



San Bruno Fire
DR 262-11
9/9/10 6:12 pm



8 Fatality's
58 Injury's Requiring Medical Treatment
Over 1200 People Directly Affected



**American
Red Cross**
Bay Area Chapter

Together, we can save a life



DISASTER RELIEF OPERATION FAST FACTS



Affected Families Assisted by the Red Cross 393

Health Services Assistance Provided by the Red Cross 997

Mental Health Support Services 1,098

Affected Residents Registered on the Red Cross Safe & Well Website 227

Meals Served 4,221

Snacks Served 9,902

Clean-up & Comfort Kits Distributed by the Red Cross 101

Cleaning Supplies Distributed (i.e. shovels, rakes, masks, gloves, etc.) 803

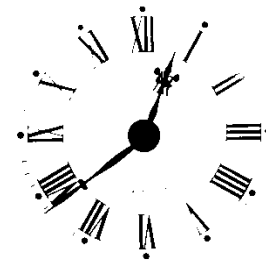
Total Volunteers & Employees Working on the Relief Operation for the Red Cross 378

Statistics regarding the Red Cross relief operation as of Thursday, October 7 at 5 p.m.

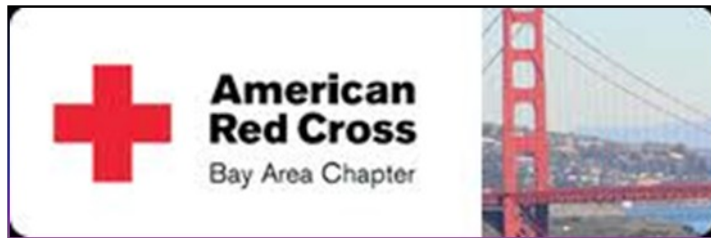
American Red Cross communications response to the San Bruno Fire



The first forty minutes ...



Incident notification process



Burlingame Red Cross Communications Group members were notified by an automated telephone alert to check in to the Bay-Net linked repeater system as their rally net



9/9/2010 6:12:28 PM (7461 min)

SBF102520008

San Bruno Fire

Structure fire

GLENVIEW INCIDENT

BC9, E38, E51, E52, PT51

General Alarm



Communication sites

**American Red Cross
Burlingame Service Center**



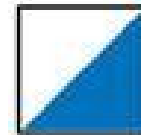
San Bruno EOC



Fire Site



Incident Command Post



Evacuation Center





Communications status

Cell phone system was unreliable because of overload and equipment failure at fire site.

Amateur radio using Bay-Net repeater system was main communications link between Burlingame Red Cross, San Bruno EOC, ICP, and Evacuation Center

Red Cross 47 MHz radios were used to communicate with Emergency Response Vehicles (ERVs) at ICP and Evacuation Center

Rough Response Time Line

- WW6BAY
- Rally Net @ 6:25 pm
- Emergency net activated @ 7:10
- Net-Control *NOT* at any of the service locations
- The “Rally” net got everyone on the same page, deployed at right place and had everyone aware of the resources available currently to address the needs of the operation
- The emergency net serviced the specific disaster response
- Remote net control was a huge asset!

Two types of RF communications response:

- 1. Comm Room activities at the Burlingame Red Cross Disaster Operations Center (DOC)**
- 2. Red Cross licensed field communications (mainly 47 Mhz)**

This presentation is about the response and lessons learned at the DOC Communications Room

Response: **Theory** versus **Reality**

Our preconceptions about how a response evolves did not match the needs of the actual event.

Existing emcomm literature tend to discusses operations after an organized response has developed.

It does not adequately address the needs of an emerging event that is sudden onset and chaotic.

Trained, flexible and aware personnel are needed to bring order out of chaos. Untrained personnel add to the problem.

Two phases of communication response at the DOC

First Forty Minutes when only a single operator was present.

Steady State Response when multiple operators were present.

Based upon lessons learned, we will describe idealized station layouts, staffing priorities, and operating conditions that would have greatly facilitated our response.

Requirements for First Forty Minutes

A single operator must be able to control three radios from a single position:

Bay-Net repeater

Red Cross 47 MHz radio

San Mateo County OES

The operator will NOT be able to use headphones because they need to monitor all three radios and need to talk to newly-arriving volunteers.

The radios should have external speakers that can be located far enough apart to enable the operator to distinguish separate simultaneous transmissions

Requirements for Steady State Response

Operators are available to monitor each of three separate operating positions

All operators use headphones if possible

Headphone splitters should be available at each station in case both a logger and an operator are needed

Model of a reconfigurable station layout for three radios

Radios are mounted on horizontal rails at eye level (or placed on the desk top) with long enough power cords and coax cables to allow position shifts of at least 4 feet.

Each radio has an external speaker that can be located independently of the radio

Configuration for First Forty Minutes



Steady State Configuration



Transitional staffing priorities

1st new person acts as **message runner** for original operator and as “gatekeeper” for Comm Room

2nd new person acts as **logger or message taker** depending upon message handling skills

3rd new person sets up **situational summary** on a white board

4th and **5th** new persons operate secondary channels, and station layout is shifted to Steady State Response configuration

Original logger assists at busiest station and acts as relief operator for all stations

Operating resources

Communications log (ICS 309)

Message forms (ICS 213)

Carbon paper for making copies of messages

Pens and post-it notes

**White board with markers for situational summary and
for tracking follow-up issues**

**TV set with muted audio tuned to a news or weather channel
as appropriate**

Paper Maps of San Mateo County and Bay Area

(not a Thomas guide)

Message composition and handling

BREVITY --- 30 words or less

CONTENT --- Who are you ?
Where are you ?
What has happened ?
How have you responded ?
What do you need ?

EXCHANGE

PROCEDURE --- Brief phrases in
STOP / CONTINUE sequences
with read-back

Minimize Distractions ! ! !

Control access to Comm Room - - - runner / gatekeeper keeps the door closed and uses pass – through window if available

Activities unrelated to communications should be conducted outside of the Comm Room

Conversations unrelated to communications should be conducted outside of the Comm Room

Training that worked

Army MARS :

Net operations

Message handling

Operational flexibility



WW6BAY:

Activation and twice weekly nets

S.F. NERT :

Message handling



Practice that paid off: Net Participation

Army – MARS :



weekly nets and
emergency exercises

WW6BAY:

weekly nets – *bay area wide*

S.S.F. CERT :



weekly nets with
drill traffic and rotating
NCS / logger roles

Participation in weekly nets - - even without message handling drills - - is essential to keeping you and your equipment ready to go !

Volunteer intake issues

YOU Need a Quick Response Guide:

Must be ten pages or less

Must fit in space of a mobile radio

Must be current within last six months

Must be pre-printed

**Must be distributed ahead of time to all
emergency groups in local area**

**Trained personnel are needed to bring order out of
chaos. Untrained personnel add to the problem.**

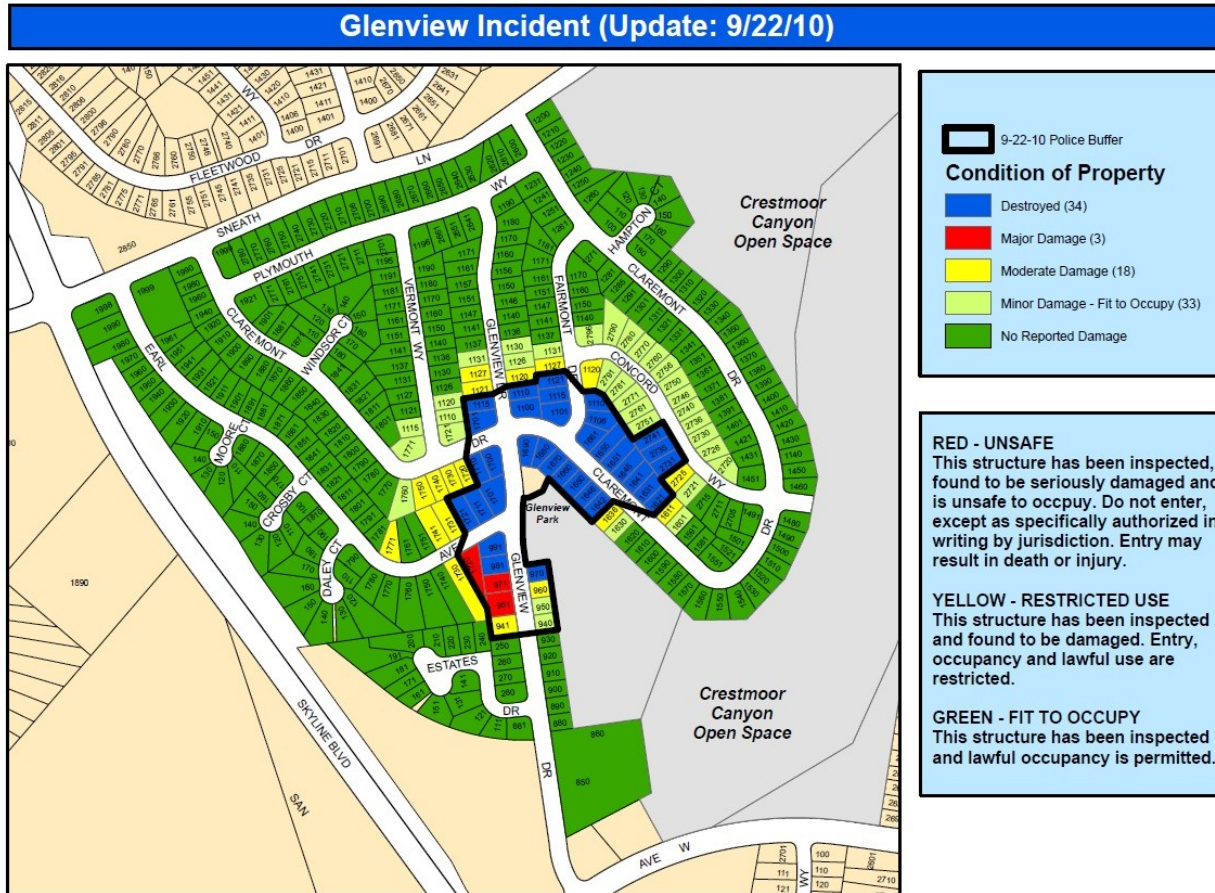
Top five lessons learned

1. Room maintenance – Comm Room must not be an obstacle course
2. Three radios must be within easy reach of a single operator initially
3. Equipment must be ready to go BEFORE the incident occurs
4. All personnel likely to respond must have at least minimal training on the *actual* Comm Room equipment and procedures
5. First person to arrive runs up to three radios, second person to arrive is the runner, and third person to arrive is the logger.

Our warts...

- Despite being equipped with a truly world class radio room and communications center the San Bruno EOC never had a single amateur show up to staff it
- Outside of S.C.A.R.E.S.,an affiliated club, NO ARRL support, input or contact - despite S.O.U.
- The Red Cross eventually burned out the comm department by not understanding it's role.

Current Status



Source: City of San Bruno

Credits



- **The City and Citizens' of San Bruno**



- *San Bruno Fire Photos;*
Thomas Hawk
smi23le
- Bay-Net Amateur Radio Club—
WW6BAY and Bay-net.org
- South County Amateur Radio
Emergency Service -
K6MPN.org
- Cisco Systems
- Google & YouTube
- American Red Cross Bay Area
Especially the Communications Department
predecessors that taught and equipped us to
move forward together.
*(And all the Volunteers that made this
response go so smoothly)*

Questions & Answers

American Red Cross Bay Area Disaster Technology Team

1-415-729-4742

info@arcba.net

Weekly Simplex Net –
7pm Mondays@ 147.420

Weekly Wide Area Net –
8pm Wednesday on bay-net.org system