April 2012 Volume 17.2

Smoke Signals II

Smoke Signals is a Publication of the Kentucky Firefighters Association

Disaster Strikes Kentucky Fire Departments

As the debris settled from the record outbreak of tornados on March 2nd in Kentucky it was obvious to all that Milton Fire & Rescue had taken a significant hit. Milton is located just across the Ohio River from Madison Indiana in Trimble County Kentucky. As you can see by the picture below their Station #2 was destroyed. Firefighter Andrew Start was at the Milton Fire Department when it was hit by the



EF3 tornado. He was not injured but did take cover in the department's bathroom. The department has posted a plea for assistance on their web page.

"We lost the Station, a 1983 Spartan Fire Engine, a mobile fish fry trailer, some gear, radios and pagers, and some other items that were stored at this station. Our fire department is an all-volunteer department that relies on donations only since we are not a taxing department. Losing our fish fry trailer is the big-

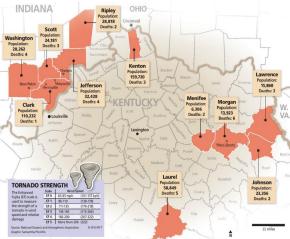
gest loss we have as this is what brought in about 50 percent of our operating budget each year. We had already had 20 booked events for this year that we are not able to do now. We are worried about how we will make payments on our bills without this source.

We are currently working with our insurance company at this time to see what, if anything, they can do for us. Our members take great pride in this department as they work hard for everything we have.

We do want people to know that WE WILL REBUILD and we will continue to serve our area in the event they need us.

We are asking for help funding our department and would like to let people know that they can mail donations to us at: Milton Fire & Rescue, P.O. Box 256, Milton, Kentucky 40045 or you can go to our Web site and donate at www.miltonfire-andrescue.org. It is not often that we have to ask for help, it seemsheroesneedheroestoo. Thankyouallforyoursupport."

The West Liberty FD also sustained some damage from the record outbreak. This chain of storms has rearranged completely portions of several counties and resulted in 19 Kentucky deaths and 41 in the Nation. There were 159 tornados that day which makes one wonder what will April bring?



INSIDE

- 2 President, VP At Large Messages
- 3 VP cont. & Treasurers Notes
- 4 Dixie Report
- **5** Area 14, Word Search Ans
- 6 Educational Opportunities
- **7** Educational Corner
- **8** Forestry, New Arrivals, For Sale

- 9 Raffle Winner, Full Color, FF Print
- 10 NVFC
- 11 Lake Dreamland Letter
- 12 Scholarship, The Courage to be Safe
- 13 Cont from 7, Chaplains Corner
- **14-15** Sustaining Members
- 16 Fire Service Crossword



Notes From The President's Desk Van Taylor

Greetings from your president. I wish to begin by expressing my deep concern for those departments effect-

ed by severe storms on March 2nd. The Milton FD lost most of its station two during this event and the West Liberty FD was also damaged (see details on front page). If your department has excess equipment you might want to contact the Milton or West Liberty departments to lend assistance. They are also taking donations.

On February 25th your KFA Executive Board held a board meeting at the Kentucky Officers School in Lexington Kentucky. You can read the minutes for yourself on the KFA website at www.kyfa.org. As a result of that meeting several interesting things were accomplished. Ken Knipper reported on the hard work being done by the NVFC (see an abbreviated part of his report in the Smoke Signals). The NVFC Volunteer Firefighter Support Fund provides a stipend of \$250 to volunteer first responders whose homes have been impacted by a state or federally-declared disaster. The stipend helps these firefighters and emergency personnel meet their basic needs in the aftermath of the disaster. If you are interested go to http:// www.nvfc.org/support/supportfund/. One accomplishment during meeting your board voted to publish your newsletter in color or colour if you're English. We hope you will enjoy this improvement however; the color version that was on the web page generally before it came out in print will not be posted until the deadline for the next issue. That timeframe translates to about a month and a half later. Also at the meeting the Scholarship Committee is looking for more firefighters to apply for a scholarship. That process is listed on the webpage but it applies to firefighters and their families. The student does not have to be pursuing a fire service degree. Priority is given first to firefighters in the fire and EMS fields and then to those in other career fields. The amount is \$2000.00 per year per student. It is worth your time to fill out the forms listed on the web page www.kyfa.org.

Several important events will be coming soon. On June 6-10 is the Kentucky State

Fire School/Homeland Security Conference in Lexington at the Convention Center (below Rupp Arena). This school is an excellent opportunity to advance your skills, look over new and exciting equipment in the vendor area, and renew old acquaintances. I hope to see you there! Also please make plans now to attend the KFA conference in Lexington July 28 – 31. It will be held at the Clarion Inn (formerly Holiday Inn North) 1950 Newtown Pike. Reservations are now being accepted at 859-233-0512 or from the Clarion Website at www.clarionhotellex.com.

I look forward to seeing you in the not too distant future. Remember to stay safe, take time for your family and loved ones and try to help make our world a better and safer place to live one run at a time.

Michael E. Hulsey Vice President at Large

At the KFA meeting at the Green River Officers School a lengthy discussion was held about the workings

of the KFA Directors. The KFA Directors are appointed by the regional associations to serve as their representative and to report to the KFA E-Board so that they may keep in touch with the associations and their activities state wide. The KFA holds in high regard all the regional associations and we are trying to encourage more participation both in the regional association and the KFA. With that being said the E-Board past a motion to pay travel expenses, (excluding motel) for directors to attend at least two of the E-Board meetings during the year, excluding the conference. It is hoped this might encourage the regional directors to attend the meetings and report on local activates. Discussion was also held about some regional associations that have grown rather inactive and there are some areas of the state that are not part of any regional association. The KFA President, Van Taylor, reinforced the Membership Committee by adding some additional personnel and charging them to meet and address this problem in a way that will encourage and strengthen the Regional Associations. Woody Will, Editor of the Smoke Signals Newsletter suggested that a meeting be arranged of all the associations to generate their participation in a solution to this problem of membership. I agree with this concept and after the committee takes a good look at all the areas a meeting should be held to try to get all areas represented.

The KFA, is a strong lobbying organization with respected legislation in Frankfort. One of the greatest problems our lobbyist have is when they are asked who they represent and how many departments there are in KY, they must answer "There are 800+ departments and we represent less than half as members of the KFA". Yet when lobbying efforts are successful and things like state aid is increased all volunteer department's members or not get the increase. The KFA is the Firefighters organization of Kentucky. We represent both paid and volunteer departments. We work closely with the Fire Commission, we are the leading sponsor of the State Fire School in June, provide an accidental death and disability insurance free of charge for all members, and unfortunately this is used quite often. The dues are only \$85.00 per year for all that benefit. There is no good reason for your department not to be a member!

I am your Vice President at Large and I want to work for you! If you would like me to come to your regional Association meeting just send me an e-mail with your meeting schedule and I will work one of the meetings into mine. You can contact me at mike.hulsey@kyfa.org. Thanks for all you do to keep your community safe. May God bless your efforts.

Thank you Michael E. Hulsey Vice President at Large

Treasurer's Notes

by Duane Suttles

As I write this issue of notes to you, our citizens and emergency services are trying to recover from a wave a

deadly weather that travelled across this state destroying homes, businesses, fire stations, community facilities and taking lives in their paths. Several communities were nearly decimated from existence and families are left with voids that can never be replaced or repaired. My thoughts and prayers go out to all affected by these tragedies.

The executive board of the KFA met in regular

session February 25th, during the Officers School held in Lexington. Since many of you were not able to attend the meetings due to your participation in classes or inability to attend the weekend at all due to various reasons, I have chosen to report to you, the status of our current membership numbers and explain membership options that are available.

As of the February 25th meeting, 371 Kentucky fire departments are currently paid members of the KFA. Of these 371, 49 are new, meaning they were not members in 2010-2011. There are still 65 departments that regularly maintain their membership, but are behind on this years dues. I feel confident that these 65 members plan to remain in good standing; they are just running a little behind in sending in their membership application with payment of dues. This should give us a total of 436 member departments for the current fiscal year. Those are great numbers, but it does fall a little short of my goal to reach 500 this year. I still see these figures as positive because we are moving forward in numbers. I do want to remind departments that our by-laws set December 31 as the due date for membership dues, making delinquent all departments not paid by that date. This could have an effect on those departments when it comes to membership benefits, so it's real important that departments attempt to remain up to date. Check out www.kyfa. org for a list of current member departments and if your department is not current, you can print out a membership application to fill out and submit with your payment of \$85.00 for the current fiscal year.

The KFA also offers personal memberships for individuals at a rate of \$25 per year and Sustaining memberships for our commercial supporters at a rate of \$150 per year. More information on these alternative memberships can be found on the KFA website at www.kyfa.org .

As always, I personally thank you for taking the time to read this issue of Smoke Signals and if I can be of any assistance or you have an issue for the office of the treasurer, give me a call at 606-922-7671. Be safe and I look forward to seeing each of you at one of the regional fire or rescue schools this spring.

Duane Suttles KFA Treasurer Dixie Firefighters Association

I would like to thank everyone who came to the Dixie Firefighters 49th annual fire school held this past weekend March 9, 10 and 11,

2012 at the Elizabethtown Community and Technical College. With a daily average of 750 students in class both Saturday and Sunday, our school has become one of the largest in the Commonwealth. With over twenty five classes being offered, the student had training opportunities that ranged from arson investigation to surviving the worst day in your career and everything in between.

The Dixie Fire School started this year's activity with the 19th annual Farm Safety Symposium. This event is dedicated to the memory of Kentucky 86 Fire Chief Louis Crosier. Chief Crosier spent many years teaching farm safety to fire departments, EMS agencies and students across the Commonwealth of Kentucky. During this event, held in the auditorium of the college with over 150 attendees, the presenters and speakers included State Fire Marshal Bill Swope, Kentucky Fire Service Training Director Bryant Stiles and the Keynote Speaker, Kentucky Agriculture Commissioner James Comer. All three speakers praised the cooperation between agriculture, educational and emergency services in the improvement of farm safety and the decrease in farm related fatalities.

The Dixie Fire School committee has worked very hard to make this a wonderful weekend for education, fellowship and fun. As part of our Saturday Evening events, we held our yearly firefighter competition. This event had seven adult firefighting teams and three junior firefighter teams competing in our version of the firefighter combat challenge type competition. This year the winners were in the Adult division were in first place Buffalo Fire Department, Second Place was Meade County Fire District, and third place was Fort Knox Fire Department. In the Junior Firefighter Division, Upton Fire Department took First place followed by Buffalo Fire Department finishing in second place and in third place was a very strong team from Meade County Fire District.

The next regular meeting of the Dixie Firefighters Association will be Thursday March 23rd at the Upton Fire Department in beautiful downtown

Upton Kentucky. At this meeting, which will be my last as President, Chief Froman Peters will be sworn in as the new leader of our association. I have a great deal of confidence in Froman and his ability to lead this organization into the future.

As I leave office, I can truly say that this has been a busy year and one where we have hopefully reconnected with departments that have not been active with the Dixie. We have held meetings this year in Breckenridge, Meade, Hardin, Larue and Grayson Counties and have been treated wonderfully in each county. While I had hoped to increase participation with departments in Nelson, Washington and Marion Counties, there simply was not enough time to make this happen. In-coming President Froman Peters will continue to make inroads and reestablish ties with departments and agencies in the eastern portion of our region. I have very much enjoyed my term as President and have had a truly wonderful staff of officers to work with. Together we have made the Dixie Association a little better than it was before. I would like to challenge you to get involved with the Dixie Association or your regional association across the Commonwealth. By being involved, we can make thing better.

As a final thought, the Dixie Firefighters Association will be the host of the KFA conference in 2014 when Chris Crawford is the President. In support of this conference, the Dixie Firefighters association is raffling off a Ruger SR 1911 forty five (45) caliber semi-automatic hand gun. This hand gun is very much in demand at this time and in some dealerships, a waiting list is a yearlong. Through the crafty resources of the Dixie's own Chris Crawford and Dale Dobson, an arrangement has been made to make one available for the Dixie Firefighters Association to obtain this sought after fire arm. Tickets for this hand gun are available from most Dixie Officers and are only \$5.00 each. This hand gun retails for almost \$900. All proceeds will go towards the 2014 KFA conference. Drawing for this prize will be at the closing ceremony of THIS YEARS KFA conference held in Lexington. The date for this drawing is July 31 2012 and you do not have to be present to win. The winner must be able to own this type of fire arm in the Commonwealth of Kentucky or their home state of residence.

I hope to see you at the March meeting of the Dixie in Upton. Be safe. Sincerely,

Larry Naser

Chief Larry Naser, President Dixie Firefighters Association.



Areas 7 and 14 trailers deployed to West Liberty

Area 14 News

Area 14 Fire School will be held April 13, 14, 15, 2011 at the Hal Rogers Regional Fire Training Center in Somerset. For more information visit the Pulaski County Fire Commission website at www.pcfirecommission.com

The Communication / Command Trailer staged at Area 14 has been recently deployed to West Liberty, Kentucky. Area 14 will continue to offer training for the communication / command trailer. Currently, there have been numerous classes taught in this region. The communication trailer can be requested for large scale public events and disasters. For information regarding the communication trailer, visit the Area 14 website at: www.sfrtarea14.com

State Fire Rescue Area 14 would like to announce an addition to our staff. Chantz McPeek has been hired as our Industrial Specialist for this region. Chantz began as industrial specialist in mid-February. Please welcome Chantz to our region as he will also be teaching fire department related classes as well. A complete biography of Chantz background is listed on the State Fire Rescue Area 14 website: www.sfrtarea14.com. Chantz McPeek has been in the Emergency Service field for 12 years. He began his service at Laurel County Fire Department where he occupied various positions, most recent being Operations Captain until August of 2011. Chantz also

worked EMS for Laurel and Whitley counties over the years. He has received various certifications, including; IFSAC FF I, IFSAC FF II, IFSAC Hazmat Awareness, IFSAC Hazmat Ops, IFSAC Driver/Pumper/Operator, IFSAC Mobile Water Supply, IFSAC Instructor, Rope Rescue Tech, Confined Space Tech, Hazmat Tech, EMT-B. Hired by Area 13 SFRT in 2009 as a field instructor, he has taught various classes throughout the commonwealth. Chantz was hired as the Industrial Specialist for SFRT, Area 14, in Febuary of 2012. If you have any industrial related training questions, feel free to contact him at any time.

Chantz M. McPeek Industrial Training Specialist Ky. State Fire Rescue Training 385 Old Greensburg Rd. Campbellsville, Ky. 42718 Office: 270-465-8633

Cell: 859-940-9624 Fax: 270-465-8730

Words of Wisdom

An educated person is one who has learned that information almost always turns out to be at best incomplete and very often false, misleading, fictitious, mendacious - just dead wrong.
Russell Baker

Answers to last issues Word Search Puzzle

ÊCLFNZMWQCMCRBEGFHP∕ÊNWRGHZ LVXLNFEYCLQLTMGAYB/L/KTRGGGM L H K B N W N T L T ® Z P B R G S L G W E C N M N P I C Z T K B B O C A X R V O K Q I T K L L L B K W R |V|FXHYR|A|LCPIXOHPVJXFCMUCYAVR ETKLTUDAZYDBYNNUAANAANMRH TPLMGSBIKQRYMMSVLFMMSHZKYG ARNDNSHBZTRAŬŬBTPAPEPEGRTŸ MDRETMDVEQEVIX SOBRUSRYHRO W O Z T G L M U T F N S S R C O E N S U T Y C C Z B T B R N L H L Q H Q H R C L C B O B P N O R O M M S R K G S K O J J T Q E E C E D S U A R O W Z X M D U O L P X C N R F N G S M R W N F B X X X N N N M BOSLGRQOIMCWVMTOELLNYNKNDZ L I Q C C E M I X Y T E S A Z A G X T P G G RWCEHNORHCLVKPRVFYTKFGPOKS XBRCLGQIMLFXPQLLFHNP WXEINSLAEQLCCRLYLILETIHWXW ZZETP(L/N/DVRN(<u>BATSELLIVPOHS</u>)(O_IM KHKN J J H A H T V PARKERSMIL D J M C K PNBOKGLMK (BREEDINGAREA) MRMN RWNWTBC(HAYNESKNOB) MGTWVTME <u>ÉLLIVSTNEMELO</u>KNK<u>(NOSUGREF</u>) EF <u> EAGLESAWYER</u>) JKLVW JD X GHVRQRL MKTTZWESTMCCREARY YVJFBNLG E V O N A L R E B M U C T S E W E N O B W O R R A M Y

EDUCATIONAL OPPORTUNITIES

2012 IFSAC SKILLS TESTING SCHEDULE

Date	Area	Location	Phone
TBD	7	Cold Springs	888-306-8101
4/21-22	6	Middletown	888-306-8064
8/4-5	12-13	London	888-234-0100
9/29-30	1	Calvert City	888-306-7901
10/6-7	6	Middletown	888-306-8064
11/3-4	5	Leitchfield	888-234-7201
12/1-2	7	Cold Springs	888-306-8101

Written testing information is available on the Ky IFSAC testing web site at http://www.kyffcert. com. Tests are given at the system office usually on the third Monday of the month. Each time you take the written test you must pay a \$15.00 charge. Contact Duane Suttles for more information about written test location and dates at 888-301-2946. REMINDER: Candidates must be at least 18 years of age and be a member of a Kentucky FD or a fulltime student of Fire Science at EKU or KCTCS to be eligible for firefighter testing. Candidates must bring state issued drivers license or ID card to skills testing site for positive identification and verification of age eligibility. Candidates under 18, may complete any of the written exams, and may certify to Haz Mat Awareness only. All Certifications are based on the Professional Qualification standards set forth by the NFPA for Firefighters, except Haz Mat, which is a Job Performance standard. Our accreditation is through the International Fire Service Accreditation Congress (IFSAC).

Coming Events At a Glance! Northern Kentucky Fire School

May 19-20

Daniel Boone Fire School

Morehead May 18-20

State Fire School

Lexington June 6-10

Mountain Fire School

Hazard August 24-26

KFA Conference

Lexington July 28-31

Meade County Fire School

Brandenburg Sept 8-9

Hazard Fire School

Hazard August 25-26

Kentucky EMS Conference

Lexington September 18-21

Buffalo Trace Fire School

Maysville October 26-28

Green River Fall Fire School

Owensboro October 26-28

Northern Kentucky Emergencies Services School

May 18 - 20, 2012

Most classes will be held at the Marriott Hotel Northern Kentucky Greater Cincinnati Airport

One Class Friday

001-Fire Alarm Inspector CEU's

One Day Classes Saturday

101-Firefighter Survival (FC10000)

102-Aircraft Crash-Fire-Rescue

103-Wildland Firefighting (S-190)

104- Company Inspector Train-the-Trainer Class

One Day Classes Sunday

111-Firefighter Rescue (FC20000)

112-Deception in Interviewing

Two Day Classes Sat & Sun

201-Firefighter Basics / Explorers

202-Basic Pump Operations

203-Haz Mat Operations Level

204-Auto Extrication - Operations Level

205-Arson Detection for the FR (NFA)

206-Strategy & Tactics for Inital Co Ops (NFA)

207-Leadership 1 (NFA)

208-Fire Ground Tactical Operations

209-Smoke Diver Advanced SCBA

210-Fire Inspector Level 2

211-EMT & Paramedic Refresher CEU's (you can register for just one day using registration codes 211A or 211B on-Line)

212-Fire Department Chaplain Class

Four Day Classes

301-Fire Instructor Level 1

302-Rope Rescue Technician

Explorer Competition

Friday May 18, Registration fee \$25.00

Compition to be held at

St. Marys School Alexandria

Check in 5 PM Competition starts at 6 PM

Registration Fee By April 30th

\$60.00 for 2 or more days

\$30.00 for 1 day

Registration After April 30th

\$100.00 for 2 or more days

\$50.00 for 1 day

Additional Fees For Special Classes

Sprinkler Inspector = \$ 30.00

Jack Morgan = \$ 20.00

Asst. Chief Ron Becker Fort Wright Fire EMS E-mail: rbecker@fortwright.com

Meade County Fire School

Meade County High School Brandenburg September 8 & 9

Saturday & Sunday Classes

- 1-EMS Continuing Education
- 2-Firefighter Safety & Survival FC1000/FC2000
- 3-Basic 16 Hour
- 4-Aircraft Crash & Rescue
- 5-Heavy Rescue

Saturday Only Class

6-Flashover

Sunday Only Classes

7-Wildland Awareness 4 Hours AM Only 8-Haz Mat Update 4 Hours PM Only

EDUCATIONAL CORNER

Leadership & Management: What IS the difference?

There are many thoughts on leadership; is one born a leader or can one learn to be a leader? Is leadership based upon the person, the situation, or a combination of the two? What does leadership mean in the fire service? And, is a good leader always a good officer?

As one looks to move from firefighter to lieutenant and onward, developing a personal style of leadership is important; even more important, however, is making sure that this style meshes with the philosophy of the chiefs and superior officers in the organization. Navigating this path to being a successful and respected officer is made more difficult by the addition of management responsibilities. Many individuals mistakenly confuse being a good manager with being a strong leader. The skill sets are different, but not mutually exclusive. It is possible to be a strong leader, a competent manager, or both.

Let's explore some very basic differences between leadership and management.

Leadership

- Establishes direction by determining what the organization/crew/ house is doing and why
- Aligns the group by clearly sharing that direction and reason
- Motivates and inspires its personnel to move in that direction
- Establishes accountability measures and consequences for failure

Management

 Internalizes the direction and determines how the group will get there

- Plans & Budgets as necessary for that movement
- Establishes the staff structure & responsibility required for the end goal
- Sets realistic time lines based upon the above responsibilities
- Controls the pace
- Problem solves as the group moves forward in the direction established by leadership

Everyone familiar with the structure of the fire service realizes that management opportunities occur on a daily, sometimes even hourly basis. True leadership opportunities may occur more rarely for the line officer, but recognizing and capitalizing on them is key to establishing oneself as a capable and respected officer. Recognizing methods for performing duties more efficiently, identifying situations that require troubleshooting. heading off future issues with rules or policy, or establishing the objectives of fire attack all require the elements of leadership. Failure to recognize these opportunities can have varying effects on the perceptions of others toward one's competency. A failure to troubleshoot may go unnoticed or redeem itself with problem solving further down the line. A failure to establish a sound objective for fire attack can have more serious results.

On the other hand, a proficiency in verbal and written communications, report entry, supply inventory, and other management skills can appear to make a strong officer and reduce interaction with superiors due to the need for remediation. A failure to consistently perform these duties results in undue attention from the same officers.

Training and preparing for these dual skill sets can be daunting and no set path or model has been universally determined for the fire service. Before embarking on the preparation path, it can be helpful to take the following steps:

- Meet with one's immediate superior to determine one's own strengths and weaknesses
- Meet with a member from a past evaluating committee or an established chief for a check list of desired qualities for a successful officer candidate in one's organization
- Compare one's strengths and weaknesses to the list for a successful officer candidate
- Establish a plan for addressing any deficiencies

"Leadership & Management" continued on page 13

Division of Forestry Impacted by Recent Storms by Lynn True

activities, the Kentucky Division

In addition to fire suppression

of Forestry (KDF) is dealing with damage left by the powerful tornado that ripped through West Liberty in Morgan County earlier this month. Severe damage to the division's Morgan County Tree Nursery (MCN), which also houses KDF's fire cache, has many of the division's fire-

fighters out of the woods and on site at the nursery.

Although crews have made some progress clearing debris and salvaging materials, most of the structures and equipment will need to be rebuilt or replaced. Damage reports include state and federal vehicles, fire suppression equipment, a Firewise educational trailer and numerous tractors, tree lifters and mowers. The main office building, two barns, a cooler containing over 400,000 seedlings and a storage building containing fire suppression equipment were also destroyed.

"Most of the buildings are gone and equipment is badly damaged," said Mike Harp, fire management program specialist for KDF. "We are estimating up to 75% loss of all firefighting tools including everything from hand tools to handheld radios. All of the vehicles listed under the Federal Excess Property program were also damaged," said Harp.

Despite the extensive loss at MCN, forestry officials remain hopeful that they will be able to rebuild as soon as possible. Likewise, forestry officials hope that the predictions for a low-risk wildfire season holds up this spring. With personnel already limited and now a setback at the nursery, a busy and costly fire season would certainly stretch KDF's resources.





Fire Department Service & Supply along with KME Fire Apparatus would like to thank the Maytown Fire Department for their recent purchase of a new KME Legacy pumper. The truck is built on an International 4400 series chassis, has a 1000 gallon tank, and a Hale 1250 GPM pump. For more information on this unit or other KME apparatus, call Rob Hubbard at 1-800-321-6965.



The Island Creek Volunteer Fire Department recently purchased a 1993 Mack pumper from New England Fire Apparatus. It has a 5-man enclosed cab, with a top mounted pump panel. It holds 1500 gals of water in a poly tank, with a 1500 GPM Hale pump and 20gal Williams Around the Pump Foam System, Mako Air Fill Station, (2) deck gun discharges, hydraulic ladder rack, on spot chains, telescoping lights, this is replacing a 1985 ford cab over.

FOR SALE



The Highview Firedepartment is selling a 1991 Seagraves 100' Ariel for \$75,000 If interested Contact Chief Dave Goldsmith at (502) 239-3561 or Email dgoldsmith@highviewfire.com



Tool Raffle Winner

PARATECH. Inc. and ///EMERGENCY EQUIP-MENT are pleased to announce the winner in our 'BIEL Tool' raffle. This raffle took place at the 2012 Green River Firefighters Association's 25TH Annual Kentucky 'Officers School' on February 25TH 2012 at the Lexington Convention Center. All visitors to our booth were invited to register for the chance of winning this \$166 forcible entry tool provided by PARATECH. Today, congratulations goes out to Battalion Chief David McCrady of the Owensboro Fire Department, Daviess, County, KY. Chief McCrady has been notified that he is the winner of this completely redesigned, multifunction, personal sized forcible entry tool from PARATECH, Inc. David will be receiving his new 'BIEL Tool' via UPS shortly.

Smoke Signals goes FULL COLOR!

At the February Executive Board meeting of your Kentucky Fire Fighters Association Executive Board voted to make your newsletter full color. No matter if you spell it Color or if you are of a British background it is Colour the result is the same. The pictures in the newsletter look much better. It is our intent to bring you the most up to date information available. That has always been our goal. Now it will even be more appealing. So send in those pictures of your events, new equipment, new fire house and make it hard for me to choose which one to put in. You can email your digital photos to woodrow.will@kyfa.org.



FIREFIGHTER INSPIRATIONAL PRINT

The Kentucky Firefighters Association has partnered with www.firefighterprint.com to offer you this very special inspirational print titled

"WHO AM I"

\$10.00 OF EVERY \$20 PRINT SOLD

goes directly into the scholarship fund to help deserving individuals realize their dreams of becoming firefighters. Our goal is to raise \$10,000 and you can help by buying this one of a kind inspirational print that touches the heart of everyone that reads it.

PLEASE GO TO: <u>WWW.FIREFIGHTERPRINT.</u> <u>COM</u>

TO PURCHASE "WHO AM I"

(Below is the inscription on the bottom of the print)

My profession is somewhat unique in comparison to that of the average person. At any one fixed moment in time when duty calls upon me, I am prepared to sacrifice my own life to save the lives of others I may not even know. I am willing to do this because I understand that we all make choices in life. As for myself, this is the choice and path of service I have chosen to follow. Though my job is often rewarding, it can also be unsettling. I often reflect upon the simplicity of one question, "Who am I?" At times, I cannot provide this answer, not even for myself. So, "Who am I" to choose a profession in life that regularly shows no mercy for the preciousness of life? "Who am I" to willingly, without hesitation, invite myself into some of the most uninviting situations known to mankind? "Who am I", so that when duty calls, may never again lay eyes on the loved ones I could leave behind? The assumed simplicity of this question is not so simple after all. Understanding "Who am I" may be difficult to answer at times. However, all I need to do is pause, think about, and remember those lives I have positively influenced and maybe even saved. All I need to do is look back on the years of service I have given to my community and realize that I have helped make the world a safer place in which to live. In my heart, I know I made a difference. "Who am I?" I am a Firefighter!



National Volunteer Fire Council

Ken Knipper, Director Bryant Stiles, Alternate

The Spring Board Meeting will be held in Washington, DC on April 26-29. As usual many administrative and legislative issues will be discussed. With the Federal Government cutting or reducing support for some of the programs the NVFC administers, the budget will be a priority even though the NVFC is financially sound.

Getonyourcomputerandgotowww.nvfc.organd pull up the 2011 annual report. If you want to learn more about the NVFC and what it does for volunteer firefighters every day, take a look at this issue.

As many of you may know the "D" Block as it was known was finally awarded to the emergency responders. A last minute effort by the NVFC and some other fire organizations allowed emergency responders to retain the old frequencies for a while. My position was that so many of our volunteer departments survive on handed down equipment that losing their current frequency now would put them in a position of not having any communications equipment that worked. Fortunately we were given additional time to convert to the new frequency range.

On February 10th the IAFC and the NVFC announced that they have solidified a partnership between the NVFC and the IAFC's National Fire Fighter Near-Miss Reporting System (www.fire-fighternearmiss.com). The goal of the Program is to improve firefighter/EMT safety by collecting, analyzing, and distributing information on nearmiss events through stories/reports shared by responders nationwide. This program is funded by a grant from the U.S. Department of Homeland Security's Assistance to Firefighters Grant Program.

The NVFC is partnering with the National Association of EMTs (NAEMT) to promote their new near-miss and line of duty death incident reporting tools, which are available at www.emseventreport.org. They become part of the NAEMT's EMS Voluntary Event Notification Tool (E.V.E.N.T.)

The NFPA is currently soliciting input on whether they should undertake a project on Community Paramedic Programs. The NFPA 450 Committee (which I chair) has received requests to

develop a guidance product as there is little information available for those who are considering such a program. If you feel such an effort is justified convey your interest to the NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.

The National Junior Firefighter Program continues to grow. If you have a program or are interested in starting a program, check the NVFC site to learn of the advantages of linking you program with the NVFC. They administer this program nationally and are proud that it has received top marks from Federal auditors. This also opens up access to cash award programs for individual members and departments.

The National Highway Traffic Safety Administration (NHTSA) has opened an application period for anyone interested in serving on the National EMS Advisory Council (NEMSAC). The Council was created to advise NHTSA and the Federal Interagency Committee on EMS (FICEMS) on all matters involving EMS and has been extremely successful in doing so. I have been privileged to serve the interests of volunteer providers on the Council. There are twenty four positions open. Go to www.EMS.gov to look at the disciplines you may represent. – you do not represent an organization.

A recent report shows that forty seven Kentucky fire departments are now using the NVFC's CAPWIZ program. This program allows your department to express your support or disapproval with administrative or legislative issues in Washington, DC. Ronnie Day has been most helpful in forwarding the NVFC requests for use of the program. By clicking on one link you immediately send an email to your congressman.

I look forward to representing you at the upcoming meeting. If you have any issue you want me to bring to the attention of the board, let me know. I appreciate the opportunity to represent Kentucky's firefighters at these meetings.

Words of Wisdom

Do you know the difference between education and experience? Education is when you read the fine print; experience is what you get when you don't. Pete Seeger

LAKE DREAMLAND FIRE PROTECTION DISTRICT

4603 CANE RUN RD. LOUISVILLE, KY 40216 STATION:(502)447-6326 FAX:(502)448-9343

3 February, 2012

MEMORANDUM FOR RECORD

FROM: Chief John Wilkinson Jr

TO: All Personnel

SUBJECT: Increased Rapid Response Positions Availability

The Lake Dreamland Fire Department is increasing the Volunteer Firefighter Rapid Response Program w/ nominal fee and is currently accepting additional applications.

To qualify and volunteer for the program you must meet the following criteria:

- 1. Application on File
- 2. Must be current and active with another Fire Department
- 3. Firefighter Fit for Duty Letter
- 4. 150 Certified Ky State Training Hours
- 5. NFPA Certified Fire Gear (LDFD can provide if necessary)
- 6. Drivers License and Insurance

Volunteer Firefighter Rapid Response Hours:

Monday through Friday 7pm to 7am in 12 hour shifts

4pm to 7pm Monday thru Friday. 3 hour Shifts

Saturday and Sunday 24hrs in 12 hour shifts

if unable to work 12 hours we can accommodate with 8 and 10 hour schedules. Individual Sleeping quarters, newly remolded lounge, bathroom and kitchen area.

Saturday and Sunday 7am to 7pm at LDFD Station #1 newly remodeled Lounge, Kitchen and Bathroom

Purpose: The purpose of the Rapid Response shifts for Volunteer Firefighters is to offer Volunteer Firefighters an additional opportunity to contribute to the operation of the Lake Dreamland fire District by participation in a structured program to enhance services that compliment the contributions of others Volunteer and Career Firefighters.

LDFD also reimburses Firefighter for any and all LDFD Training made.

To apply please stop by 4603 Cane Run Rd. between the hours of 8am 3pm. Thank you

If the applicant has not had continuing fire department education and has not been associated to a fire department for more than one (1) year. The applicant must attend a refresher course for a minimum of 20 hours of training in various firefighting topics as outlined from the State Fire Commission (minimum requirements for a volunteer firefighter). In addition, the applicant must also show proof of State Fire Commission Firefighter Rescue and Survival course if applicant has not serving on a fire department continuously for a period of 5 (five) or more years at any point. More continuing education hours may be required as deemed necessary by the Chief of the Department on a case by case basis or his/her designee.

Chief John Wilkinson Jr Lake Dreamland Fire Department

^{***}For any person wishing to seek status as a Volunteer Firefighter (or Rapid Response member) for the Lake Dreamland Fire Department.

KFA Scholarship

The Kentucky Firefighters Association Scholarship Committee is looking for three students who are interested in being scholarship recipients. A copy of the guidelines and an application can be accessed on the KFA website at www.kykfa.org. Also, we are pleased to announce that the E-Board has raised the amount of the scholarships to \$1,000 per semester. We are looking forward to hearing from you.

Allen Johnson, Chairperson

THE COURAGE TO BE SAFE

www.everyonegoeshome.com Chief Marc A. Muench, EGH State Advocate marc.muench@florence-ky.gov Cell 859 991-0721

In this issue of "Smoke Signals" we address the 16th and final "Everyone Goes Home", Life Safety Initiative which states: "Safety Must Be a Primary Consideration in the Design of Apparatus and Equipment"

Today, most Firefighters have not had the opportunity to experience metal helmets, rubber coats, "fireball" gloves and riding on the tailboard of a speeding fire engine, all of which were the norm just 45 or so years ago. Firefighters of that day were, "accident ready to happen" and they often did. 45 years ago Fire fighter "Line of Duty Deaths" occurred as many as 200-225 time per year. While many of those deaths can be attributed to tactical issues, an equal number were due to the many unsafe features of fire apparatus, poor Personal Protective Equipment or in some cases, no equipment at all. In the mid 1960's, few trucks had seat belts, many departments operated open cab apparatus and firefighters road on the "tailboard". What a thrill, but what a risk. More than a few firefighters fell off or out of these wonderful pieces of history, some never to answer another call. During this same period of time, PPE was pretty much anything goes. Helmets that would conduct electricity, coats that would become so stiff in cold weather that it was difficult to bend your joints, rubber gloves (literally inside and out). SCBA...what's that? Don't get me wrong. At that time the equipment used was state of the art however, over the years the fire service has made huge strides in developing gadgets such as antilock brakes, anti-roll computers and airbags for our apparatus and PBI, extended capacity SCBA systems, CAFS and TIC's for keeping us safe during fire operations. It is important then when designing and writing specifications for apparatus, as well as PPE, we include as many practical safety features into those specs as possible. In some cases we, as firefighters, have a tendency to concentrate on "pretty" as opposed to practical and "shiny" as opposed to safe. We need to assure that we take full advantage of the numerous safety features currently offered as well as any future improvements, as they become available.

Yes, we've come a long way in making our apparatus and equipment safer for our firefighters however; a seatbelt not worn will not save your life. A piece of fire apparatus equipped with the latest and greatest safety technology will not protect us if the vehicle is speeding or being operated in a reckless manner. The newest and very best PPE and SCBA will not protect us unless it is properly worn and we remain aware of the dangerous situations that we operate within. As fire fighters, we can be armed with the most modern and safe apparatus and equipment available however; it is still our responsibility to properly utilize it in order to assure that each of us, "Keeps Going Home, After Each Run and After Each Shift."

EGH ADVOCATES NEEDED

Over the last several years I have had the opportunity to represent Kentucky as an "Everyone Goes Home", "State Advocate". I have spread the word of firefighter safety as best I could with the limited time I have however, it's time to take it up a notch or two. Currently, there are discussions to make the "face to face" "Courage to Be Safe" program available across the entire State, beginning with a "Train the Trainer" class a State Fire School, in June. We need firefighter advocates to spread the word. More information should be available in the very near future. Please feel free to contact me at the above e-mail address if you have any questions. Stay Safe.

Words of Wisdom

Democracy is worth dying for, because it's the most deeply honorable form of government ever devised by man.
Ronald Reagan

"Leadership & Management" continued from page 7

By starting with these four steps, one can eliminate duplication of effort, make the best use of personal time, and insure that one's preparation is in philosophical alignment with that of the department prior to beginning the promotional process. Combining these steps with an understanding of the differences between leadership and management will allow one to train for department specific management skills and begin honing natural leadership tendencies into a personal style that works well within one's organization. Whether one is an officer or simply an integral part of a fire or EMS crew, these skills will enhance the performance of the entire group.

Author's Note: If you would like to be part of a comprehensive study on the integration of leadership styles in forming successful officer development plans, please complete a short survey on leadership in the fire service at:

https://www.surveymonkey.com/s/fireservice-leadershipsurvey

Michel DeLisle is a Lieutenant for the Wauwatosa Fire Department & an honorary lifetime member of the North Prairie Volunteer Fire Department. She teaches leadership development, group dynamics, and transformational change at the University of Wisconsin-Waukesha and is finishing research on a Master's thesis regarding leadership in the fire service.

Operational Changes to Smoke Signals II

Decisions have been made to help better promote individual memberships in the Kentucky Firefighters Association. In the past the color version of the newsletter has been posted to the webpage even before it went to the printer for publication. Since the newsletter is now being published in color a decision has been made to post the on-line version when the next month's issue goes to press. In other words the April issue will not be posted to the web page until the 15th of May. If you want to receive a printed copy addressed to you and sent to your residence instead of reading the newsletter sent to your fire department go to the webpage (www.kyfa.org) click on membership on the left of the page print a copy of the personal membership application fill it out and send it along with a check for \$25 to the address on the application. The Kentucky Firefighters Association is the only association in Kentucky that individual firefighters can have a voice and impact the direction of the fire service in Kentucky!



Chaplain's Corner

Have You Lost Hope By Woody Will

Firefighters are funny creatures. We are afraid of nothing on the outside, ten foot tall and bullet proof. However, most firefighter's spouses will tell tales of how we are little babies when we get sick or injure a foot or get a tooth problem. I guess it all comes down to what each individual is afraid of. They say each person has their internal fears. Things that make our skin crawl. I guess that is true. As a chaplain I am most concerned with how you are doing on the inside.

Decisions firefighters make are at best complex on the fire ground. It is doubly hard to make good judgments when you have just went through or are going through things like a divorce, death of a loved one, loss of employment, mortgage foreclosure, or other traumatic event. During those type stressors many turn to an artificial way to escape the pain. They choose alcohol, meth or some other drug. As many former addicts will tell you "Drugs are not the answer".

As a public servant either paid or volunteer there are programs that can help you through whatever it is that has you down. There are organizations that will help. Go to your department's chaplain and seek help before you reach what airplane pilots call "The point of no return". Alcohol and other drugs are a deep dark hole that will eventually swallow you whole!

Words of Wisdom

I am only one, but still, I am one. I cannot do everything but I can do something. And, because I cannot do everything, I will not refuse to do what I can.

Edward Everett Hale, American clergyman and writer (1822-1909)

Fax (859) 256-3125

Kentucky Firefighters Association Sustaining Members

<u>Please</u> remember these members when you have purchasing needs.

Advanced Fire & Rescue Equip. Air Evac Lifeteam **10-4 Warning Equipment** Nick Gapinski **Donald Hare** Todd Roberts 365 Persimmon Circle 418 Airport Road PO Box 25107 Danville, KY 40422 Booneville IN 47601 Lexington KY 40524 859-854-0081 606-309-5466 800-853-7675 haredonald@air-evac.com **Air Methods Kentucky Akron Brass Equipment Co. Bluegrass Fire Equipment David Williams** Kent Clasen 343 Venture Blvd John Baker 780 Enterprise Dr Wooster OH 44691 2417 Over Drive, Lexington KY 40511 Lexinaton, KY 40510 **859-288-5220** Fax 859-288-5262 800-228-1161 **800-526-8393** Fax 859-233-1167 kclasen@akronbrass.com Email drwilliams@airmethods.com www.bluegrassfire.com **Bluegrass Uniforms Inc.** City of Pineville FD **Bound Tree Medical** Jason Colson Chief James Miracle Tim Brockmeyer PO Box 8023 3533 Dahlia Wav PO Box 688 Dublin OH 43106-2023 Bowling Green, KY 42101 Pineville, KY 40977 800-282-7904 Ex 5162 270-842-7700 606-337-7000 tbrockmeyer@boundtree.com jason@bluegrassuniforms.com pinevillefiredepartment@hotmail.com Dixie Firefighters Assoc. ///EMERGENCY EQUIPMENT **Dove Designs** Larry Naser MIKE BRADY Res. Equip./Vehicles Chris Hays 94 Horizon Loop PO Box 1656 Monticello KY 42633 888-377-4459 (859) 359-4502 (859) 359-4503 FAX Elizabethtown KY 42702 www.dovedesigns.com http://www.EEResQ.com 502-376-1915 contact@dovedesigns.com E-Mail: EEResQ@cs.com Inaser@mcfpd.com Excellance, Inc. **Finley Fire Equipment** FAAC Inc. Thomas Pugh Bill Martin 1229 Oak Valley Dr. Rick Ebersole 453 Lanier Road Madison, AL 35758 Ann Arbor MI 48108 5255 N. State Route 60 **800-882-9799** Fax 256-772-8792 734-761-5836 Fax 734-761-5368 Connellsville OH 43756, 800-545-3280 www.excellance.com wbmartin@faac.com rebersole@finlyfire.com **Fire Department** Fireblast 451 INC. Fire Apparatus Service & Supply **Division S.D.C.** Jasmine Nava Jay Trautwein 3920 Bardstown Rd 545 Moncia Circle, Corona CA 92880 Bob Stark 8009 Beulah Church Rd. Louisville, KY 40218 951-277-8319 Louisville KY 40291 800-321-6965 Fax 502-491-1487 inava@fireblast451.com **502-239-3120** sdcfire@iglou.com **GBC Customized Calanders Firecom Corporation** Gall's Barry Jackson 7340 SW Durham Rd Kathy Whitmore 420 Rosebud Lane 2680 Palumbo Dr. Lexington KY 40509 Portland OR 97224 Winchester, KY 40391 859-266-7227 800-527-0555 859-737-8237 wells-david@galls.com barry.jackson@firecom.com kwhitmore@gordonbernard.com www.galls.com Glen's Emergency Equipment Heritage Fire Equipment Inc. **High Tech Rescue Inc.** Glen Gilreath Robbin Hodges PO Box 14546 James Riddle 2116 Frankfort RD. Shelbyville, Ky. 40065 345 N Devils Creek Rd Huntsville AL 35815 **502-633-0149** Fax 502-633-0659 Parkers Lake, KY 42634 800-422-4536 256-713-9900 james.riddle@insightbb.com glensemeg@highland.net rhodges@heritage-fire.com **KBEMS** Kentucky Fire Comm. SFRT KCTCS **Hilliard Enhanced Bob Hammonds Learning Programs (HELP)** Director Ronnie Day 300 N Main St. Versailles KY 40383 300 N Main Street, Versailles KY 42353 Mike Hilliard www.4-help.org 866-975-2367 Fax 859-256-3128 (800) 782-6823 (859) 256-3478 sales@4-help.org

kbems@kctcs.edu

888-504-4357 Fax 502-532-0800

Kentucky Firefighters Association Sustaining Members

Please remember these members when you have purchasing needs.

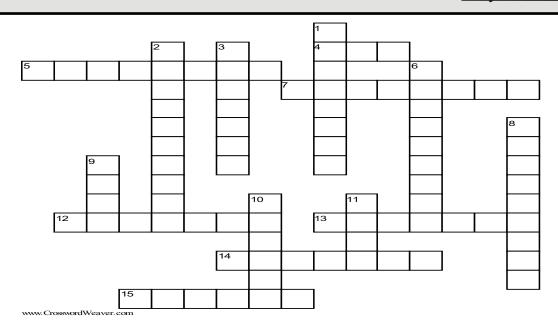
KY Chapter of IAAI **Kenwood Communications KY Emergency Management** Rusty Todd 380 Ring Road Charlie O'Neal 100 Minuteman Pkwy Larry Sparks, 2060 E. Harbor Road Elizabethtown, KY 42701 Port Clinton OH 43452 Frankfort, KY 40601 270-307-4799 419-734-4200 502-607-1601 info@greatlakescomm.com russell.todd@elizabethtownky.gov charliem.oneal@us.army.mil **New York Life Insurance Co.** On Duty Depot/MPH Ind. **NFPA** Russell Sanders Brandon Barker John "Red" Noblitt 1040 Mosley St 3257 Beales Branch Road 651 Perimeter Dr Suite 200 Owensboro, KY 42303 Louisville KY 40206 Ashland KY 41102 270-685-6423 **502-894-0411** Fax 502-894-0519 606-324-9745 red@shopmph.com Email rsanders@nfpa.org john.hester@mortonbuildings.com **QDCIP Fire, LLC Orr Rapid Response PHI Air Medical of Kentucky** Michael Kidwell 11601 Interchange Dr Cris Marley, 127 Weltmer Circle 1001 Monarch Street Suite 100 Perrysville, OH 44864 Louisville KY 40229 Lexington KY 40513 419-606-0085 qdcip@live.com **502-494-3687** Fax 800-800-6774 **859-219-3053** Fax 859-219-3059 michaelk@orrcorp.com www.gdcipfire.com wdukes@phihelice.com Scheller's Fitness & Cycling **Royce Publications RGC/Public Enity Insurance** Bill Goodwin 1987 Harrodsburg Road Michele Finke Barrett Robert Boyd Lexington, KY 40503 1056 Wellington Way Suite 130 3320 Clays Mill Rd Suite 212 859-873-0699 Lexinaton, KY 40513 Lexington KY 40503 bgoodwin@schellers.com 888-696-9620 mbarrett@roeding.com 859-327-8595 rcbyd8898@live.com Southeast DME Sales & Service Scott Health & Safety Simulation Technology Paul E. Lassanske Tim Divine 119 Lakeridge Dr Darren Basch Richmond, KY 40475 285 Commerce Pkwv 375 Fenton Unit A Hodgenville KY 42748 270-358-8365 **859-353-5017** tdivine@tycoint.com West Chicago, IL 60185 517-592-4499 www.scotthealthsafety.com paul.lassanske@sedme.com **Summit Fire Apparatus Super Vacuum Mfg Sutphen Corporation** Joe Messmer 11 Sperti Drive 7000 Columbus Marysville Rd **Command Light** Edgewood KY 41017 Amlin, OH 43002 Tim Hodgson PO Box 87 **614-889-1005** Fax 614-889-0876 859-331-0360 Loveland, CO 80539 970-290-2532 imessmer@summitfireapparatus.com hsutphen@gmail.com timh@supervac.com **Volunteer Firemen's Insurance** Vogelpohl Fire Equipment, Inc. Vehicle Systems Inc. William Vogelpohl **Services** Steve Siereveld Gary L Williams 629 Shelby Street P.O. Box 17374 • Dixie Branch 2756 Circleport Drive Lexington KY 40505 Edgewood, KY 41017 steve@kpep.net Erlanger, KY 41018 859-252-1377 800-444-FIRE (3473) **800-753-6734** Fax 859-331-3734 **800-797-8317** Fax 859-282-1550 gwilliams@vehiclesystems.net **Wynn Fire & Rescue Equipment Ward Diesel Filter Systems** To advertise in this space Charles & Kathy Wynn 133 Philo Road West, Elmira NY 14903 in the next issue of P.O. Box 1585 Corbin, KY 40702 Smoke Signals II . . . **800-845-4665** Fax 607-739-7092 606-523-9269 Fax 606-523-0591 contact Charles W Shaw www.warddiesel.com cwynn@wynnfire.com lisa.gray@warddiesel.com at 270-465-8633 To advertise in this space To advertise in this space To advertise in this space in the next issue of in the next issue of in the next issue of Smoke Signals II . . . Smoke Signals II . . . Smoke Signals II . . . contact Charles W Shaw contact Charles W Shaw contact Charles W Shaw at 270-465-8633 at 270-465-8633 at 270-465-8633

KFA Smoke Signals II PO Box 117 Cecilia, KY 42724-0117 PRESORTED STANDARD US
POSTAGE
PAID
ELIZABETHTOWN, KY
PERMIT NO. 201

KFA Smoke Signals II

This is a Publication of The Kentucky Firefighters Association. Editor Woodrow Will, PO Box 117, Cecilia, KY 42724-0117 Phone 270-766-9946 or E-Mail at woodrow.will@kyfa.org

The Deadline for June issue submission of articles is May 10, 2012



ACROSS

- 4 A means of determining the company closest to an emergency location.
- 5 2wds Nick name given to the pull box used in cities to report an alarm.
- 7 2wds A term for fire hydrant the goes back to the days when water mains were made of wood.
- 12 2wds A large master stream device sometimes attached to an apparatus.
- 13 A hose that is usually one inch internal diameter and rubber jacketed.
- 14 An older term used to describe those who fight fire.
- 15 One of the essentail parts of fire.

DOWN

- The person who drives the Fire Engine or Ladder Truck.
- 2 Vehicles used to fight wildland or grass fires.
- 3 A word used to discribe the location of the person incharge of the fire scene.
- 6 Any vehicle that serves a specific function other than to carry people.
- 8 The term applied to the explosion caused by the sudden inward rush of oxygen.
- 9 The rapid oxidation of fuel caused by heating.
- 10 An motorized apparatrus designed for fire attack.
- 11 A product when added to water reduces it's surface tension.