November 1, 2019 - November 30, 2019



November 1, 2019 – November 30, 2019

AKIMEKA | HIGH PRIORITY, HIGH IMPACT.

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Hawaii County E9-1-1 Status Report

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1. PSAP OPERATIONS

9-1-1 CALL VOLUME HAWAII COUNTY PSAPS - NOVEMBER 2019

Source: Intrado Viper system

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

| | 9-1-1 Call Volume | | | | | | | | | | | | | | | | |
|---------------------|--------------------------------|-----------------------------|---------------------|-----------------------------|------------------------|-----------------------------------|-----------------------------------|-------------------------|------------------------|-----------------------------------|------------------------|--------------------------|------------------------|------------------------------|------------------------|--------------------------|---------------------|
| HAWAII COUNTY PSAPs | | Wir | eline | Wireless | | | VC |)IP | Calls No | | Admir | Calls | Aband Ca | | Other | Calls | |
| 2019 | 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 |
| NOV | 17,106 | 2,514 | 14.70% | 12,699 | 74.24% | 40.25% | 59.75% | 778 | 4.55% | 4 | 0.02% | 0 | 0.00% | 1,111 | 6.49% | 0 | 0.00% |

CALL VOLUME HAWAII COUNTY PSAP NOTES:

The percentage of Wireless Phase 2 calls (59.75%) has surpassed the number of Wireless Phase 1 calls (40.25%) in November 2019.

 $^{*}911$ Calls with No ALI in November 2019 = 0.02% - Statewide average for 2018 = 0.09%

9-1-1 CALL VOLUME - CALENDAR YEAR 2019

| | | | | | | | 9-1-1 | Call Vo | lume | | | | | | | | | |
|------------|--------------------------------|-----------------------------|---------------------|-----------------------------|------------------------|-----------------------------------|-----------------------------------|-------------------------|------------------------|-----------------------------------|------------------------|--------------------------|------------------------|------------------------------|------------------------|--------------------------|--------------------|--|
| | HAWAII COUNTY PSAPs | | Wireline | | Wireless | | | VC |)IP | Calls v | vith No Ll | Admir | Calls | Aband Ca | doned Ills | Other | ther all alls 0 | |
| 2019 | 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 | Total | |
| JAN | 16,913 | 3,148 | 18.61% | 12,155 | 71.87% | 42.34% | 57.66% | 746 | 4.41% | 14 | 0.08% | 0 | 0.00% | 850 | 5.03% | 0 | 0.00% | |
| FEB | 16,724 | 2,829 | 16.92% | 11,899 | 71.15% | 41.31% | 58.69% | 765 | 4.57% | 13 | 0.08% | 0 | 0.00% | 1,218 | 7.28% | 0 | 0.00% | |
| MAR | 18,089 | 2,946 | 16.29% | 12,950 | 71.59% | 42.12% | 57.88% | 861 | 4.76% | 10 | 0.06% | 0 | 0.00% | 1,322 | 7.31% | 0 | 0.00% | |
| APR | 17,257 | 3,049 | 17.67% | 12,166 | 70.50% | 43.28% | 56.72% | 787 | 4.56% | 13 | 0.08% | 0 | 0.00% | 1,242 | 7.20% | 0 | 0.00% | |
| MAY | 17,912 | 2,768 | 15.45% | 12,996 | 72.55% | 43.80% | 56.20% | 816 | 4.56% | 17 | 0.09% | 0 | 0.00% | 1,315 | 7.34% | 0 | 0.00% | |
| JUNE | 17,668 | 2,638 | 14.93% | 12,986 | 73.50% | 43.21% | 56.79% | 774 | 4.38% | 18 | 0.10% | 0 | 0.00% | 1,252 | 7.09% | 0 | 0.00% | |
| JULY | 18,817 | 2,901 | 15.42% | 13,724 | 72.93% | 44.58% | 55.42% | 761 | 4.04% | 58 | 0.31% | 0 | 0.00% | 1,373 | 7.30% | 0 | 0.00% | |
| AUG | 18,258 | 2,714 | 14.86% | 13,522 | 74.06% | 41.94% | 58.06% | 775 | 4.24% | 12 | 0.07% | 0 | 0.00% | 1,235 | 6.76% | 0 | 0.00% | |
| SEPT | 16,820 | 2,703 | 16.07% | 12,300 | 73.13% | 41.43% | 58.57% | 700 | 4.16% | 13 | 0.08% | 0 | 0.00% | 1,104 | 6.56% | 0 | 0.00% | |
| ОСТ | 17,510 | 2,444 | 13.96% | 13,008 | 74.29% | 42.24% | 57.76% | 798 | 4.56% | 18 | 0.10% | 0 | 0.00% | 1,242 | 7.09% | 0 | 0.00% | |
| NOV | 17,106 | 2,514 | 14.70% | 12,699 | 74.24% | 40.25% | 59.75% | 778 | 4.55% | 4 | 0.02% | 0 | 0.00% | 1,111 | 6.49% | 0 | 0.00% | |
| DEC | | | | | | | | | | | | | | | | | | |
| YTD | 193,074 | 30,654 | | 140,405 | | | | 8,561 | | 190 | | 0 | | 13,264 | | 0 | | |
| MON AVG | 17,552 | 2,787 | 15.90% | 12,764 | 72.71% | 42.41% | 57.59% | 778 | 4.44% | 17 | 0.10% | 0 | 0.00% | 1,206 | 6.86% | 0 | 0.00% | |

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9-1-1 CALL VOLUME BY AGENCY - NOVEMBER 2019

| | | 9-1-1 Call Volume by Agency | | | | | | | | | | | | | |
|----------|--------------------------------------|-----------------------------|--------------------------|---|--------------------------|--------------------------------------|---------------------|--------------------------|--|--------------------------|--|--|--|--|--|
| 2019 | | Hawaii | Police Dep | artment | | | Hawaii | Fire Depa | rtment | | | | | | |
| 2019 | Number of Total Calls Received | % of Total Calls | Number of Admin Calls | Number of Abandoned Dropped Calls | Number of Other Calls | Number of Total Calls Received | % of Total Calls | Number of Admin Calls | Number of Abandoned Dropped Calls | Number of Other Calls | | | | | |
| November | 13,506 | 78.95% | 0 | 1,092 | 0 | 2,489 | 14.55% | 0 | 19 | 0 | | | | | |

9-1-1 CALL VOLUME BY AGENCY - CALENDAR YEAR 2019

| | | | | 9-1-1 | Call Volui | me by Agency | | | | | | | |
|-----------|--------------------------------------|---------------------|--------------------------|---|--------------------------|--------------------------------------|---------------------|-----------------------|--|--|--|--|--|
| 2040 | | Hawaii | Police Dep | partment | | | Hawaii | Fire Depa | rtment | Number of Other Calls 0 0 0 0 0 0 0 0 0 | | | |
| 2019 | Number of Total Calls Received | % of Total Calls | Number of Admin Calls | Number of Abandoned Dropped Calls | Number of Other Calls | Number of Total Calls Received | % of Total Calls | Number of Admin Calls | Number of Abandoned Dropped Calls | | | | |
| January | 13,504 | 79.84% | 0 | 825 | 0 | 2,559 | 15.13% | 0 | 25 | 0 | | | |
| February | 12,962 | 77.51% | 0 | 1,178 | 0 | 2,544 | 15.21% | 0 | 40 | 0 | | | |
| March | 15,426 | 85.28% | 0 | 1,291 | 0 | 2,663 | 14.72% | 0 | 31 | 0 | | | |
| April | 13,670 | 79.21% | 0 | 1,219 | 0 | 2,345 | 13.59% | 0 | 23 | 0 | | | |
| May | 14,041 | 78.39% | 0 | 1,284 | 0 | 2,556 | 14.27% | 0 | 31 | 0 | | | |
| June | 13,908 | 78.72% | 0 | 1,226 | 0 | 2,508 | 14.20% | 0 | 26 | 0 | | | |
| July | 14,731 | 78.29% | 0 | 1,340 | 0 | 2,713 | 14.42% | 0 | 33 | 0 | | | |
| August | 14,573 | 79.82% | 0 | 1,216 | 0 | 2,450 | 13.42% | 0 | 19 | 0 | | | |
| September | 13,410 | 79.73% | 0 | 1,089 | 0 | 2,306 | 13.71% | 0 | 15 | 0 | | | |
| October | 13,732 | 78.42% | 0 | 1,215 | 0 | 2,536 | 14.48% | 0 | 27 | 0 | | | |
| November | 13,506 | 78.95% | 0 | 1,092 | 0 | 2,489 | 14.55% | 0 | 19 | 0 | | | |
| December | | | | | | | | | | | | | |
| YTD | 153,463 | | 0 | 12,975 | 0 | 27,669 | | 0 | 289 | 0 | | | |
| MON AVG | 13,951 | 79.47% | 0 | 1,180 | 0 | 2,515 | 14.34% | 0 | 26 | 0 | | | |

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. Abandoned Calls are **not** included in the % of Total Calls.
- All VoIP (Voice over Internet Protocol) types of 911 calls are combined in the Call Volume statistic.



November 1, 2019 - November 30, 2019

FOR YOUR INFORMATION

| | FYIFor Your Information | | | | | | | | | | |
|------------------------------|---|--------|-------------|--------------|---------|--------|---------|--------|--|--|--|
| | PSAP Operations | | | | | | | | | | |
| | | Ç | Statewide 9 | 11 Call Volս | umes | | | | | | |
| PSAP | PSAP 2018 2017 2016 2015 | | | | | | | | | | |
| Oahu Civilian | 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 | Kauai County 52,623 3.60% 49,902 3.52% 50,955 3.63% 56,874 3.96% | | | | | | | | | | |
| Total | Total 1,464,398 100.00% 1,417,487 100.00% 1,402,759 100.00% 1,436,996 100.00% | | | | | | | | | | |
| *2016 & 2015 Statewide avera | 016 & 2015 Statewide average does not include Military 911 calls | | | | | | | | | | |

TEXT TO 911 - CURRENT MONTH - NOVEMBER 2019

NOTE:

- 911 Text messages received at the Fire Department are transfers from the Police Department.
- 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 Hawaii County PSAPs 2019 | | | | | | | | | | |
|--------------------------------------|-----------|-------------|--|--|--|--|--|--|--|--|
| Month | Received | Received at | | | | | | | | |
| IVIOTITI | at Police | Fire | | | | | | | | |
| January | 29 | 2 | | | | | | | | |
| February | 29 | 3 | | | | | | | | |
| March | 27 | 2 | | | | | | | | |
| April | 20 | 7 | | | | | | | | |
| May | 20 | 2 | | | | | | | | |
| June | 18 | 0 | | | | | | | | |
| July | 21 | 0 | | | | | | | | |
| August | 26 | 4 | | | | | | | | |
| September | 18 | 3 | | | | | | | | |
| October | 17 | 3 | | | | | | | | |
| November | 15 | 0 | | | | | | | | |
| December | | | | | | | | | | |
| YTD | 240 | 26 | | | | | | | | |
| Monthly Avg. | 21.82 | 2.36 | | | | | | | | |

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WIRELESS PSAP TESTING - NOVEMBER 2019

| | HAWAII COUNTY - NOVEMBER 2019 | | | | | | | | | | | |
|----------|-------------------------------|-----------------|-------------------|-------------|-------------------|-----------|--|--|--|--|--|--|
| Date | WSP | Sites Tested | Sectors Tested | Tested By: | Test Pass/Fail | Comments: | | | | | | |
| 11/14/19 | Sprint | 2 | 4 | Hawaii PSAP | Pass | | | | | | | |
| 11/25/19 | Sprint | 1 | 2 | Hawaii PSAP | Pass | | | | | | | |
| | | | | | | | | | | | | |

NOTES:

- There were two (2) scheduled Wireless 911 Test for the month of November 2019.
- Verizon Wireless has completed migrating their Wireless network database from Intrado to ComTech.
- During the 4th quarter of 2018, there was an increasing amount of "MOBL" class of service type of 911 calls delivered to the State of Hawaii PSAPs. On January 15th, 2019, Intrado completed the position source mapping for ComTech which appears to have resolved this issue.

November 1, 2019 – November 30, 2019

2. MSAG (MASTER STREET ADDRESS GUIDE)

MSAG TRANSACTIONS CURRENT MONTH/YEAR – NOVEMBER 2019

| | | | 9 |)-1-1 TR | ANSACT | IONS | | | |
|------------------|-------|---|----------|-----------|------------|-------|-------------------------|---------|-----------------------|
| HAWAII COUNTY | Total | Dispatchable Location Transactions Submitted | MSAG | ALI Suk | omitted | Disc | Open ALI repancy Rec | ords | Customer Addresses |
| 2019 | | DL (A) | MSAG (B) | TN CR (C) | ALI DR (D) | TNCR | ALI DR | VoIP DR | Affected |
| JANUARY | 184 | 157 | 12 | 9 | 6 | 322 | 0 | 0 | 82 |
| FEBRUARY | 61 | 12 | 26 | 17 | 6 | 193 | 0 | 0 | 12 |
| MARCH | 145 | 92 | 22 | 30 | 1 | 359 | 0 | 0 | 370 |
| APRIL | 60 | 25 | 21 | 13 | 1 | 254 | 0 | 0 | 24 |
| MAY | 305 | 278 | 17 | 7 | 3 | 473 | 0 | 0 | 37 |
| JUNE | 129 | 113 | 13 | 2 | 1 | 318 | 0 | 0 | 87 |
| JULY | 140 | 112 | 17 | 10 | 1 | 232 | 0 | 0 | 17 |
| AUGUST | 92 | 70 | 11 | 7 | 4 | 213 | 0 | 0 | 181 |
| SEPTEMBER | 229 | 138 | 27 | 60 | 4 | 165 | 0 | 0 | 2 |
| OCTOBER | 265 | 222 | 22 | 13 | 8 | 313 | 0 | 0 | 335 |
| NOVEMBER | 209 | 179 | 23 | 2 | 5 | 416 | 0 | 0 | 204 |
| DECEMBER | | | | | | | | | |
| TOTAL YTD | 1,819 | 1,398 | 211 | 170 | 40 | 3,258 | 0 | 0 | 1,351 |
| AVG PER MONTH | 165 | 127 | 19 | 15 | 4 | 296 | 0 | 0 | 123 |

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 299 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.



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MSAG CURRENT MONTH NOTES:

A total of **209** MSAG transactions were processed in 9-1-1 Net during the current month. Twenty-three (**23**) requests were processed relating to the MSAG database. 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 Military response areas, and inserting new MSAG records.

There were 204 customer ANI/ALI (telephone number/address) records updated as a direct result.

TELEPHONE RECORD (ALI) TRANSACTIONS CURRENT MONTH NOTES:

Two (2) Telephone Number Change Requests (TN CR) transactions were processed in 9-1-1 Net with valid MSAG addresses, as a result of the ESN 299 clean-up effort and the Dispatchable Location Project. ESN 299 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 from a residence in Pahoa. Four (4) VoIP Dr were submitted as a result of 9-1-1 calls, two (2) from residents in Kurtistown, one (1) from a resident in Kamuela and one (1) from a business in Kailua Kona.

Akimeka submitted one hundred and seventy-nine (179) TN CRs related to the Dispatchable Location Project during the current month

OPEN TELEPHONE RECORD (ALI) DISCREPANCY STATUS:

- There are currently 416 Open TN CR Transactions.
- Refer to chart in the next section "TNCR Current Status"

416 Open TN CR transactions are a direct result of the ESN 299 clean-up and are awaiting approval from Hawaiian Telcom, Inc. Once a telephone number is submitted to Intrado for correction, it is verified against HT records and/or by the customer. Intrado's internal process requires calling each telephone customer individually for verification to update an address in the 9-1-1 database. Akimeka continues to monitor and track the progress of the remaining 416 Referred records.

- There are currently no Open ALI-DRs as of November 30, 2019.
- There is currently no Open VoIP DRs as of November 30, 2019.

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TNCR (TELEPHONE NUMBER CHANGE REQUEST) CURRENT STATUS – NOVEMBER 2019

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 Intrado 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 INTRADO | OPENED TNCRS REFERRED TO TELCO BY INTRADO | TOTAL UNOPENED TNCR RECORDS | | | | | | | |
| HAWAII | 416 | 214 | 151 | 51 | | | | | | | |

STATUS

TOTAL TNCRs SUBMITTED - The total number of TNCR requests for modification that have been submitted in 9-1-1 NET.

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 Intrado Data Analysts assigns this status to a TNCR and the request is referred to the telephone service providers for further research.

<u>TOTAL UNOPENED TNCR RECORDS STATUS</u> - The request is submitted by Akimeka on behalf the PSAP; however, processing by the 9-1-1 Database Service Provider Data Analyst has not begun.



November 1, 2019 – November 30, 2019

DISPATCHABLE LOCATION - STATUS AS OF - NOVEMBER 2019

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 September 2015, Akimeka started a pilot project, entering additional location information to a verified MSAG address with multiple telephone numbers. Specifically the **Kings Shops at 690250 Waikoloa Beach Dr., Waikoloa**. 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. There are a total of 5,423 Dispatchable Locations processed to date. There were 179 Dispatchable locations submitted and 85 were processed in November 2019.

| Dispatchable Location | | | | | |
|-----------------------|--|------------------------|--------------|--|--|
| 2019 | Common Name Place | TNCR* | Transactions | | |
| Quarter 4 | MSAG Address | Transactions Submitted | Processed** | | |
| Quarter 3 Carryover | | 5,665 | 5,171 | | |
| | Four Seasons Hualalai, 720100 Kaupulehu Dr, Kailua Kona | 0 | 35 | | |
| | Hilton Wiakoloa, 690425 Waikoloa Beach Dr, Waikoloa | 110 | 110 | | |
| October | Kings' Shops, 690250 Waikoloa Beach Dr, Waikoloa | 23 | 20 | | |
| October | Queen Market Place, 690201 Waikoloa Beach Dr, Waikoloa | 21 | 0 | | |
| | Pottery Terrace, 755995 Kuakini Hwy, Kailua Kona | 0 | 2 | | |
| | Waimea Center, 651158 Mamalahoa Hwy, Kamuela | 68 | 0 | | |
| | Queen Market Place, 690201 Waikoloa Beach Dr, Waikoloa | 0 | 21 | | |
| | Waimea Center, 651158 Mamalahoa Hwy, Kamuela | 0 | 62 | | |
| November | Kings' Shops, 690250 Waikoloa Beach Dr, Waikoloa | 0 | 1 | | |
| | Matsuyama Food Market, 734353 Hawaii Belt Rd, Kailua Kona | 8 | 0 | | |
| | Crossroads of Kona, Henry St (multi business), Kailua Kona | 171 | 1 | | |
| | | | | | |
| December | | | | | |
| | | | | | |
| Q4 Total | | 401 | 252 | | |
| Total | | 6,066 | 5,423 | | |

November 1, 2019 – November 30, 2019

SPECTRUM (CHARTER) 9-1-1 VOIP DATABASE VERIFICATION PROJECT - NOVEMBER 2019

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

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

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

^{*} Spectrum VoIP Database received on June 21st, 2017

^{**} Akimeka provided VoIP Records with Latitude/Longitude coordinates

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

November 1, 2019 – November 30, 2019

BANDWIDTH 9-1-1 VOIP DATABASE VERIFICATION PROJECT - NOVEMBER 2019

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 | 9-1-1 VoIP Database Verification Project **(Updated) | | | | | | |
| | TOTAL | TOTAL NEW | TOTAL | NON | PERCENT | | |
| | RECORDS | RECORDS | RECORDS | MATCHING | COMPLETED | | |
| PSAP | SUBMITTED BY | VERIFIED WITH | NOT | RECORDS | | | |
| FSAF | BANDWIDTH | 911 DATABASES | MATCHING | CORRECTED | | | |
| | (A) | (B) | | BY AKIMEKA | | | |
| | | | | (C) | | | |
| 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 | OAHU Cilivian 4,065 | | 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

| (A) | VoIP Database records submitted by Bandwidth to Akimeka for research and MSAG address validation. |
|-----|--|
| | 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. |

^{**}Updated Bandwidth VoIP Database received on September 6th, 2018



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3. GEOGRAPHIC INFORMATION SYSTEM (GIS) – NOVEMBER 2019

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.

| | HAWAII COUNTY | | | | | |
|----------------|---|---|--|--|--|--|
| Type of Layer | Akimeka GIS Server Date Created/ Edits Performed | GIS Delivery Dates/Remarks | | | | |
| | CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE | | | | | |
| | | (Listed Alphabetically) | | | | |
| | | Next Delivery 12/03/2019 | | | | |
| | | Corrected spatial for four (4) records in Hawi | | | | |
| | | Verified address for one (1) record in Pahoa | | | | |
| | | Corrected TMK for one (1) record in Kurtistown | | | | |
| | | Corrected spatial and updated routingID for one (1) record in Keaau | | | | |
| | | Corrected spatial for two (2) records in Honokaa | | | | |
| | | Corrected spatial for three (3) records in Captain Cook | | | | |
| | | Corrected spatial and updated routingID for one (1) record in Hawi | | | | |
| | 11/19/19 | Corrected spatial and updated routingID for one (1) record in Hilo | | | | |
| | То | Corrected spatial for eighteen (18) records in Pahoa | | | | |
| | 11/30/19 | Corrected spatial for two (2) records in Ocean View | | | | |
| | | Added POI for one (1) record in Kamuela | | | | |
| | | Corrected spatial for seven (7) records in Kailua Kona | | | | |
| | | Added address for sixteen (16) records in Kamuela | | | | |
| | | Corrected TMK for one (1) record in Keaau | | | | |
| | | Corrected TMK for one (1) record in Pahoa | | | | |
| Address Points | | Corrected spatial for nine (9) records in Hilo | | | | |
| | | Corrected spatial for four (4) records in Keaau | | | | |
| | | Corrected spatial for eight (8) records in Kurtistown | | | | |
| | | Delivered 11/19/2019 | | | | |
| | | Corrected spatial for two (2) records in Hawi | | | | |
| | | Added address for five (5) records in Naalehu | | | | |
| | | Updated routingID for one (1) record in Ocean View | | | | |
| | | Added address for fifteen (15) records in Pahoa | | | | |
| | 11/5/19 | Added address for one (1) record in Pepeekeo | | | | |
| | To | Updated TMK and updated routingID for two (2) records in Kamuela | | | | |
| | 11/18/19 | Corrected spatial and updated routingID for three (3) records in Hilo | | | | |
| | | Corrected spatial for eight (8) records in Pahoa | | | | |
| | | Added address point for one (1) record in Pahala | | | | |
| | | Added address for two (2) records in Waikoloa | | | | |
| | | Added address for three (3) records in Captain Cook | | | | |
| | | Updated TMK, updated routingID for one (1) record in Kamuela | | | | |
| | | Added address for one (1) record in Keauhou | | | | |

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Hawaii County E9-1-1 Status Report

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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.

| | | HAWAII COUNTY |
|----------------|--|---|
| Type of Layer | Akimeka GIS Server Date Created/ | GIS Delivery Dates/Remarks |
| | Edits Performed | |
| | CRITICAL 9-1 | -1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE |
| | | (Listed Alphabetically) |
| | | Updated routingID for one (1) record in Keaau |
| | | Corrected TMK for two (2) records in Volcano |
| | | Added new address point for one (1) record in Kailua Kona |
| | | Added address for three (3) records in Papaikou |
| | | Verified address for one (1) record in Kamuela |
| | | Added address for one (1) record in Holualoa |
| | | Corrected zipcode, added alias for two (2) records in Ocean View |
| | | Updated TMK and corrected spatial for one (1) record in Kailua Kona |
| | | Added address for twelve (12) records in Volcano |
| | | Corrected spatial for sixteen (16) records in Kailua Kona |
| | | Corrected zipcode, for three (3) records in Ocean View |
| | | Corrected spatial for three (3) records in Captain Cook |
| | | Updated routingID for one (1) record in Hilo |
| | | Added address for fifty (50) records in Ocean View |
| | 11/5/19 | Added address for ten (10) records in Hilo |
| | | Added address for one (1) record in Ookala |
| Address Points | То | Corrected TMK for two (2) records in Kailua Kona |
| | 11/18/19 | Corrected spatial for three (3) records in Honokaa |
| | | Added address for three (3) records in Hawi |
| | | Corrected TMK and updated routingID for five (5) records in Kamuela |
| | | Added address for eighteen (18) records in Kailua Kona |
| | | Corrected spatial for four (4) records in Ocean View |
| | | Updated routingID for five (5) records in Kamuela |
| | | Corrected spatial for four (4) records in Mountain View |
| | | Corrected spatial for three (3) records in Keaau |
| | | Updated building for ten (10) records in Kamuela |
| | | Corrected zipcode, approximate location for one (1) record in Kurtistown |
| | | Corrected spatial for ten (10) records in Kamuela |
| | | Corrected spatial for five (5) records in Keauhou |
| | | Added address for twenty-five (25) records in Keaau |
| | | Added address for fifteen (15) records in Mountain View |
| | | Corrected zipcode, added address point for two (2) records in Ocean View |
| | | Corrected location name, updated phone and website, added to AP for one (1) record in Kamuela |



Hawaii County E9-1-1 Status Report

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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.

| | | HAWAII COUNTY | | | | | |
|-------------------------|---|--|--|--|--|--|--|
| Type of Layer | Akimeka GIS Server Date Created/ | GIS Delivery Dates/Remarks | | | | | |
| | Edits Performed | | | | | | |
| | CRITICAL 9-1-1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE | | | | | | |
| | | (Listed Alphabetically) | | | | | |
| | 44/5/40 | Added address for twelve (12) records in Kamuela | | | | | |
| | 11/5/19 To | Added address for two (2) records in Paauilo | | | | | |
| | 11/18/19 | Corrected spatial for ten (10) records in Hilo | | | | | |
| | ,, | Added address for thirty (30) records in Kurtistown | | | | | |
| | | Delivered 11/5/2019 | | | | | |
| | | Corrected routingID for one (1) record in Hilo | | | | | |
| | | Corrected spatial for one (1) record in Kamuela | | | | | |
| | | Corrected TMK for one (1) record in Laupahoehoe | | | | | |
| | | Corrected spatial for three (3) records in Kealakekua | | | | | |
| | | Corrected spatial and updated routingID for one (1) record in Hilo | | | | | |
| | | Corrected spatial for four (4) records in Captain Cook | | | | | |
| Address Points | | Corrected spatial for two (2) records in Naalehu | | | | | |
| Address I office | 44440 | Corrected spatial for three (3) records in Pahoa | | | | | |
| | 11/1/19 To | Added alias for one (1) record in Captain Cook | | | | | |
| | 11/4/19 | Updated address for one (1) record in Kamuela | | | | | |
| | """ | Corrected TMK for four (4) records in Naalehu | | | | | |
| | | Added address point for two (2) records in Naalehu | | | | | |
| | | Corrected spatial for one (1) record in Kailua Kona | | | | | |
| | | Updated address and corrected TMK for one (1) record in Kamuela | | | | | |
| | | Added alias for one (1) record in Laupahoehoe | | | | | |
| | | Corrected spatial for five (5) records in Hilo | | | | | |
| | | Updated routingID for one (1) record in Hilo | | | | | |
| | | Corrected TMK for three (3) records in Kamuela | | | | | |
| | | Added alias for four (4) records in Kailua Kona | | | | | |
| Airports | | | | | | | |
| Bridges | | | | | | | |
| Building Footprints | | | | | | | |
| Bus Stops | | | | | | | |
| Churches | | | | | | | |
| Coastal Names | | | | | | | |
| Coastline | | | | | | | |
| Common Places | | | | | | | |
| Correctional Facilities | | | | | | | |

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MAPPING LAYERS UPDATED (PART IV)

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

| | | HAWAII COUNTY |
|-------------------------|---|--|
| Type of Layer | Akimeka GIS Server Date Created/ Edits Performed | GIS Delivery Dates/Remarks |
| | CRITICAL 9-1 | -1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE |
| | | (Listed Alphabetically) |
| Emergency Callboxes | | |
| Emergency Operation | | |
| Centers | | |
| Emergency Shelters | | |
| ESZ/ESN | | |
| Fire Beats | | |
| Fire Districts | | |
| Fire Response Areas | 11/19/19 To 11/30/19 | Next Delivery 12/03/2019 Merged 1805 and 1810 boundaries for one (1) record |
| 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 | | |
| Medic Stations | | |
| Medical Facilities | | |
| Milepost Markers | | |
| MSAG Communities | | |
| Net Junctions | | |
| Ocean Rescue Boundaries | | |
| Ocean Safety | | |
| Parcels | | |



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MAPPING LAYERS UPDATED (PART V)

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.

| HAWAII COUNTY | | | | |
|-----------------------|----------------------------------|--|--|--|
| Type of Layer | Akimeka GIS Server | GIS Delivery Dates/Remarks | | |
| Type of Enjer | Date Created/ Edits Performed | SIS DELIVERY DUTES/REMAINS | | |
| | CRITICAL 9-1 | -1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE | | |
| | | (Listed Alphabetically) | | |
| Parks | | | | |
| Parks Polygon | | | | |
| Points of Interest | | | | |
| Police Beats | | | | |
| Police Districts | | | | |
| Police Response Areas | | | | |
| Police Stations | | | | |
| Post Offices | | | | |
| Schools | | | | |
| | | Corrected spatial, added two (2) records in Kamuela Updated range for ten (10) records in Kapaau Updated range for one (1) record in Kealakekua Split segment for and updated range for one (1) record in Paauilo Split segment for and updated range for two (2) records in Hilo Split segment for and updated range for two (2) records in Kamuela | | |
| | | Added segment for one (1) record in Holualoa | | |
| | | Updated range for two (2) records in Holualoa | | |
| | 11/5/19 | Updated street name for four (4) records in Kamuela | | |
| | То | Added segment for three (3) records in Hilo | | |
| Street Centerlines | 11/18/19 | Updated range for two (2) records in Paauilo | | |
| | | Split segment for, updated range and extended segment for two (2) records in Ninole | | |
| | | Corrected spatial, corrected range & corrected spatial for one (1) record in Kapaau | | |
| | | Extended segment three (3) records in Hilo | | |
| | | Updated range for one (1) record in Papaikou | | |
| | | Updated range for two (2) records in Kamuela | | |
| | | Added segment for four (4) records in Kamuela | | |
| | | Updated police, corrected spatial for one (1) record in Kealakekua | | |
| | | Added segment for one (1) record in Ninole | | |
| | | Split segment for one (1) record in Paauilo | | |
| | 11/1/19 To | Delivered 11/5/2019 | | |
| | 11/4/19 | Updated range for one (1) record in Kamuela | | |

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MAPPING LAYERS UPDATED (PART VI)

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.

| | HAWAII COUNTY | | | | |
|--------------------------|---|---|--|--|--|
| Type of Layer | Akimeka GIS Server Date Created/ Edits Performed | GIS Delivery Dates/Remarks | | | |
| | CRITICAL 9-1 | -1 PUBLIC SAFETY LAYERS FOR DISPATCH & RESPONSE | | | |
| | | (Listed Alphabetically) | | | |
| Subdivisions | | | | | |
| Tow Jurisdictions | | | | | |
| Tsunami Evacuation Zones | | | | | |
| Tsunami Heights | | | | | |
| Waste Water Plants | | | | | |
| Water Fire | 11/19/19 To | Next Delivery 12/03/2019 | | | |
| water The | 11/30/19 | Merged w1810 and w1805 and updated zone code for one (1) record | | | |
| | 11/19/19 To | Next Delivery 12/03/2019 | | | |
| | 11/30/19 | Added ten (10) sectors per Sprint CRS | | | |
| | 11/5/19 | Delivered 11/19/2019 | | | |
| WSP Cell Sectors | To | Added twelve (12) sectors per Verizon Wireless CRS | | | |
| Wer den decision | 11/18/19 | Added eight (8) sectors per AT&T CRS | | | |
| | | Updated three (3) sectors per Verizon Wireless CRS | | | |
| | 11/1/19 To | Delivered 11/5/2019 | | | |
| | 11/4/19 | Added six (6) sectors per AT&T CRS | | | |
| | 11/19/19 To | Next Delivery 12/03/2019 | | | |
| | 11/30/19 | Added three (3) towers per Sprint CRS | | | |
| | 11/5/19 | Delivered 11/19/2019 | | | |
| WSP Cell Towers | To | Updated one (1) tower per Verizon Wireless CRS | | | |
| | 11/18/19 | Added one (1) tower per Verizon Wireless CRS | | | |
| | | Updated one (1) tower per AT&T CRS | | | |
| | 11/1/19 To | Delivered 11/5/2019 | | | |
| | 11/4/19 | Updated two (2) towers per AT&T CRS | | | |



November 1, 2019 – November 30, 2019

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 |
|------------|---|
| 11/21/2019 | Delivered Text2911 boundary, consisting of 35 mile buffer around the coastline |
| | less the area closer to Maui, for Hawaii county for use in RapidSOS Lite. |
| 11/19/2019 | Delivered Address Points, Cell Sectors, Cell Towers, Points of Interest, Street |
| | Centerlines, ESN, and MSAG Communities, Fire Hydrants, |
| | MedicResponseAreas, FireResponseAreas for Hawaii County Mapflex |
| 11/19/2019 | Delivered Address Points, City, Common Names Alt Table, Display Streets, Fire |
| | EMS Zone, First In, Points of Interest, POI Alt Names, Police Zones, Street |
| | Centerlines, Street Alt Names, Street Routes, Fire Beats, Medic Beats (Medic |
| | Response Areas) and FireHydrants for Hawaii County Spillman. |
| 11/5/2019 | Delivered Address Points, Cell Sectors, Cell Towers, Points of Interest, Street |
| | Centerlines, ESN, and MSAG Communities, Fire Hydrants, |
| | MedicResponseAreas, FireResponseAreas for Hawaii County Mapflex |
| 11/5/2019 | Delivered Address Points, City, Common Names Alt Table, Display Streets, Fire |
| | EMS Zone, First In, Points of Interest, POI Alt Names, Police Zones, Street |
| | Centerlines, Street Alt Names, Street Routes, Fire Beats, Medic Beats (Medic |
| | Response Areas) and FireHydrants for Hawaii County Spillman. |

LAVA FLOW AND ALTERNATE ROUTES

Historical events are archived in the 2018 Monthly Status Reports.

Akimeka will resume to deliver updates should the event start up again.

FIRE DEPARTMENT IMT (INCIDENT MANAGEMENT TEAM) MAP

Historical events are archived in the 2018 Monthly Status Reports.

Akimeka will update these GIS layers upon request by the Hilo Fire Department.

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ADDRESS POINTS AND STREET CENTERLINES UPDATE COMPARISON

On a routine basis, upon receipt of Hawai'i County Planning Department's Address Points and Street Centerlines layer updates, Akimeka compares and incorporates any of the County's additions, changes, and deletions into the Akimeka Address Points and Street Centerlines layers that appear necessary for the dispatch and response of 911 personnel.

The new Address Points and Street Centerlines geodatabase comparative analysis was received from the Hawai'i County Planning Department on **November 20, 2019**. A new compare process was developed by Akimeka to perform this analysis.

| HAWAII COUNTY | Address Points Layer | Street Centerlines Layer | | |
|-------------------------------|-------------------------|-----------------------------|--|--|
| New Addresses Added | 207 | | | |
| Addresses Removed | 11 | | | |
| Address Street Name Changes | 0 | | | |
| Address Street Number Changes | 1 | | | |
| New Street Segments Added | | 5 | | |
| Street Segments Removed | | 2 | | |
| Street Segment Range Changes | | 22 | | |
| Street Segment Name Changes | | 0 | | |

NOTE:

Some Address Points have multiple updates that are required, including Street Name and Street Number. These updates are counted as separate actions since the changes are required in order to make the GIS layers "9-1-1 capable" for CAD system recommendations affecting public safety dispatch and response operations.

CAD SYSTEM DEPLOYMENT

On September 18th, 2018, the Hawaii Police and Fire Department went live on the new Spillman CAD and mapping systems. There have been no major GIS data configuration changes requested. Historical events are archived in the 2018 Monthly Status Reports.

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MAPFLEX SYSTEM

Akimeka delivered GIS data to the MapFlex system on the following dates in November 2019

Hawaii County – November 5th, 2019 and November 19th, 2019 **Maui County** – November 6th, 2019 and November 20th, 2019 **Kauai County** – November 7th, 2019, and November 21st, 2019 **Honolulu** – November 8th, 2019, and November 22nd, 2019



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MAPFLEX ISSUES

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

| DATE | ISSUE | DESCRIPTION | STATUS |
|-----------|---------------------------------------|---|--|
| 8/2016 | Wireless Addresses | MapFlex system began displaying wireless information incorrectly. MapFlex system is doing a reverse query for additional information in the GIS and this is overriding the ALI information with the closest address in the GIS. | Partially Resolved (Nov 2016) The overriding ALI with updated Lat/Longs from the GIS is still occurring |
| 11/2016 | Phase I Display | Wireless Phase I calls plotting at centroid of coverage area and landing in the ocean. After installation of new MapFlex version to correct other issues, the configurations for Wireless Phase I were not set up properly by Intrado, 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 Intrado. Intrado 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 Intrado 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 Intrado 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. | Intrado 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 |

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| 6/27/2018 | Moving Labels | It was brought up during the PSAP teleconference with | Pending |
|-----------|---------------|--|---------|
| | | Hawaiian Tel and Intrado 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. | |

November 1, 2019 – November 30, 2019

4. SERVICE REQUESTS TRANSACTIONS

OPEN SERVICE REQUESTS – NOVEMBER 2019

| # | Date | Ticket# | Description | PSAP | Urgency | Comments |
|---|------------|---------|-------------------|-------------|---------|--|
| 1 | 1/23/2019 | 1007 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from Inteliquent.com 11/30/2019 JBC |
| 2 | 9/30/2019 | 1013 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from Inteliquent.com 11/30/2019 JBC |
| 3 | 9/30/2019 | 1014 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from DL-911All@centurylink.com 11/30/2019 JBC |
| 4 | 10/3/2019 | 1015 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from DL-911All@centurylink.com 11/30/2019 JBC |
| 5 | 10/15/2019 | 1017 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from Time Warner Cable 11/30/2019 JBC |
| 6 | 11/6/2019 | 1019 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from Time Warner Cable 11/30/2019 JBC |
| 7 | 11/8/2019 | 1020 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from Time Warner Cable 11/30/2019 JBC |
| 8 | 11/8/2019 | 1021 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from Time Warner Cable 11/30/2019 JBC |
| 9 | 11/25/2019 | 1022 | Incorrect Address | Hawaii Fire | Normal | Confirmation pending from Inteliquent.com 11/30/2019 JBC |

Note* There are nine (9) opened service request pending for November 2019.

SERVICE REQUEST YEAR-TO-DATE (YTD) SUMMARY - 2019

| H | MSAG SERVICE REQUEST CATEGORIES | | | | | | | | |
|-----------------|---------------------------------|--------|------|---------|----------|---------|----------|---------|--------|
| 2019 | TOTAL | | 0 | WIRE | WIRELINE | | WIRELESS | | IP |
| 2019 | Created | Closed | Open | Created | Closed | Created | Closed | Created | Closed |
| 2018 Carryover* | | | 0 | | | | | | |
| January | 6 | 5 | 1 | 2 | 2 | 0 | 0 | 3 | 2 |
| February | 6 | 4 | 3 | 3 | 3 | 0 | 0 | 3 | 1 |
| March | 1 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 |
| April | 1 | 3 | 1 | 1 | 1 | 0 | 0 | 0 | 2 |
| May | 3 | 3 | 1 | 3 | 3 | 0 | 0 | 0 | 0 |
| June | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| July | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| August | 4 | 2 | 3 | 1 | 1 | 0 | 0 | 3 | 1 |
| September | 4 | 1 | 6 | 1 | 1 | 0 | 0 | 3 | 0 |
| October | 8 | 2 | 12 | 2 | 2 | 0 | 0 | 6 | 0 |
| November | 5 | 8 | 9 | 1 | 1 | 0 | 0 | 4 | 7 |
| December | | | | | | | | | |
| TOTAL | 40 | 31 | 9 | 17 | 17 | 0 | 0 | 22 | 13 |

* The 2018 Carryover row indicated the number of Service Requests that were opened in 2018 and brought forward into 2019 in an effort to track the service request until completion.

Detailed information on service tickets are available upon request.

| | Category | Description | | |
|---------------------|----------|---|--|--|
| | Wireline | Telephone Number (ALI) Discrepancies from land line phones that have been submitted to Intrado via 9-1-1 Net for correction. | | |
| <u>Definitions:</u> | 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. | | |
| | VolP | Telephone Number (ALI) Discrepancies from VoIP phones that have been submitted to Time Warner Cable (TWCBL) or other VoIP providers for correction | | |



Hawaii County E9-1-1 Status Report

November 1, 2019 – November 30, 2019

5. E9-1-1 DATABASE SYNCHRONIZATION

(<u>Reference:</u> 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 quarterly database synchronization audit for Hawaii County in **November 2019**.

The database synchronization effort included comparing Hawaii County's 9-1-1 MSAG against its GIS Street Centerline data. A total number of **4,631** 9-1-1 MSAG records were reviewed in the audit and analyzed. Results of the database synchronization audit completed on November 1, 2019 for Hawaii 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%.

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 it ongoing maintenance process. Results of the database synchronization audit will be included and reported in the Monthly Status Report (MSR) accordingly.

November 1, 2019 – November 30, 2019

AUDIT SUMMARY RESULTS - NOVEMBER 2019

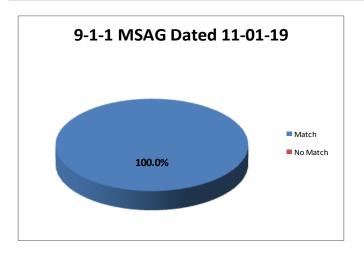
| | | As of February 1, 2019 | | As of May 1, 2019 | | As of August 1, 2019 | | As of November 1, 2019 | |
|--|-------|-----------------------------|-------|-----------------------------|--------|-----------------------------|--------|------------------------------|--------|
| 9-1-1 MSAG TO GIS STREET CENTERLINE AUDIT COMPARISON RESULTS | Notes | 9-1-1 MSAG Dated 2-01-19 | | 9-1-1 MSAG Dated 5-01-19 | | 9-1-1 MSAG Dated 8-01-19 | | 9-1-1 MSAG Dated 11-01-19 | |
| | | # of Records | % | # of Records | % | # of Records | % | # of Records | % |
| Total 9-1-1 MSAG Records Reviewed | | 4,578 | | 4,592 | | 4,595 | | 4,631 | |
| Less: 9-1-1 MSAG Exception Records | (1) | 45 | 1.0% | 44 | 1.0% | 44 | 1.0% | 44 | 1.0% |
| Net 9-1-1 MSAG Records Eligible for Comparison | | 4,533 | | 4,548 | | 4,551 | | 4,587 | |
| Total 9-1-1 MSAG Records Match (9-1-1 MSAG GIS Match No Corrections Required) | | 4,515 | 99.6% | 4,547 | 100.0% | 4,551 | 100.0% | 4,587 | 100.0% |
| 9-1-1 MSAG GIS No Match Minor Correction Required | (2) | 11 | 0.2% | 1 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 9-1-1 MSAG Record With No GIS Record | (3) | 7 | 0.2% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Total 9-1-1 MSAG Records No Match | | 18 | 0.4% | 1 | 0.0% | 0 | 0.0% | 0 | 0.0% |

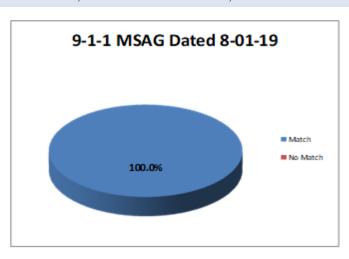
Notes:

- (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.

November 1, 2019 – November 30, 2019

AUDIT SUMMARY RESULTS COMPARISION - NOVEMBER 1, 2019 VS AUGUST 1, 2019





November 2019

NOTE:

Hawaii County

Hawaii County's level of accuracy or 9-1-1 Match percentage remained consistent from 100% as of November 1, 2019 to 100% as of August 1, 2019 NENA Recommended Match Rate = 98%

AUDIT SUMMARY RESULTS

COMPARISON NOTES:

- There continues to be a tremendous work effort to synchronize the MSAG and GIS data. Akimeka continues to work closely with County Planning to address problem areas. Hawai'i County has worked very hard to assign addresses and name and range street centerlines which have helped facilitate Akimeka's synchronization efforts.
- * "MSAG MSAG with Missing GIS Records" remained consistent from zero (0) to zero (0) records from August 2019 to November 2019. MSAG records with missing record were zero due primarily to the verification of the MSAG records against multiple GIS databases to determine if the roads are existing within Hawaii County.
- * "MSAG GIS Minor Corrections" remained consistent from zero (0) to zero (0) records from August 2019 to November 2019. The non-match condition of the eleven records are a result in which MSAG records submitted in 9-1-1 Net were not completed prior to the end of month.
- * "GIS Record with No Matching MSAG Record" remained consistent from zero (0) to zero (0) records from August 2019 to November 2019. This includes GIS records that have no MSAG records, and/or GIS records that do not match the MSAG record exactly.
- * "GIS Record with No MSAG Record" remained consistent from zero (0) to zero (0) records from August 2019 to November 2019. This was primarily the result of edits made to the GIS Street Centerlines layer in order to meet new NG9-1-1 requirements.
- Ongoing maintenance is critical to ensure the database synchronized level of address accuracy is maintained each time an MSAG or GIS record is "touched".

November 1, 2019 – November 30, 2019

INVALID MSAG STREETS AND ADDRESS RANGES - ESN X99 RECORDS

At the request of the County of Hawai'i Chief of Police, Hawaiian Telcom, Inc. (HTI) provided Hawai'i County 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. Results of the data provided are as follows:

| | Invalid MSAG Records | | | | | | | | | |
|---------|---------------------------|---------------------------------------|---------------------------|---------------------------------------|---------------------------|---------------------------------------|---------------------------|---------------------------------------|--|--|
| | 9-1-1 MSAG Dated 02-01-19 | | 9-1-1 MSAG Dated 05-01-19 | | 9-1-1 MSAG Dated 08-01-19 | | 9-1-1 MSAG Dated 11-01-19 | | | |
| HAWAII | Number of Records | % of Total Inlavid MSAG Records | | |
| ESN 299 | 199 | 4.2% | 188 | 4.0% | 177 | 3.7% | 152 | 3.2% | | |

These invalid MSAG records represent 3.2% of the Total MSAG records for Hawai'i County. The individual ALI records associated with these records are provided below.

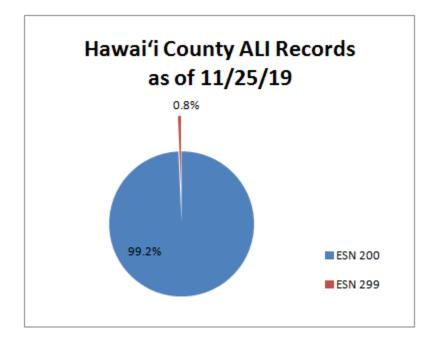
TN CRs are submitted by Akimeka when valid MSAG addresses are identified and validated against the GIS data. Akimeka will continue to investigate and report on these ESN 299 MSAG records as a separate project and add-on to the Database Synchronization quarterly report.

Hawaii County E9-1-1 Status Report

November 1, 2019 – November 30, 2019

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 Hawai'i County. As of November 25, 2019, 523 ESN 299 records, representing .8% of Hawai'i County's total ALI records, require research and corrective action, if needed. These ALI discrepancy reports may result in a No Record Found (NRF) condition during a 9-1-1 call.



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