



County of Orange RACES

NetControl

August 1998



Newsletter of the County of Orange Radio Amateur Civil Emergency Service

Top Story

Field Day - 1998

By Ralph Sbragia, KD6FYT

Another Field Day is in the books and we have learned a variety of lessons from the experience. As in previous years there were both positive and negative occurrences during the event. I would like to thank all the OCRACES members and guests that devoted their time and effort. Field Day is an activity that helps prepare our organization for disasters by providing an exercise in which members must work together towards a common goal. This familiarity is what makes disaster response second nature.

Set-up began at approximately 0800 and proceeded fairly well. Our first 40M phone contact was made at 1104 with our first 20M phone contact being made at 1134. The VHF station was activated at 1434 with the first contact on packet.

Overall, we logged 394 contacts (that's an average of about 16 contacts per hour).

Several problems were encountered. Not all positions were staffed for the twenty-four hour period. The 80M antenna could not be matched to the transceiver. This limited our 80M contacts to just 4 compared to 140 on 40 meters and 134 on 20M.

Additionally, we lost over an hour just prior to 2300 when most of the staff had to go on "sprinkler watch." Yes, that's right, Field Day 1998 was another 'wet weather Field Day' exercise. Quick thinking and reflex actions, on the part of our staff, minimized the damage. Several of us were completely soaked by the time the ordeal was over. We also planned ahead by powering down the rigs and generators when the adjacent sprinklers first became active.

After the distraction and energy required to deal with the mid-night artificial rain-storm most of us on duty gathered in some shut-eye except for one lone operator (Assistant Radio Officer Joe Selikov, KB6EID) who kept the rigs going between 0100 and 0230.

During the debrief it was suggested that next year scratch logs be used in conjunction with the computer logs. The

August Meeting

In keeping with our new tradition of OCRACES General Meeting technical presentations, all interested hams are invited to our next meeting, Monday August 3, 1998. This meeting will feature a presentation on packet radio by OCRACES member Dave Wilson (KE6AFR). The meeting will be held at 1930 hours at the usual Eckhoff Street location.

computer logs do not reflect any HF activity after 0230 yet I know contacts were made. There is no way to know how many points we lost through this error. Next year we will have pre-printed scratch forms for all operators to use that will have room for scratch logging the time and exchange information as well as checking off that the QSO has been entered into the computer.

Special THANKS to the PF&RD, Harbors Beaches and Parks and especially the Park Ranger and her crew.

Upcoming Events

Aug 3	General Meeting, Packet Radio
Aug 10	Staff Meeting, Loma Ridge – Training and Drill
Aug 16	OCSD Aero Squadron & SAR Drill
Aug 15,16	Ham Convention, San Diego – ATV Presentation and RACES forum
Aug 20	OCRACES Presentation at CPRA Meeting
Sept 7	Labor Day – No Meeting, No Net
Sept 14	Staff Meeting – Field trip, John Wayne Airport
Sept 19	Red Alert Expo – Laguna Niguel

Inside this issue:

Top Story	1
Upcoming Events	1
Captain's Corner	2
City Watch	2
ECC News and Views	2
Training	3
Committee Reports	5
Did You Know ?	6
Editor's Notebook	7

Captain's Corner

By Ray Grimes

Looking at the weather reports and the national news, we have to consider ourselves so very lucky to be living in Southern California. Florida is in crisis, with a large drought and daily lightning storms producing one of the worst and possibly longest firestorms of modern US. history. Hundreds of homes have been lost and thousands of people have been displaced, as firefighters lose and gain control of this firestorm which re-ignites daily or weekly from repeated lightning strikes. The Florida firestorm has been compared with Hurricane Hugo, with the fire winning the dubious honor of producing more widespread damage and destruction, affecting more people than a hurricane. Other ma-

lor mid-west and eastern cities are also sharing the misery as the El Nino influenced jetstream blows the Mexico fire smoke and ash as far north as Chicago, and the Florida smoke northward into New England. Some experts believe that if Florida doesn't get substantial rain soon, it could be sometime in September when the fires are finally under control. Florida has summoned mutual aid from all states and agencies. Orange County has sent equipment and personnel to assist, as have neighboring departments.

Can you imagine a RACES callout which lasts weeks or months?

Realistically, we couldn't effectively staff

such an event for that long. At best, we could probably manage one or two weeks at a time with rotating shifts. Envision two disasters at once, such as an earthquake and firestorm, or earthquake and flood. Could we manage two simultaneous and different incidents? Aside from needing more new RACES members to support our program, we should consider a long term response plan for such events. Two squads could be assigned prime responsibility to support specific incidents, with the third squad providing rotating fill-in duty. You could think of such events as an "extended Field Day". Could you handle it?

ECC News and Views

by Robert Stoffel

It has been another busy month for OC-RACES. I would like to thank our members who staffed the Amateur Radio booth at the Orange County Fair on Sunday, July 12, 1998. This is always a worthwhile activity, promoting ham radio, including the hobby and public service aspects. This year the following members participated, Jack Barth (AB6VC), Jim Carter (WB6HAG), Nancee Graff (N6ZRB), Amish Parashar (KE6EZM), Joe Selikov (KB6EID), Steve Sobodos (KN6UX), Nona Thomas (KD6IED), Roger Thomas (KD6DAN) and Roger Woodcock (KF6CJJ).

At our next staff meeting, we will meet at Loma Ridge and participate in a communications exercise. On August 16, OC-RACES will participate in the Sheriff Search & Rescue field exercise. The City/County RACES drill date has been set for October 17, 1998 and is in the final planning stages. Mike Krueger (KC6ZSF) will have a full report on these exercises at our next staff meeting, August 10, 1998.

Our members will also be speaking at several upcoming events. If you are attending the ARRL Southwestern Division Convention in San Diego, please be sure

to check out or participation in the ATV and RACES presentations. The convention is being held at the Town & Country Convention Center August 15 & 16, 1998. We will also be presenting amateur radio at the California Public-Safety Radio Association meeting August 20, 1998.

In closing, I would like to congratulate Ken Bourne (W6HK) on his recent appointment and promotion to the position of Deputy State ACS officer. Ken now has responsibility for all regions throughout the State. Congratulations, Ken!

City Watch

This section of **NetControl** is dedicated to fostering relations between city RACES groups and OCRACES. City ECCs and Radio Officers are encouraged to submit articles about events held within their city. Mutual aid requests will also appear in this column.

La Palma

Chief Radio Officer Susan Atkinson has a new email address: ke6yip@yahoo.com

Please update your City Races Guide.

Riverside County RACES

Norm Davies, Radio Officer change of callsign to KQ6OS

RACES coordinator is now Mike Burton, N6KZB. He is the Communications Manager, Riverside County F.D. Delete the old Emergency Service Division title of the RACES coordinator.

Please update your City Races Guide.

New Member

OCRACES is pleased to welcome Tom Tracey, KC6FIC. Tom lives in Fullerton and is employed by Golden State Foods located in Irvine.

Tom graduated from CS Fullerton with a degree in Criminal Justice. Although not pursuing a career in Law Enforcement, he has been involved with emergency preparedness and communications for many years.

Thanks for choosing OCRACES Tom, and welcome aboard.

Training

A RECIPE FOR ALPHABET SOUP

by Ray Grimes, W6RYS

As we enter what may be one of the worst fire seasons in Southern California history (thanks to El Nino), it makes sense to review some specific terms and programs used by firefighters which relate to disaster management systems we as OC-RACES members have been trained to implement. It so happens that this is the 25th anniversary year of the first use of the Incident Command System (ICS). As we have learned, the ICS system is the common and standard emergency management system for immediate use in multi-agency, multi-jurisdictional incidents, and is increasingly being used for multi-discipline incidents (such as an air carrier crash with fire, HazMat spill, intruders, looters, biological hazards, possible act of terrorism, etc.).

The ICS system evolved out of a program called FIREScope (Firefighting Resources of Southern California Organized for Potential Emergencies). The FIREScope program was created after several terrible years of California wildland fires with considerable structure losses. This program was made-up of a partnership of key county fire agencies with brush fire responsibilities, the California Division of Forestry (CDF), California State Office of Emergency Services (OES), and the U.S. Forest Service (USFS). The task was to create and implement an operational fire suppression coordination system. FIRES-

COPE addressed a number of causes for losses of life and property in past fire disasters, including:

- No generic management organization that all responders understood
- Poor communications capability
- Poor strategy and tactics and deployment of resources
- Ineffective response of resources and control of resources

In 1980 the ICS developed under the FIREScope program extended to become a national program known as the National Interagency Incident Management System (NIIMS). In 1990 the National Fire Service Incident Management Consortium began, combining the FIREScope ICS system and the Phoenix Fireground Commander systems into a single organizational structure. A National ICS Training Curriculum was developed for use by all local, state and federal agencies to ensure uniformity of response across the nation.

TWA Flight 800 Remembered

by: Joe Selikov, KB6EID

July was the anniversary of the TWA Flight 800 disaster off the coast of Long Island. We as Emergency responders should be interested in some of the lessons learned by the people involved in the recovery and protection of life and property.

Responders were not prepared for the magnitude of the event nor the trauma associ-

ated with the critical incident stress. Many are still undergoing counseling. In addition we all must be aware of the feeding frenzy exhibited by the media, some of whom provided unsubstantiated rumors just to make a story.

Originally I was going to run an article in **NetControl**, taken from a presentation given by Mr. Robert Gaffney at the 7th World Conference on Disaster Management. Mr. Gaffney is the Chief Elected Officer in Suffolk County, New York. Because of the length of the article it would have been necessary to spread it over several issues of **NetControl**. I decided it would be better to keep the article as one. The article will be available from our OCRACES Web page. I encourage each of you to read the article. It covers all aspects of the disaster and represents something that could happen anywhere there is an airport or planes that fly over.

State OES News

The California Governor's Office of Emergency Services welcomes Ben Green as the State OES ACS/EAS program coordinator. Recently promoted to Communications Coordinator, he has been assigned the programs that were managed by Stanly Harter, KH6GBX, until his death in April.

>From 1995-1998 Ben served as permanent staff to the State Warning Center in Sacramento as an Emergency Notification Controller.

He is the holder of FCC Amateur license WD6CZP. Over the last 25 years he has

ESP

Aug '98

Heat Wave



Did you know that during an average summer, some 200 people across the country die due to heat injuries from exposure to high summer temperatures?

Heat injuries that can occur include sunburn, heat cramps, heat exhaustion and heatstroke. Exposure to ultra violet (UV) radiation can also damage the skin. If you need to go out in the sun, use a sunscreen with a sun protection factor (SPF) of at least 15. Refer to the directions on the bottle. Don't forget to carry water with you.

Find out now what steps you can take to protect yourself and your family from

heat-related injuries.

For more information on the Earthquake Survival Program (ESP), contact your local Office of Emergency Services.

The Los Angeles County Office of Emergency Management has a program called ESP which stands for Earthquake Survival Program. As part of that program they supply a set of articles which focus on a different hazard each month. **NetControl** will publish each month's hazard through the end of the year.

(State OES from page 3)

held many positions of leadership in volunteer communications services.

>From 1988 to 1991, while at his last assignment in the U.S. Navy as a staff photographer at the Naval Air Station Miramar, he served a collateral duty as Communications Coordinator to the base Emergency Manager. In that role he promoted the use of Amateur, MARS, CAP and others as auxiliary modes for the Navy for liaison between civilian & military authorities in events such as Air Shows and mutual-aid disaster drills. Since his Navy retirement, Ben continued to apply his volunteer experience by serving in the field with the State OES as an Emergency Hire in telecommunications for such disasters as the Wildland Firestorm of 1993 and the Northridge Earthquake in 1994.

>From 1991 to 1995 he was the Chief Radio Officer for San Diego County RACES. In that post he developed an effective reserve communications organization, and was awarded a Certificate of Appreciation for Service and Commitment to RACES & Emergency Communications by the Unified San Diego County Emergency Services Organization. He was also a recipient of the County Sheriff's 'Exceptional Service Medal'.

Ben is a member of the California Emergency Services Association (CESA), Inland Region Chapter, where he was the State ACS liaison the past three years. He is also a member of the International Association of Emergency Managers (formally NCEM now IAEM); Associated Public-Safety Communications Officer (APCO) Northern California Chapter; and a Life member of the American Radio Relay League (ARRL).

Ben takes over Stan's old desk on July 1st. Ben's first task will be the ACS program, followed by the EAS program. Interim EAS program manager, Cary Mangum, will continue with the State and Local Area EAS plans until they are filed with the Federal Communications Commission, a process that should be complete by October. Ben's telephone is 916-262-1603; Fax 916-262-1677.

State OES News

by Dave Larton

On Thursday July 16th, we had a great meeting of the ACS Executive Staff at the State OES Headquarters in Sacramento. Thanks to all of the ACS Staff Officers who flew in or drove from all parts of the state. It was a meeting I look forward to again soon!

We now have a definite date for ERI South! Mark your calendars for October 10-11, 1998, at March Air Force Bases' Clark Training Center. ERI 98 Incident Commander Ken Bourne has more information below.

Congratulations to our ACS Listmaster Mark Hartman, who has accepted an appointment as Southern Region ACS Officer. He succeeds Ken Bourne, who was promoted to Deputy State ACS Officer. Welcome aboard!

Current Events:

Mark your calendars for ERI '98, which is the annual Emergency Response Institute in California. The dates are Saturday and Sunday, October 10 and 11, 1998. For the first time, ERI will be held in Southern California, at the Ben Clark Training Center at March Air Force Base, east of Riverside. The theme of ERI is "D2K—Dealing with the Disasters of the Next Millennium." ERI '98 is cosponsored by the State of California OES (and ACS) and by the Riverside County Fire Department (and their RACES organization).

ERI '98 will consist of intensive classes, seminars, forums, exhibits, and demonstrations on a wide variety of subjects dealing with emergency response. Just some of the topics include emergency communications, dealing with Y2K communications outages, chemical and biological terrorism, seismic preparation of communications sites, Incident Command System (ICS), stress management, etc. The training center is fully equipped with the best in audio/visual aids, food, and even some hotel space. Printed material will be distributed at each session. Be sure to check the ERI '98 Web site often for updates. The URL is <http://www.qsl.net/races/eri>.

Resignation

OCRACES member Steve King, KE6WEZ has accepted employment with the Gillette Company Stationery Products Group located in Santa Monica.

Steve stated "I certainly have had a great deal of fun and learning these past few years and will miss the entire crew. I do plan on getting involved with the "local" RACES or ARES once I get settled in, and you may even get me to help you with the next B2V (did I really say that?)"

Anyone that has worked with Steve knows how much he has contributed and how much he will be missed. Although the Gillette Company has hired him, they still do not realize the caliber of the individual they have hired.

Good luck Steve and if you should find your way back to Orange County our doors are always open.

Tsunami

As many of you know a devastating tsunami and earthquake hit Papua New Guinea. For those interested in their disaster recovery efforts, a web page has been set up. Its URL is:

<http://omzg.sccc.ru/tsulab/19980717.html>

The large number of fatalities (over 1800 at last report) has caused the local government to take some extreme measures. One of which is to blow up one of their Lagoons that still contain many bodies.

Ham Convention

OCRACES will be participating in ARRL Southwest Division Convention scheduled for August 14 - 16 located at 500 Hotel Circle North, San Diego, California. A web site has been established. Its URL is:

<http://www.geocities.com/siliconvalley/lakes/8400/>

Committee Reports

Visual Communications



Coordinator: Jim Carter (WB6HAG)
Web page:
[http:// www.qsl.net/wb6hag/](http://www.qsl.net/wb6hag/)

Ham Fax Update - Dan Welch (W6DFW) project leader, reported new approaches for meeting our objectives. He has identified a method for having two fax machines talk to each other without using public phone lines. Based upon this findings, he has developed a many page scenario for accomplishing the objective. However, Dan needs assistance from other members to make this a reality . If anyone is interested, please contact Jim Carter. If assistance can not be obtained, this project will be tabled. This is a very interesting concept that will create high visibility to OCRACES, since we can not identify any prior art. Thanks Dan for your achievements!

ATV Goes to OC Fair - Jack Barth (AB6VC) and Jim Carter (WB6HAG) demonstrated ATV during the morning of July 12, 1998, at the Orange County Fair Amateur Radio booth. Jack roamed the grounds with his ATV backpack and Jim demonstrated the Helmet-Cam to onlookers. Roger Thomas(KD6DAN), also assisted in the demonstration by roaming with the helmet-cam for the purpose of conducting range test, since its transmitter

output is only a few hundred milliwatts. Thanks Jack and Roger, for demonstrating what ATV can do!

Tri-Agency Update - Members of the Tri-Agency committee meet in Long Beach last month and established goals and objectives. One objective is to provide bi-directional ATV feeds to Loma, Signal Hill, Mt. Disappointment, and East LA via a linking system. Frequency feasibility study will be conducted this month and next to determine which frequency bands will have minimum interference.

Captain Ray Grimes (W6RYS) presented our status to a State of California OES meeting. The State is very interested in our project.

Dialog has also started with the President of SCRRBA for obtaining frequency availability.

Field Day - The ATV Visual Committee demonstrated 434MHz, 2.4GHz capabilities during the field day event. Other city RACES also used ATV to demonstrate the benefits for using this type of communications. We were able to communicate via the Santiago ATN repeater with a P5 picture.

2.4GHZ Project: Jack Barth project leader, reported that the project continues

to be moving forward. A point to point transmission test was conducted during field day. He reported a P5 picture at a distance of 1.77 miles was obtained using the WaveCom's. Also, one set of WaveComs were placed into die-cast aluminum cases to protect the receiver from RF interference. The next phase is to increase their power output once test equipment is obtained.

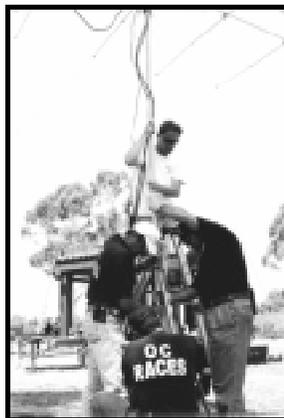
ARRL Convention - The ATV Committee consisting of Ray Grimes (W6RYS), Jack Barth (AB6VC) and Jim Carter (WB6HAG) will be presenting "Using ATV in RACES Events", on August 15th, at the San Diego ARRL Convention. Jim will present the purpose and advantages for using ATV, Jack will illustrate the types of ATV equipment used, and Ray will conduct the Q and A session. This will provide OCRACES an opportunity to demonstrates its capabilities to other organizations.

Members Needed - We are looking for additional members. If you would like to learn about ATV or provide assistance to the Ham Fax development, please contact Jim Carter (WB6HAG) for additional information.

Loma Console - Al Baird (KC6TWD), constructed a great looking cabinet for housing the Loma Ridge ATV equipment. This addition now provides organization of our ATV modules. Thanks Al for sharing your handywork!

Field Day 98

Jim Carter setting up ATV



Antenna crew erecting 6M Beam



Gazibo #2 at Craig Park
Thanks to all the help from Park officials



Control 6 providing support

We Won't Forget

by: Ray Grimes, W6RYS
Orange County RACES

There were a few modest notices in some communications magazines recently noting the death of radio communications pioneer Fred M. Link. An intensive search of the Internet yielded very little information about his life and work. There was nothing in the newspapers or on television about the world's loss of such an important pioneer and contributor to public safety and military communications. This led me to do some research in journals, corporate histories, and professional organizations in search of information on this amazing man. Here is what I learned.

Fred M. Link was 93 at the time of his death. He was licensed as W2ALU. He received his bachelor's degree in electrical engineering from the State College of Pennsylvania (now Pennsylvania State University) in 1927. He was a member of the Radio Club of America, a Fellow of the IEEE and founding member of its Vehicular Technology section. Fred lived in Pittstown, New Jersey. He operated the Fred M. Link Company from 1931 to 1950. In later years his company was called Link Radio Corp., manufacturing two way radios used exclusively in the U. S. and other countries for police. On rare occasion you can find an antique Link Radio Corp. 1940's version VHF mobile transceiver at a swap meet. These were vacuum tube and vibrator power supply radios housed in hammertone finish box-like metal cabinets, with a metal control head, microphone and loudspeaker. In 1954 Fred Link joined the Allen B. DuMont Laboratories as director of the mobile radio division. It was then no surprise that DuMont's mobile radio transceivers looked and operated much like the Link products.

In 1959 Fred Link was hired by David Sarnoff as a consultant to RCA Corporation. He had also consulted to several corporations including Ericsson Private Radio Systems, Decibel Products, and Mobile Radio Technology magazine. He

was also a member of APCO, the Quarter Century Wireless Association, and the Veteran Wireless Operators Association. He received the IEEE Centennial Medal in 1984 and was honored with a plaque at the entrance of the Connecticut Department of Public Safety headquarters in Middletown, Conn. for his contributions in developing the first police FM radio communications system (1940, Hartford). The success of this system led to the development of an FM radio communications system for the Mechanized Cavalry (tanks) based at Ft. Monmouth, N.J. which was used in WWII.

Fred M. Link recognized the importance and need for "reliable" police radio communications systems. Prior to his Fred M. Link Company FM VHF mobile radio system, the state of the art was AM transmission using the broadcast and short-wave bands. Early police systems were plagued by fading and skip, vehicular noise and static, and mechanical and electrical instability of equipment. The Link FM transceiver brought several "new" technologies which included crystal controlled transmitters and receivers, highly efficient FM transmitters, and FM receivers which discriminated against man-made electrical noise, including a squelch circuit which muted atmospheric noise when no carrier was present, making long periods of radio monitoring very tolerable. Fred Link also introduced another concept which is the foundation of critical public safety systems today, that is, programmed maintenance using trained, licensed radio technicians. When questioned about his incredible success in the police radio communications business in the 1930's, he confided to Paul Galvin, founder of Motorola that he would never sell a Link radio to a department that didn't have their own licensed technicians. Fred M. Link is almost unknown among the American people, but his inventions and concepts help protect their lives every day.

Did You Know?

Are You Protected?

Ham radio volunteers stand to benefit from "The Volunteer Protection Act of 1997," signed into law June 18, 1997, by President Clinton. The measure aims to provide Federal protection from "frivolous, arbitrary, or capricious" lawsuits filed against individuals affiliated with nonprofit organizations and government entities and acting in their volunteer capacities. This would include members of the Amateur Auxiliary and volunteer examiners, as well as other volunteers.

In general, the new law will exempt a volunteer of a nonprofit organization or governmental entity from liability for harm caused by an act or omission of the volunteer on behalf of such organization or entity if:

- The volunteer was acting within the scope of his or her responsibilities at the time.
- The volunteer was properly licensed or otherwise authorized for the activities or practice in the State in which the harm occurred.
- The harm was not caused by willful or criminal misconduct, gross negligence, reckless misconduct, or a conscious, flagrant indifference to the rights or safety of the individual harmed.
- The harm was not caused by the volunteer operating a motor vehicle, vessel, aircraft, or other vehicle for which the State requires the operator or owner to possess an operator's license or maintain insurance.

The law, known as Public Law 105-19, became effective September 16, 1997.

Editor's Note Book

The Editor's Note Book located on the last page, contains a reprint of a Heat Index chart and some heat related medical problems often encountered during the summer months. Given the current heat wave throughout the US, it would be wise to stay prepared and look for the warning signs.

Meetings:

General: First Monday of Month
(open to public) @ 1930 hrs

Staff: Second Monday of Month
(members only) @ 1930 hours

Meeting Location:

OCSD/Communications
840 N. Eckhoff St. , Suite 104
Orange, Ca. 92868-1021

County RACES Frequencies

6 m: 52.62 MHz output, 52.12
MHz input, 103.5 Hz PL

2 m: 146.895 MHz output,
146.295 MHz input, 136.5 PL;
(primary net Mondays, 1900 hrs.)

2 m Packet: 145.07 MHz
(1830 – 1900 hours)

1.25 m: 223.76 MHz output,
222.16 MHz input, 110.9 Hz
PL

70 cm: 449.175 MHz output,
444.175 MHz input, 110.9 Hz
PL (private)

OCRACES Web Page:

<http://www.ocraces.org>

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Editor's Notebook

Heat Index Chart (Temperature and Relative Humidity)

Temperature (F)

RH (%)	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
90	119	123	128	132	137	141	146	152	157	163	168	174	180	186	193	199
85	115	119	123	127	132	136	141	145	150	155	161	166	172	178	184	190
80	112	115	119	123	127	131	135	140	144	149	154	159	164	169	175	180
75	109	112	115	119	122	126	130	134	138	143	147	152	156	161	166	171
70	106	109	112	115	118	122	125	129	133	137	141	145	149	154	158	163
65	103	106	108	111	114	117	121	124	127	131	135	139	143	147	151	155
60	100	103	105	108	111	114	116	120	123	126	129	133	136	140	144	148
55	98	100	103	105	107	110	113	115	118	121	124	127	131	134	137	141
50	96	98	100	102	104	107	109	112	114	117	119	122	125	128	131	135
45	94	96	98	100	102	104	106	108	110	113	115	118	120	123	126	129
40	92	94	96	97	99	101	103	105	107	109	111	113	116	118	121	123
35	91	92	94	95	97	98	100	102	104	106	107	109	112	114	116	118
30	89	90	92	93	95	96	98	99	101	102	104	106	108	111	112	114

***Exposure to full sunshine will increase these values by up to 15F*

Source: 3d Weather Squadron, Ft. Hood, TX

Extreme Danger
Danger
Extreme Caution

Recommendations:

Wear light clothing

Drink fluids, particularly water and juices, often

Take it easy - don't over exert yourself

Symptoms of Heat Illness

Heat illnesses are a spectrum of disorders that range from the very mild heat rash and heat cramps to the serious heat exhaustion and life-threatening heat stroke. Be alert to the symptoms of heat exhaustion and heat stroke.

Heat Exhaustion

- Nausea
- Vomiting
- Irritability
- Headache
- Rapid heart rate
- Weakness
- Difficulty breathing
- Dizziness
- Chills
- Dehydration

Treatment
Rest
Cooldown (shade, air conditioning)
Increase fluids

Heat Stroke

- Lack of coordination
- Bizarre behavior
- Confusion
- Seizures

Treatment
Immediate cooling
This is a medical emergency!

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