Hawaii Statewide Alert & Warning System (SAWS)

STATE PLAN

Integrated Public Alerts & Warning Systems (IPAWS)
Emergency Alert System (EAS)
Wireless Emergency Alerts (WEA)

Live Audio Broadcast System (LABS)

Live Video Broadcast System (LVBS)

Statewide Outdoor Siren Warning System
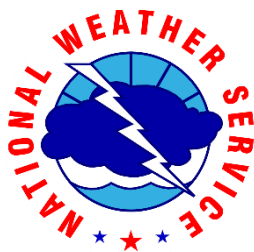
FEBRUARY 28, 2020

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RECORD OF REVISIONS

Change Number	Date of Change	Date Entered	Change Made by (Signature)
1	Mar 31, 2004	Mar 31, 2004	G. Burnett, HI-EMA, SECC Executive Committee Member
2	Nov 1, 2006	Oct 26, 2006	G. Burnett, HI-EMA, SECC Executive Committee Member
3	Feb 11, 2019	Feb 11, 2019	C. Harrington SECC Chair
4	Feb 28, 2020	Feb 28, 2020	R. Hirae, HI-EMA, SECC Executive Committee Member

I. <u>INTRODUCTION</u>

A. Background

This State Plan replaces all previous versions of the State of Hawaii EAS Plan. Henceforth this plan will be known as the Hawaii Statewide Alert & Warning System (SAWS) State Plan. It is produced by the State Emergency Communications Committee (SECC) which is a collaboration of Local Broadcasters, the National Weather Service, Hawaii Emergency Management Agency (HI-EMA), in coordination with the Federal Communications Commission.

Broadcasters, cable providers, and wireless cellular carriers are an integral component of the alert and warning dissemination to the public in preventing loss of life and minimizing property damage. This State Plan establishes guidelines and operating procedures for broadcasters in supporting alert and warning within the State of Hawaii.

This State Plan will be reviewed and amended as needed to incorporate changes from the FCC or local policies and procedures.

B. State Emergency Communications Committee (SECC)

The Hawaii SECC is a volunteer organization composed of Radio & TV/Cable Broadcasters, The Hawaii Association of Broadcasters, EAS Participants, emergency management officials, and other stakeholders.

- SECC Chair
  Courtney Harrington harrington.courtney@gmail.com

- SECC Executive Committee Member (Radio/TV Broadcaster Representative)
  Christopher S. Leonard chris@hawaiibroadcasters.com

- SECC Executive Committee Member (Cable Broadcaster Representative)
  "Vacant"

- SECC Executive Committee Member (State Emergency Management Representative)
  Ryan Hirae ryan.j.hirae@hawaii.gov

The State Emergency Communications Committee shall convene:
- Annually in person
- Semiannually via teleconference
- After any major emergency and/or event that utilized the alert & warning system within this State Plan as deemed necessary. Participants may submit testimony during the after-action review.

C.   Authority

1. FCC Title 47 of the Code of Federal Regulations (CFR)
Part 10 - Wireless Emergency Alerts
Part 11 – Emergency Alert System

2. Hawaii Revised Statutes
HRS 127A EMERGENCY MANAGEMENT
§127A-12 Emergency management powers, in general.
(5) Direct or control as may be necessary for emergency management:
(A) Alerts, warnings, notifications, activations, exercises, drills, and tests;
(B) Warnings and signals for alerts or exercises, and any type of warning device, system, or method to be used in connection therewith;

3. U.S. Department of Justice
(1) Law Enforcement Blue Alert, National Blue Alert Act of 2015
(2) Child Abduction Emergencies or AMBER Alert, Protect Act of 2003. MAILE-AMBER (CAE) Alert as reference in the State of Hawaii.

D.   Overview of Hawaii Statewide Alert & Warning System

1. Integrated Public Alert and Warning System (IPAWS)
Federal and the State, Local, Tribal, Territorial (SLTT) alerting authorities can have the ability to use the Common Alerting Protocol (CAP) standards to activate alerts with the FEMA IPAWS-OPEN infrastructure. IPAWS allows public safety officials with an effective way to alert and warn the public about pending emergencies using the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), the National Oceanic and Atmospheric Administration (NOAA) Weather Radio, and other public alerting systems from a single interface. See Appendix D for IPAWS Diagram.

a) Emergency Alert System (EAS)
The Emergency Alert System is a national public warning system that requires TV and radio broadcasters, cable television systems, wireless cable systems, satellite digital audio radio service providers, direct broadcast satellite service providers and wireline video service providers to offer to the President the communications capability to address the American public during a national emergency. The system also may be used by state and local authorities to deliver important emergency information such as AMBER (missing children) alerts and emergency weather information targeted to a specific area.

b) Wireless Emergency Alert (WEA)
This system delivers critical alert & warnings information to the public on WEA enabled mobile wireless devices that have not been manually

opted out of the service by the user. The alerts appear like text messages on mobile wireless devices preceded by a special attention alert tone reserved for WEA. These alerts can also be sent out to a geographically targeted area. Participation by wireless providers is voluntary, but those that opt into this public safety service must adhere to the technical and operational requirements established by the FCC.

2. Live Audio Broadcast System (LABS)

May be used by emergency management authorities when public response is required. Live video broadcasts are disseminated statewide via the University of Hawaii (UH) Network. TV programmers may interrupt normal programming or cutaway periodically to display updated information. Broadcast TV stations are encouraged to acquire Institutional Television Fixed Service (ITFS) receivers enabling them to receive the live video broadcast feed from the State EOC and use it to supplement normal video programming. Emergency Management authorities will notify participating stations by closed circuit announcement that a message will be forthcoming at a scheduled time, usually within minutes.

- Oahu: Olelo via the ALS-PEG Network.
- Kauai: Hoike via analog fiber from Kauai Community College.
- Maui: Akaku via analog fiber from Maui Community College.
- Hawaii: NaLeo via IP multicast from UH Hilo.

3. Statewide Outdoor Siren System

The Statewide All-Hazard Outdoor Warning System for Public Safety can be used for Tsunamis (distant & local), Hurricanes, Evacuations for Lava, Brush Fires, Dam Breaks, and/or Terrorist/Enemy Attack. There are over 400 sirens across the state not including military and private sirens.

II. OPERATIONAL PROCEDURE

Important Contact Information

National Weather Service	808-973-5269
State Emergency Operations Center	808-733-4300
Oahu Emergency Operations Center	808-723-8960
Hilo Emergency Operations Center	808-935-0031
Maui Emergency Operations Center	808-270-7285
Kauai Emergency Operations Center	808-241-1800

A.   Activation

The State of Hawaii EAS Network will be activated under one of the following circumstances:

1. National Level

Initiated upon receipt of an Emergency Action Notification (EAN) released at the national level. The notification consists of a digitally encoded notification message followed by an audio transmission (only) of the president's message. The EAN will be received by State Emergency Operations Center, the Primary

Entry Point (PEP) source for the State of Hawaii and is required by Federal law to be automatically relayed through local broadcasters without delay.

> a) Under federal law participating stations must carry presidential messages live at the time of transmission. An EAN will automatically preempt normal programming. During a national emergency, the radio and TV broadcast network program distribution facilities are reserved exclusively for distribution of presidential messages.
>
> b) FCC rules have established the following message priorities upon a National Level activation of the alert system:
> - Presidential (National) messages
> - Local Area messages
> - State messages
>
> c) The EAS encoder/decoder must be installed in the audio chain between the station console/audio sources and the transmitter. This allows an EAS activation to go on the air automatically, overriding station programming. When the National Level EAS is no longer needed, an Emergency Alert Termination (EAT) order will be transmitted to release control of the National EAS Network.

2. State\Local Level

May be activated by either of the following agencies in response to a potentially hazardous condition that poses a threat to the safety of life and/or property:

> a) State/Local Emergency Management authorities may utilize the IPAWS system to disseminate locally coordinated information and instructions such as:
>
> > (1) Imminent Civil Danger
> > (2) Impending Civil Emergencies
> > (3) Evacuation Orders
> > (4) Sheltering Information
> > (5) Government Facility Closures
> > (6) Road and/or Highway Closures
> > (7) Critical Communications Outage
> > (8) Wildland Fire
> > (9) Flooding and/or mudslides
> > (10) Other items as the situation requires
>
> Coordinated use of the outdoor siren warning system with the IPAWS will occur as required.
>
> b) County Police Chief or his/her designee and the State AMBER/MAILE Coordinator from the State Attorney General's Office or his/her designee may also activate IPAWS upon

determination that imminent danger exists to pose a threat to the safety of life and/or for law enforcement incidents/events.

In the event of an erroneous IPAWS activation on EAS and/or WEA, the subsequent corrective alert must utilize the same event code as the original activation to ensure the same audience is alerted.

3. **National Weather Service (NWS)**

NWS will issue advisories, watches and warnings when adverse weather conditions are expected to impact all or a portion of the state. The NWS in Hawaii operates the local portion of the NOAA Weather Radio (VHF) system and generates Specific Area Message Encoding messages (SAME) for required events. SAME encoded messages use common protocols and event codes with the EAS, so that any SAME message will be decoded by EAS encoders/decoders at all broadcast/cable provider locations. Only those SAME encoded messages listed in Attachment B are to be programmed to activate the EAS. Broadcasters/providers are responsible for the accuracy of these codes within their encoder/decoders.

NOAA Weather Radio (SAME messages) is the NWS access point to the EAS. This allows the NWS to activate the EAS.

For local earthquakes occurring in the Hawaiian Islands magnitude 5.0M and higher, where Pacific Tsunami Warning Center (PTWC) has determined that no damaging tsunami is expected, NWS will manually generate an Administrative Message (ADR) EAS system activation to notify the public that no tsunami is expected. This will be based on the PTWC Tsunami Information Bulletin which details the evaluation that no tsunami was generated. If the earthquake has generated or expected to have generated a damaging tsunami, a Tsunami Warning (TSW) event code activation of the EAS will preclude the need for an NWS generated ADR.

EAS activation by the NWS will provide the public and authorities with initial notification of a watch or warning status. For warnings of locally generated tsunamis, the NWS may repeat as necessary the EAS activation until the event is cancelled and/or the threat has cleared.

B. Broadcasters Responsibilities

Emergency Management authorities will alert the public of impending danger via one or more of the Hawaii Statewide Alert & Warning Systems. Participating stations and cable operators are required to monitor the digitally coded messages transmitted through State/Local authorities and alert their audiences accordingly.

Participation of State/Local EAS activations shall not be deemed as a relinquishment of program control and shall not be deemed to prohibit a broadcast licensee from exercising his independent discretion and responsibility in any given situation. Broadcast stations and cable systems passing EAS emergency communications shall be deemed to have conferred rebroadcast authority.

1. As required by the FCC, be equipped with authorized EAS encoders and decoders properly configured to either store or automatically transmit EAS messages for each FCC specified event code. Assistance to initially configure EAS equipment is available upon request from HI-EMA Telecommunications Branch; phone 808-733-4300.

2. All radio broadcast stations are required to monitor at least two (2) local EAS sources in addition to the IPAWS Common Alerting Protocol (CAP) internet feed. See Appendix C.

3. The EAS Operating Handbook summarizes the actions to be taken by personnel at EAS Participant facilities upon receipt of an EAN, Tests, or Federal\State\Local area alerts. A copy of the Handbook must be located at normal duty positions or EAS equipment locations.

4. Upon activation of the EAS:

> (1) Local Primary sources are required by this State Plan to broadcast all EAS activation messages per instruction in Appendix A & B. This State Plan contains three categories for decoder event codes.
>> (a) One category is an AUTOMATIC FORWARD and broadcasters are recommended to transmit the EAS alert immediately as they warn of imminent danger affecting life and property. It is important that broadcasters utilize the immediate AUTOMATIC FORWARD codes listed in this State Plan as Federal\State\Local authorities need to be confident the information provided is reaching the public in a timely manner
>>
>> (b) The second category is LOG ONLY. These alerts are not to be forwarded. These codes are for testing only and deemed not imminent to the safety of life or property.
>>
>> (c) The 3rd category is MANUAL FORWARD. It is recommended these specified alert types be carried when practical to ensure public situational awareness of the indicated natural hazard.
>
> (2) Stations that provide foreign language programming may transmit emergency announcements in the foreign language. TV broadcast stations shall transmit all announcements visually and orally.
>
> (3) TV stations and cable operators must carry "crawlers" to alert hearing impaired viewers and carry embedded audio messages contained in any EAS alert activation.

(4) Resume normal broadcast operations upon transmission of the alert message.

III. <u>TESTING</u>

The FCC mandates certain required weekly and monthly EAS testing while the State strongly encourages participation in coordinated monthly tests of the Live Audio/Video Broadcast system components. The following test apply to all participating cable operators and all broadcasters.

A. Broadcaster Testing

1. <u>Broadcaster Required Weekly Test (RWT)</u>
All broadcast stations are required to initiate a RWT each week. This will be performed on random days at unannounced times except for the week of the monthly test. There are no time-of-day restrictions. This is a 10.5-second test consisting only of the EAS header and end-of-message codes.

B. National Weather Service Testing

1. <u>Broadcaster Required Weekly Test (RWT)</u>
The NWS also generates a SAME encoded RWT messages. This test, conducted each Wednesday between 11:00 a.m. and 12:00 p.m., is designed to verify that the NOAA Weather Radio SAME receiver/decoders available to the public are working, as well as verify EAS connectivity from NWS to broadcasters and cable providers. During significant weather and/or when the test falls on the State's Required Monthly Test day, the test will be postponed until the next day.

C. State\Local Testing

1. <u>Required Monthly Test (RMT)</u>
Monthly tests of the EAS system encoders/decoders will be initiated by Emergency Management monthly as required by the FCC. This test will occur at 11:15 a.m. on the first workday of each month. While FCC guidelines instruct broadcasting entities receiving the RMT to retransmit within 60 minutes, this State Plan request that broadcasters <u>immediately forward</u> the RMT. Times are required to be logged for both the receipt and retransmission of the RMT test.

2. <u>Monthly Test of LABS & LVBS</u>
Monthly test of the LABS and LVBS will be conducted at 11:45 a.m. on the first workday of each month. Broadcasters and cable providers are recommended to air the live feeds generated by emergency management authorities. TV operating facilities capable of airing the live video feed disseminated via UH Network are requested to broadcast this video during the 11:45 a.m. test. Emergency Management authorities will provide participating stations by closed circuit announcement with a 2-minute countdown to broadcast.

D. **Wireless Emergency Alert Testing**

As of May 2019, State\Local alerting authorities are authorized to send Wireless Emergency Alert Test Messages. Hawaii Emergency Management Agency is reviewing a new testing schedule and will determine an implementation plan.

AGREED

_____   Apr 16, 2020
Luke Meyers   Date: _____
Administrator of Emergency Management
Hawaii Emergency Management Agency
State of Hawaii

     APPROVED AS TO FORM:

Michael S. Vincent   Apr 15, 2020
_____   Date: _____
Michael S. Vincent
Deputy Attorney General
State of Hawaii

_____   Apr 15, 2020
Christopher Brenchley   Date: _____
Area Manager/Meteorologist-in-Charge
National Weather Service Forecast Office, Honolulu

_____   Apr 15, 2020
Courtney Harrington   Date: _____
SECC Chair

_____   Apr 14, 2020
Christopher S. Leonard   Date: _____
Hawaii Association of Broadcasters
President, Legislative / EAS Chairman

SECC Executive Committee Member
Radio/TV Broadcaster Representative

_____   Apr 14, 2020
Ryan Hirae   Date: _____
Hawaii Emergency Management Agency
Telecommunications Branch

SECC Executive Committee Member
State Emergency Management Representative

IV. <u>**APPENDIX A – State/Local Event Codes**</u>

EVENT CODE	DESCRIPTION	"Immediate" Auto Forward Messages	Log Only Messages
STATE/LOCAL ALERT ORGINATION **State of Hawaii, COG ID#200003**			
ADR	Administrative Message	X	
BLU	Blue Alert	X	
CAE	Child Abduction Emergency	X	
CEM	Civil Emergency Message	X	
CDW	Civil Danger Warning	X	
DMO	Practice/Demo Warning		X
EQW	Earthquake Warning	X	
EVI	Evacuation Immediate	X	
FRW	Fire Warning	X	
HMW	Hazardous Material Warning	X	
LEW	Law Enforcement Warning	X	
LAE	Local Area Emergency	X	
RHW	Radiological Hazard Warning	X	
RMT	Required Monthly Test	X	
RWT	Required Weekly Test		X
SPW	Shelter in Place Warning	X	
TOE	Telephone Outage Emergency	X	
VOW	Volcano Warning	X	

V.   **APPENDIX B – NWS Event Codes**

EVENT CODE	DESCRIPTION	"Immediate" Auto Forward Messages	Manual Forward Messages
NATIONAL WEATHER SERVICE ALERT ORGINATION Forecast Office, Honolulu, COG ID# 200032		
CFW	Coastal Flood Warning	X	
CFA	Coastal Flood Watch		X
FFA	Flash Flood Watch		X
FFS	Flash Flood Statement		X
FFW	Flash Flood Warning	X	
FLW	Flood Warning	X	
HUA	Hurricane Watch		X
HUW	Hurricane Warning	X	
HWW	High Wind Warning	X	
SMW	Special Marine Warning		X
SPS	Special Weather Statement		X
SVA	Severe Thunderstorm Watch		X
SSA	Storm Surge Watch		X
SSW	Storm Surge Warning	X	
SVR	Severe Thunderstorm Warning	X	
SVS	Severe Weather Statement		X
TOA	Tornado Watch		X
TOR	Tornado Warning	X	
TRW	Tropical Storm Warning	X	
TRA	Tropical Storm Watch		X
TSA	Tsunami Watch		X
TSW	Tsunami Warning	X	

VI.   APPENDIX C – FIPS, Monitoring Sources, RPU, LPs

A.   EAS FIPS County Code.
The Federal Information Processing Standard (FIPS) is a code which uniquely identifies state and counties in the United States.

1. ALL STATE   #015000
2. HONOLULU COUNTY   #015003
3. MAUI COUNTY   #015009
4. KAUAI COUNTY   #015007
5. HAWAII COUNTY   #015001
6. KALAWAO COUNTY   #015005

B.   Available Monitoring Sources
All broadcast stations are being required to monitor at least two (2) local EAS sources in addition to the NOAA Weather Radio & the IPAWS Common Alerting Protocol (CAP) internet feed. See Appendix E for specific monitor assignments.

Local Sources Available
(1) Local Primary 1 (LP1)
(2) Local Primary 2 (LP2)
(3) State HI-EMA Wireline (available for local primaries only)
(4) State HI-EMA "Remote Pickup Unit" (RPU) VHF Radio Signal

Other
(5) IPAWS CAP Internet Feed
(6) NOAA Weather Radio

C.   RPU Locations
The Remote Pickup Units (RPU) are VHF Radio Transmitters situated on each main island to allow broadcasters an alternate wireless EAS source.

OAHU
Hawaii Emergency Management Agency
Public Safety Building, Diamond Head Rim Site
Lat: 21-15-55.9 N   Long: 157-48-05.7 W
Frequency: 161.73 MHz
Call Sign: WQJH544

KAUAI
Kauai Emergency Management Agency
3990 Kaana Street, Lihue
Lat: 21-58-36.7 N   Long: 159-21-18.8 W
Frequency: 161.10 MHz
Call Sign: WQKG368

MAUI

KPOA 93.5 FM Radio Studio
311 Ano Street, Kahului
Lat: 20-88-69.4 N   Long: 156-47-73.1 W
Frequency: 161.10 MHz
Call Sign: WQIR668

HAWAII-HILO

Hawaii County Civil Defense
920 Ululani Street, Hilo
Lat: 19-42-55.0 N   Long: 155-05-05.0 W
Frequency: 161.10 MHz
Call Sign: WQIR662

HAWAII-KONA

Hawaii County Police Department
74-611 Hale Makai Place, Kailua Kona
Lat: 19-39-51.2 N   Long: 156-00-23.9 W
Frequency: 161.10 MHz
Call Sign: WQIR651

D.   Local Primaries

Oahu LP1	KSSK-AM/FM	590 KHz/92.3 MHz	808-550-9200
Oahu LP2	KRTR-FM	96.3 MHz	808-275-1000
Kauai LP1	KQNG-FM	93.5 MHz	808-245-9657
Kauai LP2	KKCR-FM	91.9 MHz	808-826-7774
Maui LP1	KMVI-AM	900 KHz	808-877-5566
Maui LP2	KAOI-AM	1110 KHz	808-244-9145
Hawaii (Hilo) LP1	KWXX-FM	94.7 MHz	808-935-3367
Hawaii (Hilo) LP1	KPUA-AM	670 KHz	808-935-5461
Hawaii (Hilo) LP2	KKBG-FM	97.9 MHz	808-961-0651
Hawaii (Kona) LP1	KAOY-FM	101.5 MHz	808-935-3367
Hawaii (Kona) LP2	KLEO-FM	106.1 MHz	808-961-0651

VII. APPENDIX D – FEMA IPAWS-OPEN Diagram
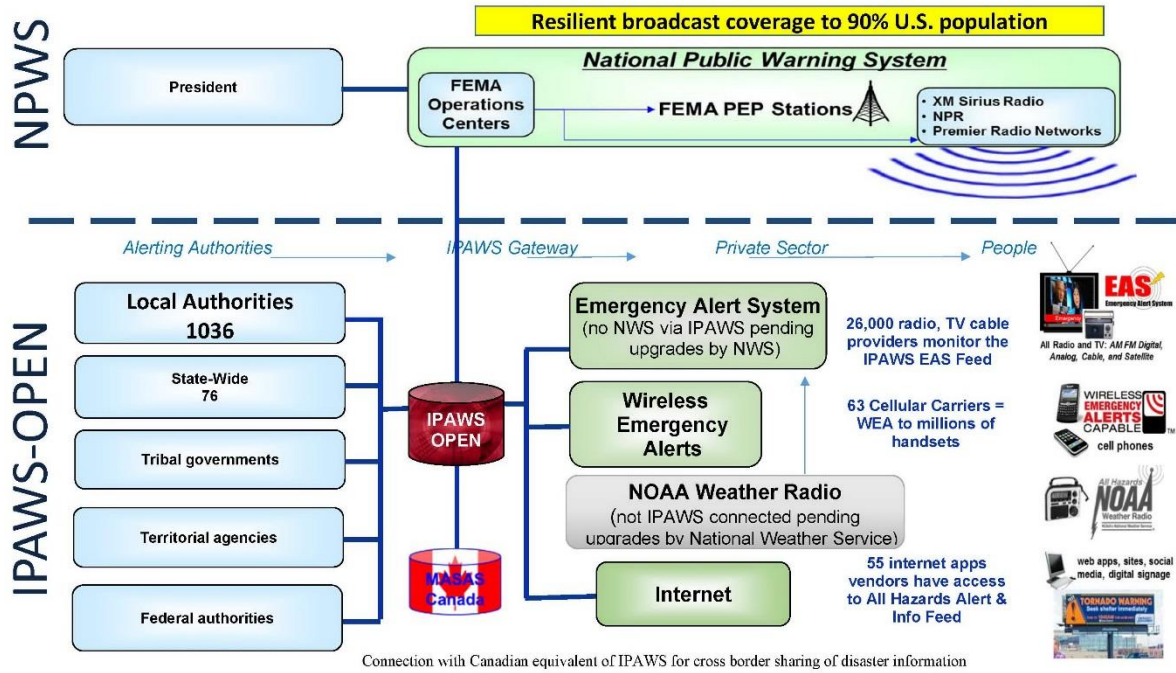
VIII. APPENDIX E – Statewide Broadcaster Assignments

A.   OAHU-HONOLULU County

City	Call Sign	Band	Freq	Mon 1	Band	Freq	Mon 2	Band	Freq	Mon 3	Band	Freq	Internet CAP
Aiea	KKOL	FM	107.9	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHPR	FM	88.1	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KIPO	FM	89.3	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KTUH	FM	90.1	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KLHT	FM	91.5	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KQMQ	FM	93.1	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KUBT	FM	93.9	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHNR	FM	94.3	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KUMU	FM	94.7	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KAIM	FM	95.5	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHCM	FM	97.5	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KDNN	FM	98.5	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KGU	FM	99.5	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KCCN	FM	100.3	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KINE	FM	105.1	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KPOI	FM	105.9	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KSSK (LP1)	AM	590	SRN	FM	161.73/DC	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KPRP	AM	650	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHNR	AM	690	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KGU	AM	760	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHVH	AM	830	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHCM	AM	880	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KIKI	AM	990	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KLHT	AM	1040	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KWAI	AM	1080	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KPHI	AM	1130	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KZOO	AM	1210	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KNDI	AM	1270	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KKEA	AM	1420	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHRA	AM	1460	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHKA	AM	1500	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KREA	AM	1540	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Honolulu	KHON-2 (FOX affiliate)	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KITV-4 (ABC affiliate)	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	5 KGMB CBS affiliate	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	9 KHII-TV FOX affiliate	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KHET-11 (PBS affiliate)	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KHNL-13 (NBC affiliate)	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KWHE-14	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KIKU-20	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KAAH-26	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KBFD-32	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KALO-38	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Honolulu	KPXO-66	TV	n/a	SRN	FM	161.73/DC	KSSK/KRTR	FM/AM	92.3/96.3/590	NOAA-KBA99	FM	162.55	YES
Kailua	KHPH	FM	88.7	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Kailua	KRTR (LP2)	FM	96.3	SRN	FM	161.73/DC	KSSK	AM	590	NOAA-KBA99	FM	162.55	YES
Kaneohe	KPHW	FM	104.3	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Nanakuli	KNAN	FM	106.7	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Pearl City	KUCD	FM	101.9	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Pearl City	KUPA	AM	1370	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Wahiawa	KLUU	FM	103.5	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Waianae	KORL	FM	101.1	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Waipahu	KSSK (LP1)	FM	92.3	SRN	FM	161.73/DC	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Waipahu	KDDB	FM	102.7	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES
Waipahu	KKNE	AM	940	KSSK	AM/FM	590/92.3	KRTR	FM	96.3	NOAA-KBA99	FM	162.55	YES

NOAA Weather Radio
KBA99 Mt. Kaala, 162.550 MHz

LP = Local Primary
SRN = State Relay Network
DC = Direct Circuit

State Remote Pickup Unit (RPU) Frequency = 161.730 MHz

B.   MAUI County

City	Call Sign	Band	Freq	Mon 1	Band	Freq	Mon 2	Band	Freq	Mon 3	Band	Freq	Internet CAP
Haiku	KRYL	FM	106.5	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Haiku	KUAU	AM	1570	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Halimaile	KPMW	FM	105.5	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Hana	KIPH	FM	88.3	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Kahului	KLHI	FM	92.5	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Kahului	KJKS	FM	99.9	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Kahului	KMVI (LP1)	AM	900	SRN	FM	161.1/DC	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Kahului	KEWE	AM	1240	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Kihei	KHEI	FM	107.5	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Kihei	KCIK	AM	740	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Kihei	KAOI (LP2)	AM	1110	SRN	FM	161.1/DC	KMVI	AM	900	NOAA-WWG75	FM	162.40	YES
Lahaina	KPOA	FM	93.5	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Lanai City	KONI	FM	104.7	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Makawao	KDLX	FM	94.3	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Paia	KQMY	FM	102.1	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Pukalani	KJMD	FM	98.3	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Waikapu	KIPM	FM	89.7	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Wailea-Makena	KRKH	FM	97.3	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Wailuku	KKUA	FM	90.7	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Wailuku	KAOI	FM	95.1	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Wailuku	KNUI	AM	550	KMVI	AM	900	KAOI	AM	1110	NOAA-WWG75	FM	162.40	YES
Wailuku	KGMV-3 (KHII translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Wailuku	K28NN-D-5 (CBS-KGMB translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Wailuku	KAII-7 (KHON translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Wailuku	KMED-10 (KHET translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Wailuku	KMAU-12 (KITV translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Wailuku	KOGG-15 (KHNL translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Wailuku	KAMN-LP-61 (TBN translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES

NOAA Weather Radio
WWG75 Haleakala, 162.400 MHz

LP = Local Primary
SRN = State Relay Network
DC = Direct Circuit

State Remote Pickup Unit (RPU) Frequency = 161.100 MHz

C. KAUAI County

City	Call Sign	Band	Freq	Mon 1	Band	Freq	Mon 2	Band	Freq	Mon 3	Band	Freq	Internet CAP
Anahola	K36IJ-D-32 (PBS-KHET translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Eleele	KUAI	AM	570	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Hanamaulu	KSHK	FM	103.1	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Hanapepe	KHKU	FM	94.3	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Kalaheo	KTOH	FM	99.9	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Kapaa	KITH	FM	98.9	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Kilauea	K62AQ-62 (PBS-KHET translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Lihue	KHJC	FM	88.9	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Lihue	KIPL	FM	89.9	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Lihue	KQNG (LP1)	FM	93.5	SRN	FM	161.1/DC	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Lihue	KFMN	FM	96.9	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Lihue	KJMQ	FM	98.1	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Lihue	K30JE-D-30 (PBS-KHET translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Lihue	K51BB-51 (ABC-KITV translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Lihue	K55DZ-55 (FOX-KHON translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Lihue	K65BV-65 (NBC-KHNL translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Lihue	K69BZ-69 (CBS-KGMB translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Poipu	KSRF	FM	95.9	KQNQ	FM	93.5	KKCR	FM	91.9	NOAA-WWG74	FM	162.40	YES
Princeville/Hanalei	KKCR (LP2)	FM	90.9	SRN	FM	161.1/DC	KQNG	FM	93.5	NOAA-WWG74	FM	162.40	YES
Princeville/Hanalei	K29HL-D-29 (PBS-KHET translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Waimea	K57BI-57 (CBS-KGMB translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Waipake	K21IA-D-21 (PBS-KHET translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES

NOAA Weather Radio
WWG74 Kokee, 162.400 MHz

LP = Local Primary
SRN = State Relay Network
DC = Direct Circuit

State Remote Pickup Unit (RPU) Frequency = 161.100 MHz

D. HAWAII County

City	Call Sign	Band	Freq	Mon 1	Band	Freq	Mon 2	Band	Freq	Mon 3	Band	Freq	Internet CAP
Captain Cook	KMWB	FM	93.1	SRN		161.1/DC	KLEO	FM	106.1	NOAA-WZ2540	FM	162.50	YES
Hakalau	K50JT-D-10 (PBS-KMEB translator), RF channel 36	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	K201FQ	FM	88.1	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KANO	FM	89.1	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KCIF	FM	90.3	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KHBC	FM	92.7	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KWXX (LP1-Hilo)	FM	94.7	SRN	FM	161.1/DC	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KPVS	FM	94.7	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KNWB	FM	97.1	SRN	FM	161.1/DC	KWXX	FM	94.7	NOAA-WWG76	FM	162.55	YES
Hilo	KKBG (LP2-Hilo)	FM	97.9	SRN	FM	161.1/DC	KWXX	FM	94.7	NOAA-WWG76	FM	162.55	YES
Hilo	KAPA	FM	100.3	SRN	FM	161.1/DC	KWXX	FM	94.7	NOAA-WWG76	FM	162.55	YES
Hilo	KUHH	FM	101.1	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KPUA (LP1-Hilo)	AM	670	SRN	FM	161.1/DC	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KHLO	AM	850	SRN	FM	161.1/DC	KWXX	FM	94.7	NOAA-WWG76	FM	162.55	YES
Hilo	KIPA	AM	1060	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Hilo	KHBC-2 (KHNL translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	KGMD-9 (KHII translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	K28JV-D-10 (PBS-KHET translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	KHAW-11 (KHON translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	KHVO-13 (KITV translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	KWHD-14 (KWHE translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	K34HC-34 (RTN translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Hilo	K45CT-45 (CBS-KGMB translator)	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Holualoa	KHWI	FM	92.1	KAOY	FM	101.5	KLEO	FM	106.1	NOAA-WWG27	FM	162.50	YES
Kailua-Kona	KLUA	FM	93.9	KAOY	FM	101.5	KLEO	FM	106.1	NOAA-WWG27	FM	162.50	YES
Kawaihae	KWYI	FM	106.9	KAOY	FM	101.5	KLEO	FM	106.1	NOAA-WWG76	FM	162.55	YES
Keaau	KBGX	FM	105.3	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Kealakekua	KAOY (LP1-Kona)	FM	101.5	SRN	FM	161.1/DC	KLEO	FM	106.1	NOAA-WWG27	FM	162.50	YES
Kealakekua	KKON	AM	790	KAOY	FM	101.5	KLEO	FM	106.1	NOAA-WWG27	FM	162.50	YES
Kilauea	K220EO	FM	91.9	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG76	FM	162.55	YES
Kilauea Military Camp	K41JT-D-10 (PBS-KMEB translator), RF channel 17	TV	n/a	"Simulcast from master station. See Honolulu-Oahu programming"									YES
Kona	KHPH	FM	88.7	KAOY	FM	101.5	KLEO	FM	106.1	NOAA-WWG76	FM	162.55	YES
Kona	KLEO (LP2-Kona)	FM	106.1	SRN	FM	161.1/DC	KAOY	FM	101.5	NOAA-WWG76	FM	162.55	YES
Kurtistown	KTBH	FM	102.7	KWXX	FM	670.0	KWXX	FM	94.7	NOAA-WWG76	FM	162.55	YES
Paauilo	KNUQ	FM	103.9	KWXX	FM	94.7	KKBG	FM	97.9	NOAA-WWG27	FM	162.50	YES
Pahala	KAHU	FM	91.3	KAPA	FM	100.3	KWXX	FM	94.7	NOAA-WZ2540	FM	162.50	YES
Volcano	KKOA	FM	107.7	KWXX	FM	670.0	KWXX	FM	94.7	NOAA-WWG76	FM	162.55	YES
Waimea	KAGB	FM	99.1	SRN	FM	161.1/DC	KAOY	FM	101.5	NOAA-WWG27	FM	162.50	YES

NOAA Weather Radio
WWG27 South Point, 162.550 MHz
WWG76 Kulani Cone, 162.500 MHz
WZ2540 Kamuela, 162.500 MHz

LP = Local Primary
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State Remote Pickup Unit (RPU) Frequency = 161.100 MHz

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