

March 2005



Newsletter of the County of Orange Radio Amateur Civil Emergency Service



Inside this issue:

Captain's Corner	1
OCRACES News	2
Upcoming Events	3
Watching the Web	5
RACES News	6
BPL Update	7
Calendar	7

Captain's Corner

by Ray Grimes N8RG, Chief Radio Officer

Southern California weather continues to be a key topic of discussion, particularly among first responders. We seem to be getting more than our share of the kind of weather that we used to read about that normally affects "other places". In a matter of weeks we have suffered driving rain, flooding, mud slides, high winds and tornados, plus snow and hail. Our citizens aren't prepared for these extremes, as witnessed by a sizable loss of hillside homes and a large number of motorist incidents involving swollen streets and flood control channels. This may also prove to be a record year in other ways, as we can expect perhaps the largest wild vegetation growth seen in decades. That may produce a serious wildfire threat as summer heat dries out hillside grasses.

Regardless of the threat, we as first responders must remain prepared and alert, always making sure that our families are safe. When responding to a disaster, we must always think "safety", as just being in the disaster zone increases the risks of injury. Do you know what to do to protect yourself during a tornado? Unfortunately, there are many Southern California single story wood frame houses that won't survive a tornado. While driving in the midwest states, you quickly learn that concrete freeway overpasses afford a good degree of tornado protection, particularly when

traveling on open roads. Flying debris is a significant hazard, as are downed power lines. It's important for your own survival to stop and survey a disaster scene before rushing in to help and possibly becoming another victim.

Monitor NOAA weather radio (162.450) for updates and special bulletins. An hour advanced warning can make a great difference in surviving a weather-related disaster. You should check your home disaster supplies to make sure that you have plenty of drinking water, warm blankets, flashlight batteries, a self-powered portable radio, a small portable stove, food, first aid supplies, and your ham radio equipment. When commercial power fails, you will have few of the comforts of home. At minimum, plan for a two day outage. Also make sure that your vehicle always has at least a half tank of gasoline, remembering that when power fails, service stations can't deliver fuel.

By the time you read this, we will have just completed an exercise at John Wayne Airport. We will have a full report in our April newsletter. Don't forget that Baker-to-Vegas is approaching fast, if you would like to assist please contact our B2V Coordinator, Ralph Sbragia, at w6csp@ocraces.org.

The Next
OCRACES
Meeting is

March 7th
1930 Hours

840 N. Eckhoff St.
Orange, CA



OCSD/Communications Division Names New Assistant Director and Engineering Manager

Their have been several recent retirements and promotions within the Communications Division, and recently Director Susan Markey announced two new appointments. Robert Stoffel has been named the new Assistant Director for the Communications Division, and Ray Grimes has been appointed the new Engineering Manager.

Robert began his career with the County of Orange in the 1980's as an extra-help employee at Control One. He started working full-time in November 1989, and served as the Chief of Operations at



Control One until he was appointed the Emergency Communications Coordinator. Robert provides leadership to the volunteer personnel who comprise OCRACES, and serves as the RACES Operational Area coordinator for Orange County.

Robert also works closely with several high-level organizations including the Orange County Chiefs of Police and Sheriff's Association, the Orange County Fire Chiefs' Association, and the Orange County Health Care Agency. Robert has received numerous awards, commendations and letters of appreciation throughout his career at Communications, including the prestigious Medal of Merit which was awarded by Sheriff Michael Carona in March 2001. As Director Susan Markey recently noted, "Robert is an outstanding representative of the Communications Division and a visionary with the ability to make things happen." Robert will continue as RACES Coordi-

the RACES program coordinator until his replacement is selected.



Ray Grimes began his assignment as Engineering Manager for the Communications Division on February 28th. Ray previously worked for 32 years in various engineering positions with Motorola.

Ray has supported the County as a RACES member for 11 years, attaining the position of Chief Radio Officer. Ray also serves as an Orange County Sheriff's Reserve Lieutenant in the Aero Squadron Reserve Unit.

Ray is a Senior Member of the Association of Public-Safety Communications Officials, International (APCO), and also holds membership in the Airborne Law Enforcement Association and the Institute of Electrical and Electronics Engineers (IEEE).

Some of the more interesting assignments Ray has experienced in his career include the development of a working agreement with the U.S. Navy, Pentagon, and FCC regarding 900 MHz military radar interference; a trip to Jordan last July to support a major cellular customer; technical support of the 1984 Los Angeles Olympics; and support of the 2002 Salt Lake City Olympics as a member of the Technical Command Staff assigned to the RF Interference Team.

Ray will continue as our RACES Chief Radio Officer until his replacement is named.

County of Orange RACES News

Christmas in April Coming to the County

As we have done in past years, County of Orange RACES will once again provide logistics communications support for the annual Rebuilding Together event. Formerly known as Christmas in April, the Rebuilding Together Orange County organization partnerships with the community to rebuild owner-occupied homes, shelters and non-profit facilities for low income residents. Services are provided particularly for the elderly and those with disabilities, so that they may live independently in warmth and safety.

Although Rebuilding Together provides services throughout the year, the national rebuilding day is Saturday, April 30, 2005. This is the largest event of the year and when communications is needed the most. As we have done in the past, OCRACES will be seeking assistance from any interested City RACES organization. The event is too large for us alone, and we are seeking communicators for this day-long activity. If you are interested, please have your City Coordinator or Radio Officer contact us at OCRACES@ocgov.com and we will provide you with all the details.

Weather Wise! By Ray Grimes, N8RG

The recent series of severe Southern California storms produced some potentially disastrous conditions for ham radio operators that we may not have considered. It's so unusual to experience lightning and tornado's in this area that very few of us (if any) install our ham stations to endure nature's worst wrath. Lightning accompanies most every episode of intense rain and hail. If your antenna is struck by lightning, your radio equipment will likely be destroyed. That same event could result in a structure fire. Your computer may be connected

to a telephone circuit or high-speed network cable. That too can be struck by lightning. In order to protect all of your electronics and your home, it's important to install *complete* lightning and grounding protection for *all* systems. Though your ham radio antenna may be lightning protected, damage to your home electronics can still occur through other 'sneak paths' such as the AC line, your telephone line, or the TV antenna, to name a few possibilities.

Anything less than *total* facility protection equals *no* protection! A lightning or surge protector is ineffective unless it includes a good grounding system. A cold water pipe or the utility entrance ground rod makes a reasonably good ground protection tiepoint for a home. Coaxial antenna lightning protectors are available at most all ham radio stores. These too must be grounded at the radio equipment. Telephone and AC surge protectors are most effective when installed at the point of entry where these circuits enter the home. Most consumer type surge arrestor devices will degrade or fail after a period of time. Unfortunately, there are no visible signs for most low cost surge protectors that they are no longer capable of protecting your valuable equipment.

Extreme winds and tornado's are also rare to Southern California, though we have had more than our share of these recently. It is critical to make sure that antennas are installed adequately to handle such conditions, and if they should fail, life and property will not be jeopardized as would occur if they fell into power lines.

As emergency communications providers, it would be foolish to install our ham radio home stations in any manner that would not survive some degree of extreme weather. Most important of all is a caution that should your station antenna fail, extreme caution must be exercised to not risk your life in reconstructing your antennas during extreme weather.

Working in the Rain...and Other Stormy Weather

A "Behind the Scenes Look at a County of Orange Operation" as presented in the February 2005 County Connection Newsletter

"Being in the field during a major storm is very exciting. It's a rush, although it can be scary at times," said Lon Hanson, Inspections Supervisor, Operations and Maintenance/Storm Center. "I've been doing this for 30 years and sometimes I still find myself looking over my shoulder. Imagine going out in the rain during a major storm in the middle of the night. You're all alone in the cold and darkness. All you can hear is the sound of trees blowing in the howling wind and different kinds of animals crying out from a distance. Then you hear the sound of rushing water as if it's running directly under your feet. At that moment even the smallest pebbles sound like boulders rolling in the creek."

Floods, mudslides, windstorms, firestorms, earthquakes and other natural disasters are just some of the incidents faced by the Resources & Development Management Department (RDMD) Storm Center staff. The Storm Center is a function of RDMD's Public Works department and is operated by on-site Operations and Maintenance personnel. The Board of Supervisors recently recognized the department for outstanding service to the community. This group is seldom visible, yet they are responsible for responding to the public and protecting public property when a natural disaster strikes. They are the silent heroes who also lend a helping hand to various other departments such as the California Highway Patrol, Fire Authority, Cities and other Counties during all kinds of weather conditions.

Tucked away at Katella Yard in Anaheim, across from Angel Stadium and near the Pond, the County's Storm Center was established in 1973 and only comes to life at the onset of bad weather. If a storm or other natural disaster is expected or hits without warning, the Storm Center is launched into action in the main conference room. At first glance, the room seems to be a traditional conference room, yet once the adrenaline, intensity and flow of information start pumping, the mood is anything but traditional. In the event of a natural disaster, Operations and Maintenance on-call personnel kick into storm mode. Inspectors go out to check on "hot spots" where there has been a history of problems during storms. Once at the location, they call back to the Storm Center and report on the status of the site. These inspectors assess trouble spots and try to take care of any problems such as downed trees, minor mudslides and plugged up drains. Inspectors might call for backup unless they can resolve the problem on their own.

Meanwhile, the team that stays inside takes calls from the public and tries to answer their storm-related questions. Calls about specific concerns might warrant an on-site visit by an inspector. "In a major storm or other natural disaster, we go into high-gear for hours at a time," said Holly Felipe, Inspections Supervisor, RDMD/Storm Center. "There have been times when I've been called into the Storm Center at 2 a.m. It's my home-away-from-home. There are many people involved so the key is communication. The fast pace and high-stress atmosphere make time go very fast, and knowing that we are serving the community makes it all worth it."

Another function of the department is to compile all the rainfall statistics for the County. They maintain records for more than 40 rainfall gauges located throughout the county. They often assist the Orange County Fire Authority by providing backup bulldozers, water trucks and chemical spray trucks. "During the recent January storms, my staff worked tirelessly to protect public property and serve the community," said Bill Tidwell, Manager, Operations and Maintenance/Storm Center. "This group of individuals is very hard-working and dedicated."

Watching The Web – By Ken Bourne, W6HK

Each month, Ken Bourne, W6HK, Radio Officer, County of Orange RACES, presents Web Sites of Interest to RACES Personnel. Featured this Month: Radio Mobile Freeware by VE2DBE.

Roger Coudé, VE2DBE, offers free “Radio Mobile” software on his Web site at <http://www.cplus.org/rmw/english1.html>. With this software you can predict the performance of a radio system. It uses digital terrain elevation data for automatically extracting path profile between a transmitter and a receiver. This data is added to system, environmental, and statistical parameters to feed the Irregular Terrain Model radio propagation model, available at <http://flattop.its.bldrdoc.gov/itm.html>. The link to the Irregular Terrain Model given on the Radio Mobile site is incorrect, so use the above “flattop” link instead to the U.S. Department of Commerce NTIA/ITS Institute for Telecommunications Sciences Irregular Terrain Model.

The ITS model of radio propagation for frequencies between 20 MHz and 20 GHz (the Longley-Rice model) is a general purpose model that can be applied to a large variety of engineering problems. The model, which is based on electromagnetic theory and on statistical analyses of both terrain functions and radio measurements, predicts the median attenuation of a radio signal as a function of distance and the variability of the signal in time and in space.

The Radio Mobile site provides elevation data for most of the world, used to produce virtual maps in the background, including gray-scaled slope, X-ray, and rainbow. The software also provides 3D views, stereoscopic views, and animation. A background picture can be merged with a scanned map, satellite photo, or military ADRG (ARC Digitized Raster Graphics).



Mission Statement

County of Orange RACES has made a commitment to provide all Public Safety departments in Orange County with the most efficient response possible to supplement emergency/disaster and routine Public Safety communications events and activities. We will provide the highest level of service using Amateur and Public Safety radio resources coupled with technology, teamwork, safety and excellence. We will do so in an efficient, professional and courteous manner, accepting accountability for all actions. We dedicate ourselves to working in partnership with the Public Safety community to professionally excel in the ability to provide emergency communications resources and services.

County of Orange RACES Frequencies:

- 6m: 52.62 MHz output, 52.12 MHz input, 103.5 PL
- 2m: 146.895 MHz output, 146.295 MHz input, 136.5 PL *
- 23cm: 1282.025 MHz output, 1270.025 MHz input, 88.5 PL
- 1.25m: 223.76 MHz output, 222.16 MHz input, 110.9 PL
- 70 cm: 449.180 MHz output, 444.180 MHz input, 107.2 PL

* Primary Net - Mondays, 1900 Hours

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RACES News from Around the County

ANAHEIM RACES

What’s in store for Anaheim RACES during the 2005 calendar year? Not surprisingly, it will look very similar to 2004, reports Chief Radio Officer Wayne Barringer, KB6UJW. At least one major field-deployment exercise is anticipated, and a new format will be implemented for monthly training meetings.

During 2005, Anaheim RACES will implement a combination of “open” and “closed” meeting formats. Odd-number months will be “open” to the public and to visitors; even numbered months will be “closed” to the public and provide “away” opportunities for training and facility orientation of strategic locations. The new training format will allow members to learn more about various facilities, both within and out of the City that are potential areas for deployment during a local emergency or wide-spread disaster.

Based on CERT involvement in the May 8th exercise, future joint operations with Anaheim RACES is assured. Not only do the CERT members learn more about what amateur radio does during an emergency, but it provides training opportunities for them to learn about deployment operations, the Incident Command System (ICS) and the important role they play in overall operations when traditional resources are stretched to capacity or available in very limited supply. Buena Park and Fullerton RACES will continue to be high on the list of

partners invited to participate in training exercises, concluded Wayne.

HUNTINGTON BEACH RACES

Many cities had their own unique weather related incidents during the months of January and February. This photo was taken February 19th by the Huntington Beach Lifeguards, and shows a waterspout off the coast of the Huntington Beach pier.

“The waterspout touched down on



14th Street and took out a light pole, a few trees and a roof,” reports Gloria Morrison, KE6ATG, the HBRACES City Coordinator.

The Huntington Beach Emergency Operations Center was activated at a Level I and RACES was placed on standby, however an activation was not required.

“RACES News” provides an opportunity to share information from all City & County RACES organizations in Orange County.

Please send your news to:

**OCRACES@
ocgov.com**

March 2005

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
			<i>JWA Exercise</i>			
6	7	8	9	10	11	12
	<i>Weekly Net OCRACES</i>		<i>SONGS Dress Rehearsal</i>			
13	14	15	16	17	18	19
	<i>Weekly Net</i>					
20	21	22	23	24	25	26
	<i>Weekly Net</i>					
27	28	29	30	31		
	<i>Weekly Net</i>					

Upcoming Events:

- **March 2:** Disaster Exercise, John Wayne Airport, OCRACES Activation
- **March 7:** OCRACES monthly meeting, 840 N. Eckhoff Street, Orange, 1930 hours
- **March 9:** SONGS Dress Rehearsal – OCRACES Activation
- **April 4:** OCRACES monthly meeting, 840 N. Eckhoff Street, Orange, 1930 hours
- **April 23 & 24:** Baker-to-Vegas – OCRACES Activation
- **April 30:** Christmas in April – OCRACES Activation

BPL TEST SITES TO BE DEPLOYED IN SAN DIEGO COUNTY

Staff members from San Diego Gas & Electric Company ("SDG&E") made a presentation to the San Diego DX Club on February 23, 2005 and announced that SDG&E plans to deploy multiple BPL test sites in San Diego County at as-yet unspecified locations. Several equipment vendors are expected to be involved, each with its own test area and frequency plan. The first system may be in place as early as June 2005, with others coming on line shortly thereafter. SDG&E staff said they were unimpressed by early BPL equipment, but were encouraged by their December visit to Cinergy's BPL system in Cincinnati that was said to pass some 50,000 homes without creating radio interference concerns. Furthermore, they believed that Cinergy had a viable financial model for making BPL work. Lee Krevat, IT Manager in charge of strategy and planning for SDG&E, was the lead presenter.

In response, ARRL Laboratory Manager, Ed Hare, comments that while the Current Technologies equipment he says is used by Cinergy has reduced the interference potential to amateur radio operators because of frequency notching, the BPL system operates at full signal strength in other allocated spectrum, so the largest interference concerns have been shifted to other places on the dial. Ed also points out that Cinergy only induces BPL signals onto the secondary (110/220V) sides of transformers, essentially keeping the signals off the overhead medium voltage lines, thereby helping to contain the interference potential. Nevertheless, the actual performance of each and every BPL system must be closely examined, and nothing can be taken for granted.

This article was provided by the CGC Communicator, #676 – February 24, 2005

County of Orange RACES

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It's Where It's @!

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**"W6KRW ...
Serving
Orange County"**

Meet your County of Orange RACES Members!



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Jack Barth
AB6VC

Bill Borg
KG6PEX

Scott Byington
KC6MMF

Ernest Fierheller
KG6LXT

Nancee Graff
N6ZRB

Bryan Hovde
KD7CRA

Walter Kroy
KC6HAM



Martin LaRocque
N6NTH

Carol Matthews
KF6ERZ

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W6JOR

Tony Sanchez
AE6QT

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N6FDZ

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KC6FIC