Oahu Civilian E9-1-1

Status Report

April 1, 2017 – April 30, 2017

Oahu Civilian E9-1-1 Status Report

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1. PSAP OPERATIONS

9-1-1 CALL VOLUME CIVILIAN PSAPS – APRIL 2017

(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	
2017	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	81,212	18,045	22.22%	59,951	73.82%	47.58%	26.24%	3,192	3.93%	24	0.03%	1,960	2.41%	11,213	13.81%	670	0.83%

9-1-1 CALL VOLUME CILILIAN PSAPS – CALENDAR YEAR 2017

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	
2017	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	86,983	18,605	21.39%	64,872	74.58%	52.63%	21.95%	3,471	3.99%	35	0.04%	2,304	2.65%	12,546	14.42%	660	0.76%
FEB	76,289	16,845	22.08%	56,461	74.01%	51.74%	22.27%	2,952	3.87%	31	0.04%	1,960	2.57%	10,210	13.38%	556	0.73%
MAR	84,599	27,766	32.82%	53,847	63.65%	43.49%	20.16%	2,961	3.50%	25	0.03%	1,873	2.21%	11,245	13.29%	611	0.72%
APR	81,212	18,045	22.22%	59,951	73.82%	47.58%	26.24%	3,192	3.93%	24	0.03%	1,960	2.41%	11,213	13.81%	670	0.83%
MAY																	
JUNE																	
JULY																	
AUG																	
SEPT																	
OCT																	
NOV																	
DEC																	
YTD	329,083	81,261		235,131				12,576		115		8,097		45,214		2,497	
MON AVG	82,271	20,315	24.63%	58,783	71.52%	48.86%	22.66%	3,144	3.82%	29	0.04%	2,024	2.46%	11,304	13.73%	624	0.76%

NOTE:

- ***911 Calls with No Ali for April 2017 = 0.03% - Statewide average for 2016 = 0.15%**
- **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 2017

| 2017 | 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	69,817	85.97%	17,926	39,741	937	11,213	2,402	2.96%	159	72

| 2017 | 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	8,289	10.21%	830	113	34	0.04%	34	13

9-1-1 CALL VOLUME BY AGENCY – CALENDAR YEAR 2017

| 2017 | 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	74,743	85.93%	18,134	42,544	1,519	12,546	3,108	3.57%	82	87	8,421	9.68%	653	170	51	0.06%	50	8
FEB	64,949	85.14%	16,171	37,608	960	10,210	2,745	3.60%	168	0	7,983	10.46%	778	151	56	0.07%	54	35
MAR	72,928	86.20%	19,456	41,420	807	11,245	2,300	2.72%	148	29	8,708	10.29%	867	129	52	0.06%	51	9
APR	69,817	85.97%	17,926	39,741	937	11,213	2,402	2.96%	159	72	8,289	10.21%	830	113	34	0.04%	34	13
MAY																		
JUNE																		
JULY																		
AUG																		
SEPT																		
OCT																		
NOV																		
DEC																		
YTD	282,437		71,687	161,313	4,223	45,214	10,555		557	188	33,401		3,128	563	193		189	65
MON AVG	70,609	85.81%	17,922	40,328	1,056	11,304	2,639	3.21%	139	47	8,350	10.16%	782	141	48	0.06%	47	16

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9-1-1 CALL VOLUME MILITARY PSAP – APRIL 2017

9-1-1 Call Volume																
OAHU MILITARY	Wireline		Wireless				VOIP		Calls With No ALI		Admin Calls		Abandoned Calls		Other Calls	
2017	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	% of Total Calls
APR	2,339	291	12.44%	1,839	78.62%	48.07%	51.93%	64	2.74%	0	0.00%	0	0.00%	145	6.20%	0	0.00%

*911 Calls with No Ali for April 2017 = 0.00% - Statewide average for 2016 = 0.15%

9-1-1 CALL VOLUME MILITARY PSAP – CALENDAR YEAR 2017

9-1-1 Call Volume																
OAHU MILITARY	Wireline		Wireless				VOIP		Calls with No ALI		Admin Calls		Abandoned Calls		Other Calls	
2017	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	% of Total Calls
JAN	2,243	300	13.37%	1,690	75.35%	58.70%	41.30%	75	3.34%	0	0.00%	0	0.00%	178	7.94%	0	0.00%
FEB	1,910	273	14.29%	1,467	76.81%	57.46%	42.54%	50	2.62%	0	0.00%	0	0.00%	120	6.28%	0	0.00%
MAR	2,381	287	12.05%	1,840	77.28%	55.65%	44.35%	78	3.28%	0	0.00%	0	0.00%	176	7.39%	0	0.00%
APR	2,339	291	12.44%	1,839	78.62%	48.07%	51.93%	64	2.74%	0	0.00%	0	0.00%	145	6.20%	0	0.00%
MAY																	
JUNE																	
JULY																	
AUG																	
SEPT																	
OCT																	
NOV																	
DEC																	
YTD	8,873	1,151		6,836				267		0		0		619		0	
MON AVG	2,218	288	13.04%	1,709	77.01%	54.97%	45.03%	67	2.99%	0	0.00%	0	0.00%	155	6.95%	0	0.00%

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.**

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FOR YOUR INFORMATION

FYI ………... For Your Information				
PSAP Operations				
Statewide 911 Call Volumes for 2016 & 2015 compare				
PSAP	2016		2015	
Oahu Civilian	1,009,059	71.93%	1,019,402	70.94%
Hawaii County	205,412	14.64%	217,768	15.15%
Maui County	137,333	9.80%	142,952	9.95%
Kauai County	50,955	3.63%	56,874	3.96%
Total	1,402,759	100.00%	1,436,997	100.00%
*Statewide average does not include Military 911 calls.				

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TEXT TO 911 OAHU CIVILIAN PSAPS – CURRENT MONTH – APRIL 2017

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 2017						
Month	Total	HPD	HFD	EMS	OS	911 (handled)
January	188	175	2	0	0	11
February	146	141	2	0	0	3
March	166	147	2	0	0	17
April	182	165	2	7	0	8
May						
June						
July						
August						
September						
October						
November						
December						
YTD	682	628	8	7	0	39
Monthly Avg.	170.5	157.0	2.0	1.8	0.0	9.8

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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TEXT TO 911 OAHU MILITARY PSAP – CURRENT MONTH – APRIL 2017

TEXT TO 911 Pearl Harbor RDC 2017	
Month	Total received
January	6
February	18
March	9
April	13
May	
June	
July	
August	
September	
October	
November	
December	
YTD	46
Monthly Avg.	11.5

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.

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911 WIRELESS OAHU CIVILIAN PSAP TESTING – APRIL 2017

OAHU CIVILIAN - APRIL 2017						
Date	WSP	Sites Tested	Sectors Tested	Tested By:	Test Pass/Fail	Comments:
4/13/2017	AT&T	1	3	Oahu PSAP	Pass	

NOTES:

- **There was one two (1) scheduled Wireless 911 Test for the Oahu Civilian PSAP in April, 2017.**

911 WIRELESS OAHU MILITARY PSAP TESTING – APRIL 2017

OAHU MILITARY - APRIL 2017						
Date	WSP	Sites Tested	Sectors Tested	Tested By:	Test Pass/Fail	Comments:

NOTES:

- **There were no (0) scheduled Wireless 911 Tests for the Oahu Military PSAP in April, 2017.**

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2. MSAG (MASTER STREET ADDRESS GUIDE)

OAHU CIVILIAN MSAG TRANSACTIONS CURRENT MONTH/YEAR – APRIL 2017

OAHU CIVILIAN	9-1-1 TRANSACTIONS								
	Total	MSAG	ALI Submitted			Open ALI Discrepancy Records			Customer Addresses Affected
2017		MSAG (A)	TN CR (B)	ALI DR (C)	VoIP (D)	TNCR	ALI DR	VoIP DR	
JANUARY	30	28	2	0	0	80	0	1	1,283
FEBRUARY	6	5	0	1	0	80	0	1	80
MARCH	7	5	1	1	0	79	0	1	20
APRIL	18	15	2	1	0	78	0	1	446
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL YTD	61	53	5	3	0				1,829
AVG PER MONTH	15	13	1	1	0				457

Definitions
(A)**M**aster **S**treet **A**ddress **G**uide - Represents corrections made to street records including, street names, address ranges, MSAG Communities and ESNs.
(B) **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 199 attached to them which indicates the need for validation.
(C) **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. These record corrections are treated with a higher priority and should be processed within 48 hours as a general guideline.
(D) **V**oice **o**ver **I**nternet **P**rotocol **D**iscrepancy **R**ecord - 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 eighteen (18) MSAG transactions were processed in 9-1-1 Net during the current reporting month. Fifteen (15) 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 446 customer ANI/ALI (telephone/address) records updated as a direct result.

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

Two Telephone Number Change Requests (TN CR) transactions were processed in 9-1-1 Net with valid MSAG addresses, as a result of the ESN 199 clean-up effort. ESN 199 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 9-1-1 call from a pay phone in Hauula. Honolulu Police submitted this request to Akimeka to update the customer information.

OAHU CIVILIAN OPEN TELEPHONE RECORD (ALI) DISCREPANCY STATUS:

- **There are 78 Open TN CR Transactions as of April 30, 2017**

- **Refer to chart in the next section "TNCR Current Status"**

The 78 Open TN CR transactions are a direct result of the ESN 199 clean-up and are awaiting approval from Hawaiian Telcom, Inc. Akimeka continues to monitor and track the progress of the Referred records. 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 April 30, 2017**

- **There is one (1) Open VoIP DRs as of April 30, 2017**

- The VoIP DR was the result of 9-1-1 call from a shelter in Waianae. Honolulu EMS submitted the requests to Akimeka to verify the customer information as the caller ALI was invalid. Akimeka submitted the VoIP DR to the proper telco's via email and are awaiting confirmation that the addresses have been updated.

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TNCR (TELEPHONE NUMBER CHANGE REQUEST) CURRENT STATUS – APRIL, 2017

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	**78**	**0**	**72**	**6**

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.

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OAHU MILITARY MSAG TRANSACTIONS CURRENT MONTH/YEAR – APRIL 2017

OAHU MILITARY		9-1-1NET REQUESTS									
		MSAG TRANSACTIONS							ALI TRANSACTIONS		
2017	TOTAL	Total	Change	Combined	Delete	Insert	Split	Customer Addresses Affected	Address Change Request (TN CR) Processed (a)	ALI Discrepancy (ALI-DR) Processed (b)	VoIP Discrepancy Processed (c)
April	234	231	41	182	7	1	0	22,517	0	3	0

NOTE:

- Akimeka received authorization to begin MSAG transactions on behalf of the RDC on January 25, 2017.

OAHU MILITARY		9-1-1NET REQUESTS									
		MSAG TRANSACTIONS							ALI TRANSACTIONS		
2017	TOTAL	Total	Change	Combined	Delete	Insert	Split	Customer Addresses Affected	Address Change Request (TN CR) Processed (a)	ALI Discrepancy (ALI-DR) Processed (b)	VoIP Discrepancy Processed (c)
January	50	50	4	25	21	0	0	24	0	0	0
February	156	156	17	122	17	0	0	1,047	0	0	0
March	365	365	59	286	18	1	1	120	0	0	0
April	234	231	41	182	7	1	0	22,517	0	3	0
May											
June											
July											
August											
September											
October											
November											
December											
TOTAL YTD	805	802	121	615	63	2	1	23,708	0	3	0
AVG PER MO	201	201	30	154	16	1	0	5,927	0	1	0

Definitions:	(a)	Represents address corrections on a specific TN or group of TNs.
	(b)	Represents ALI Discrepancies discovered during a 9-1-1 call. These record corrections are treated with a higher urgency.
	(c)	Represents ALI Discrepancies discovered during a 9-1-1 call from a VoIP telephone. These record corrections are treated with a higher urgency.

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OAHU MILITARY MSAG CURRENT MONTH NOTES:

A total of 234 MSAG transactions were processed in 9-1-1 Net during the current reporting month. 231 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. Three (**3**) ALI DR was submitted as the result of 9-1-1 calls which included a government facility in Tripler, Aliamanu Community Center, and a government facility in Pearl HBR.

There were 22,517 customer ANI/ALI (telephone/address) records updated as a direct result.

REGIONAL DISPATCH CENTER (RDC) OMIL GIS/MSAG PROJECT

PHASE I RDC MSAG Correction of OMILFK Records

DELETION OF MSAG RECORDS CONTAINING ZERO (0) TELEPHONE NUMBERS.

- A total of 35 records containing zero (0) TNs were deleted from the OMILFK database.
- This is a preventive measure to restrict Telco's from inserting unverified TN's into the 911 Net database.
- As of April 2017, there are 61 MSAG records containing 10,515 TN's with invalid MSAG addresses.

PHASE II RDC MSAG Preparation					
Community	Street Name (A)	Combined (B)	Total TN's (C)	Status	Date
MCBH	16	72	346	Completed	2/16/2017
Camp Smith	0	1	80	Completed	2/16/2017
Puuloa	0	0	0	Completed	2/17/2017
Bellows	0	12	20	Completed	2/20/2017
Kahuku RNG	0	0	0	Completed	2/21/2017
Makua	0	0	0	Completed	2/21/2017
Helemano	1	11	98	Completed	2/23/2017
NCTAMS PAC	1	3	1044	Completed	2/27/2017
Lualualei	0	73	2	Completed	3/2/2017

Definitions
(A)   Changed the Street Name Suffixes to meet USPS Pub 28 standards.
(B)   Two or more MSAG records combined into one valid record.
(C)   Total number of Community Telephone ALI Records within 911Net.

Note: MSAG transactions currently being performed does not affect TN counts in 911 Net.

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PHASE II	RDC MSAG Preparation continued				
Community	Street Name (A)	Combined (B)	Total TN's (C)	Status	Date
Manana	2	9	13	Completed	3/15/2017
Schofield	40	137	24,204	Completed	3/21/2017
Red Hill	1	28	29	Completed	3/22/2017
Makalapa	0	10	56	Completed	3/22/2017
Tripler	2	11	135	Completed	3/31/2017
Ft Shafter	9	62	150	Completed	4/6/2017
Pearl HBR	27	59	408	Completed	4/11/2017
Hickam	37	82	6,329	Completed	4/24/2017
Ft Derussy	0	2	95	Completed	4/24/2017
Ford ISL	in progress	in progress	in progress	in progress	in progress
AMR					
*Makua RNG					
*Shafter Fl					
*Waipio Pt					
*JBPHH (Pearl/Hickam)					
*West Loch					
*White Plains					

*Community name change project to begin mid 2017

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PHASE III   RDC GIS Address Points

NOTE:

The Phase III effort is taking place in conjunction with the Phase II effort in the MSAG. The Phase III project includes the collection and creation of new Address Points in the GIS to be used as a critical source of information in the Street Centerline correction and synchronization process with the MSAG data. Furthermore, the Address Points serve as a vital piece of information in the identification of the 9-1-1 caller's location and synchronization with the ALI database. Much of this Phase III effort is dependent on the availability of information.

PHASE III RDC GIS Address Points			
Community	Address Points Added to Community	Status	Date
MCBH	2,204	In Progress	3/21/2017
Camp Smith			
Puuloa			
Bellows			
Kahuku RNG			
Makua			
Helemano			
NCTAMS PAC			
Lualualei			
Schofield			
Manana	125	In Progress	3/24/2017
Red Hill			
AMR	1,425	Completed	4/26/2017
Makalapa			
Tripler	34	In Progress	3/30/2017
Pearl HBR	1	In Progress	4/11/2017
Hickam			
Ft Shafter			
Ft Derussy			
Fold ISL			
*Makua RNG			
*Shafter Fl			
*Waipio Pt			
*JBPHH (Pearl/Hickam)			
*West Loch			
*White Plains			
Total	3,789		

PHASE IV   RDC GIS/MSAG Community Synchronization

Specific Project Plan – TBA

PHASE V   RDC ESN/ELT

Specific Project Plan – TBA

PHASE VI   Total Oahu Database Synchronization

Specific Project Plan – TBA

CHARTER COMMUNICATIONS (TIME WARNER) VOIP DATABASE TNCR

Akimeka received Automatic Location Identification (ALI) records from Charter Communications (formally known as Time Warner) which is the predominant Voice over Internet Protocol (VoIP) provider in the State of Hawaii. As Akimeka had access to these ALI Records, Akimeka was able to perform a three way comparison. This comparison is a validation of the ALI Record to ensure 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 indicated there were invalid MSAG addresses utilized by the VoIP Provider, however, the majority of these records were corrected, or sent back to Charter for further location clarifications. Akimeka was able to verify the majority of the VoIP records had a valid MSAG address assigned and matched with the GIS information. Akimeka has also initiated a correction process with Charter Communications on behalf of the PSAPs in order to perform timely corrections to the remaining VoIP 9-1-1 Records, and to ensure new VoIP customers receive valid MSAG addresses to improve their 9-1-1 location service.

Charter Communications 9-1-1 Telephone Number Location Change Request (Telephone Number Change Request (TNCR) Status)			
PSAP	**TOTAL RECORDS SUBMITTED BY CHARTER (A)**	**RECORDS REQUIRING FURTHER INFORMATION BY CHARTER (B)**	**RECORDS CORRECTED AND RETURNED TO CHARTER BY AKIMEKA (C)**
HAWAII County	19,135	5	33
KAUAI County	7,911	7	39
MAUI County	15,629	0	7
OAHU Cilivian	82,256	5	66
TOTAL	**124,931**	**17**	**145**

(A)	VoIP Database records submitted by Charter to Akimeka for research and MSAG address validation.
(B)	Akimeka was not able to determine an MSAG valid address with the information provided. Charter is advised to contact customer and provide Akimeka with a TMK or driving directions.
(C)	Akimeka researched and provided Charter with an MSAG valid address.

Oahu Civilian E9-1-1 Status Report

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3. GEOGRAPHIC INFORMATION SYSTEM (GIS) – APRIL 2017

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.

Type of Layer	Akimeka GIS Server — Date Created/ Edits Performed	Date GIS Delivered	Other/Remarks
OAHU CIVILIAN PSAPS & RDC			
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE (Listed Alphabetically)			
Address Points		04/28/17	
	4/26/2017		Added one (1) address point (990171 Puakala St) in Aiea.
	4/26/2017		Added nine hundred sixty-eight (968) address points in AMR.
	4/26/2017		Added four (4) address points in Ewa Beach.
	4/26/2017		Added one (1) address point (4620 Kahala Ave) in Kahala.
	4/26/2017		Added five (5) address points in Kaimuki.
	4/26/2017		Added one (1) address point (910060 Malakole St) in Kapolei.
	4/26/2017		Added one (1) address point (670435 Waialua Beach Rd) in Mokuleia.
	4/26/2017		Added three (3) address points (3104 Kaohinani Dr, 3106 Kaohinani Dr, and 2428 Liliha St) in Nuuanu.
	4/26/2017		Added one (1) address point (211 Kellog St) in Wahiawa.
	4/26/2017		Added eleven (11) address points in Waipahu.
	4/18/2017		Added one hundred seventy-four (174) address points in AMR.
	4/17/2017		Spatially corrected four hundred sixty-six (466) address points in Pearl City.
		04/14/17	
	4/14/2017		Spatially corrected nineteen (19) address points in Kapahulu.
	4/14/2017		Spatially corrected one hundred six (106) address points in Pearl City.
	4/13/2017		Spatially corrected eighty-nine (89) address points in Aina Haina.
	4/13/2017		Added one hundred thirty-two (132) address points in Ewa Beach.
	4/13/2017		Spatially corrected eight (8) address points in Kaimuki.
	4/13/2017		Spatially corrected three (3) address points in Kapahulu.
	4/13/2017		Corrected address to two (2) address points (4933 and 4935 Brown Dr) in MCBH.
	4/13/2017		Spatially corrected ninety-eight (98) address points in Waialae.
	4/13/2017		Added one (1) address point (4237 Keanu St) in Waialae.
	4/11/2017		Added one hundred eight (108) address points in AMR.
	4/11/2017		Added one (1) address point (424 Reuben James St) in Pearl Hbr.
	4/7/2017		Added one hundred seventy-five (175) address points in AMR.
Airports			
Bridges			
Building Footprints			
Bus Stops			
Churches			

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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.

Type of Layer	Akimeka GIS Server Date Created/ Edits Performed	Date GIS Delivered	Other/Remarks
OAHU CIVILIAN PSAPS & RDC			
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE **(Listed Alphabetically)**			
Coastal Names			
Coastline			
Common Places		04/14/17	
	4/7/2017		Spatially corrected two (2) points of interest (Tripler Hospital and Tripler PMO) in Tripler.
Correctional Facilities			
Emergency Callboxes			
Emergency Operation Centers			
Emergency Shelters			
ESZ/ESN		04/28/17	
	4/17/2017		Corrected boundary to two (2) ESNs (153 and 162).
Fire Beats			
Fire Districts			
Fire Response Areas		04/28/17	
	4/17/2017		Corrected boundary to two (2) Fire Response Areas (STA16 and STA41).
Fire Stations			
Food & Beverage			
Gas Stations			
Gate Codes			
Government Buildings			
Harbors			
Helipads			
Hiking Trails			
Hospitals			
Hydrants			
Hyrdology Layers			
Incident Response Areas			
Lodging			
Major Roads			
Medic Beats			
Medic Districts			
Medic Response Areas			

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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 & RDC			
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)			
Medic Stations			
Medical Facilities			
Milepost Markers			
MSAG Communities			
Net Junctions			
Ocean Rescue Boundaries			
Ocean Safety			
Parcels			
Parks			
Parks Polygon			
Points of Interest			
Police Beats			
Police Districts			
Police Response Areas			
Police Stations			
Post Offices			
Schools			
Street Centerlines		**04/28/17**	
	4/27/2017		Corrected range to four (4) streets in MCBH.
	4/27/2017		Flipped three (3) segments of Bordelon Loop in MCBH.
	4/27/2017		Merged twelve (12) street segments in MCBH.
	4/27/2017		Corrected speed limit to seven (7) street segments in Waimanalo.
	4/27/2017		Split two (2) segments of Kalanianaole Hwy in Waimanalo.
	4/27/2017		Spatially corrected two (2) segments of Kalanianaole Hwy in Waimanalo.
	4/24/2017		Corrected range to four (4) streets in MCBH.
	4/20/2017		Added eight (8) streets in Waimanalo.
	4/20/2017		Split five (5) streets in Waimanalo.
	4/20/2017		Split two (2) segments of Kalanianaole Hwy in Kailua.
	4/18/2017		Corrected range to four (4) segments of Honeysuckle St in AMR.
	4/18/2017		Flipped three (3) segments of Honeysuckle St in AMR.
	4/18/2017		Corrected street name to three (3) segments of Daly Cir in MCBH.

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.

Type of Layer	Akimeka GIS Server Date Created/ Edits Performed	Date GIS Delivered	Other/Remarks
OAHU CIVILIAN PSAPS & RDC			
CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE **(Listed Alphabetically)**			
Street Centerlines	4/18/2017		Added one (1) new street (Moffett Pl) in MCBH.
		04/14/17	
	4/13/2017		Corrected range to two (2) segments of Brown Dr in MCBH.
	4/11/2017		Added range to two (2) segments of Reuben James St in Pearl Hbr.
	4/10/2017		Corrected one-way to three (3) street segments of Salt Lake Blvd in Aiea.
	4/10/2017		Added twelve (12) street segments in Ewa Beach.
	4/10/2017		Split two (2) segments of Kamakana St in Ewa Beach.
	4/7/2017		Corrected range to four (4) street segments in AMR.
	4/4/2017		Added nine (9) streets in Waimanalo.
	4/4/2017		Split two (2) streets (Kalanianaole Hwy and Saddle City Rd) in Waimanalo.
Subdivisions			
Tow Jurisdictions			
Tsunami Evacuation Zones			
Tsunami Heights			
Waste Water Plants			
WSP Cell Sectors		**04/28/17**	
	4/27/2017		Per AT&T CRS
	4/17/2017		Per AT&T CRS
		04/14/17	
WSP Cell Towers		**04/28/17**	
	4/27/2017		Per AT&T CRS
	4/17/2017		Per AT&T CRS
		04/14/17	

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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
4/28/2017	Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD
4/28/2017	Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD
4/28/2017	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
4/14/2017	Street Centerlines, Common Places, Police Beats, MSAG Communities to HPD for Motorola CAD
4/14/2017	Street Centerlines, Address Points, Fire Response Areas, Medic Response Areas, and Display Address Points to HFD, EMS, and Ocean Safety for TriTech CAD
4/14/2017	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

MAPFLEX SYSTEM

During the month of April 2017, 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 and 2016 years.

1. Akimeka delivered GIS data to the MapFlex system on the following dates in April 2017
    a. **Hawaii County** – April 11th, 2017 and April 25th, 2017
    b. **Maui County** – April 12th, 2017 and April 26th, 2017
    c. **Kauai County** – April 13th, 2017 and April 27th, 2017
    d. **Honolulu** – April 14th, 2017 and April 28th, 2017

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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
7/24/2016	Automatic Uploads Malfunctioning	It was identified that the Automatic uploads were creating issues within the MapFlex systems, where locators were not being published, etc. as a result of a scripting error at West. Manual uploads have been taking place of the GIS as necessary and agreed by all PSAPs.	Pending, however as of April 2017, West/HT has decided to implement a process to upload data the following week after GIS uploads (manually)
7/24/2016	Blank MapFlex Screen	The MapFlex screen went blank and there was no mapping capability, similar to what had occurred with Maui PD. Resulted from West's automatic update script. All of the PSAPs agreed to hold off on all GIS updates in MapFlex until West has resolved the issue.	Resolved (Nov 2016) There have been no reported blank screens
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
8/2016	Text-to-911 Icons	Icons for text calls have stopped displaying. Previously when calls came in as a text call, there would be an icon displaying "TEXT" where the call was plotted.	Resolved (Nov 2016)
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.	Resolved (Dec 2016)
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
1/18/2017	RDC MapFlex	During a meeting between Akimeka and RDC, it was identified that HPD GIS data was contained within the RDC MapFlex and was missing RDC's data. Due to the proprietary nature of the GIS data provided by Akimeka for the civilian PSAP's mapping systems and the confidential information contained to support HPD operations, it was concerning. Actions were taken to request West to stop this and to pull RDC's archive data. West has since replied that they never knew RDC was military and functioned separately from the civilian PSAPs. HPD, RDC, and Akimeka have taken corrective actions to construct GIS data that will be used as a baseline for the RDC and to remove sensitive information supplied for the RDC MapFlex.	Pending – Notified by West in Feb 2017 that they are still planning this with HT and should be able to move forward soon.
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.	A new SP 5.4 update by West is aimed to correct this issue.

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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 November 21, 2016 and January 20, 2017.

Street Utility Check				
	First Report 06/01/13	11/21/2016	1/20/2017	Improvements/Corrections
Total Number of GIS Records	26,602	29,752	29,947	Increased by 195 records
Errors Identified				
Zero Errors	5,112	6	10	Increased by 4 errors
Low > High Errors	3	0	0	No change
Mixed Parity Errors	1	0	2	Increased by 2 errors
Changed Parity Errors	105	0	0	No change
Address Gap Errors	2,629	1	1	No change
Address Overlap Errors	423	1	2	Increased by error
Flipped Link Errors	1,030	277	282	Increased by 5 errors
Total Errors	9,303	285	297	Increased by 7 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.

Akimeka plans to continue its work effort to complete corrections of the discrepancies identified and/or identify any valid exceptions which Akimeka will tag with the proper information so the CAD system will accept the record(s) and not jeopardize the full functionality of the CAD system from the upload to RMS. Akimeka plans to complete all Street Utility Check errors prior to the implementation of the Motorola PremierOne CAD "go live" date.

Due to the MSAG Community and Street Sweep – Phase VII project, Akimeka expects there to be fluctuation in the results of the Street Check Utility moving forward, especially with regards to Zero Errors, Flipped Link Errors, Address Gap Errors, and Address Overlap Errors. These errors are as a direct result of the spatial corrections made on the Street Centerline network, where many new ingress segments are added. The preference is that the system can generate these non-impacting and non-critical errors instead of overriding them beforehand. The errors that are identified through this process are subsequently corrected based on the results of the Street Check.

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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, 2017.

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, 2017, against the PSAP's 911 GIS Street Centerline data. A total number of **7,774** 9-1-1 MSAG records were reviewed in the audit and analyzed. Results of the database synchronization audit completed on April 1, 2017 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 yield a 100 percent match rate. 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 – 2016 – 2017

9-1-1 MSAG TO GIS STREET CENTERLINE AUDIT COMPARISON RESULTS	Notes	As of July 1, 2016 9-1-1 MSAG Dated 7-01-16		As of October 1, 2016 9-1-1 MSAG Dated 10-01-16		As of January 1, 2017 9-1-1 MSAG Dated 1-01-17		As of April 1, 2017 9-1-1 MSAG Dated 4-01-17	
		# of Records	%	# of Records	%	# of Records	%	# of Records	%
Total 9-1-1 MSAG Records Reviewed		7,755		7,754		7,754		7,774	
Less: 9-1-1 MSAG Exception Records	(1)	33	0.4%	35	0.5%	35	0.5%	35	0.5%
Net 9-1-1 MSAG Records Eligible for Comparison		7,722		7,719		7,719		7,739	
Total 9-1-1 MSAG Records Match (9-1-1 MSAG -- GIS Match -- No Corrections Required)		7,718	99.9%	7,718	100.0%	7,708	99.9%	7,732	99.9%
9-1-1 MSAG -- GIS No Match - Minor Correction Required	(2)	3	0.0%	2	0.0%	8	0.1%	2	0.0%
9-1-1 MSAG Record With No Matching GIS Record	(3)	1	0.0%	1	0.0%	3	0.0%	4	0.1%
Total 9-1-1 MSAG Records No Match		4	0.1%	3	0.0%	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 January 2017 with a 99.9% Match Rate to a 99.9% Match Rate as of April 2017.
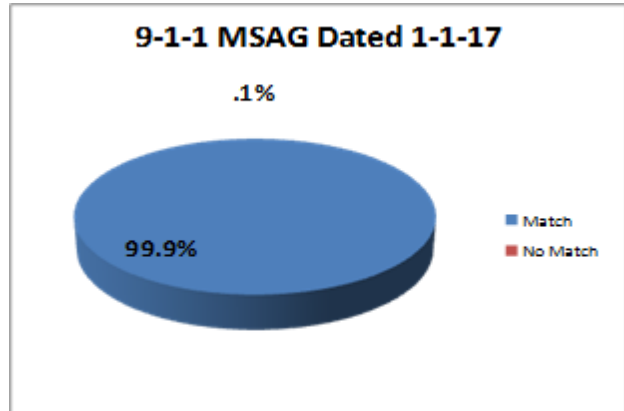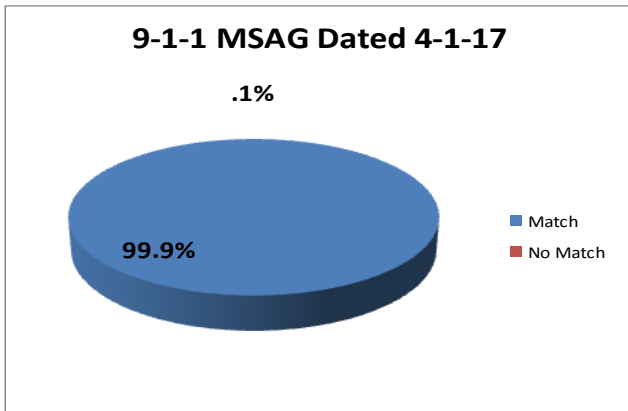
NOTES:

- **(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, 2017 MSAG VS. JANUARY 1, 2017 MSAG

Oahu Civilian's level of accuracy or 9-1-1 Match percentage remained consistent with a

99.9% as of April 1, 2017 compared to 99.9% as of January 1, 2017.

❖ 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 by 75% (8 to 2) from January 2017 to April 2017 respectively. 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, 2017 MSAG VS. JANUARY 1, 2017 MSAG CONTINUED

❖ MSAG Record with No GIS Record" increased (3 to 4) from January 2017 to April 2017. 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 by 69% (13 to 4) from January 2017 to April 2017 respectively. 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 by 75% (12 to 3) from January 2017 to April 2017 respectively. 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 01-01-17		9-1-1 MSAG Dated 04-01-17	
	Number of Records	% of Total Invalid MSAG Records	Number of Records	% of Total Invalid MSAG Records
ESN 199	32	0.4%	30	0.3%

These invalid MSAG records represent **0.3%** of the Total MSAG records for the City & County of Honolulu as of the April 1, 2017 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 28, 2017, there are **356** 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.
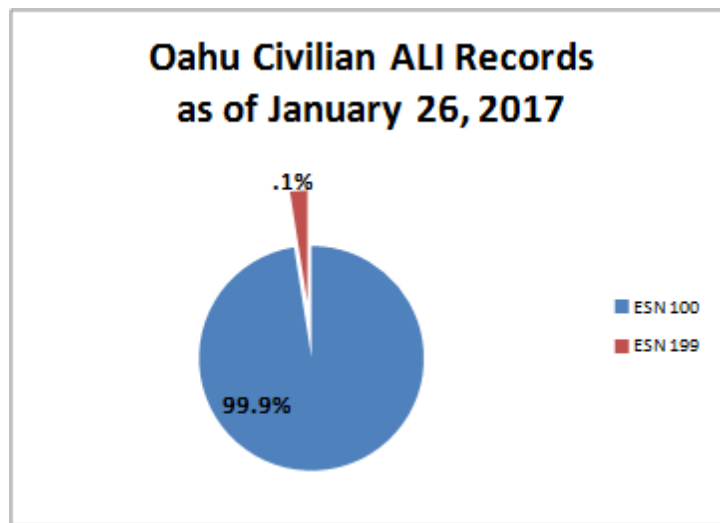
The number of Ali records with an ESN 199 records increased by **4.7%** (340 to 356) from January 2017 to April 2017. The increase was due primarily to Akimeka's effort to identify the invalid MSAG records and verify their correct locations against current County GIS data.

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".

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5. E9-1-1 OAHU MILITARY RDC 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 Military RDC PSAP on April 1, 2017.

The database synchronization effort included comparing Oahu Military's 9-1-1 MSAG received from the 911 Database provider, West Safety Servicers on April 1, 2017, against the PSAP's 911 GIS Street Centerline data. A total number of **2,231** 9-1-1 MSAG records were reviewed in the audit and analyzed. Results of the database synchronization audit completed on April 1, 2017 for the Oahu Military 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 yield a 100 percent match rate. 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.

Oahu Civilian E9-1-1 Status Report

April 1, 2017 - April 30, 2017

AUDIT SUMMARY RESULTS – 2017

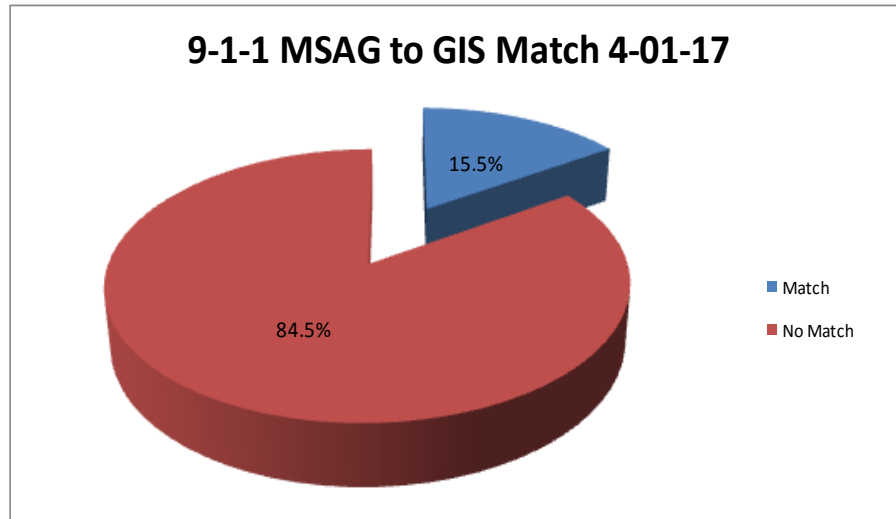| 9-1-1 MSAG TO GIS STREET CENTERLINE AUDIT COMPARISON RESULTS	Notes	As of January 25, 2017		As of April 1, 2017	
		9-1-1 MSAG Dated 1-25-17		9-1-1 MSAG Dated 4-01-17	
		# of Records	%	# of Records	%
Total 9-1-1 MSAG Records Reviewed		3,235		2,231	
Less: 9-1-1 MSAG Exception Records	(1)	0	0.0%	0	0.0%
Net 9-1-1 MSAG Records Eligible for Comparison		3,235		2,231	
Total 9-1-1 MSAG Records Match (9-1-1 MSAG -- GIS Match -- No Corrections Required)		259	8.0%	346	15.5%
9-1-1 MSAG -- GIS No Match - Minor Correction Required	(2)	0	0.0%	842	37.7%
9-1-1 MSAG Record With No Matching GIS Record	(3)	0	0.0%	1,043	46.8%
Total 9-1-1 MSAG Records No Match		0	0.0%	1,885	84.5%

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.**

Oahu Civilian E9-1-1 Status Report

April 1, 2017 - April 30, 2017

AUDIT SUMMARY RESULTS – APRIL 1, 2017 MSAG

The two-way (MSAG – GIS) database synchronization audit for the Oahu Military RDC PSAP was completed as scheduled.

The initial Match Rate is 15.5% as of April 2017.

<u>Objective:</u> NENA Recommended Match Rate = 98%

❖ As agreed between the Military PSAP and Akimeka, Akimeka would initially focus on the <u>existing</u> MSAG and GIS records to produce a match which will benefit the PSAP in the interim.

❖ "MSAG - GIS Minor Corrections" A total of **37.7%** of records require corrections. 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.

❖ "MSAG Record with No GIS Record" A total of **46.8%** of MSAG records need matching GIS records. Records with no matching record was due primarily to the verification of the MSAG records against the single source 9-1-1 GIS database created by Akimeka from the multiple public safety agencies' databases to determine if the roads exist within Military bases GIS records.

❖ 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.

Oahu Civilian E9-1-1 Status Report

April 1, 2017 - April 30, 2017

INVALID MSAG STREETS AND ADDRESS RANGES – ESN 169 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 Military RDC data provided are as follows:

OAHU MILITARY	Invalid MSAG Records			
	9-1-1 MSAG Dated 01-01-17		9-1-1 MSAG Dated 04-01-17	
	Number of Records	% of Total Invalid MSAG Records	Number of Records	% of Total Invalid MSAG Records
ESN 169	97	2.9%	61	2.7%

These invalid MSAG records represent **2.7%** of the Total MSAG records for the Oahu Military PSAP as of the April 1, 2017 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 169 MSAG records as a separate project and add-on to the Database Synchronization quarterly report.

AUTOMATIC LOCATION IDENTIFICATION (ALI) DATABASE DISCREPANCIES

NOTE:

Statistical data will be provided as more jurisdictional Military GIS data becomes available.