



USE AND DISTRIBUTION NOTICE

- Santa Clara County RACES authorization is granted to use and duplicate this material as-is, as long as this page and the copyright notices on each page are included, acknowledging Santa Clara County ARES/RACES as the holder of the copyright.
- Permission is granted to adapt this presentation to your needs as long as you acknowledge our copyright and include a note similar to "adapted with permission from Santa Clara County ARES/RACES."
- For additional information on training or any of our programs, send an email to: info@scc-ares-races.org

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved



Fundamentals of Emergency Communications



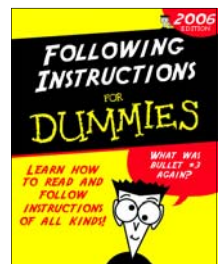
Santa Clara County ARES®/RACES

Last Updated: November 05, 2016

ARES and Amateur Radio Emergency Service are registered servicemarks of the American Radio Relay League, Incorporated and are used by permission. Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved


Housekeeping

- Introductions
- Pen/pencil & paper
- Cell phones & pagers
- Side conversations
- Questions
- Breaks
- Restrooms
- In case of emergency



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved


Introductions



- First Name
- City where you live
- Did you attend the "Introduction to Emergency Communications" class
- Call Sign

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

Learning Objectives




- At the end of this class, you will be able to
 - Describe the Disaster Service Worker program, including your responsibilities as a participant
 - Describe the purpose and appropriate usage of the main Santa Clara County ARES/RACES nets
 - Properly submit a Mike-Mike report
 - Describe and execute the proper procedures for mobilization, tracking, and demobilization, including the use of the Resource Net
 - Properly complete an ICS 214 Log form
 - Properly complete an ICS 213 Message Form

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

Today's Agenda

- Disaster Service Worker
- Santa Clara County Nets
- Mobilization, Tracking, Demobilization
- Logging
- Message Handling
- Action Items

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved



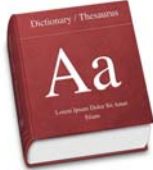
Registration and Rules

DISASTER SERVICE WORKER

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

What is Disaster Service?

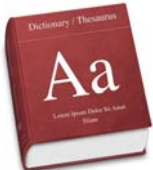
- All activities authorized by and carried on pursuant to the California Emergency Services Act, including approved and documented training necessary or proper to engage in disaster activities.



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

What is a Disaster Service Worker?

- Any person registered by an accredited Disaster Council for the purpose of engaging in disaster service without pay or other monetary consideration.



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

What's in it for me?

- Workers Compensation coverage by State Compensation Insurance Fund
 - Death Benefit
 - Wage Continuation
 - Medical Treatment
- Limited liability protection when acting within scope of assignment and training
- In case of emergency, be sure your spouse/significant other/family are aware of this coverage
 - See DSW brochure at:
 - <http://www.scc-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

When am I covered as a DSW?

- When registered ...
- ... and when activated and assigned by proper authority ...
- ... and while performing your duties in accordance with DSW rules
 - Performing only duties for which you have been trained (i.e. according to our standards)
 - Performing while under supervision

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

The Elements of Disaster Service Activation

- Registration
- Training and Preparation
- Activation
- Assignment
- Supervision

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

Registration

- Only an “authorized person” person may register you
 - For county: District Emergency Coordinator (DEC), ADECs, and county officials
 - For city: Appropriate city officials
- You must have a current DSW registration on file with the entity that is activating you
 - County DSW required for county drills and events
 - City DSW required for local city activities
- DSW registration does not expire, but the Cards do!
- Personal information must be verified every five years (State)
- County wants the info verify every year
 - Address, phone numbers, etc.
 - <https://www.scc-ares-races.org/activities> > My Contact Info

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 13

Training

- Everyone is responsible for their own training
- Santa Clara County ARES/RACES:
 - <http://www.scc-ares-races.org> (procedures, forms, ...)
 - Training courses, drills, public service events
 - Mutual Aid Communicator Program
 - MACs earn qualifications in various disciplines, at various levels
- City training programs also available
 - Usually focus on city-specific procedures and capabilities
- Incident Command System (ICS) training - FEMA
 - Standardized, on-scene, all-hazards incident management approach
- Other training – Red Cross, CERT, etc.

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 14

Activation

- Only an entity with whom you are registered may activate you
 - In California DSW program, county and city registrations are separate
 - City will activate you for city events
 - You must be registered with the city
 - County will activate you for county events and mutual aid situations
 - You must be registered with the county
- An “Activation Number” will be issued
 - Example county activation number: XSC-11-06
 - Example city training activation number: MTV-11-01T
- Write it down!
 - Consider it your confirmation number that you were properly activated under DSW rules

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 15

Assignment

- Usually, assignment is made by radio
 - On Resource Net (county)
 - On city net (city)
- Location will be given by common name, address or Thomas Bros. map coordinates
 - e.g., Mountain View Fire Station 4; 229 N. Whisman Rd.; Thomas Guide page 812 grid A5
- Write it down!
- Have a county Thomas Guide or off-line map available at all times! Google maps or here.com
- Standard shifts are 8 hours
 - Be prepared for 12 hours
 - Go Kit: batteries, connectors, food, water, clothing, essentials
 - For full go kit contents: <http://www.scc-ares-races.org>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 16

Supervision


- You must be under continuous supervision while on your assignment
 - You must be reachable by radio at all times
 - You must have a radio that can be operated with reasonable range while you are in your car, traveling to and from your destination
- Get a magnetic mount antenna and headset!
- Know which repeaters to use from which locations
 - In particular, travel to Southern part of county requires switching repeaters and bands

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 17

Your To Do List (so far)

- Become familiar with: <http://www.scc-ares-races.org>
 - At a minimum, review everything on the Operations page
- Obtain County and City DSW registration
- Inform family of Workers’ Comp provisions

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 18

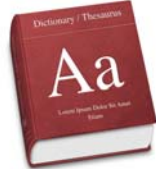


SANTA CLARA COUNTY ARES/RACES NETS

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 19

What is an Amateur Radio Net?

- An Amateur Radio Net exists whenever 3 or more operators are in simultaneous contact with each other for the purpose of exchanging information or passing informal or official traffic.



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 20

Types of Nets

- Open Net
 - Stations call each other directly to pass traffic
- Directed Net
 - Stations call only net control directly, they go direct to other stations only with net control permission

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 21

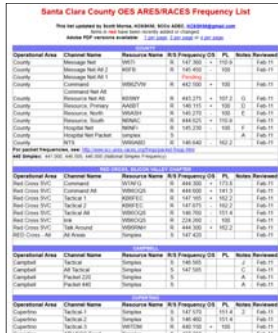
Santa Clara County Primary Emergency Nets

- Resource Net
 - Usually the first county net activated
 - Official traffic; type of traffic depends on level of operation
- Message Net
 - Usually the second county net activated
 - Official message traffic for served agencies
- City and Tactical Nets
 - Official and unofficial traffic of a local nature
- Command Net
 - Official traffic between Operational Area (county) command staff, and between county and city Emergency Operations Centers (EOCs)
- Hospital Net
 - Official traffic with Dept. of Public Health

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 22

Frequency List

- Keep an up-to-date copy
 - County frequency list
 - Any additional frequency list(s) for your city
- Program your radio
 - Your city's frequencies
 - County frequencies
 - at least the Resource Net frequencies



<http://www.scc-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 23

Resource Net

- Usually the first net activated at the county level
- Directed net
- Three levels of operation
 - Level 1: Information gathering (initial damage reports)
 - Earthquake Modified Mercalli ("Mike-Mike") reports; flood levels; power; etc.
 - Level 2: City EOC check-ins and referral to city tactical nets
 - City EOCs check-in and announce status; individuals referred to city nets
 - Level 3: Coordination of mutual aid; tracking county resources
 - Mobilization (resource check-ins, activations and assignments)
 - Location/Travel tracking (you MUST be in contact while traveling)
 - Demobilization (resource release, tracking during return home)
- Frequencies (<http://www.scc-ares-races.org/operations.html>)
 - Primary AA6BT 146.115 (+) 100.0
 - North W6ASH 145.270 (-) 100.0
 - South N6NAC 444.625 (+) 110.9 (South of 101 & 85; South San Jose)

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 24

Message Net

- Usually the second net activated at the county level
- Directed net
- Official message traffic for served agencies
 - Typically: cities to/from county; agencies to/from county
- Formal messages
 - Official Message Form (ICS 213-SCCo)
 - All messages and responses numbered and tracked
- Informal messages
 - “Los Altos EOC is checking in ...”
- Frequencies (<http://www.scc-ares-races.org>)
 - Primary W6TI 147.360 (+) 110.9
 - Alternate K6FB 145.450 (-) 100.0


Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 25

Tactical Nets

- Usually a directed net, but may start up as an informal net
- Established when and where needed
 - Staging areas, checkpoints, rovers, shadows
 - Each city has one or more tactical frequencies; one is for main city net
- Each city activates their city net as soon as possible
 - Handle local resource check-ins, notifications
 - Check-in here first if you want to be released to the county
- Localized, often informal messages
 - “checkpoint 3 reports Dead Man’s creek at 1 foot below flood level ...”
 - “rover 2 reports all runners have now passed rest stop 4 ...”
- May also include formal messages
 - Resource request from school or shelter to city
- Frequencies (<http://www.scc-ares-races.org/operations.html>)
 - May also be assigned at time of activation


Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 26

Your To Do List (so far)



- Become familiar with: <http://www.scc-ares-races.org>
 - At a minimum, review everything on the Operations page
- County and City DSW registration
- Inform family of Workers’ Comp provisions
- Learn the nets and their usage
- Frequency lists (county, city); program your radio

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 27



The County Resource Net in Action

ALERTING, MOBILIZATION, TRACKING, DEMOBILIZATION


Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 28

Alerting vs Activation

- Alerting
 - You become aware of a situation where Amateur Radio support may be requested
 - You can monitor your radio and check into a net
 - You are not authorized to do anything or go anywhere unless the served agency has pre-authorized your role
- Activation
 - A government entity has requested Amateur Radio support
 - An activation number is provided to you along with a job assignment
 - You accept the assignment

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 29

Alerting Types



- Self alerting
 - Earthquakes (you can feel them)
 - Floods (you can see them)
 - Other situations where you know there’s a problem
- Non-self alerting
 - Hazardous material spills
 - Local infrastructure failure
 - Other situations where you don’t know a problem has occurred until someone alerts you
- Some situations are both
 - April 2009 partial county telecom outage – some were not affected, unaware, some were affected but only became aware when they were contacted ...
- Either way, once you learn of an incident, next step is Check-In


Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 30

Alerting Methods for Non-Self Alerting Events

- AlertSCC – phone call, SMS text message, or e-mail with instructions
 - Important to keep contact information updated
 - AlertSCC is updated weekly from the SCCo ARES/RACES database
- Voice telephone call from someone
- Someone knocking on your door (unlikely but possible)
- You happen to hear traffic on the Resource Net or your city net
- Again, once you learn of an incident, next step is to Check-In

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 31


Resource Net – Level 1



- Purpose: initial damage reports during initial stages of an incident
- First, make sure everything is okay at home
- Tune to a Resource Net repeater
 - Primary AA6BT 146.115 (+) 100.0 (preferred, if you can reach it)
 - North W6ASH 145.270 (-) 100.0
 - South N6NAC 444.625 (+) 110.9 (best for South of 101 & 85 in S. San Jose) (also near East side hills)
- Resource Net Level 1 operations
 - Net Control will be asking for damage reports, flood levels or other info
 - Respond with your call sign
 - When called, respond with city, report, and call sign; use a minimum of words
 - Example using Modified Mercalli scale for an earthquake: "KE6AGJ, Los Altos, Mike-Mike-4, KE6AGJ"
- Monitor to determine if further escalation will occur
- If you hear your city EOC activate, then proceed to Level 2

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 32

Example of Resource Net Level 1: Earthquake Damage Reports




- Use the Modified Mercalli ("MIKE-MIKE") scale
 - Mike-Mike 1 – Not felt at all
 - Mike-Mike 2 – Felt by persons at rest, especially on upper floors
 - Mike-Mike 3 – Felt indoors, objects swing; like light truck passing
 - Mike-Mike 4 – Windows, dishes rattle; standing cars rock; walls creak
 - Mike-Mike 5 – Felt outdoors; liquids disturbed/spilled; pictures move; doors swing; small items displaced
 - Mike-Mike 6 – Windows, dishes, glassware broken; books off shelf; pictures off walls; furniture, lamps moved/toppled
 - Mike-Mike 7 – Difficult to stand; notice by drivers of cars; waves on ponds; furniture broken; chimneys, plaster fall
 - Mike-Mike 8 – Steering of cars affected; damage to masonry; towers & elevated tanks fall; branches broken; frame houses move
- Typical response: call sign, city, mike-mike #, call sign
- Keep a wallet card handy <http://www.scc-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 33


Resource Net – Level 1 – Example

- May 5, 2012 County Drill - Simulated Earthquake
- Objective: Practice Level 1 and Level 2 Resource Net
- Individuals call in their simulated Mike-Mike reports
- Net control keeps tally by city
- The net started like this ...



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 34


Who Will Be The Net Control??



- It could be you!!
- Come up on the Resource Net
- Listen for active stations
- If no net currently exists, announce that you are organizing a net to collect damage information
- Inform that you have no ability to dispatch help
- Take gross reports of damage until relieved
 - Earthquakes: use the Modified Mercalli ("MIKE-MIKE") Scale (1-8)
- Be prepared to pass summary information to a more experienced Net Control operator

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 35

Mike Mike Report Summary Form




Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 36

Example Damage Survey Net

- Net Control
 - "This is <call sign>. Is there a net on this frequency?" (none heard)
 - "This is <call sign>, net control for the Santa Clara County Resource Net."
 - "I will now take reports of damage using the Mike-Mike scale."
 - "I do NOT have the ability to dispatch resources."
 - "I will ask for call signs by <severity/city>. When I call you, please report using: call sign, city, mike-mike number, and call sign"
 - "I'll take the first five call signs" ... "with Mike Mike 7 or higher" ... "from <city>"
- Class
 - Call in your damage report using the mike-mike scale
 - Use the last digit in your telephone number; use "0" instead of "0" or "9".
 - Example:
 - NCO: "KE6AGJ"
 - You: "KE6AGJ Los Altos Hills, Mike Mike 4, KE6AGJ"

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 37

Resource Net – Level 2




- Purpose: Referral to city tactical nets
- Listen on the Resource Net for your city EOC to activate
 - Example: "Resource Net Control, Los Altos EOC is now active and accepting check-ins on 146.595 simplex, this is KE6AGJ"
- Switch to your city net frequency (typically a tactical freq.)
 - Check-in to the city net
 - If you're joining later in the incident, check your city net first
 - If your city doesn't activate, check-in on county resource net; they may have alternative instructions for you
- City Net Control decides where you are needed
 - City will request you monitor city frequency for possible assignment
 - City may release you to county; if so, return to county resource net

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 38

Resource Net – Level 2 – Example

- May 5, 2012 County Drill – Simulated Earthquake
- As Resource Net level 1 continues
 - Net control is now taking reports of MM-5 and higher
- Some cities have determined that the situation is severe enough (simulated) to activate their city EOCs
- The net continues ...




Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 39

City/Agency-Level Tactical Nets

- At this point, some or all cities will have activated their city nets
- City residents switch to their city nets and follow instructions there
- If city resources are overwhelmed, city may contact the county for "mutual aid"
- Unaffected or lightly affected cities may release some of their operators to the county to provide mutual aid

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 40


Resource Net – Level 3



- Purpose: tracking mutual aid and county resources
- Important: You must first be released by your city's Emergency Coordinator (EC) / Chief Radio Officer (CRO), or their designee
 - Check with your city tactical net first
 - If your city net is not up and you can't locate your EC, then check-in with county – they may have alternative instructions
- Check-in to Resource Net Level 3 only if:
 - You have been released by your city
 - You are available for county-wide assignment (family/home, training, 12-hr kit)
 - You are ready to go (car is loaded, gassed up; you are ready to walk out the door)
- Some important points:
 - Monitor continuously and respond promptly when called
 - Resources according to need; NOT first come, first served; expect to wait
 - Notify Net Control if you must leave the net for any reason
- While waiting for an assignment, make sure you are prepared

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 41

Preparation




- City or county-level: Do NOT self-activate!!!
 - Don't go anywhere, don't do anything except prepare
- Net Control may or may not make an immediate assignment
 - It may take time for incident command to determine what resources are needed and where they need to be deployed
 - Be patient; pay attention; monitor closely; respond promptly
 - If you are unable to monitor: inform Net Control that you need to leave the net and provide an alternative contact method
- If not immediately activated, use the time wisely to prepare
 - Double check your personal situation: home, family
 - Double check your go-kit, including batteries, food, water, etc.
 - Review proper emergency communications procedures & techniques

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 42

Go Kit


- 2 Hour Carry Kit
 - Keep nearby at all times
 - Resource Net Level 1
 - Damage Reports
 - Resource Net Level 2
 - City net Check-ins
- 12 Hour Go kit
 - Fully independent operations for 12 hrs
 - Return home to retrieve
- Extended Kit (optional)
 - 72 hour or longer



<http://www.scc-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 43

Assignment and Activation




- Net Control may call you at some point and offer an assignment
 - Applies to both city and county nets
- If you accept the assignment, you will be activated
 - Do not accept any assignment if you don't feel safe, aren't trained, no equip.
 - Do not accept an assignment if you're not ready to leave
 - You should only be on Resource Net Level 3 if you're ready for an assignment
- Before leaving home, notify Net Control that you are ready to roll
 - Report street location and last three digits of odometer
- You will be given travel and reporting information
 - Write it down! Often includes important travel restrictions

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 44

Assignment Form

- Convenient for recording your assignment
- Reminder for
 - What info to copy
 - Resource net procedure



<http://www.scc-ares-races.org/operations.html>


Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 45

Travel

- While en route, check-in every 15-20 min (or as directed by Net Control)
 - Report your street location and last three digits of odometer
 - e.g. "... Highway 101 South @ Lawrence, odometer 456, this is KEGAGJ"
 - Don't make Net Control ask you for the information
 - You know what's needed (street and odometer); be prepared to provide it

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 46


Arriving on Scene



- Pick an appropriate and safe place to park
- STAY in your vehicle and do the following:
 - Tell the Resource Net (or other local travel net) that you have arrived
 - Resource Net control will inform you of local tactical net
 - Acknowledge and check out of Resource Net
 - Check in on the local tactical net
 - If you CANNOT make contact with local tactical Net Control, return to the Resource Net and ask for further instructions
 - Do all this FROM YOUR VEHICLE using the more powerful mobile radio and/or antenna
 - Do NOT leave your car and walk to the event unless instructed to do so
 - They may not want you there yet and this violates the County's standards of operation.

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 47

Interacting With Local Authorities



- Approach in the field of vision of the officer
- Keep hands in plain sight
- Greet the officer
- Identify yourself
- Show identification
- State who sent you
- State where you are headed
- State what you will do there
- Request permission to pass
- Thank the officer
- If you have difficulty, do not argue!
 - Walk away (as appropriate) and contact net control to ask for instructions

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 48

Checking In at the Scene

- At the event, check in where instructed
 - ICS 211A Communications Check-In form (ICS 211A-SCCo)
- Follow the instructions of the local team
 - Be patient; you may be asked to wait until others arrive
 - Be courteous; you are there to help, not run the show
- Remain in constant contact with the local tactical net
 - If you need to go off the air, inform Net control
 - If we lose track of you, you have become part of the problem; we have to go find you!

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 49


Conducting Yourself at the Scene

- You are there to assist with communications
 - You are not there to manage the incident, nor to manage all comms
- You must be courteous and respectful at all times
 - You are an ambassador for ALL amateur radio!
 - What you do and how you act reflects on ALL of us
 - If you experience difficulty, contact your supervisor or net control
- Your job is to be a communicator
 - Do NOT direct vehicle traffic, climb towers, move barricades, etc.
 - You are not trained for these; you will not be covered by DSW!
 - Do NOT take on tasks that will interfere with duties as communicator
 - Do NOT take on tasks or go places if you do not feel safe
 - Do be the best, most effective communicator you can be
- At all times, remain in contact with net control

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 50

Procedures & Techniques

- Contents
 - Professionalism & Training
 - Communications Technique
 - Safety
 - Methods & Procedures
 - Equipment
 - Documentation
- Keep a copy in your Go Kit
- Review before/during each assignment



Santa Clara County ARES®/RACES

**Performance Standards
and Best Practices**

Version 1.0.4 - Last Revised: 05/12/2016

<http://www.scc-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 51

Demobilization


- Upon relief at end of assignment, sign out on the ICS-211 form
- Check OUT of the local event tactical net
- Check IN on Resource Net (or other travel tracking net)
- Inform Resource Net control that you are proceeding to home
 - Give current street location and last three digits of odometer
- Check-in every 15-20 minutes on the way home
 - Give street location ("Highway 101") and last three digits of odometer
- Check-out when you arrive home
 - Give location ("arrived at home") and state you are checking out
- You are responsible for maintaining contact with net control at all times
- If you have somewhere else to go, you can check out early, before arriving home
 - You will not be covered under DSW after checking out

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 52

Your To Do List (so far)

- Become familiar with: <http://www.scc-ares-races.org>
 - At a minimum, review everything on the Operations page
- County and City DSW registration
- Inform family of Workers' Comp provisions
- Learn the nets and their usage
- Frequency lists (county, city); program your radio
- **Prepare Go Kit, Review Performance Standards**
- **Learn mobilization, tracking, demobilization procedures**

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 53




Tracking activities and message traffic

FUNDAMENTALS OF LOGGING

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 54

Three Primary Logging Forms

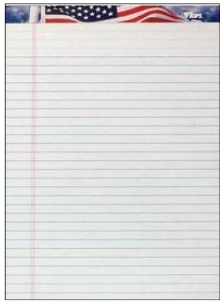
- Form 1
- ICS 214 – Unit Activity Log
- ICS 309 – Communications Log



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 55

Form 1


- Clear documentation is required
- A simple writing tablet works
- Lots of uses
 - Writing down assignment
 - Writing down activation number
 - Copying directions
 - Informal notes and messages
 - Scratch paper
 - Food and drink orders for the team
 - ... when you run out of the right form
- Turn in to supervisor at end of shift
 - (yes, even informal notes!)



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 56

ICS 214 – Unit Activity Log

- Our version: ICS 214-SCCo
- A record of all major activities
 - Assignment, departure, arrival, etc.
- Start when you get your assignment
- EVERYONE fills out a 214
 - Individuals: a unit of one
 - Teams: Team leader
- Occasional message traffic?
 - Just log it right on the 214
 - No need to use a 309 Comm Log
- Use multiple pages if necessary
- Turn in to supervisor at end of shift




<http://www.scco-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 57

ICS 214-SCCo

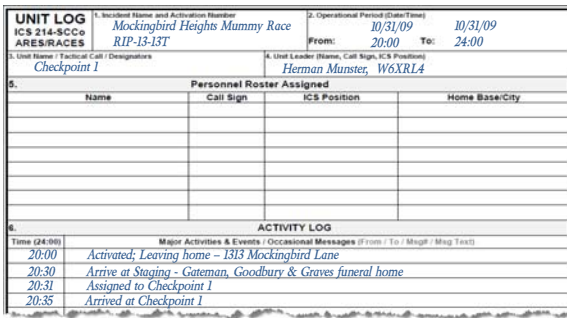
Field-by-field instructions on back:

- Incident Name & Activation Nbr
- Operational period
- Unit name / tactical call
- Unit leader
 - Your name, call sign for individual
- [Optional] Personnel roster
- Activity log
 - Time (local 24:00 time)
 - Major activities/events
 - Occasional messages
- Prepared by
- Date & Time Prepared



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 58

Example 214 (individual field communicator)



UNIT LOG
ICS 214-SCCo
ARES/RACES

1. Incident Name and Activation Number: Mockingbird Heights Mummy Race
RIP-13-13T

2. Operational Period (Date/Time): 10/31/09
From: 20:00 To: 24:00

3. Unit Name / Tactical Call / Designator: Checkpoint 1

4. Unit Leader (Name, Call Sign, ICS Position): Herman Munster, W6XRL4


5. Personnel Roster Assigned			
Name	Call Sign	ICS Position	Home Base/City

6. ACTIVITY LOG	
Time (24:00)	Major Activities & Events / Occasional Messages (From / To / MsgT / Msg Text)
20:00	Activated; Leaving home - 1313 Mockingbird Lane
20:30	Arrive at Staging - Gateman, Goodbury & Graves funeral home
20:31	Assigned to Checkpoint 1
20:35	Arrived at Checkpoint 1

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 59

ICS 309 – Communications Log

- Our version: ICS 309-SCCo
- Net Control Operators and stations with high message traffic
- Columns help organize key message tracking info
 - Time
 - From
 - To
 - Message subject
- Does not replace ICS-214
 - ICS-214 is a Unit Activity Log
 - EVERYONE fills out a ICS-214
- Turn in to supervisor at end of shift




<http://www.scco-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 60

ICS 309-SCCo

Field-by-field instructions on back:

1. Incident Name & Activation Nbr
2. Operational Period
3. Radio Net or Position Name
 - NCOs: Radio net name
 - Individuals: Position/tactical call
4. Radio Operator
5. Communications Log
 - Time (local 24:00 hour time)
 - From (Call Sign/ID & Msg #)
 - To (Call Sign/ID & Msg #)
 - Message
6. Prepared by
7. Date & Time Prepared




Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 61

Summary of Logging Responsibilities

- Everyone fills out a 214 Unit Activity Log (ICS 214-SCCo)
- Only occasional message traffic? (Primarily Shadows)
 - Log it on the ICS-214 Unit Log
 - No ICS-309 Communications Log is required
- Net control operator or significant message traffic?
 - Also use an ICS-309 Communications Log
 - Does not replace the need to maintain a 214 Unit Activity Log
- Start your ICS-214 as soon as you receive your assignment
- Must be legible!
- Hand in your log(s) at the end of your shift

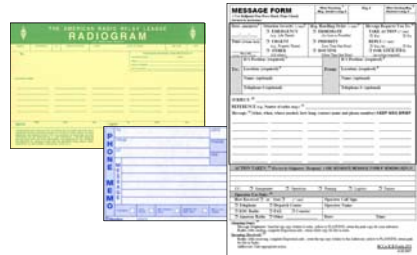
Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 62

Your To Do List (so far)



- Become familiar with: <http://www.scc-ares-races.org>
 - At a minimum, review everything on the Operations page
- County and City DSW registration
- Inform family of Workers' Comp provisions
- Learn the nets and their usage
- Frequency lists (county, city); program your radio
- Prepare Go Kit, Review Performance Standards
- Learn mobilization, tracking, demobilization procedures
- Learn and use the ICS-214 Unit Activity Log

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 63



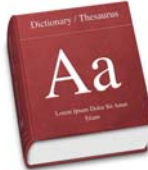
The Message Net in Action

FUNDAMENTALS OF MESSAGE HANDLING

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 64

What is a Message Net?

- A network of Amateur Radio Operators acting in an official capacity to pass traffic to or receive traffic from a served agency.



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 65


Types of Message Nets

- County Message Net
 - Between City/Agency and County
 - Between Operational Area (county) and Region
- Local Message (tactical) Net
 - Between Field Stations and City/Agency EOC (Emergency Operations Center)

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 66

Types of Messages

- Formal messages
 - Typically between field site and city; between city and county; between agency and county
 - Use official ICS Form 213-SCCo (Message Form)
 - ICS = Incident Command System
- Informal messages
 - Simple, tactical messages
 - Longer messages - use dual-copy phone message form, radiogram, or other acceptable form
- All messages are always logged



Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 67

Message Traffic Operator Skills

A good radio operator ...

- ... is as concise as possible
- ... frequently identifies tactical call
 - Don't forget FCC call sign at end of traffic
- ... clearly states the nature of the traffic
 - "I have one priority message for you."
- ... passes or copies messages exactly as written
- ... uses the 213 Message Form
- ... keeps an accurate log
- ... uses proper phonetics, numbers and pro-words
- ... passes messages five words at a time
 - and only as fast as you can write them yourself

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 68

Standard Phonetics

A - alfa (AL-fa)	N - november (no-VEM-ber)
B - bravo (BRAH-voh)	O - oscar (OSS-cah)
C - charlie (CHAR-lee)	P - papa (pah-PAH)
D - delta (DELL-tah)	Q - quebec (keh-BECK)
E - echo (ECK-oh)	R - romeo (ROW-me-oh)
F - foxtrot (FOKS-trot)	S - sierra (see-AIR-rah)
G - golf (GOLF)	T - tango (TANG-go)
H - hotel (hoh-TELL)	U - uniform (YOU-ni-form)
I - india (IN-dee-ah)	V - victor (VIK-tah)
J - juliet (JU-lee-ETT)	W - whiskey (WISS-key)
K - kilo (KEY-loh)	X - x-ray (ECKS-RAY)
L - lima (LEE-mah)	Y - yankee (YANG-key)
M - mike (MIKE)	Z - zulu (ZOO-loo)

If there is a chance of misunderstanding, spell it out with "I spell":
 Example: "go to Kay Street" → "go to Kay, I spell kilo alfa yankee, Street"

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 69

Pronouncing Numerals

0 - zero (ZEE-row)	5 - five (FY-ive)
1 - one (WUN)	6 - six (Sicks)
2 - two (TOOO)	7 - seven (SEV-vin)
3 - three (THUH-ree)	8 - eight (Ate)
4 - four (FOH-wer)	9 - nine (NINE-er)

- Zero is always "zero"; never "oh"
- Decimal point is "decimal" or "point"; never "dot"
- Larger numbers are spoken as a string of single digits:
 - 600 = "six zero zero"
- Often preceded by the word "figures"
 - "Please copy 109" → "Please copy figures one zero niner"
 - "Requesting 16 blankets" → "Requesting figures one six blankets"


Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 70

Message Handling Prowords

SAY AGAIN ...	Repeat – usually used with other prowords
WORD AFTER	"Say again word after ..."
WORD BEFORE	"Say again word before ..."
BETWEEN	"Say again between ... and ..."
ALL AFTER	"Say again all after ..."
ALL BEFORE	"Say again all before ..."
I SPELL	"I spell, Alfa, Bravo ..."
FIGURES	"Figures Wun, ZEE-row, NINE-er" (= 109)
INITIALS	"Initials Echo, Oscar, Charlie" (= "EOC")
MIXED GROUP	"Mixed Group Foxtrot, Wun, FY-ive, ZEE-row" (= "F150")

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 71

ICS 213 Message Form



- Message Numbers
- Header
- Address Info
- Message Body
- Action Taken
- Operator Use

<http://www.scco-ares-races.org/operations.html>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 72

Message Form – Message Numbers

- Critically important for tracking messages
- Message #
 - YOUR message number (often pre-stamped to ensure uniqueness)
- When Receiving, Sender's Message #
 - If you are receiving a message, put the sender's message number here
- When Sending, Receiver's Message #
 - If you are sending a message, put the receiver's message number here
- You have two blocks filled in when finished

Message Form - Header

- Date, Time (when message was created)
 - Use 24-hour clock, local time
- Severity
- Handling Order
 - Always prioritize according to handling order first
- Take Action, Reply, FYI

Message Form - Address

- To, From
 - ICS Position (required)
 - Planning, Logistics, Operations, Finance, ...
 - Location (required)
 - Santa Clara County EOC, Los Altos EOC, Shelter 2, ...
 - Name (optional)
 - Telephone (optional)

Message Form - Body

- Subject
- Reference
- Message body
 - 5 words at a time; 30 words max

Message Form – Action Taken

- Typically for local use – not transmitted via radio
- NOT FOR REPLYS!
- Originator may record action they took
 - Who they cc'd
 - What else they did with the message
- Recipient may record action they took
 - Who they cc'd
 - Responded via message # X

Message Form – Operator Use

- For tracking how message was handled (received or sent)
- Method
 - For us, we will typically check Amateur Radio
 - But we are first and foremost communicators, so we may send by FAX or telephone or other means
- Operator Call Sign, Name
- Date, Time (when you sent/received the message)

Recommended Transmission Process

- Sender
 - Message #, Date, Time (wait for ACK)
 - Severity, Handling, Requests (wait for ACK)
 - To, From (wait for ACK)
 - Subject (wait for ACK)
 - Reference (if any) (wait for ACK)
 - Message - 5 words at a time (wait for ACK)
 - “End of message”
- Receiver
 - ACK followed by receiver’s message #
 - “This is <call sign>”
 - Fill in Operator Info
- Sender
 - ACK Msg # / Fill in receiver’s message #
 - “This is <call sign>”
 - Fill in Operator Info

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 79

Sending to More Than One Station

- Announce message
 - “All Stations, All Stations, Stand by to copy one routine message”
- Pick a pacing station
 - “Mountain View, will you be my pacing station?”
 - “Mountain View acknowledges”
- Send message as normal
 - Pacing station provides acknowledgements during message transfer
- Ask for acknowledgements from other stations
 - “I will now poll all stations for acknowledgements. When I call you, respond with your message number or request a fill.”
 - “Los Altos”
 - Gives stations an opportunity to ask for “fills” or repeats
 - Confirms which stations received the message

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 80

Example Message

- Everyone will need a 213 Message Form
- I will send a message to all stations using a pacing station
- Everyone will copy the message
- After the pacing station acknowledges, you can ask for fills
 - Be sure to use the proper Prowords!
- We’ll compare at the end

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 81

How’d You Do?

- Should look like →
- Is it EXACTLY correct?
- Complex spelling
- Heterographs
 - “to” vs. “too” vs. “two”
 - “for” vs. “four”
 - “ate” vs. “eight”
- Did you add?
 - Your message number
 - How received
 - Amateur Radio
 - Call sign
 - Name
 - Date
 - Time

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 82

Get it Right!

- Our task is to effectively transfer message traffic
 - Priority ONE is to get the message through accurately
 - Priority two is to do so as quickly and efficiently as possible
- We don’t alter the message, we send it as written
- If we don’t get that right, there’s no point in us being there
- Get it right – the first time, every time
- Remember:
 - “For want of a letter, a word was lost.
 - For want of a word, the message was lost.
 - For want of a message, a life was lost.”

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 83

Recommended Training

- You now have exposure to the basics of emergency communications in Santa Clara County; but there’s much more!
- To be effective, you’ll need training and some experience in each of the specific functional areas: field operations, net control, packet, shadow, etc.
- Some courses are multi-part; attend the parts in order
- Courses are usually held on the first Saturday of the month
- Drills, public service events occur throughout the year
- Sign up at: <http://www.scc-ares-races.org>
- Hope to see you there

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 84

Core Courses

- Field Operations
 - Field Operations - Type III/II
- Net Control
 - Net Control - Type III, Part A
 - Net Control - Type III, Part B
 - Net Control - Type II
- Packet Operations
 - Packet Operations - Type III, Part A
 - Packet Operations - Type III, Part B
 - Packet Operations - Type II
- Shadow Communicator
 - Shadowing - Type III
- Other Core Courses
 - Message Passing
 - Cross-band Repeating
 - Antenna Fundamentals and Safety
 - Event Planning - Type I
 - WiFi/Mesh Networking Workshop

Year End Review
Offered in December each year to review the significant changes made to any classes during the year.

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 85

Mutual Aid Communicator (MAC) Program

- Available for deployment throughout the county, according to the county mutual aid mechanisms.
- The MAC Program defines standards of performance and includes several types and levels of qualifications:
 - Field Ops, Net Control, Packet, and Shadowing
- These qualifications are the basis for resource typing and effective and efficient resource assignment.
- Resource typing is categorizing, by capability, the resources requested, deployed and used in incidents.

<http://www.scc-ares-races.org/mac>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 86

Mutual Aid Communicator (MAC) Program

- Type I (Specialist) - Capable of the most critical and complicated assignments. Capable of planning, designing, deploying and operating complex multi-radio, multi-antenna equipment configurations for larger events or incidents.
- Type II (Advanced) - Capable of more difficult assignments, requiring more equipment and more complicated configurations, operations and troubleshooting.
- Type III (Independent) - Capable of fully independent operation, without coaching or assistance, in the qualified skill area (Field Ops, Net Control, Packet, & Shadowing).
- Type IV (Basic) - Any Mutual Aid Communicator, including those just entering the program.
- Type V - Any licensed amateur radio operator with DSW

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 87

Mutual Aid Communicator (MAC) Program

Resource	Skill Areas				
	Field Comms	Net Control	Shadow	Packet	HF
Type I	Field Comm I	Net Control I	Shadow I	Packet I	HF I
Type II	Field Comm II	Net Control II	Shadow II	Packet II	HF II
Type III	Field Comm III	Net Control III	Shadow III	Packet III	HF III
Type IV	Mutual Aid Communicator				
Type V	Licensed Amateur Radio Operator				

<http://www.scc-ares-races.org/mac>

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 88

Your To Do List (so far)



- Become familiar with: <http://www.scc-ares-races.org>
- County and City DSW registration
- Inform family of Workers' Comp provisions
- Learn the nets and their usage
- Frequency lists (county, city); program your radio
- Prepare Go Kit, Review Performance Standards
- Learn mobilization, tracking, demobilization procedures
- Learn and use the ICS-214 Unit Activity Log
- Learn Phonetics; pro words
- ICS 213 Message Forms; informal message forms
- Continued training, drills, public service events
- Consider the Mutual Aid Communicator (MAC) Program

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 89

Summary

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved 90

Summary



- You should now be able to
 - Describe the Disaster Service Worker program, including your responsibilities as a participant
 - Describe the purpose and appropriate usage of the main Santa Clara County ARES/RACES nets
 - Properly submit a Mike-Mike report
 - Describe and execute the proper procedures for mobilization, tracking, and demobilization, including the use of the Resource Net
 - Properly complete an ICS 214 Log form
 - Properly complete an ICS 213 Message Form

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

91

Thank You!

Questions, comments, suggestions?

Please complete the Course Evaluation

Copyright © 2012-2016 Santa Clara County ARES/RACES All rights Reserved

92