



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
ANNUAL REPORT ON  
THE ENHANCED 9-1-1 BOARD  
FOR THE PERIOD OF  
JULY 1, 2017 THROUGH JUNE 30, 2018

SUBMITTED TO  
THE TWENTY-NINTH LEGISLATURE  
IN RESPONSE TO SECTION 138-6, HAWAII REVISED STATUTES

**STATE OF HAWAII  
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FOR THE PERIOD OF JULY 1, 2017 THROUGH JUNE 30, 2018**

**Pursuant to Section 138-6, HRS, the Enhanced 9-1-1 (E911) Board (the Board) shall submit an annual report to the legislature no later than twenty days prior to convening of each regular session. The Enhanced 9-1-1 Fund is comprised of monthly surcharges imposed on every commercial mobile radio and VoIP service connection. For the purposes of this report, the Enhanced 9-1-1 Fund will be referred to as “the Fund”, the Public Safety Answering Points as “PSAPs”, the Wireless connection service providers as “WSPs”, and the Voice over Internet Protocol connection service providers as “VoIPs”.**

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## I. Executive Summary

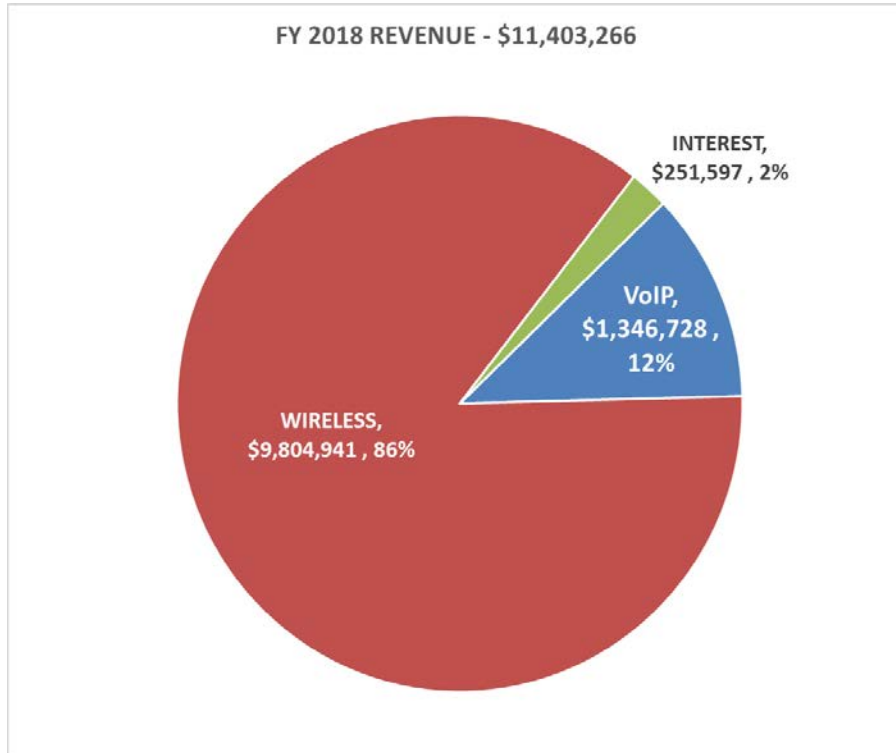
Act 168/SLH 2011 (the Act) created an Enhanced 9-1-1 Board (the Board) on June 27, 2011 which is administratively attached to Department of Accounting and General Services (DAGS). The Enhanced 9-1-1 Board supersedes the Wireless Enhanced 9-1-1 Board created by Act 159/SLH 2004.

The purpose of the Enhanced 9-1-1 Board is to manage, administer, provide technical expertise and perform fiscal duties necessary for the collection of 9-1-1 surcharge tax revenue. The Board manages distribution of the Fund in accordance with the law to the five primary and two secondary county public safety answering points in Hawaii and the wireless carriers providing service to the public. The Enhanced 9-1-1 Fund is established outside the state treasury as a special fund.

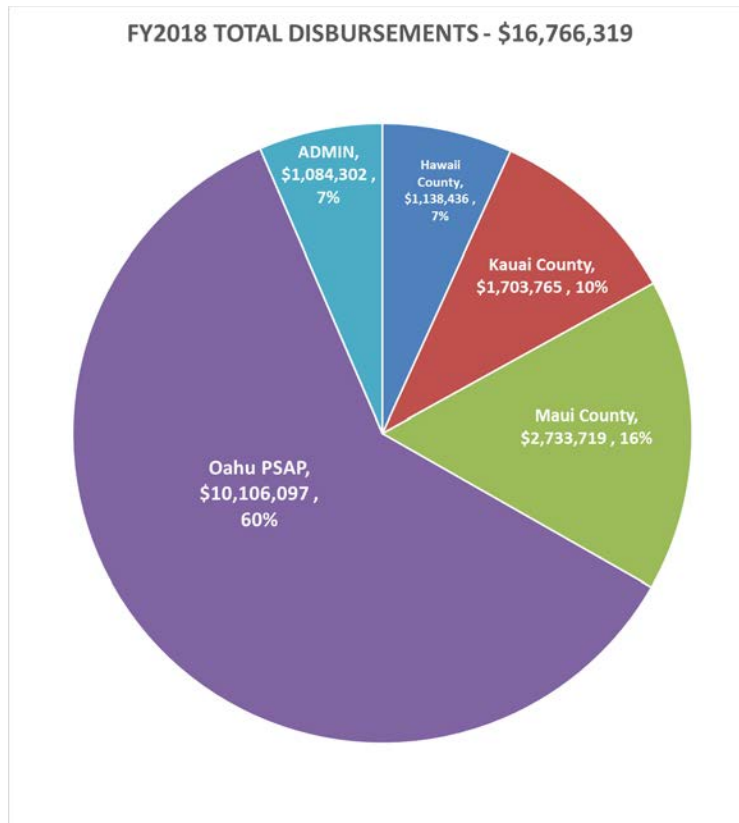
The Enhanced 9-1-1 Board is comprised of thirteen members appointed by the Governor. The members of the Board represent each county PSAP, three wireless service providers, one VoIP representative, Hawaiian Telcom, City & County of Honolulu and two permanent seats consisting of the Director, State Department of Consumer Affairs and the State Chief Information Officer. The current board members are:

- John Jakubczak, Assistant Chief of Police, Maui County Police Department, E911 Board Chair.
- Ken Bugado, Deputy Chief of Police, Hawaii County Police Department, E911 Board Vice Chair.
- Nani Blake, Sprint Service Provider Representative.
- Dean Rickard, Deputy Chief of Police, Maui County Police Department.
- Elliott K. Ke, Captain Kauai Police Dept., Kauai County (awaiting appointment)
- Francis Alueta, Hawaiian Telcom Service Provider Representative.
- Mark Wong, City & County of Honolulu, Chief Information Officer.
- Thalia Burns, Honolulu Police Department, Technical Committee Chair.
- Dean Nishima, Director, State of Hawaii, Department of Consumer Affairs.
- Todd Nacapuy, State of Hawaii, Chief Information Officer.
- Jeffrey Riewer, Hawaii Lead Engineer Network Sales Support, AT&T.
- Kiman Wong, VoIP Service Provider Representative.
- Corey Shaffer, Verizon Service Provider Representative.

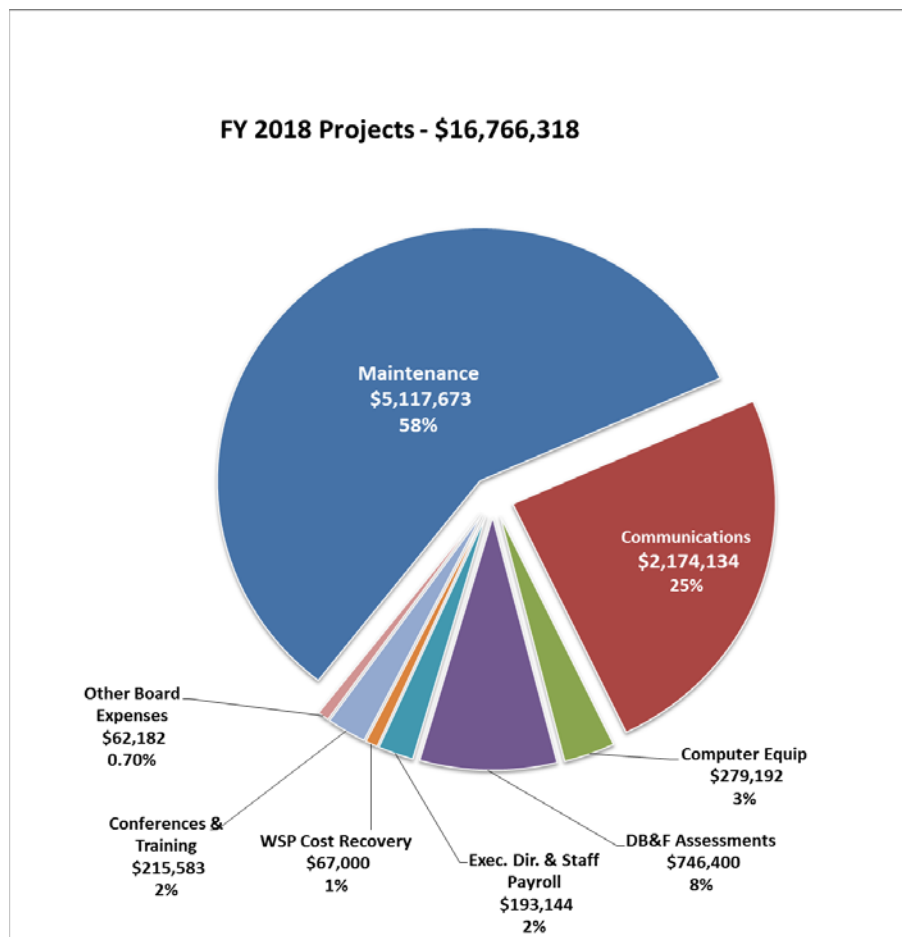
**II. The total aggregate surcharge collected by the Fund in FY 2018.**



III. The amount and recipient of the disbursements from the Fund in FY 2018.



**IV. Projects for which the money was disbursed in FY2018.**



## **V. Project Descriptions**



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Item	Amount	Description of Disbursements	Recipient
		<b>Computer Hardware/Software/CADS</b>	
Computer Hardware and Software	\$ 8,183,003	Maui and Honolulu Counties are undergoing modernization of its CAD systems for its PSAP to continue to provide first responders with the services necessary to assist in the rescue of its endangered citizens and visitors.	Maui & Oahu PSAPs
		<b>Maintenance</b>	
Program Mgt. Consulting Services	\$ 3,260,122	Akimeka, LLC provides continued Enhanced 911 Program Management Services and Geographic Information Systems Services for the counties of Hawaii, Maui, Honolulu and Kauai. The services rendered include: 1. Program mgmt. support. 2. PSAP Day-to-Day Operational support. 3. Geographic Information System (GIS) services. 4. Master Street Address Guide (MSAG) services. 5. Database synchronization. Benefits include: 1. Up-to-date location information on emergency calls received by the respective dispatch center. 2. Current GIS information. 3. Coordination for implementation and testing of new additions to the network with wireline, wireless, VoIP and Telemetric service providers. 4. Dealing with only one company with which to coordinate activities and issues.	Hawaii, Maui, Kauai and Oahu PSAPs
Logging Recorder	\$ 60,775	Logging recorders seamlessly retrieve audio and data from radio and telephony communications recreating communications around an incident, just as it happens.	Oahu PSAP
Imagery Data Base	\$ 135,572	Pictometry database software is a powerful tool for the first responder which provides detailed imagery of every square foot of a region and can navigate quickly and easily between views of a map to images associated with its specific features contained within images such as doors, manholes, fences, and fire hydrants. With this capability, first responders may be directed to the emergency in the most direct route and in the case of high rise buildings, the software will acknowledge any obstacles that may impede a rapid response.	Kauai, Hawaii, Maui and Oahu PSAPs
Computer Hardware and Software Maintenance	\$ 1,661,205	Maintenance support from vendors is essential to keep hardware and software running efficiently and provide immediate troubleshooting support.	Hawaii, Maui, Kauai and Oahu PSAPs
	\$ 5,117,673	Subtotal Maintenance	

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<b>Item</b>	<b>Amount</b>	<b>Communications</b>	<b>Recipient</b>
<i>Telecom Service Connections</i>	2,056,623	Hawaiian Telcom tariff, network and equipment costs necessary for PSAPs to receive Enhanced 911 calls.	Hawaii, Maui, Kauai and Oahu PSAPs
<i>SMART 911 Database Software</i>	\$ 117,511	SMART911 Database software provides first responders with the ability	
<i>EMS Tower Lease</i>	\$ 7,200	EMS tower lease provides network connections between EMS facility at the airport to the City's data center at the FASI Municipal Building to connect the EMS PSAP with other Oahu PSAPs in order to share data and information.	Oahu PSAP
	\$ 2,181,334	Subtotal Communications	
		<b>Conferences &amp; Training</b>	
<i>New &amp; Emerging Technology Training</i>	\$ 200,006	Conferences & Training attended by PSAPs offers an effective opportunity to stay abreast of national standardization efforts and receive training in day-to-day operational 9-1-1 issues impacting their PSAPs, specifically in regards to new and emerging technologies. In addition, it provides networking opportunities with subject matter experts and with fellow PSAPs in the US and worldwide.	Hawaii, Maui, Molokai, Kauai, and Oahu PSAPs
	\$ 15,682,017	Subtotal PSAP Expenses	

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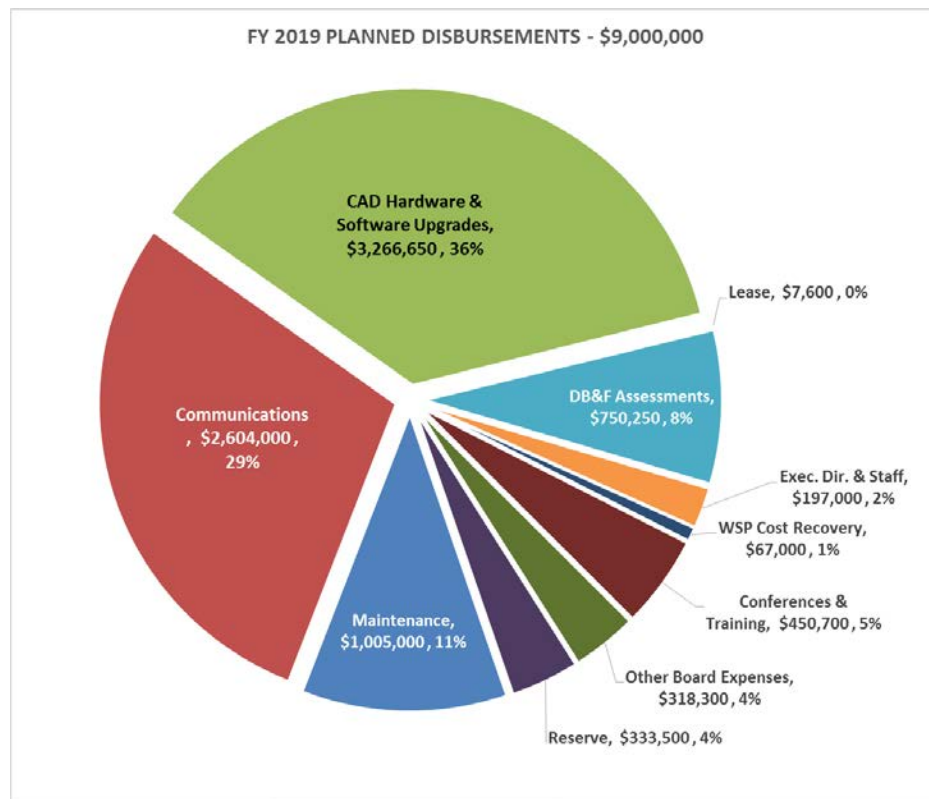
Item	Amount	E911 Board Administrative Expenses	Recipient
Revenue Assessment	\$ 652,481	Dept. of Budget & Finance Revenue Assessment : Authorized under §36-27, HRS.; 5% of total revenue.	State of Hawaii General Fund
Administrative Assessment	\$ 93,919	Dept. of Budget & Finance Administrative Assessment: Authorized under §36-30, HRS; 2.168% of total E911 Fund disbursements.	State of Hawaii General Fund
	\$ 746,400	Subtotal DB&F Assessments	
E911 Executive Director & Staff Payroll	\$ 193,144	The Executive Director and Staff positions provide essential support to the Board which includes: 1. to carry legislative agenda, policy and regulatory support to PSAPs. 2. Lead the statewide initiative on new and emerging 911 technologies. 3. Accounting. 4. Surcharge revenue collection services. 5. Banking relations. 6. Drafting Legislation. 7. Board & Committee Agendas and Minutes. 8. Supervision of Audits. 9. Cash Disbursements. 10. Record keeping. 11. Provide expert counsel on E911 issues. 12. Budget & Planning. 13. Strategic Planning.	State of Hawaii Payroll
WSP Cost Recovery	\$ 67,000	WSP Cost Recovery: Authorized under §138-5 HRS, requires that 1/3rd of the net proceeds of the WSP surcharge revenue (after Board administrative expenses) are to be set aside for potential cost recovery claims by the WSPs and VoIP service providers.	Sprint
Other Board of Directors Admin Expenses:	\$ 32,110	Board & Committee Member Travel Expenses (interisland) for required attendance of neighbor island PSAPs at the Board and sub Committee meetings held in Honolulu.	Hawaii, Maui, Molokai, Kauai PSAPs
	\$ 13,000	Independent CPA Audit services to perform an annual audit in accordance with generally acceptable accounting principles (GAAP).	EGAMI & ICHIKAWA, CPAs, Inc.
	\$ 15,576	New & Emerging Technologies Conference expenses necessary to keep administrative personnel abreast of current and future issues regarding public safety and administration.	NENA, APCO, NASNA
	\$ 8,518	Office Supplies/Xerox Copier/Office Equipment	Various Vendors
	\$ 853	Phone Charges	T-Mobile
	641	IntraState Travel for operations review of neighbor island PSAPs.	Hawaii, Maui, and Kauai PSAPs
	\$ 291	Electronic Signature Software to allow Board authorized signatories to approve disbursements or other documents remotely.	DocuSign
	\$ 6,768	Other ADMIN Expenses	Various Vendors
\$ 1,084,302	Subtotal Board Administrative Expenses		
7,200	Other Expenses		
\$ 16,766,318	Total Disbursements		

**VI. The conditions, if any, placed by the Board on disbursements from the Fund.**

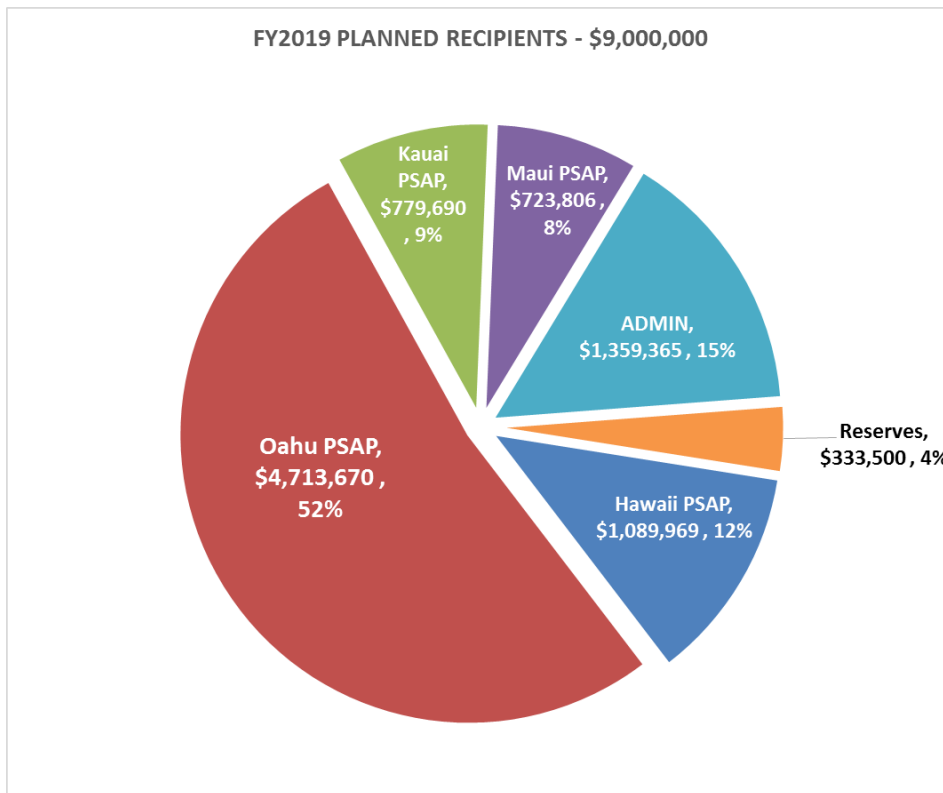
The Board has implemented policies and procedures for the PSAPs, WSPs, VoIPs, and approved vendors seeking reimbursement from the Fund. The Board requires the following for disbursements:

1. Be permitted under Hawaii State statute.
2. Have sufficient funds available for disbursement.
3. Be reviewed and approved by the Technical and/or Finance Committee(s), subject to final approval by the Board.
4. Final approval by the E9-1-1 Board in its 5 year Strategic Budget Plan.
5. Approval for payment by the Board Chair, Finance Committee Chair and authorized Board member. Signed approval from two of the three individuals mentioned.
6. A valid invoice or receipt of payment approved by the appropriate PSAP authorized official(s).
7. The disbursement check must be signed by two Board approved signatories.
8. All disbursements are subject to audit.

**VII. The planned expenditures from the Fund for FY2019.**



**VIII. The planned recipients of disbursements from the E9-1-1 Fund in FY2019.**



**IX. The amount of any unexpended funds to be carried forward for FY 2019.**

Cash Flow:	FY2018 Actuals
Beginning Cash July 1, 2017	\$ 22,458,025
Net Cash Receipts/(Disbursements)	3,047,015
Ending Cash June 30, 2018	25,505,040
Total Encumbrances Outstanding	(18,786,978)
Total Unencumbered Cash	\$ 6,718,062

The total amount of unexpended E9-1-1 Funds carried forward for FY2018 was \$22,458,025. However, unexpired encumbrances at the end of FY2018 amounted to \$18,786,978 which reduced the unencumbered cash amount to be carried forward to FY2019 amounts to \$6,718,062.

**X. A cost study to guide the legislature towards necessary adjustments to the fund and the monthly surcharge.**

A majority of the E9-1-1 strategic budget plan funding is necessary to modernize the current voice-based 9-1-1 systems' aging equipment and software in order to meet or exceed the PSAP public safety goals and the continuing training needs of the PSAPs to keep abreast of technological changes.

The State of Hawaii is part of the national movement to transition to Next Generation 9-1-1 (NG9-1-1) system to significantly improve emergency response, saving lives and reducing property damage. A fully operational NG9-1-1 system enables the public to send texts, photos, videos, and other data to 9-1-1 centers in the same manner as the public is able to communicate with each other today. Consequently the Board has chosen to conserve cash in anticipation of this cash outflow as a result of the transition to NG9-1-1. The National Highway Traffic Safety Board Commissioned the NG9-1-1 Cost Estimate Report to Congress in October 2018 that estimated the lifecycle NG9-1-1 costs would amount to \$13.5 - \$16 billion nationwide; and the NG9-1-1 costs for deployment nationwide will amount to \$9.5-\$12 billion. Due to the uncertainties associated with the transition to this new emergency response system and revenue collections, the Board will continue to recommend the existing surcharge fee rate remain at the current level for the fiscal year.

**XI. A status report of jurisdictional capabilities for enhanced 9-1-1 services, including public safety answering points and communications service providers.**

All requirements of FCC Order 94-102 have been met by the Public Safety Answering Point (PSAPs), Wireless Service Providers (WSPs) and the Incumbent Local Exchange Carrier (ILEC). The State of Hawaii is currently Phase II capable throughout the state and each PSAP has the capability to make useful the data elements being transmitted by the WSPs and delivered by the ILEC. All WSPs (AT&T, Sprint, T-Mobile, and Verizon) are providing Phase II services in all counties and jurisdictions and are only limited by coverage, RF interference, and terrain anomalies. The WSPs continue to expand their existing networks by adding additional sites in each of the jurisdictions at a steady pace.

Advancements in technology in the wireless industry have also placed demands on the PSAPs by WSPs deploying new and improved networks that support



broadband capabilities such as the wireless 3G, 4G, and LTE Wireless technology networks deployed by most of the WSPs. These advancements are rapidly coming to market and it has been difficult for the PSAPs to forecast their needs and related costs in this environment.

The State of Hawaii Wireless 9-1-1 service has graduated from a wireless Phase II maintenance phase to Wireless Phase II expansion and New Wireless Technology implementation phase. This wireless expansion phase has opened the door for the PSAPs to start receiving New and Emerging Technology 9-1-1 services such as Voice over Internet Protocol (VoIP) and Telemetric emergency services. In addition, these new technologies are being added or in the development stages:

1. Location Accuracy (horizontal & vertical) – improved location accuracy will benefit both low and high rise condos/hotels in Waikiki and Kakaako neighborhoods.
2. Text-to-911 allows the 911 caller to use texting to contact the 911 call center in order to avoid detection by an active shooter or in domestic abuse situations.
3. Real Time Texting – allows vast improvement in the communications capability for the hearing impaired as compared to the TTY legacy system.
4. Smart911 – establishes a database of information on the caller's medical condition, residence or other information that would be useful by first responders to facilitate the caller's rescue.
5. Kari's Law Enforcement – mandates multi-line telephone service (MLTS) to eliminate having to dial an outside phone line before dialing 911.
6. Third party location apps. – companies such as Uber and Apple have partnered with companies such as RapidSOS to provide Apps to improve location accuracy in smartphones of 911 callers.
7. Location Based Routing - uses caller location, not cell tower location, as the basis for initial 911 call routing. This technology can significantly reduce the number of wireless 911 calls that must be transferred from one PSAP to another, and will enable geospatial routing in the NG911 environment.

Most of these new 9-1-1 services have been deployed while others are in the later stages of development. The PSAPs have responded in an expeditious manner to keep pace with the demands of the New Technologies. As such, the primary activities being undertaken by the PSAPs have been concentrated on bringing all their 9-1-1 databases into i3 compliancy as part of the New Next Generation 9-1-1 service implementation. The PSAPs must perform these database

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synchronizations and GIS improvements in order to improve location accuracy and the dispatch of 9-1-1 resources efficiently and effectively.

The Wireless E9-1-1 Board is now the Enhanced 9-1-1 Board with the passage of HB 1000 and the Governor signing Act 168 (11) into law June 27, 2011. This established a single entity to administer enhanced 9-1-1 services for the State along with expanding board membership. The broadening of scope for the Enhanced 9-1-1 Board's responsibilities provides the leadership to improve and modernize the current 9-1-1 system improving emergency response, saving lives and reducing property damage. The E9-1-1 Board has undertaken the responsibilities associated with the investigation and recommendations of preparing the State of Hawaii Strategic Plan for the migration of the State of Hawaii's E9-1-1 resources into the futuristic New and Emerging Technology 9-1-1 services referred to as NG 9-1-1.

## **XII. FY2017-18 Independent Audit Report Summary.**

Chapter 138, HRS requires the Board to perform an audit every two years to determine whether the fund is being managed in accordance with this chapter. The Board has elected to conduct an audit every year to provide additional assurance to the Board and the legislature of the integrity of its oversight over the fund. All independent audits have resulted in "clean" or unqualified opinions.

The next independent audit report will cover the period from July 1, 2017 through June 30, 2018 and is scheduled for completion during the 2nd quarter of FY 2019.

Current and past audit reports are posted on the E911 website (<http://ags.hawaii.gov/hawaii-enhanced-9-1-1-board/>).

### Glossary of Terms

ALI – Automatic Location Identification  
CAD- Computer Assisted Dispatch  
CDMA-Code Division Multiple Access  
GIS-Geographic Information Systems  
GSM-Global System for Mobile  
iDEN-Integrated Digital Enhanced Network  
LEC-Local Exchange Carrier

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NG9-1-1-Next Generation 9-1-1

PSAP-Public Safety Answering Point

VoIP-Voice over Internet Protocol

WBB-Wireless Broadband

WSP-Wireless Connection Service Provider

VoIP – Voice over Internet Protocol Connection Service Provider