There are no open ALI DRs as of December 31, 2018

There are no open VoIP DRs as of December 31, 2018

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

TNCR (TELEPHONE NUMBER CHANGE REQUEST) CURRENT STATUS – DECEMBER, 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)**				
County	**TOTAL TNCR RECORDS SUBMITTED BY AKIMEKA**	**OPENED TNCRS PENDING FURTHER ACTION BY WEST SAFETY SERVICES**	**OPENED TNCRS REFERRED TO TELCO BY WEST SAFETY SERVICES**	**TOTAL UNOPENED TNCR RECORDS**
MAUI	**46**	**12**	**4**	**30**
MOLOKAI	**8**	**5**	**1**	**2**
TOTAL	**54**	**17**	**5**	**32**

STATUS
TOTAL TNCRs SUBMITTED - The total number of TNCR requests for modification that have been submitted in 9-1-1
PENDING STATUS - 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.
REFERRED STATUS - 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.
TOTAL UNOPENED TNCR RECORDS STATUS - 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.

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

DISPATCHABLE LOCATION – STATUS AS OF – DECEMBER 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.

During the month of August 2015, Akimeka started a pilot project, entering additional location information to a verified MSAG address with multiple telephone numbers. Specifically the Queen Kaahumanu Shopping Center at 275 Kaahumanu Ave. 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. Screen shots of the "Before" ALI screen, and the "After" ALI screen with the updated "Dispatchable Location" information visible, were presented to the Dispatch Supervisors. Akimeka received positive feedback from the 911 Dispatch Personnel because the information that the 911 Call Takers will receive, will certainly cut down on the process of determining the exact location of the 911 caller. In addition to this, Akimeka was informed that the Mobile Dispatch Terminals (MDTs) in the Police Vehicles, also are able to view this "Dispatchable Location" information which will reduce the response times for Public Safety.

Dispatchable Location			
2018 **Quarter 4**	**Common Name Place** **MSAG Address**	**TNCR*** **Transactions** **Submitted**	**Transactions** **Processed****
Quarter 3 Carryover		2,679	2,528
October	Andaz Maui at Wailea, 3300 Wailea Alanui, Wailea	29	0
	Wailea Ekahi, 3300 Wailea Alanui, Wailea	19	0
	Wailea Villages, 161 Wailea Alanui, Wailea	79	0
November	Wailea Ekahi, 3300 Wailea Alanui, Wailea	20	150
	Wailea Villages, 161 Wailea Alanui, Wailea	6	73
December	Andaz Maui at Wailea, 3550 Wailea Alanui, Wailea	27	0
	Wailea Ekahi, 3300 Wailea Alanui, Wailea	0	7
Total		**180**	**230**
YTD Total		**2,859**	**2,758**

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

SPECTRUM (CHARTER) 9-1-1 VOIP DATABASE VERIFICATION PROJECT – DECEMBER 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.

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

* Spectrum VoIP Database received on June 21st, 2017
** Akimeka provided VoIP Records with Latitude/Longitude coordinates

<table>
<tr><td>(A)</td><td>VoIP Database records submitted by Spectrum to Akimeka for research and MSAG address validation.</td></tr>
<tr><td>(B)</td><td>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.</td></tr>
<tr><td>(C)</td><td>Verifcation Process Completed.</td></tr>
</table>

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

BANDWIDTH 9-1-1 VOIP DATABASE VERIFICATION PROJECT – DECEMBER 2018

Akimeka received the Automatic Location Identification (ALI) records from Bandwidth which is a Voice over Internet Protocol (VoIP) provider in the State of Hawaii. As Akimeka has access to these ALI Records, Akimeka researched and verified 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 were invalid MSAG addresses utilized by the VoIP Provider. These records were identified, and sent back to Bandwidth for corrective action.

Akimeka will update the chart below as we receive updated ALI records from Bandwidth.

*Bandwidth 9-1-1 VoIP Database Verification Project **(Updated)					
PSAP	**TOTAL RECORDS SUBMITTED BY BANDWIDTH (A)**	**TOTAL NEW RECORDS VERIFIED WITH 911 DATABASES (B)**	**TOTAL RECORDS NOT MATCHING**	**NON MATCHING RECORDS CORRECTED BY AKIMEKA (C)**	**PERCENT COMPLETED**
HAWAII County	545	85	0	0	100.00%
KAUAI County	306	41	0	0	100.00%
MAUI County	914	222	1	1	100.00%
OAHU Cilivian	4,065	888	1	1	100.00%
OAHU Military	56	7	0	0	100.00%
TOTAL	**5,886**	**1,243**	**2**	**2**	**100.00%**

*Bandwidth VoIP Database received on April 5th, 2018
**Updated Bandwidth VoIP Database received on September 6th, 2018

(A)	VoIP Database records submitted by Bandwidth 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 Bandwidth. Addressing data will be updated or added in the GIS if the VoIP record is determined to be valid.
(C)	Verifcation Process Completed.

3. GEOGRAPHIC INFORMATION SYSTEM (GIS) – DECEMBER 2018

MAPPING LAYERS UPDATED (PART I)

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

MAUI COUNTY			
Type of Layer	**Akimeka GIS Server** **Date Created/ Edits Performed**	**Date GIS Delivered**	**Other/Remarks**
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE **(Listed Alphabetically)**			
Address Points	12/31/2018		Spatially corrected one (1) address point in Lahaina
	12/31/2018		Added one (1) address in Lahaina
	12/31/2018		Added one (1) address in Kula
	12/28/2018		Spatially corrected one (1) address in Lanai
	12/28/2018		Added fourteen (14) addresses in Kahului
	12/28/2018		Spatially corrected eighty-seven (87) address points in Kahului
	12/27/2018		Added sixteen (16) addresses in Kahului
	12/27/2018		Corrected one (1) address in Kahului
	12/27/2018		Spatially corrected seventy-one (71) address points in Kahului
	12/27/2018		Added Location Name for one (1) address in Kahului
	12/27/2018		Added forty-nine (49) addresses in Wailuku
	12/26/2018		Added four (4) addresses in Kahului
	12/26/2018		Added nineteen (19) addresses in Kahului
	12/26/2018		Corrected one (1) address in Kahului
	12/26/2018		Spatially corrected one hundred eleven (111) address points in Kahului
	12/26/2018		Updated Location Name for one (1) address in Kahului
	12/26/2018		Added two (2) addresses in Kaunakakai
	12/26/2018		Added one (1) address in Makawao
	12/26/2018		Spatially corrected one (1) address point in Makawao
	12/26/2018		Added two (2) addresses in Napili
	12/26/2018		Added one (1) address in Paia
	12/26/2018		Added fifteen (15) addresses in Wailuku
		12/19/18	
	12/18/2018		Added one (1) address in Makawao
	12/18/2018		Spatially corrected two (2) address points in Makawao
	12/18/2018		Added four (4) addresses in Kahului
	12/18/2018		Spatially corrected fifty-four (54) address points in Kahului
	12/18/2018		Corrected one (1) address in Kahului
	12/17/2018		Spatially corrected sixty-one (61) address points in Kahului
	12/14/2018		Added seven (7) addresses in Kahului
	12/14/2018		Added one (1) address in Makawao
	12/14/2018		Spatially corrected forty-five (45) address points in Kahului

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

MAPPING LAYERS UPDATED (PART II)

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

MAUI COUNTY			
Type of Layer	**Akimeka GIS Server** **Date Created/ Edits Performed**	**Date GIS Delivered**	**Other/Remarks**
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)			
Address Points	12/14/2018		Spatially corrected two (2) address points in Makawao
	12/14/2018		Spatially corrected one (1) address in Wailuku
	12/11/2018		Spatially corrected two (2) address points in Wailuku
	12/11/2018		Added three (3) address in Kaunakakai
	12/11/2018		Added nineteen (19) addresses in Kahului
	12/11/2018		Corrected one (1) address in Kahului
	12/11/2018		Spatially corrected ninety-six (96) address points in Kahului
	12/10/2018		Added three (3) addresses in Kaunakakai
	12/10/2018		Added seven (7) addresses in Kahului
	12/10/2018		Spatially corrected thirty-three (33) address points in Kahului
	12/7/2018		Corrected ESN for one (1) address in Maalaea
	12/6/2018		Added one (1) address in Kahului
		12/05/18	
	12/5/2018		Corrected ESN for one (1) address in Waikapu
	12/5/2018		Corrected ESN for one (1) address in Kahului
	12/5/2018		Corrected ESN for one (1) address in Pukalani
	12/5/2018		Corrected ESN for one (1) address in Maalaea
	12/5/2018		Corrected ESN for one (1) address in Kula
	12/5/2018		Corrected ESN for one (1) address in Pukoo
	12/5/2018		Corrected ESN for one (1) address in Paia
	12/5/2018		Corrected MSAG Community for four (4) addresses in Kahului
	12/5/2018		Corrected MUN for two (2) addresses in Kihei
	12/5/2018		Corrected MUN for one (1) address in Makawao
	12/5/2018		Corrected MUN for one (1) address in Wailea
	12/5/2018		Corrected MSAG Community for one (1) address in Kaanapali
	12/5/2018		Corrected MSAG Community for one (1) address in Kula
	12/5/2018		Corrected MSAG Community for one (1) address in Kaanapali
	12/5/2018		Corrected MSAG Community for two (2) addresses in Hoolehua
	12/5/2018		Corrected MSAG Community for five (5) addresses in Wailea
	12/5/2018		Corrected MSAG Community for three (3) addresses in Napili
	12/5/2018		Added TMK info to three thousand one hundred eleven (3111) addresses

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

MAPPING LAYERS UPDATED (PART III)

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

Type of Layer	Akimeka GIS Server Date Created/ Edits Performed	Date GIS Delivered	Other/Remarks
MAUI COUNTY			
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE **(Listed Alphabetically)**			
Address Points	12/5/2018		Added street name info for thirty-six (36) POI in Hana
	12/4/2018		Added nine (9) addresses in Kahului
	12/4/2018		Spatially corrected sixty-six (66) address points in Kahului
Airports			
Bridges			
Building Footprints			
Bus Stops			
Churches	12/27/2018		Added one (1) church in Kahului
Coastal Names			
Coastline			
Common Places			
Correctional Facilities			
Emergency Callboxes			
Emergency Operation Centers			
Emergency Shelters			
ESZ/ESN		**12/19/18**	
	12/11/2018		Modified boundary of ESN 311 and 312
		12/05/18	
	12/5/2018		Modified the boundary of ESN 306, 307, 317, 318, 321, and 322
Fire Beats			
Fire Districts			
Fire Response Areas			
Fire Stations			
Food & Beverage			
Gas Stations			
Gate Codes			
Government Buildings			
Harbors			
Helipads			
Hiking Trails			
Hospitals			

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

MAPPING LAYERS UPDATED (PART IV)

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

MAUI COUNTY			
Type of Layer	**Akimeka GIS Server** **Date Created/ Edits Performed**	**Date GIS Delivered**	**Other/Remarks**
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE **(Listed Alphabetically)**			
Hydrants			
Hyrdology Layers			
Incident Response Areas			
Lodging			
Major Roads			
Medic Beats			
Medic Districts			
Medic Response Areas			
Medic Stations			
Medical Facilities			
Milepost Markers			
MSAG Communities	12/5/2018	**12/05/18**	Modified the boundary of Haiku, Haliimaile, Hoolehua, Kaanapali, Kaluakoi, Makawao, Maunaloa, Napili, Paia, Waiehu, Waihee, and Wailuku
Net Junctions			
Ocean Rescue Boundaries			
Ocean Safety			
Parcels			
Parks			
Parks Polygon			
Points of Interest	12/27/2018		Added one (1) POI in Kahului
	12/26/2018		Updated one (1) POI in Kahului
		12/19/18	
	12/17/2018		Added two (2) POI in Kahului
		12/05/18	
	12/5/2018		Added street name info for thirteen (13) POI in Haiku
Police Beats			
Police Districts			
Police Response Areas			
Police Stations			
Post Offices			

MAPPING LAYERS UPDATED (PART V)

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

Type of Layer	Akimeka GIS Server — Date Created/ Edits Performed	Date GIS Delivered	Other/Remarks
MAUI COUNTY			
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)			
Schools			
Street Centerlines	12/28/2018		Spatially corrected one (1) street centerline in Kahului
	12/28/2018		Assigned range to one (1) street centerline in Wailuku
	12/27/2018		Added one (1) street centerline range in Wailuku
	12/27/2018		Split two (2) street centerline segments in Wailuku
	12/26/2018		Modified two (2) street centerline segment ranges in Kaanapali
		12/19/18	
	12/7/2018		Modified one (1) street centerline range in Wailuku
Subdivisions			
Tow Jurisdictions			
Tsunami Evacuation Zones			
Tsunami Heights			
Waste Water Plants			
WSP Cell Sectors	12/27/2018		Added forty-two (42) sectors per Sprint CRS.
WSP Cell Towers	12/27/2018		Added nine (9) towers per Sprint CRS.

NOTE:

The Parcels layer is provided by Maui County. Akimeka performs edits on the spatial information of the layer for 9-1-1 purposes. Changes to the attribute table are made when needed. The Parcels layer uploaded to the PSAP GIS server is intended for 9-1-1 purposes only and should not be disseminated to other county agencies.

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

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
12/19/2018	Delivered .map, .str, .rte, and Maui Cell Coverage.csv which included updated Address Points, Common Places Lookup Table, Points Of Interest, Street Centerlines, and WSP Cell Towers for Intergraph
12/19/2018	Delivered updated data for MapFlex which included Address Points, ESN, Points Of Interest, Street Centerlines, WSP Cell Sectors and WSP Cell Towers
12/10/2018	Delivered .map, .str, .rte, .ply and Maui Cell Coverage.csv which included updated Address Points, Common Places Lookup Table, Points Of Interest, Street Centerlines, and WSP Cell Towers for Intergraph
12/5/2018	Delivered updated data for MapFlex which included Address Points, ESN, MSAG Communities, Points Of Interest, Street Centerlines, WSP Cell Sectors and WSP Cell Towers

INTERGRAPH CAD UPGRADE

From April through June 2014, the Maui Police Department worked to upgrade their Intergraph CAD system to the more recent 2014 version. Through this upgrade process, new improvements were identified and the overall functionality of the system from the Map Build process to the Production workstation made significant enhancements in order to streamline the deliverables and continue providing accurate data to the PSAP.

1. On October 11th, 2018, Akimeka requested Maui County IT submit a SR with Hexagon regarding publishing map (.map) issue. A screenshot of the mapping issue was also sent to Maui County IT. Maui County IT submitted a SR with Hexagon the same day.

2. Akimeka delivered an updated Intergraph CAD map October 12th, 2018 which included:
    a. Address Points, Common Places Lookup Table, Points Of Interest, Police Beats, Police Response Areas, Street Centerlines, and WSP Cell Towers for Intergraph
    b. .map, .str, .rte, .ply, CAD Map Build database and Cell Coverage.csv

3. On October 15, 2018, Akimeka emailed Maui County IT to follow-up on the Hexagon SR submitted October 11th, 2018.

4. Maui County IT replied October 18, 2018 that they reached out to Hexagon's Map support but the technician was away from his desk. Later it was communicated that Hexagon was engaged in another priority event and would contact Maui County IT the following day because our issue was not affecting our Production CAD maps.

5. Maui County IT and Hexagon contacted Akimeka on October 19th, 2018 but Akimeka wasn't available.

6. Akimeka spoke with Steve Cain of Hexagon on October 22nd, 2018 but Akimeka was unable to share their computer screen with Steve, so they rescheduled for the next day.

7. The following day, on October 23rd, 2018, Akimeka was able to show Hexagon the mapping error. Steve took a screenshot of the map and said he'd have to get back to us. Steve also mentioned that since we were running on GeoMedia 2014, we should upgrade to 2016. Steve agreed to email Maui County IT with the directions and necessary information to complete an upgrade.

8. On October 25th, 2018– Akimeka delivered an updated Intergraph CAD map which included:
   a. Address Points, Common Places Lookup Table, Points Of Interest, Street Centerlines, and WSP Cell Towers
   b. .map, .str, .rte, .ply, CAD Map Build database and Cell Coverage.csv

9. On October 30th, 2018, Akimeka emailed Maui County IT to see if Hexagon contacted them with a solution to the mapping issue or upgrade directions. Maui County IT responded that they have not heard back from Steve Cain.

10. A follow-up response from Hexagon came on November 28th, 2018 suggesting there was corrupted data. Akimeka requested another WebEx meeting to be shown where the possible corrupted data was. This occurred on November 30th, 2018. The table Hexagon suggested Akimeka review could not be viewed as the system does not save older tables. The time between the first WebEx and follow-up, Akimeka successfully made three map deliveries. The table from the latest delivery, November 21st, 2018 did not have corrupted data. Hexagon closed the SR. Again Akimeka requested and Steve Cain of Hexagon agreed to send Maui County IT the directions so the Maui Map computer can be upgraded from GeoMedia 2014 to the current version, GeoMedia 2016. Maui PD will be upgrading to the newest version of GeoMedia in April 2019. Steve also emailed Akimeka and Maui County IT a map troubleshooting PowerPoint presentation.

11. Akimeka delivered an updated Intergraph CAD map November 7th, 2018 which included:
   c. Address Points, Common Places Lookup Table, Points Of Interest, Street Centerlines, and WSP Cell Towers for Intergraph
   d. .map, .str, .rte, .ply, CAD Map Build database and Cell Coverage.csv

12. On November 21st, 2018– Akimeka delivered an updated Intergraph CAD map which included:
   a. Address Points, Common Places Lookup Table, Fire Beats, Fire Response Areas, Points Of Interest, Street Centerlines, and WSP Cell Towers
   b. .map, .str, .rte, .ply, CAD Map Build database and Cell Coverage.csv

13. On December 19th, 2018– Akimeka delivered an updated Intergraph CAD map which included:
   a. Address Points, Common Places Lookup Table, Points Of Interest, Street Centerlines, and WSP Cell Towers
   b. .map, .str, .rte, .ply, CAD Map Build database and Cell Coverage.csv

14. Akimeka is still waiting for the upgraded software from Hexagon.

During January 2019, the Intergraph CAD map will continue to be delivered every other week, which has been coordinated with all mapping system updates and synchronizations with other 911 databases.

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

MAPFLEX SYSTEM

During the month of December 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 December 2018
    a. **Hawaii County** – December 4th , 2018 and December 18th, 2018
    b. **Maui County** – December 5th , 2018 and December 19th, 2018
    c. **Kauai County** – December 6th, 2018, and December 20th, 2018
    d. **Honolulu** – December 7th , 2018, and December 21st , 2018

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)
5/23/2018	Phase I & Phase II coverage area	Phase I calls received at the Kihei Maui PSAP are displaying a circular circumference area rather than a cone shaped directional coverage. Phase II calls are not plotting the COF meters correctly.	Pending
5/24/2018	Incorrect Addresses	MapFlex system began displaying incorrect addresses in the bubble display when an Address Point is right mouse clicked to see information by the PSAPs. However, the address in the data is still correct as shown on the left hand side.	Pending
6/27/2018	Moving Labels	It was brought up during the PSAP teleconference with Hawaiian Tel and West that the Hawaii Fire Department submitted a trouble ticket regarding the parcel labels. When the base map is checked on for viewing the owner's names on the parcel layer, the names of some of the parcels will follow and leave their parcel as the map is panned following streets. This problem was also recreated at the Hawaii Police Department.	Pending

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

4. SERVICE REQUESTS TRANSACTIONS

OPEN SERVICE REQUESTS – MAUI COUNTY PSAPS - DECEMBER 2018

MAUI COUNTY						
#	Date	Ticket #	Description	PSAP	Urgency	Comments
1	7/16/2018		Updated Address	Molokai	Normal	TN has been submitted in 9-1-1 Net for correction.

NOTE:

There is one (1) Open Service Request for the Maui County PSAPs for December, 2018.

MAUI PSAP SERVICE REQUESTS YEAR-TO-DATE (YTD) SUMMARY – 2018

MAUI COUNTY				MSAG SERVICE REQUEST CATEGORIES					
2018	TOTAL		Open	WIRELINE		WIRELESS		VoIP	
	Created	Closed		Created	Closed	Created	Closed	Created	Closed
2017 Carryover*			0						
January	3	3	0	3	3	0	0	0	0
February	0	0	0	0	0	0	0	0	0
March	2	1	1	2	1	0	0	0	0
April	2	2	1	2	2	0	0	0	0
May	0	0	1	0	0	0	0	0	0
June	0	1	0	0	1	0	0	0	0
July	3	2	1	3	2	0	0	0	0
August	1	1	1	1	1	0	0	0	0
September	1	1	1	1	1	0	0	0	0
October	1	1	1	1	1	0	0	0	0
November	2	2	1	2	2	0	0	0	0
December	3	3	1	3	3	0	0	0	0
TOTAL	18	17	1	18	17	0	0	0	0

Note:	*The 2017 Carry Over row indicates the number of Service Requests that were opened in 2017; however, were brought forward into 2018 in an effort to track the service request until completion.

Definitions:	Category	Description
	Wireline	Telephone Number (ALI) Discrepancies from land line phones that have been submitted to West Safety Services via 9-1-1 Net for correction.
	Wireless	Telephone Number (ALI) Discrepancies from phones that were land lines at one time, and were ported out to a wireless carrier. However, the phone number was never removed from the MSAG database.
	VoIP	Telephone Number (ALI) Discrepancies from VoIP phones that have been submitted to Spectrum - Time Warner Cable (TWCBL) for correction

5. E9-1-1 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 the next quarterly database synchronization audit for Maui County in December 2018.

The database synchronization effort included comparing Maui County's 9-1-1 MSAG against its GIS Street Centerline data. A total number of **2,727** 9-1-1 MSAG (ESN 300 – 357) records were reviewed in the audit and analyzed. Results of the database synchronization audit completed on December 1, 2018 for Maui County 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%.

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

AUDIT SUMMARY RESULTS – 2018

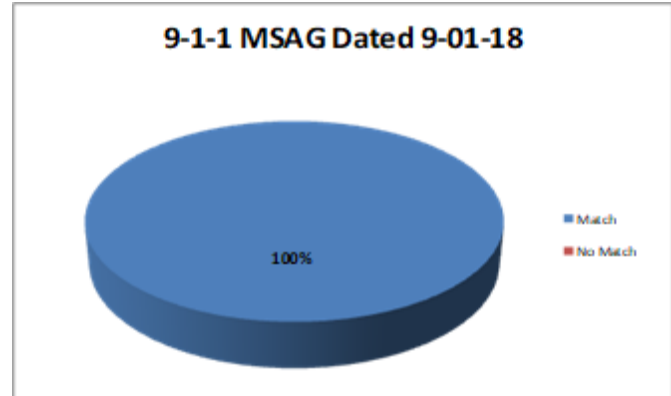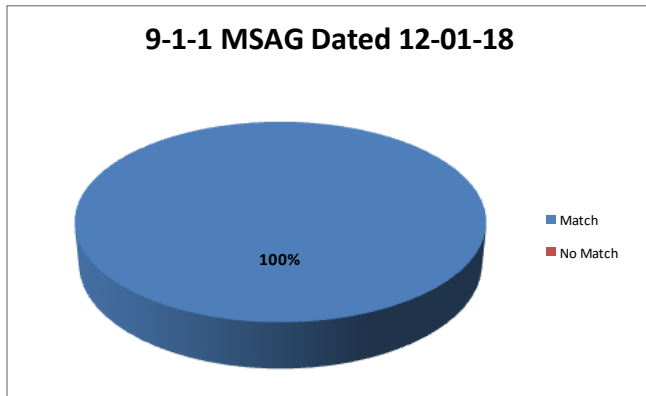| 9-1-1 MSAG TO GIS STREET CENTERLINE AUDIT COMPARISON RESULTS	Notes	As of March 1, 2018 9-1-1 MSAG Dated 3-01-18		As of June 1, 2018 9-1-1 MSAG Dated 6-01-18		As of September 1, 2018 9-1-1 MSAG Dated 9-01-18		As of December 1, 2018 9-1-1 MSAG Dated 12-01-18	
		# of Records	%	# of Records	%	# of Records	%	# of Records	%
Total 9-1-1 MSAG Records Reviewed		2,722		2,719		2,732		2,727	
Less: 9-1-1 MSAG Exception Records	(1)	75	2.7%	74	2.7%	75	2.7%	75	2.7%
Net 9-1-1 MSAG Records Eligible for Comparison		2,647		2,645		2,657		2,652	
Total 9-1-1 MSAG Records Match (9-1-1 MSAG -- GIS Match -- No Corrections Required)		2,645	100.00%	2,625	100.00%	2,642	100.00%	2,648	100.00%
9-1-1 MSAG -- GIS No Match - Minor Correction Required	(2)	1	0.0%	20	0.0%	15	0.0%	3	0.0%
9-1-1 MSAG Record With No GIS Record	(3)	1	0.0%	0	0.0%	0	0.0%	1	0.0%
Total 9-1-1 MSAG Records No Match		2	0.0%	20	0.0%	15	0.0%	4	0.0%

AUDIT SUMMARY 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.**

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

MSAG AUDIT SUMMARY RESULTS – DECEMBER 1, 2018 VS SEPTEMBER 1, 2018

9-1-1 MSAG Dated 12-01-18 — 100% Match

9-1-1 MSAG Dated 9-01-18 — 100% Match

Maui County's level of accuracy or 9-1-1 Match percentage remained constant

at 100% as of December 1, 2018 to 100% on September 1, 2018

NENA Recommended Match Rate = 98%

MSAG AUDIT SUMMARY RESULTS NOTES:

- **"MSAG - GIS Minor Corrections" decreased (15 to 4) from September 2018 to December 2018. Minor corrections were primarily the result of edits made to the GIS Street Centerlines layer in order to meet new NG9-1-1 requirements. Low and high address ranges were then adjusted in the MSAG to correspond with the GIS record. Although this is a minor correction, customer telephone numbers (TNs) need to be validated by the service providers prior to adjusting an address range.**
- **"MSAG Record with No GIS Record" increased (0 to 1) from September 2018 to December 2018. The one MSAG Record with No GIS Record was due primarily to the verification of the MSAG records against multiple GIS databases to determine if the roads are existing within Maui County records.**
- **"GIS Record with Minor Corrections" decreased (14 to 3) from September 2018 to December 2018. Low and high address ranges, street suffix, and MSAG Community were adjusted in the GIS to correspond with the MSAG record.**
- **Ongoing maintenance is critical to ensure the database synchronized level of address accuracy is maintained each time an MSAG or GIS record is "last modified".**

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

INVALID MSAG STREETS AND ADDRESS RANGES – ESN X99 RECORDS

Hawaiian Telcom, Inc. (HTI) provides Maui County and Akimeka, as the PSAP's agent, with access and visibility to the ESN 359/399 MSAG records which are "known" invalid streets and address ranges. Results of the data provided are as follows:

PSAP	ESN	Invalid MSAG Records							
		9-1-1 MSAG Dated 03-01-18		9-1-1 MSAG Dated 06-01-18		9-1-1 MSAG Dated 09-01-18		9-1-1 MSAG Dated 12-01-17	
		# of Records	% of Total MSAG Records (Valid and Invalid)	# of Records	% of Total MSAG Records (Valid and Invalid)	# of Records	% of Total MSAG Records (Valid and Invalid)	# of Records	% of Total MSAG Records (Valid and Invalid)
MAUI	399	26	1.0%	24	1.0%	21	0.8%	13	0.05%
MOLOKAI	359	4	1.8%	3	1.4%	3	1.4%	0	0.0%
TOTAL MAUI		30	1.1%	27	1.0%	24	0.9%	13	0.05%

Maui County E9-1-1 Status Report

December 1, 2018 - December 31, 2018

AUTOMATIC LOCATION IDENTIFICATION (ALI) DISCREPANCY REPORT

As part of Akimeka's ongoing database synchronization efforts, Akimeka reviewed and summarized the ALI discrepancy reports by community for Maui County. As of December 27, 2018, **13** ESN 399 (Maui/Lanai) and ESN 359 (Molokai) records, representing **.05%** of Maui County's total ALI records, require research and corrective action, if needed.

Maui County ALI Records
as of December 27, 2018

0.05%

99.95%

ESN 300
ESN 399