

November 17, 2012

# **California Hospital Drill Report – Yolo County Amateur Radio Emergency Services to Yolo County Public Health Medical Health Operational Area Coordinator (MHOAC)**

**November 15, 2012**

## **Yolo County, Sacramento County, and Adjacent Counties**

### **Drill Objective**

To test the ability of amateur radio operators to establish communication channels on amateur radio bands for health care entities in Yolo County and surrounding Counties.

### **The four tasks scheduled for the November 15th California Hospital Drill**

**Task #1, 12:00 PM, Noon, Yolo County Emergency Operations Center (EOC),** to communicate with California Emergency Management Agency, (Cal EMA).

Test Yolo County EOC for communications with Cal EMA. The test was run on the W6AK repeater and on 80, meters lower SSB. The amateur radio operator was Gary Matteson, WA6TQJ. The contact was Brenna Howell, Interim Coordinator Sacramento County Office of Emergency Services - Planner (916) 202-2635 or Dennis Plessas, Coordinator Yolo County Office of Emergency Services, (916) 874-4670.

**Task #2, 2:00 pm, Sutter Davis Hospital to contact Woodland Memorial Hospital via amateur radio.**

The test was run on the K6JRB repeater. The amateur radio operator at Sutter Davis was Bryce, K7WDO. The amateur radio operator at Woodland Memorial Hospital was Jerry Young, KG6TEN. Gary, WA6TQJ, was the back up operator at Woodland Memorial Hospital. The contact for Woodland Memorial was Sara McCarthy, Nursing Supervisor, (530) 933-5600. The contact for Sutter Davis Hospital was Vinnie Ryan, e-mail: [ryanv@sutterhealth.org](mailto:ryanv@sutterhealth.org).

**Task #3, 2:30 pm, Sutter Davis Hospital to make contact with three Sacramento Area Sutter Hospitals.**

This task was in conjunction with the Hospital going on emergency power. All contacts were to be made on W6AK Repeater. The three hospitals and the respective amateur radio contacts were:

Sutter Health Emergency Management, Jonathan, WQ6F, (916) -496-1116

Sutter General, Dave, KI6ZDI, (916) 733-8338

Sutter Memorial, Jim, KJ6MOU, (916) 733-3029

Sutter Davis, Bryce, K7DWO (530) 406-0103

The Woodland Memorial and Sutter Davis contacts were the same as listed in Task #2.

See Attachment 1 California Sutter Davis Hospital Net Control Preamble and Roster

#### **Task #4, 5:00 pm Wrap up of the November 15th California Hospital Drill.**

This task was conducted on the K6JRB repeater as primary and W6AK as tactical. WA6TQJ was net control for K6JRB. KG6SJT was net control on W6AK repeater. The following were the sub tasks: Yolo County Public Health was to check-in and send a message to Yolo County Hospitals and health care providers. The person initiating the message was Dana Cary, Emergency Preparedness, Supervisor, Yolo County Public Health. (530) 666-8709. This activity will be conducted on the K6JRB repeater. A roll call followed to determine who copied Dana Cary's message. Each station was asked to summarize their Drill activities. See Attachment 2 [California Hospital Drill Wrap Up Net Preamble and Roster](#).

### **Drill Amateur Radio Repeaters**

K6JRB, located on the UC Davis Campus, 145.450 MHz, 203.5 Hz tone, negative offset.

W6AK, located on the Cal Trans Building in Downtown Sacramento, 146.910 MHz, 162.2 tone, negative offset.

KE6YUV, located on Berryessa Mountain, in Yolo County, 146.970. MHz, 123 Mhz tone, negative offset.

HEART Net, located on UC Davis Medical Center in Sacramento, 444.300 MHz, 77 MHz tone, negative offset.

### **Summary of Activity is described in Attachment 3**

[\(EXCEL Spread Sheet\)](#)

### **Observations on Tasks**

Task #1 was conducted at the Yolo County Emergency Operating Center

Yolo County EOC was able to connect with the State Office Emergency Services, at CAL EMA on W6AK repeater,

Brenna Howell, Interim Coordinator Sacramento County Office of Emergency Services- Planner was the Yolo County EOC contact. She made verbal contact with the Cal EMA Office over amateur radio frequencies.

Tests were made on 80 meter HF SSB, Lower Side band. High noise levels prohibited solid contacts. The station did hear and was heard by, Cal EMA, W6EME, and UC Davis Vet Hospital, N6JOA.

Task #2 was at the Woodland Memorial Hospital and the Sutter Davis Hospital

The two hospitals successfully contacted each other on the KE6YUV Berryessa Repeater. Sara McCarthy, of the Woodland Memorial Hospital was at the station.

Attempts by the two hospitals to contact one another on the K6JRB and W6AK repeater were not successful, due to the fact that Woodland Memorial Hospital did not have a base station. Only a mobile station was used at the Woodland Memorial Hospital.

Task #3 was the establishment of out-of-county contacts for the Sutter Davis Hospital.

The Sutter Davis Hospital was able to contact Sutter Memorial Hospital, KJ6MOU, in Sacramento on the Berryessa Repeater.

Task #4

The message for this task was received by Gary WA6TQJ from Dana Cary, Emergency Preparedness Supervisor and MHOAC for Yolo County. This message was then retransmitted to participants of the California Hospital Drill on the K6JRB repeater and the W6AK repeater. This activity required two nets to operate simultaneously starting at 5:00 pm. On the UC Davis repeater, K6JRB, six Drill participants checked -in and confirmed receipt of the message. On the Sacramento repeater, W6AK, fourteen Drill participants checked-in and twelve stations confirmed receipt of the message. Please see Attachment 3 for list of stations.

## **Recommendations**

### **Task #1**

The equipment at the Yolo County EOC needs to be tested and in some cases repaired. Dennis Plessas, Coordinator, has agreed to work with Yolo County ARES personnel to resolve issue.

- (1) A 2 meter base station did not turn on.
- (2) Tests of the two dual band VHF antennas revealed a wide range of results. The antennas need to be examined for damage.
- (3) The HF antenna did not tune on 40 meter or 80 meter bands. The traps on this antenna need to be examined for continuity.
- (4) The Dual Band VHF Transceiver needs to have amateur radio repeaters programmed into the unit. The unit presently has no channel installed.

- (5) Attempts to contact Solano EOC were made and e-mail exchanges took place. For future drills, there is now a recognition by each EOC of the others operating frequencies. The Solano EOC operates on 441.15 MHz, tone 77 Hz, negative offset for North Solano Command, 145.31 MHz, tone 88.5 MHz, negative offset for South Solano Command. They also have Packet capability on 145.73 MHz simplex no tone.

## **Task #2**

The Woodland Memorial Hospital needs to repair or replace its VHF antenna and re-establish a base station. Mobile operations from the Woodland Memorial only worked through the Berryessa Repeater (the Berryessa Repeater was the designated back up for this task).

## **Task #3**

Both the HF and VHF antennas at the Sutter Davis Hospital need to be examined for continuity and appropriate coax.

- (1) The 80 meter antenna has been found to need repair.
- (2) The VHF antenna appears to have some coax problems that need to be addressed. The reception of the W6AK repeater in Sacramento is marginal, whereas the UC Davis Vet Med with a similar configuration about 5 miles away has adequate signal from W6AK.
- (3) UC Davis and the Sacramento Amateur Radio Club plan to link the K6JHRB repeater to the W6AK repeater will provide a much improved service.

## **Task #4**

The need to have two net controls operating the UC Davis Repeater K6JRB and the Sacramento Repeater W6AK brought complexity to this task. The mobile station in the Woodland area had difficulty finding a location with adequate path to either the Davis or the Sacramento Repeater.

- (1) UC Davis and the Sacramento Amateur Radio Club plan to link the K6JHRB repeater to the W6AK repeater will provide a much-improved service.
- (2) A procedure where by Net Control conduct a test transmission prior to running their net proved to be a critical element. This procedure was used on the W6AK repeater but not on the K6JRB repeater. Net Controls operating 50 watts from nearby the K6JRB repeater run the risk of overdriving the system. 5 watts of power should be used within in a one mile radius of the base of the repeater.
- (3) The Operation Plan indicated that the Net Control for W6AK was to operate from the Yolo County Public Health. Initial tests showed marginal capability when using mobile

rigs with 50 Watts of power and roof mounted gain antennas. On the day of the drill the path almost disappeared and caused the Net Control to move to another site. The Yolo County Public Health needs to consider the installation of an antenna for amateur radio bands and an operating station within the building. At the last minute, an option to use the Yolo County Communication Systems 15 channel hand held transceivers was tested. The unit was found not to work inside buildings within Woodland and there was no reception from outside the UC Davis Campus EOC location.

Signed by: \_\_\_\_\_ Yolo County Emergency  
Coordinator, Amateur Radio Emergency Services ARES

Date: -----

### **Attachment 1**

[California Hospital Drill Net Control Script for the 2:00 PM net from Sutter Davis Hospital](#)

### **Attachment 2**

[California Hospital Drill Warp-Up Net Control Script](#)

### **Attachment 3**

[California Hospital Drill Summary of Activity](#)