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|--|---|-----------------------------|
| EAS-WA - Tab 10-A<br>WA-PAWS – Tab C5A | <b>Monitoring Guidelines for<br/>All Participants</b> | Approved by SECC<br>5.12.20 |
|--|---|-----------------------------|

## **INTRODUCTION**

The Tabs in this section address Analog EAS Monitoring Requirements as determined by the Washington and Oregon State SECC's as directed by the FCC. This information is designed to provide a means for EAS Participants to determine what sources they should be monitoring in order to be FCC compliant.

## **LEGACY/ANALOG SOURCES**

The reader is cautioned that these sources covered in this Tab are for what is commonly termed 'Legacy/Analog' EAS. Typically, a participant will utilize off-air receivers to provide an input to the analog inputs on their EAS equipment. **Other, Internet based sources, such as FEMA-IPAWS, are not addressed here.**

## **CONTENTS OF THIS TAB-**

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## **IMPORTANT INFORMATION REGARDING TAB NUMBERS –**

The Washington State SECC is in the process of revising our Alert and Warning Plan. Until this process is completed, you will find Tab numbers expressed as follows – Old Tab Number / New Tab Number – for example – Tab10B/C5B.

It is important to understand that information regarding the Monitoring Assignments for LP and Distribution System is conveyed to the FCC via their Alert Reporting System (ARS) and, thereby, becomes part of the FCC's Washington State EAS Plan.

For a more complete understanding of the role of the FCC in regulating the EAS, Please refer to Part 11 of the Commissions Rules available at – <https://www.govinfo.gov/app/details/CFR-2010-title47-vol1/CFR-2010-title47-vol1-part11>.

## **[Section 1]**

### **NATIONAL DISTRIBUTION & RULES**

#### **NATIONAL SOURCES**

- PEP's
- SiriusXM
- NPR Affiliates
- Premiere Affiliates

#### **DISTRIBUTION SYSTEMS**

- State Relay Network (SRN, SP & NP)
- NWPB – (Statewide NP)
- KNKX – (Western Washington NP)
- KPBX – (Northeastern Washington NP)

#### **LP - LOCAL PRIMARY STATIONS**

- Two or more per Operational Area (See Tab 3/B9)

#### **PN - PARTICIPATING NATIONAL FACILITIES**

- Those that are not LP's (Radio/TV/Cable)

#### **THE RULES**

- **Distribution Systems must monitor two or more National Sources as determined by the SECC**
- **LP's must monitor two or more National Sources as determined by the SECC**
- **PN's must monitor two or more LP's**

#### **THE EXCEPTIONS**

- **PN's may, additionally, monitor National Sources directly**
- **PN's may, additionally, monitor Distribution Systems directly**

## **[Section 2]**

### **Primary Entry Points (PEP's) and National Primaries (NP's)**

#### **PRIMARY ENTRY POINT (PEP) WASHINGTON**

- There is one PEP Radio Station in Washington State – 710 - KIRO-AM- Seattle

#### **PRIMARY ENTRY POINTS (PEP) OREGON**

- There are multiple PEP Radio Stations in Oregon State
- Participants along the southern portion of Washington State may monitor the following PEP stations in Oregon that are affiliated with Oregon Public Broadcasting (OPB):
  - 89.7- KOAC- FM Astoria
  - 91.5- KOPB-FM - Portland
  - 89.7- KOTD - The Dalles
  - 90.1- KHRV - Hood River
  - 90.9- KRBM - Pendleton

#### **PREMIERE SATELLITE NETWORK (NP)**

- National EAS messages are received on Premiere Satellite Receivers 'FEMA Channel'
- This channel must be connected to an input of the associated station's EAS equipment
- Stations that are so connected are to advise the SECC to become recognized as a National Primary Source.
- More info - <http://engineering.premiereradio.com/files/pages/XDSDocsMan.html>

#### **NPR (NP)**

- National EAS messages are received on NPR Satellite Receivers 'Squawk Channel'
- This channel must be connected to an input of the associated station's EAS equipment
- Stations that are so connected are to advise the SECC to become recognized as a National Primary Source.  
(NP)

#### **SIRIUS/XM SATELLITE RADIO (NP)**

- National EAS messages are received on Sirius/XM Satellite Receivers 'Barker Channel'
- This channel must be connected to an input of the associated station's EAS equipment
- Stations that are so connected are to advise the SECC to become recognized as a National Primary Source.  
(NP)

#### **[OPTIONAL FOR PORTIONS OF WESTERN WASHINGTON ONLY]**

#### **SEATTLE NATIONAL WEATHER SERVICE (NWS) SERVED TRANSMITTERS**

- See Tab 15/B11 for a listing of the NWR Transmitters fed from the Seattle NWS Office
- The Seattle NWS facility (WFO) Monitors and forwards alerts and warnings from –
  - 1) KIRO-AM [PEP], 2) KNKX [NPR Squawk], 3) SRN, 4) Central Puget Operational Area LRN

### **[Section 3]**

#### **Washington – State Relay Network (SRN)**

##### **STATE RELAY NETWORK (SRN) STATE PRIMARY (SP) – 155.475 MHz**

- The sole entry point for the SRN is the Washington Emergency Management Division (WEMD) facility at Camp Murray. Here WEMD can launch EAS Messages, via the SRN, that reach the State.
- WEMD also automatically relays – KIRO-AM (The PEP) as well as KNKX (FM) which is a source of NPR-Squawk. This qualifies the SRN to be a NP Relay
- The SECC has assigned the SRN to be monitored by LP's in some cases, we encourage all stations to monitor the SRN
- For those in much of Western Washington, (they also relay Seattle NWR EAS encoded messages)
- See Tab 4/C4 for Map showing SRN transmitter locations

##### **STATE RELAY NETWORK Transmitter Locations –**

| Site Name     | Location                | Additional Information                              |
|---------------|-------------------------|---|
| Mt Ellis      | West Clallam County     | North of Forks                                      |
| Nasselle      | Southern Pacific County | East of Longbeach- North of Astoria, Oregon         |
| Galbraith Mt  | Whatcom County          | Often called Lookout Mountain – South of Bellingham |
| Gold Mt       | Kitsap County           | West of Bremerton                                   |
| Boistfort Pk. | West Lewis County       | SW of Centralia/Chehalis. Often called Baw-Faw      |
| Burch Mt      | Chelan County           | North of Wenatchee                                  |
| Sunny Slope   | Yakima County           | South of Mabton                                     |
| Joe Butte     | Benton County           | SE of Tri-Cities                                    |
| Stacker Butte | Skamania County         | In the Columbia Gorge, NE of The Dalles, Oregon     |
| Mt Spokane    | North Spokane County    | North of Spokane                                    |
| Steptoe Butte | Whitman County          | North of Colfax                                     |

## **[Section 4]**

### **Northwest Public Broadcasting (NWPB) - Distribution System**

#### **NORTHWEST PUBLIC BROADCASTING (WSU)**

- NWPB monitors and automatically relays two PEP's: NPR/Squawk and Sirius/XM
- This enables an NWPB Radio station to be used as a NP Relay or Distribution System.
- The SECC may assign specific NWPB Radio Stations to be monitored by LP's in certain Operational Areas
- PN's are encouraged to monitor these sources
- For a listing of NWPB Radio Transmitters – see the following table.

#### **NWPB Radio Stations –**

| Location     | Frequency | Call Sign | Operational Areas        |
|--------------|-----------|-----------|--------------------------|
| Bellingham   | 91.7      | KZAZ      | North Puget Sound        |
| Chehalis     | 88.9      | KSWs      | Lewis                    |
| Clarkston    | 90.5      | KNWV      | Inland Northwest (South) |
| Ellensburg   | 90.7      | KNWR      | Kittitas/North Central   |
| Forks        | 91.5      | KNWU      | Clallam (West)           |
| Manson       | 88.3      | KHNW      | North Central            |
| Moscow, ID   | 91.7      | KRFA      | Inland Northwest (South) |
| Moses Lake   | 91.5      | KLWS      | North Central            |
| Mt Vernon    | 89.7      | KMWS      | North Puget Sound        |
| Omak         | 90.1      | KQWS      | Okanogan                 |
| Port Angeles | 90.1      | KNWP      | Clallam (East)           |
| Pullman      | 1250      | KWSU      | Inland Northwest (South) |
| Tacoma       | 90.9      | KVTI      | Central Puget Sound      |
| Tri-Cities   | 89.1      | KFAE      | Columbia Basin           |
| Walla Walla  | 89.7      | KLWS      | Columbia Basin           |
| Yakima       | 88.5      | KYVT      | Yakima                   |
| Yakima       | 90.3      | KNWY      | Yakima                   |

**Note – NWPB also operates a number of Translators.**

See - <https://www.nwpb.org/about-us/> for a complete listing.

## **[Section 5]**

### **KNKX - Distribution System**

#### **KNKX – Tacoma/Seattle**

- KNKX monitors and automatically relays –PEP’s – NPR/Squawk and KIRO-AM (Seattle PEP)
- This enables KNKX to be used as a NP Relay or Distribution System.
- The SECC may assign specific KNKX Affiliated Radio Stations and Translators to be monitored by LPs in certain Operational Areas.
- PN’s are encouraged to monitor these sources.
- KNKX Sources may be listed KNKX even if the local transmitters call letters are different.
- For a listing of KNKX Radio Transmitters – see the following table.

#### **KNKX Radio Stations –**

| Location               | Frequency | Call Sign | Operational Area    |
|------------------------|-----------|-----------|---------------------|
| Aberdeen               | 100.9     | K265DP    | Grays Harbor        |
| Bellingham             | 88.7      | K204BI    | North Puget Sound   |
| Longview               | 104.7     | K284BM    | Cowlitz/Wahkiakum   |
| Olympia                | 90.1      | KPLI      | Mason/Thurston      |
| Port Angeles           | 89.3      | KVIX      | Clallam East        |
| Raymond                | 90.7      | K214FI    | Grays Harbor        |
| Seattle                | 88.5      | KNKX      | Central Puget Sound |
| Sedro-Wooley/Mt Vernon | 88.9      | KPLK      | North Puget Sound   |

Note – Status of Raymond- 90.7-K214FI as a monitoring source is under review 4.27.20

## **[Section 6]**

### **KPBX - Distribution System**

#### **KPBX (Spokane Public Radio)**

- KPBX monitors and automatically relays –PEP’s – NPR/Squawk and Sirius/XM
- This enables KPBX to be used as a NP Relay or Distribution System.
- The SECC may assign specific KPBX Affiliated Radio Stations and Translators to be monitored by LPs in certain Operational Areas.
- PN’s are encouraged to monitor these sources.
- KPBX Sources may be listed KPBX even if the local transmitters call letters are different.
- For a listing of KPBX Radio Transmitters – see the following table.

#### **KPBX Radio Stations –**

| <b>Location</b>      | <b>Frequency</b> | <b>Call Sign</b> | <b>Operational Areas</b> |
|----------------------|------------------|------------------|--------------------------|
| Bonnars Ferry, Idaho | 92.1             | KIBX             | Inland Northwest         |
| Brewster             | 91.9             | KPBW             | Okanogan                 |
| Grand Coulee         | 91.9             | K220DV           | North Central            |
| Kellogg, Idaho       | 89.3             | KLGG             | Inland Northwest         |
| Omak                 | 88.5             | KOMQ             | Okanogan                 |
| Oroville/Tonasket    | 90.9             | KPBG             | Okanogan                 |
| Spokane              | 91.1             | KPBX             | Inland Northwest         |
| St Maries, Idaho     | 92.1             | KXJO             | Inland Northwest         |
| Twisp                | 91.1             | KTWP             | Okanogan                 |

## **[Section 7]**

### **TAB 10B/C5B - MONITORING TABLES FOR LP STATIONS**

This Tab, generally, contains two tables per Operational Area

*(Some Operational Areas may have additional tables to provide clarity)*

- Table of LP Stations and their **required** Monitoring Assignments
- Table of Contact Information for the LP Stations as well as applicable LECC Chair

### **OPERATIONAL AREA - LP MONITORING ASSIGNMENT TABLE - COLUMN GUIDE**

| Column | Label   | Explanation   |
|--------|---------|---|
| 1      | OP AREA | Operational Area (See Tab 3/C4 for map)   |
| 2      | CALL    | Call letters of the Station   |
| 3      | FREQ    | Frequency of the Station  |
| 4      | MON-1   | First Required Source Monitor –<br>Must be a PEP, NP or other acceptable to the SECC  |
| 5      | MON-2   | Second Required Source Monitor –<br>Must be a PEP, NP or other acceptable to the SECC |
| 6      | MON-3   | First Recommended Source – NWS  |
| 7      | MON-4   | Second Recommended Source – SRN   |
| 9      | MON-5   | Third Recommended Source – LRN  |
| 10     | MON-6   | Station Option  |

- Any deviation from these Monitoring Assignments **must** be approved in writing by the SECC.

It is important for LPs to **automatically** relay NWS, State and Local sources **as soon as possible** for the benefit of those stations that are depending on them to receive the alerts.

Additionally – LPs should follow the guidelines found in Tab 8/B7 regarding which Event Codes should be automatically forwarded.

### **OPERATIONAL AREA - CONTACT INFORMATION TABLE**

- Below the Monitoring Assignment Table is an additional Table containing contact information for each of the LPs as well as a contact for the Operational Area LECC Chair.
- It is the responsibility of each LECC to notify the SECC regarding corrections, updates and changes so that the Tab can be updated.



## **[Section 8]**

### **TAB 10C/C5C – MONITORING SOURCES FOR PN STATIONS**

- This Tab has one table per Operational Area  
(Some areas may have additional tables to provide clarity)
- The Table includes -
  - A list of LP Stations, two of which are to be monitored
  - Location of the SRN Transmitter location
  - Frequency and location of the Operational Area LRN
  - Frequency and location of the NWS Transmitters serving the area

### **OPERATIONAL AREA - MONITORING SOURCE TABLE COLUMN GUIDE**

| Column | Label                               | Explanation  |
|--------|-------------------------------------|--|
| 1      | OPERATIONAL AREA<br>& REVISION DATE | The name of the Operational Area – (See Tab 3/B9 for Map)<br>The date this information was updated |
| 2      | COUNTIES                            | Counties within the Operational Area – (See Tab 3/B9 for Map)                                      |
| 3      | DESIG                               | The facility designation   |
| 4      | CALL                                | Call Letters   |
| 5      | FREQ                                | Frequency  |
| 6      | LOCATION                            | Location of the monitored station  |
| 7      | SRN & LOCATION                      | State Relay Network location   |
| 9      | LRN & LOCATION                      | Local Relay Network location   |
| 10     | NWR & LOCATION                      | NOAA Weather Radio transmitter frequency and location  |
| 11     | NOTES                               | SECC Remarks   |

## **[Section 9]**

### **IMPORTANT INFORMATION FOR ALL PARTICIPATING NATIONAL (PN) FACILITIES**

- The SECC only 'assigns' Monitoring Assignments for Local Primary and Distribution Facilities.
- For PN facilities, the choice of what is monitored is determined by the participants Provided they follow these guidelines
  - All Participating Facilities must monitor TWO Local Primary (LP) facilities within their Operational Area. They are encouraged to monitor the LP's that provide the best consistent message quality.
  - Participants may, and are encouraged to, monitor the same-sources as the LP's to enhance the viability of the system.
  - Participants are also encouraged to monitor the SRN in order to receive State EAS Messages.
  - Participants are also encouraged to monitor the LRN serving their Operational Area to receive Operational Area level Messages.
  - Participants are highly encouraged to monitor the NWR facility in their Operational Area since a high percentage of Alerts and Warnings are weather related.
  - It is important to understand that NWS will often broadcast specific area warnings via their transmitters in adjacent areas where broadcasters may have coverage via their main-stations and/or translators etc. In these cases, Participants are encouraged to monitor these additional NWR facilities and forward those messages as well. (e.g. – coastal warnings on the Olympia NWR station)
- Reporting of what is monitored-is a function of the FCC's EAS Test Reporting System (ETRS)
- Message Originators need to know that stations will be forwarding their messages. Therefore, It is important to remember that all EAS Encoders need to be programmed to include all the counties within each Operational Area (OA). Should a station cover more than one OA, those counties should be included as well.

## **[Section 10]**

### **ANTENNA RECOMMENDATIONS FOR OFF-AIR SOURCES**

The receivers used to receive signals from various sources are often located near their companion EAS equipment – within - a building or structure. These structures tend to attenuate the received signal yielding poor audio quality that should be avoided. The solution to this problem is to, always, **strive to mount all receiving antennas outside of these structures and as high as possible**. Indoor antennas for ANY frequencies should be avoided.

Technical Questions should be addressed to the SECC Technical Committee via the State EAS Remailer.

**Failure to use an outside antenna is not a valid excuse for being unable to receive a consistently high-quality signal.**

| Source                    | Antenna Recommendations  |
|---------------------------|--|
| Any AM Station            | A 'Loop' Antenna mounted outside, on the roof, of a structure will yield superior results and is highly recommended.   |
| Any FM Station            | For an FM station with a strong signal –an omni-directional antenna such as a, vertically polarized, Discone should work well. For a distant FM station- a directional FM antenna is recommended, carefully aimed for the best reception. A VHF TV antenna may work.   |
| NOAA Weather Radio (NWR)  | <p>If the NWR signal is strong, then an omni-directional antenna such as the Discone should work well. NOTE - The same, vertically polarized, antenna used for receiving a strong FM can be used.</p> <p>If the NWR signal is not strong (Yielding noise free reception) then a directional VHF antenna should be used, carefully aimed for the best reception. A VHF TV antenna may work, however, it may need to be vertically polarized.</p>                                      |
| State Relay Network (SRN) | <p>If the SRN signal is strong, then an omni-directional antenna such as the, vertically polarized, Discone should work well. NOTE - The same antenna used for receiving a strong FM can be used.</p> <p>If the SRN signal is not strong (yielding noise free reception) then a directional VHF antenna, such as a Yagi, should be used, carefully aimed for the best reception.</p>   |
| Local Relay Network (LRN) | <p>It should be noted that LRNs can be on VHF or UHF Frequencies. The Participant can obtain this information from their LECC or local Emergency Management.</p> <p>If the LRN signal is strong, the same, vertically polarized, antenna used for other sources can be used.</p> <p>If the LRN signal is not strong (yielding noise free reception) then use a directional antenna, chosen for the band of frequencies used (VHF or UHF) carefully aimed for the best reception.</p> |

## **[Section 11]**

### **TERMS AND ABBREVIATIONS**

- The following are Terms and Abbreviations used in these Tabs. For additional information, see Tab 7/ F1.

|           |  |
|-----------|--|
| EAN       | The Emergency Action Notification is the notice to all EAS Participants and to the general public that the EAS has been activated for a national emergency.  |
| EOC       | Emergency Operations Center. A facility used by Emergency Management within a governmental jurisdiction.   |
| ETRS      | EAS Electronic Test Reporting System   |
| KNKX      | A Seattle/Tacoma based broadcast station that includes a number of additional connected stations and translators forming a NP Distribution Facility.   |
| KPBX      | A Spokane based broadcast station that includes a number of additional connected stations and translators forming a NP Distribution Facility.  |
| LP        | A Local Primary is a facility that serves other EAS Participants within an Operational Area  |
| LRN       | A Local Relay Network consisting of an analog wireless distribution system whose purpose it is to distribute Public Warning Messages from government entities within an Operational Area to EAS Participants. See the applicable Local Area Plan for additional information.   |
| NP        | A source of National EAS Messages. Such as NPR Squawk channel, Premiere 'FEMA Channel' and the SiriusXM 'Barker Channel' used to distribute EAN's and NPT's. Local Primary (LP) facilities are required to monitor at least two of these sources. Other participating systems are welcome do so as well.   |
| NP        | A source of National EAS Messages. Such as NPR Squawk channel, Premiere 'FEMA Channel' and the SiriusXM 'Barker Channel' used to distribute EAN's and NPT's.   |
| NPT       | A nation-wide test of the EAN system. Historically conducted annually by FEMA.   |
| NWPB      | Northwest Public Broadcasting. A network of Radio Stations and translators operated by the Murrow College of Communication at Washington State University. NWPB (Radio) is a NP Distribution Facility.   |
| NWS & NWR | National Weather Service – NOAA Weather Radio Transmitters (NWR)– which broadcast Weather Warnings – See Tab 15 for a listing of frequencies, locations and associated Operational Areas.  |
| OA        | Operational Area. Historically based on Market Areas.  |
| PEP       | A Primary Entry Point or Source of National EAS Messages. Such as KIRO-AM in Seattle or OPB in Oregon.   |
| PEP       | A Primary Entry Point or Source of National EAS Messages. Such as KIRO-AM in Seattle or OPB in Oregon.   |
| PN        | A Participating National Station- A facility that stays on the air during a National Emergency. Generally, all Participating Stations or Cable Systems are considered to be a PN.  |
| Premiere  | The Premier Satellite 'FEMA Channel' is used to distribute EAN's and NPT's to their affiliates.  |
| SiriusXM  | SiriusXM Barker Channel is used to distribute EAN's and NPT's .  |
| Squawk    | An auxiliary audio channel used by NPR to distribute EAN's and NPT's to their affiliates.  |
| SRN & SP  | State Relay Network – An analog distribution system owned and operated by the Washington State Emergency Management Division (WEMD) the purpose of distributing State Public Alerts and Warnings. This function is described as a State Primary or SP. It is also used to forward National Level Messages (EAN's & NPT's) from KIRO-AM in Seattle as well as serving as a back- up system for local area alerts and warnings. The origination point is WEMD. The frequency is 155.475- Statewide – See Tab 4/C4 for a map for a geographical overview. |
| WEMD      | The State of Washington Emergency Operations center at Camp Murray.  |

For additional terms and definitions, see WA-PAWS Tab F-1.

