



CRYSTAL LAKE FIRE RESCUE

Annual Report 2009







Gary J. Mayerhofer, City Manager City of Crystal Lake

Dear Mr. Mayerhofer,

It is my pleasure to present to you, the 2009 Crystal Lake Fire Rescue Department Annual Report. Once again, your Fire Rescue Department has made tremendous strides in the areas of emergency response, training, disaster preparedness, fire and life safety. As you will see in this document, the men and women of the Crystal Lake Fire Rescue Department have one goal in mind....

"Serving Crystal Lake with P.R.I.D.E." (Professionalism, Readiness, Innovation, Dedication and Empowerment).

During the past year we saw some major changes in the Fire Rescue Department as we added a fourth ambulance and the personnel to staff it. The training and integration of the new personnel has been a major focus of all of our personnel this year. Thanks to our past several years of dedication to organizational and personal development we have enjoyed another year of great success.

While our success cannot be traced to one single factor, as successful emergency services delivery is dependent on many interrelated factors, we could not have advanced this past year without the support of our Mayor, City Council, Fire District Trustees, yourself and our community. We are thankful to everyone for his or her support.

Listed below you will find a highlight of our accomplishments for 2009:

- Achieved an improved Community Fire Safety Rating from the Insurance Service Offices (ISO). Our organizational and operational improvements have lowered our score from a 4 to a 3 in the City of Crystal Lake.
- Instituted a fourth fully staffed advanced life support ambulance. This fourth ambulance also serves as an alternate response company where assigned personnel can staff our ladder truck or water tender depending on several different variables.
- Enhanced our water rescue capabilities with the procurement of a boat specifically designed for our rescue divers needs.
- Continued Officer Development on a monthly basis.
- Continued to focus on training and professional development of all personnel.
- Pandemic Flu Continuity of Operation Plan was updated, exercised and placed into operation.
- Conducted a model first responder H1N1 vaccination distribution center.
- Conducted a highly successful, full scale, city-wide Strategic National Stockpile (SNS) distribution exercise.





- Created a Bureau Chief position to oversee the daily Emergency Medical Service needs of our paramedics and community.
- Transitioned to a new county owned Computer Aided Dispatch (CAD) program.
- Developed a Contractor's Packet in order to provide our development community clear expectations of fire alarm/sprinkler system design and installation.
- Completed an entire change/upgrade to our Self-Contained Breathing Apparatus.
- Completed multiple live fire training sessions.
- Researched and planned for a Wireless Fire Alarm Network.
- Conducted ladder truck specific training for personnel who are assigned to the alternate response concept of Ambulance 352.
- Conducted City-wide Emergency Operations Center (EOC) Training.
- Completion of the mandated National Incident Management System Capability Self Assessment Tool (NIMSCAST)
- Life Safety Inspection of over 600 occupancies in our community.
- Updated our comprehensive Policy and Procedure Manual to provide consistent direction to our emergency response personnel.
- Continued our Observed Behavior Safety Training Program to place an increased focus on the safety of our personnel.
- Replaced Ambulance 352 with the support of the Crystal Lake Rural Fire Protection District.
- Placed safety chevrons on the rear of all ambulances with the support of the Crystal Lake Rural Fire Protection District.
- Lead several countywide fire service initiatives, such as radio programming of evacuation tones and Incident Command training.
- Updated and enhanced our one year old mapping program with the help of our Planning Department staff.
- Community support through active participation and donations to the Salvation Army, Crystal Lake Food Pantry and Muscular Dystrophy Association.
- Conducted a sold-out seminar (300 firefighters) on "The Art of Reading Smoke" with author Battalion Chief Dave Dodson (Ret.).

On behalf of the men and women of the Crystal Lake Fire Rescue Department, we thank you for the opportunity to serve our community.

Sincerely,

James P. Moore Fire Rescue Chief





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Department Overview

The City of Crystal Lake is located in Illinois approximately 45 miles northwest of the City of Chicago, in McHenry County. The Crystal Lake Fire Rescue Department provides service for the City of Crystal Lake, the Crystal Lake Rural Fire Protection District and portions of Lake in the Hills. The area served is approximately 46.2 square miles, with a resident population of over 56,000 according to the 2000 census. Estimated current population is 60,000. Services provided include fire protection, emergency medical care (Advanced Life Support), fire inspections, public education, hazardous material response, water rescue, and special team responses such as trench, confined space, rope, and dive rescue. The City of Crystal Lake is the largest city in McHenry County, and our service area includes three U.S. highways, a railroad (Union Pacific), two large lakes (Crystal Lake and Three Oaks Recreation Area), and McHenry County College. The Department also provides automatic aid to the Nunda Rural Fire Protection District, McHenry Township Fire Protection District and the Algonquin / Lake in the Hills Fire Protection District. Mutual Aid is provided to communities in McHenry, Lake and Kane Counties frequently through our Mutual Aid Box Alarm System (MABAS).

The Fire Rescue Department provides 24-hour emergency response, operating out of three stations with 77 personnel. Staffing is provided by three shifts of full-time firefighters on a 24/48-hour schedule, and is supplemented with paid-on-premise firefighters. Approved full-time positions include 3 Battalion Chiefs, 9 Lieutenants, and 46 firefighter/paramedics. Full-time firefighters and Lieutenants are members of the Crystal Lake Professional Firefighters Association, Local 3926, of the International Association of Firefighters. Minimum manning for emergency response is at 15 firefighters per shift. Approved day positions (40-hour week), include Fire Chief, Deputy Chief, Bureau Chief of Training, Bureau Chief of Emergency Medical Services, Bureau Chief of Fire Prevention, Fire Inspector, Office Coordinator, and Administrative Assistant. In 2009, the Department responded to over 4,900 incidents. 65% of the incidents involved emergency medical care.





2009 Year in Review

Deputy Fire Rescue Chief - Paul DeRaedt

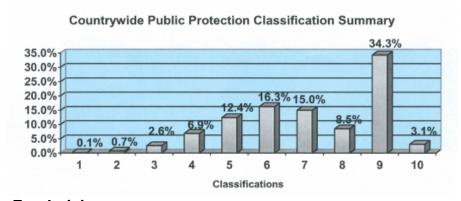
2009 was a remarkable year for our Department. The list of accomplishments our Department has worked for this past year is nothing but impressive. The people we protect can be proud of the service our members provide as shown in their dedication and professionalism.

Insurance Services Office Rating

Periodically, the Insurance Services Office (ISO) conducts surveys of municipalities in order to update classifications for insurance rating purposes. ISO is the leading supplier of data and analytics for the property/casualty insurance industry.

ISO completed a Public Protection Classification (PPC) survey in order to conduct an analysis of the structural fire suppression delivery system provided in the City. In general, the price of fire insurance in a community with a good PPC is substantially lower than in a community with a poor PPC. Class 1 represents an exemplary fire suppression program, and Class 10 indicates that the area's fire suppression program does not meet ISO's minimum criteria.

Based on this most recent survey, the City has improved its ISO PPC rating from 4 to 3. ISO has evaluated and classified over 44,000 fire protection areas across the United States. The City's new Class 3 rating places the City within the top 3.4% of fire suppression services.



Community Fundraising

Fire Rescue personnel participated in three fundraising events this year.

 The annual Muscular Dystrophy Association's Fill-the-Boot campaign coordinated by the Crystal Lake Professional Firefighters, Local 3926. The event took place during the third weekend in August. Through our personnel's efforts, we were able to raise over \$5,900 for this worthwhile cause.





- Salvation Army's Red Kettle Campaign. The three shifts, administrative staff and paid-on-premise (POP) personnel competed against one another to see who could raise the most money. This was the fourth year the Department participated in this fundraising campaign. This year our department raised \$12,315.14 which surpassed last year's total by \$2,166.70.
- In lieu of holiday gifts, the Officers of the Crystal Lake Fire Rescue Department donated \$ 500.00 to the Crystal Lake Food Pantry.

Challenge Coins

The Crystal Lake Foreign Fire Insurance Board purchased inaugural challenge coins for the Department. A challenge coin is a small coin bearing our Department's values and service emblems which is carried by members of our Department. Challenge coins are given to show membership and to enhance morale.



The challenge coin serves as a memento of belonging to an organization. As a paramilitary organization, the Crystal Lake Fire Rescue Department has chosen to symbolize our values and belonging to a team in a challenge coin.

Strategic National Stockpile Distribution Plan
Personnel from Police, Fire Rescue, Public Works
and City Department Heads worked together
during a full-scale exercise of our plan to dispense
the Strategic National Stockpile (SNS). Thanks to
months of planning and the hard work of many,
this drill was a tremendous success. We
distributed over 260 doses of simulated medication



Medical Administration Record (MAR) Entry Point



(candy).

Medication Distribution Lanes

During the past year we conducted two full-scale SNS drills. One drill was for first responders and the other was for community wide distribution. In both cases the drills were a success, illustrating that our plans are sound and our personnel are committed to our Department and Community.





Self-Contained Breathing Apparatus (SCBA)



Thanks to our City Council, our existing MSA SCBA was replaced with the Scott NXG 7. This necessary change came after the life expectancy of our MSA packs was reached. Training, fit testing and policy changes took place over several months. This project was a large undertaking that involved research, procurement, and implementation. The end result was an SCBA program that is compliant with national standards related to the safety of our personnel who utilize this equipment each day.

Scott NXG 7 SCBA

McHenry County Radio Interoperability

Our City and Department were engaged in the McHenry County Radio Interoperability Committee to bring together emergency communication for large-scale events. This committee is tasked with determining what our communication resource needs are, what radio resources each community has, develop a communication plan, and exercise the plan.

Emergency Evacuation Tone

All of our Command Vehicles have been programmed to transmit an audible tone to evacuate a structure when conditions present a hazard to the safety of our personnel. This programming was part of a county-wide initiative that was lead by Crystal Lake Fire Rescue to ensure all incident commanders have the ability to effectively notify personnel of a dangerous situation.

Mapping Program

Thanks to the hard work of FF/PM H. Olsen and City Planner Latika Bhide, "version 1.0" of the Crystal Lake Fire Rescue Map Book was released in February. The Map Book is a grid by grid version of the quality wall maps that were distributed in 2008.

H1N1 Influenza Operations

With the emergence of a novel influenza strain to the human population, the City of Crystal Lake activated the "Pandemic Influenza Continuity of Operations Plan." The activation of our plan allowed us to evaluate the practical application of our plan and make modifications for the future.

A First Responders Clinic was held in our station to distribute the H1N1 flu vaccine among Police and Fire Rescue personnel to protect them from contracting the flu and possibly affecting our ability to provide emergency service to the public.





Promotions

On November 3, 2009, we celebrated the promotions of Bureau Chief Bill Whyte and Lieutenant Chris Kopera. Promotions are a milestone in an individual's career and a shot in the arm for the Department as new blood is infused into leadership roles.



Bureau Chief Whyte and his wife Linda



Lieutenant Kopera and his wife Teri

Annual Department Awards

December 15-17, 2009 was the dates our Department held its annual awards presentations. Our members were recognized in 3 categories of awards; Department Service Awards, EMS Service Awards, and Department Recognition Awards.

Service Awards

Bob Lutherus 30 years Kirk Kiermas 20 years 20 years Todd Howell Mike Lukas 20 years Rick Kaiser 15 years 15 years Dave Kaltenbach 10 years Chris Angelo 10 years Dave Ling Darrell Cook 5 years Tim Kerley 5 years Mike Lucas 5 years Brian Marino 5 years Jim Sustek 5 years

EMS Service Awards (years certified with IL Dept. of Public Health)

Rob Martel 25 years
Bob Olszewski 25 years
Darrell Cook 10 years
Brian Tamason 10 years
Tim Kerley 5 years
Tom Linneman 5 years





Department Recognition Awards

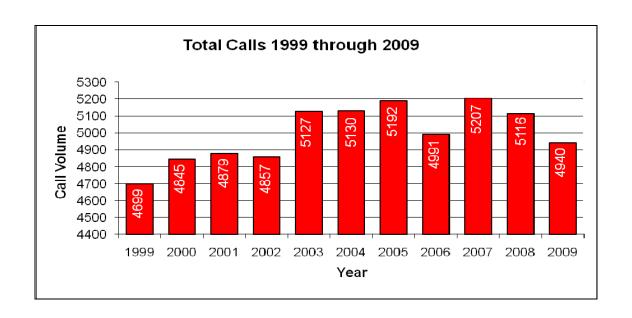
Type of Award	Date of Incident	Description	Crew Receiving Award
Award of Recognition	10/26/08	Full arrest with successful resuscitation.	Lt. Cork, FF/PM's Kerley, Leuck, Shipley
Award of Recognition	11/21/08	Full arrest with successful resuscitation.	Lt. Lutherus, FF/PM's Linneman, Lucas, Schmitt
Award of Recognition	11/30/08	Full arrest with successful resuscitation.	FF/PM's Laufer, LeClercq, Linneman, Lucas
Award of Recognition	12/9/08	Full arrest with successful resuscitation.	Lt. Lutherus, FF/PM's Kownacki, LeClercq, Linneman, Lucas
Award of Recognition	3/14/09	Full arrest with successful resuscitation.	FF/PM's Aiello, Brechbiel, Fowles, Kerley, Kopera
Award of Recognition	3/27/09	Full arrest with successful resuscitation.	Lt. Grischow, FF/EMT Howell, FF/PM's Geyman, Kreher, Linneman, Sustek
Award of Recognition	5/24/09	Annual Memorial Day flag placement at the graves of Crystal Lake firefighters.	FF Behrens, FF/PM's Cook, Rozhon
Award of Recognition	Spring 2009	Department photos and display project.	FF/PM Perenchio
Award of Recognition	6/22/09	Emergency childbirth	FF/PM's Borst, Linneman
Unit Performance Award	6/22/09	Emergency childbirth	FF/PM's Geyman, LeClercq, Rozhon, Williams D.

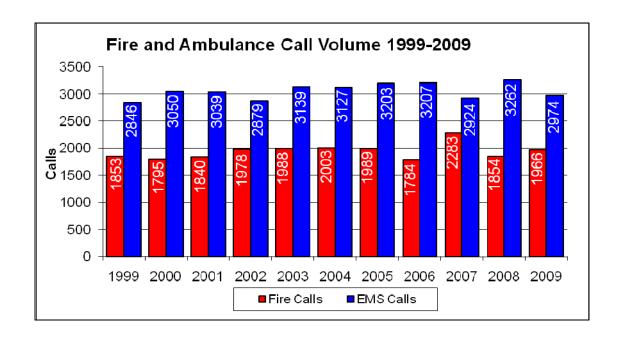




Incident Statistics – 2009

Bureau Chiefs - Bob Olszewski & Bill Whyte









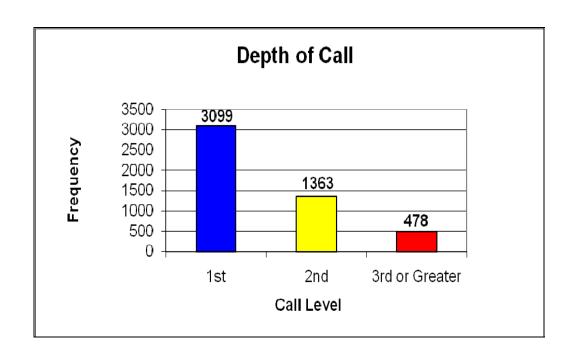
Fire Rescue Department Calls for Service 2007-2009

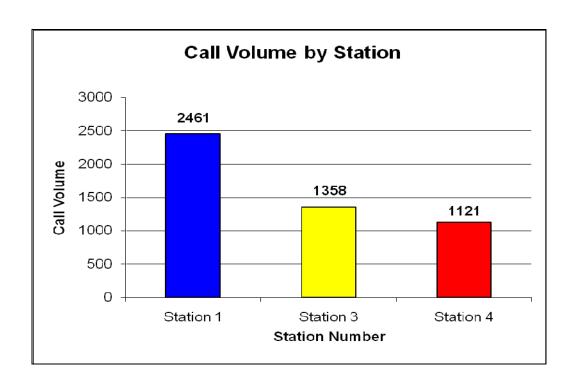
Incident Type	# 2007	% 2007	# 2008	% 2008	# 2009	% 2009
Fire	95	1.82%	67	1.31%	68	1.38%
Rescue and EMS Incidents	3344	64.22%	3262	63.76%	3334	67.49%
Hazardous Conditions (No Fire)	341	6.55%	265	5.18%	184	3.72%
Service Call	509	9.78%	558	10.91%	405	8.20%
Good Intent Call	181	3.48%	295	5.77%	218	4.41%
Fire Alarms	737	14.15%	669	13.08%	731	14.80%
Total	5207	100.00%	5116	100.00%	4940	100.00%

Jurisdiction	# 2007	% 2007	# 2008	% 2008	# 2009	% 2009
City of Crystal Lake	4379	84.10%	4402	86.04%	4292	86.88%
CL Rural FPD	665	12.77%	545	10.65%	534	10.81%
Out of District	163	3.13%	169	3.30%	114	2.31%
Total	5207	100.00%	5116	100.00%	4940	100.00%













Crystal Lake Fire Rescue Department <u>Fire Suppression</u> Response Times Within Each Response District

		Station 1	Station 3	Station 4
Average Alarm Processing Time		1:38	1:31	1:46
Average Turn Out Time		1:17	0:46	1:00
Average Travel Time of First Due Engine		4:49	4:19	5:56
	Total	7:44	6:36	8:42

Crystal Lake Fire Rescue Department <u>EMS</u> Response Times Within Each Response District

	Station 1	Station 3	Station 4
Average Alarm Processing Time	1:37	1:39	1:26
Average Turn Out Time	0:39	0:40	0:44
Average Travel Time of First Due Engine	4:25	4:12	5:07
Total	6:41	6:31	7:17

The Crystal Lake Fire Rescue Department responded to over 4,900 calls in 2009 with a total of 4,940 incident responses.





Apparatus Report – 2009

Lieutenant James Kalisik – Apparatus Coordinator

In 2009, we saw many changes and improvements in our ability to maintain our apparatus. Our Fleet Division has once again done an excellent job of maintaining our vehicles. The relationship between the Fleet Division and our staff has been excellent in keeping our vehicles ready to respond to all emergencies.

The Fire Rescue Department apparatus consists of:

- 5 Engines (3 Frontline, 1 Callback, 1 Reserve)
- 6 Ambulances (4 Frontline, 1 Callback, 1 Reserve)
- 1 Aerial Ladder Truck (Alternative Staff / Callback)
- 1 Command Vehicle
- 1 Squad (Callback)
- 1 Tender (Alternative Staff / Callback)
- 1 Brush Truck (Alternative Staff / Callback)
- 2 Chief Officer Cars
- 4 Bureau Cars
- 2 Support Vehicles
- 1 Dive Rescue Truck (Callback)
- 2 Rescue Boats (Alternative Staff / Callback)
- 1 Specialty Response Team Truck and Canister
- 1 Foam Trailer
- 1 Fire Safety House Trailer
- 1 SCBA Training Trailer

Apparatus Inventories

Every apparatus has an inventory list for every piece of equipment on that apparatus. Each frontline apparatus has equipment that is checked daily and weekly. All other apparatus has equipment checked weekly. The purpose of conducting inventory checks is to ensure all equipment is in a ready state.

Pump Testing and Aerial / Ground Ladder Inspection

All apparatus with a pump received their required annual pump test according to National Fire Protection Association (NFPA) guidelines. Underwriters Laboratories performed the required annual aerial ladder and ground ladder testing. All ladders with the exception of one ground ladder and one folding ladder passed the annual test.





Ambulance Safety Chevrons

The Trustees of the Crystal Lake Rural Fire Protection District funded a project to retro fit our existing ambulances with National Highway Safety compliant rear safety chevrons. When compared side by side, chevrons provide an additional degree of safety to all parties through greater visibility.



New Apparatus

A new Ford E-450, Type III, Medtec ambulance purchased by the Crystal Lake Rural Fire Protection District was ordered from Foster Coach and was placed in service on December 16, 2009. The new ambulance replaces one of our older ambulances that has reached its serviceable life. FF/PM Dave Kaltenbach was tasked with overseeing that the specifications were followed during the building of the new ambulance.



New Ambulance 352





Rescue Boat 398

Thanks to our City Council and support from our Foreign Fire Insurance Board, we acquired a replacement for Boat 398. This new boat has features that improve diver safety and operations by incorporating a swing down step for divers to enter and leave the boat without causing the boat to capsize. Additionally, this boat can be attached to other connector type boats in the county to form a dive platform. Working from a dive platform allows standby and replacement divers to stage at the dive site rather than taking additional time to bring them from shore. Revised operational updates for boat operations along with scheduled training for this new piece of life saving equipment was completed in mid-summer.



Engine 344 Alterations

Engine 344, which is housed at Fire Station Four on Bard Road, is now carrying the Crystal Lake Fire Rescue Department's Hurst hydraulic rescue equipment that was previously on the Shift Commander's vehicle /squad. While all frontline engines carry hydraulic rescue tools, the squad carried specialized hydraulic equipment that is used for specialized vehicle rescue and the Department did not have enough to supply each engine with. This project also made our Shift Commander available to manage the Department's resources during multiple call events rather than being committed to a vehicle accident because of the tools he carried in his vehicle.

To move the heavy rescue equipment on to one of our frontline engines, we had to make room on Engine 344 for two hose reels and a Hurst power unit. The City's Fleet Division worked along with us to complete the changeover. Engine 344 now responds to vehicle accidents when additional or specialized vehicle rescue tools are needed.



Engine 344 Hurst Equipment Project





Squad 359

This squad previously doubled as our Shift Commander's vehicle. It has been converted into a specialty vehicle. It carries equipment to assist our Fire Investigation Team at structure fires. It will also be equipped to operate as a rehabilitation vehicle with bottled water, misting fans and other replenishment items at emergency incidents and training evolutions.

Command Car 330

Car 335 was converted into a command vehicle for our Shift Commanders and was renumbered to 330. This vehicle was outfitted with a command box that contains equipment features to help our Shift Commanders safely monitor our Department's resources at emergency incidents. The National Incident Management System (NIMS), requires that there is a designated commander and command post at each major incident. This conversion projects brings us into further compliance with NIMS. A tactical work board, 2 additional radios, and reference material storage are some of the items the commanders now have at their disposal.



Command Car 330's Command Box





Public Education - 2009

Lieutenant Joyce Stevenson – Public Education Coordinator

The Fire Rescue Department receives inquiries and requests to schedule public education events on a daily basis. Most public education events are conducted by onduty crews. Events lasting four or more hours are assigned to off-duty personnel. In 2009, we conducted 103 public education events involving approximately 25,000 people.

Fire Safety Programs

Our fire safety programs for school age children are in the most demand. The majority of our fire safety talks and station tours occur between the months of September and November. Each fall we conduct school evacuation drills to observe how quickly and orderly the staff and children exit their school. The number of staff and children participating in the drills in 2009 was 14,567.

Generally, we visit the preschools with an engine or ambulance to teach children about fire safety and injury prevention. With the preschool children, we emphasize to them to

stay away from things that are hot, to STOP, DROP, and ROLL if their clothes catch on fire, and to stay low if there is smoke. Firefighters put on their firefighting gear so the children can see what a firefighter looks like when he goes into a fire. The children are also shown equipment we use when we help an injured or sick child. Kindergarten children usually visit the fire station and receive a fire safety message before touring the station and apparatus.



Second grade children participate in our Fire Safety
House program. The safety house is transported to each school where children see a video on exiting a burning building. The students then go into the safety house to practice their escape with firefighters reinforcing the skills that were taught.

In 2009, the Crystal Lake Fire Rescue Department participated in may fire educational presentations both at the stations and at various locations in the City. Activities included:

- Fire Safety tours for school groups, scouts, and other organizations
- Safety House classes at the schools, and events such as the McHenry County Health Fair, and Johnny Appleseed Festival.







- Special events at the library and opening day events for baseball and Truck or Treat.
- Blood pressure checks
- Block parties
- Fire extinguisher demonstrations for businesses, residential living facilities.
- Prom disaster demonstration

New Programs for 2009

An Emergency Medical Services (EMS) Open House was held in May. This was the first time our Department conducted an open house dedicated to EMS. Approximately 300 people attended this inaugural event. Demonstrations on spinal and extremity immobilization, administration of oxygen, blood pressure and pulse oximetry readings, and 12-lead heart monitor were offered to those in attendance. Centegra, Good Shepherd, and Mercy Hospitals were present along with Flight for Life-NIMC. Crystal Lake Police demonstrated the Trak Care device for locating missing persons. McHenry County Health Department provided information on H1N1 Flu precautions. Information was also available on being prepared for disasters.





A new program on Senior Fall and Fire Prevention was developed and offered to the community. The response has been very positive not only from our residents, but also from agencies such as home health care organizations and Faith in Action which assist elderly citizens.

The Crystal Lake Fire Rescue Department also disseminates information on the City's website (www.crystallake.org), Government Access Channel 17, and in brochures available at the City's Municipal Complex.

Through our programs we hope to instill fire safety practices to prevent fires. If a fire or medical emergency should occur, people will know how to respond in the safest, quickest manner.





Lieutenant Joyce Stevenson – CPR Coordinator

With the emphasis by the media on the effectiveness of CPR and quick use of an Automatic External Defibrillator (AED) in saving lives, the demand for CPR by the community has greatly increased this year.

This life saving skill has shown to provide the greatest chance of survival for someone who is not breathing and has no pulse when no advanced medical care is available.

Changes by the American Heart Association (AHA) for fast and hard compressions done as soon as CPR is needed have improved survival rates. The Crystal Lake Fire Rescue Department teaches four types of classes:

- Healthcare Provider
- Heartsaver AED
- Friends and Family
- Heartsaver First Aid



In 2009, our instructors taught 540 students from the general public, as well as our City Departments.

Information about our classes can be found in the City's newsletter, Channel 17 cable access channel, and at www.crystallake.org.





Fire Prevention Bureau-2009

Bureau Chief of Fire Prevention - Jerry Larsen

Fire Prevention Programs focus on the three E's of Fire Prevention; Education, Enforcement, and Engineering. Providing education to our business owners and their employees, building designers and contractors about safe practices can reduce the chance of fire in their buildings. Enforcement is aimed at reducing fire hazards, as well as mandating the proper installation and maintenance of a building's fire and life safety features. Engineering is about designing buildings properly with respect to fire and life safety. Plan review is part of this process. The Crystal Lake Fire Prevention Bureau works at improving in all three of areas for a safer Crystal Lake.

Contractor's Packet

In order to focus on improved customer service, the Fire Prevention Bureau implemented a Contractor's Packet. The Contractor's Packet is distributed to contractor's to assist them in identifying what fire protection systems are required for their project. The information contained in the packet lists all the information that needs to be submitted for the Fire Prevention Bureau to complete a plan review on fire protection systems. The packet then identifies the steps required during inspections or acceptance testing. The Contractor's Packet is available on the City's website.

City Addressing

The Fire Rescue Department has assumed the responsibility for the addressing of properties within the City. Consistent addressing application ensures first responders, business customers and the general public can locate an address in a timely manner. The Fire Prevention Bureau has been working with members of the Planning, Engineering & Building and Police Departments in identifying the City's current addressing practices and is working to create a set standard for future addressing needs.

Fire Prevention Records

To ensure that fire protection documents are readily accessible, the Fire Prevention Bureau has revised the filing and records retention procedures. In collaboration with the Building Division, the files have been consolidated with the Building Division records. This allows the Fire Prevention Bureau to keep essential documents for use during plan reviews and inspection history. This project also improves coordination and communication for our Life Safety Inspection program by allowing crews to review previous inspection reports before visiting an occupancy.





Consulting Services

The Fire Prevention Bureau has contracted B & F Technical Code Services to complete fire protection plan reviews for larger projects. The Fire Prevention Bureau has identified the threshold of projects that can be reviewed by staff and the larger projects are sent to the consultant for review of code compliance.

Life Safety Inspections

The Fire Rescue Department conducts Life Safety Inspections in commercial occupancies throughout our community. All inspections are conducted by in service fire companies. Listed below is a breakdown of the number and types of inspections that were conducted by our crews in 2009:

Initial Inspections	616
Re-Inspections	354
Total	970

Plan Reviews

The Fire Prevention Bureau completed the following plan reviews for the calendar year 2009:

Building Permit Review	108
PUD (planned unit development)	16
TUP (temporary use permit)	42
SUP (special use permit)	8
Sprinkler System	56
Fire Alarm System	98
Wet Chemical/Ansul	9
Building Permit Occupancy	25
Cursory	19
Variation	5
Facade Grant	12
FOIA	10
County - Residential	2
Consultant Reviews	4
Subtotal - Bureau Reviews	410
Subtotal - Consultant Reviews	4
Total Plan Reviews	414





Inspections

The Fire Prevention Bureau completed the following inspections or acceptance testing for the calendar year 2009:

Annual	107
Occupancy	249
Complaint / Concern	41
Construction	138
Wet Chemical	10
Life Safety Follow-up	249
Fire Alarm System	125
Sprinkler System	96
Total	1,015





Specialized Rescue Teams – 2009

Lieutenant Kirk Kiermas – Dive Master

Crystal Lake Fire Rescue Dive Rescue Team (DRT) continued to be active in training and responses. DRT members participated in 21 events including training exercises, seminars, classes and incidents. DRT personnel trained on basic and advanced dive techniques. Ongoing team training is essential for the safe and efficient performance of all DRT members. Additionally, all Fire Rescue Department personnel have been trained to assist in dive operations, boat operations, surface water rescue and dive communications. Total department coordination is paramount to successful mitigations of emergency responses.

Training

Dive training during the 2009 year focused on several areas. These specific areas as well as other specialized training are part of a continuing program designed to build and maintain team efficiency. Several of the training areas the DRT focused on during the year are as follows:

- Annual basic skills refresher
- Boat operations
- Compass navigation
- Dead reckoning navigation
- Underwater hardwire communication
- Underwater wireless communication
- Rope signal communication
- Search and recovery techniques
- Ice diving
- Sonar operations

All DRT personnel have to achieve minimum training certifications in order to meet Department standards. Minimum certification requirements are as follows:

- Public Safety Diver I
- Dive Rescue I
- Ice Rescue Diver

Crystal Lake Fire Rescue DRT members participated in annual combined training with the Crystal Lake Park District.

New and improved techniques that have been developed by each organization over the last year were demonstrated resulting in a greater distribution of knowledge.





Discussion of policies and procedures help to ensure better understanding and cooperation was the goal of each session. Beach staff participated in a scenario that demonstrated the importance of establishing the correct "last seen point". Following these procedures resulted in an almost immediate recovery of a simulated victim.

Training exercises for the Crystal Lake Fire Rescue DRT within the bodies of water located in the City help to familiarize divers to the unique properties of each location. In the event of an actual emergency, DRT members will have a better knowledge of a specific body of water and the areas surrounding it. Crystal Lake and Three Oaks Recreation Area are the two most notable bodies of water within the City. After each use, DRT members thoroughly clean their equipment and boats to prevent transfer of unwanted aquatic life to the next body of water. Repetitive training in these locations is essential for proper preparedness in the event of an emergency or evidence/property recovery. With the expected opening of the Three Oaks Recreation Area to the public in 2010, the Crystal Lake Fire Rescue DRT will remain up to date on all changing aspects of this location to ensure the safety of the public.



DRT members train at the Three Oaks Recreation Area

Additionally, there are numerous smaller bodies of water throughout the City. Retention ponds, pools and private lakes are located in neighborhoods, wooded areas and parks in areas around town. All of these bodies of water have a potential for a water related emergency.







DRT members training on Crystal Lake

New Equipment

Crystal Lake Fire Rescue Department Dive Rescue Team received a donation of an underwater video camera system. This system will allow DRT personnel to search and locate victims and/or evidence without jeopardizing the safety of dive personnel in dangerous water conditions. This unit can be used through ice and around obstructions in addition to utilizing divers performing normal search patterns. This could greatly speed up recovery operations. The camera is equipped with a 50 foot video cable, 6 inch monitor and infrared capabilities.







Side Scan Sonar Team

Side Scan Sonar has become an increasingly important asset for departments who find a need to search a large area in a short period of time. Side Scan Sonar can be requested through the Lake & McHenry Counties Specialized Rescue Teams to respond to and search any water body in Lake and McHenry Counties. This ability to search from a boat without the immediate deployment of divers greatly improves safety and reduces the number of divers needed to perform a rescue/recovery operation.

Training

Two training opportunities stand out from the 2009 season. First, the Crystal Lake Fire Rescue Department hosted a drill in March on Crystal Lake. The drill was a coordinated effort with the Crystal Lake Dive Rescue Team and members of the Lake & McHenry Counties Specialized Rescue Team. The drill utilized a simulated victim that was submerged at a point of triangulated landmarks.



Crystal Lake DRT members during a pool training dive.

The second training opportunity was an Acoustic Imaging Class hosted by the Elk Grove Fire Department. This was a 40 hour class for certification as a Sonar Technician I. Crystal Lake Fire Rescue Side Scan Sonar Technician Darrell Cook is now 1 of 2 technicians on the Lake & McHenry Counties Specialized Rescue Team to obtain this certification. There are approximately 12 certified technicians in the State of Illinois.

<u>Lieutenant Dan Grischow – Specialized Rescue Team Coordinator</u>

The Crystal Lake Specialized Rescue Team (SRT) is a member of the Lake & McHenry Counties Specialized Rescue Team (LMCSRT) which prepares for high risk, low frequency events such as structural collapse, vertical rescue, slope evacuation, and confined space. As no one department can have all the equipment and manpower to handle these events, the combined manpower and specialized equipment from LMCSRT are able to handle these specialized calls for service.

Training

Team members train in four major specialties:

- Structural Collapse
- Trench Rescue
- Confined Space Rescue
- Vertical Rescue





Crystal Lake Fire Rescue houses one of the Lake & McHenry Counties Urban Search and Rescue (USAR) truck and roll off containers. This USAR container contains tools and specialized equipment that team members can use to handle almost any type of specialized rescue incident. This year the Lake & McHenry Counties team added some additional equipment to the container. Cribbing, saws, lumber and a specialized search camera were welcomed resources to aid in our ability to perform our duties.

The search camera was obtained through a \$15,000 grant and enables team members to search areas too hazardous or small to enter.

Crystal Lake Specialized Rescue Technicians attended over 150 hours of specialized rescue training this year. Along with hosting trench drills and providing manpower and equipment for several other drills around the county, our technicians attended drills throughout Lake and McHenry Counties. Trainings included structural collapse, slope evacuation, and trench rescue along with confined space scenarios. These drills provide our team members with ongoing instruction to enhance their skills.

A Crystal Lake Specialized Rescue Technician participated in the MABAS tent city drill held at Northern Illinois Public Safety Training Academy (NIPSTA). This drill was an exercise held over two days to train Illinois SRT Teams to set up and operate in a tent city during a team deployment. Especially early in a disaster, housing is not available in the stricken area. The tent city provides responders with shelter and security. Two technicians per team trained on how to set up a complete tent complex. The State of Illinois has purchased three semi-trailers that carry 10, western system tents each, in wheeled carts. The trailer also carries 10 HVAC units, extra heaters, light towers and a total of 125 bunk beds. The tents can be connected together or stand alone. The trailer is equipped with a generator large enough to supply power to all 10 tents.

Lieutenant Dan Grischow – HazMat Team Coordinator

Crystal Lake Hazardous Materials Team members, like the SRT Team members, are part of the larger Lake & McHenry Counties Hazardous Materials Team. Crystal Lake has six team members who are certified to the Hazardous Materials Technician B level. By federal legislation, an annual commitment of at least 40 hours of hazardous materials training is required at their certification level.

Training

Crystal Lake Hazardous Materials Technicians attended over 250 hours of continuing education during 2009. Along with monthly drills, we attended seminars and classes in hazardous materials identification and Incident Management & Emergency Planning. Crystal Lake technicians also instructed Fire Rescue personnel during our annual hazardous materials awareness and operations training.





Emergency Medical Services (EMS) – 2009

Bureau Chief of EMS - Robert Olszewski

Equipment

The McHenry / Western Lake County EMS System added cutting edge tools to the required list of equipment that is carried on all Advanced Life Support (ALS) units. The addition of the mucosal aerosol device (MAD) and the EZ-IO device (intraosseous access tool) increased the ability of emergency personnel to perform their skills at a greater capacity and with more efficiency. These devices assist in providing a route for our personnel to administer medications more rapidly, thus providing better patient outcomes. Additionally, a sixth "Lifepak 12" was obtained with the assistance of the Crystal Lake Rural Fire Protection District which now equips all ALS ambulances with an identical monitor/defibrillator.



EZ-IO Device



Lifepak 12 Heart Monitor

The Department is continuing its preventative maintenance program on the cardiac monitors, cots, and patient moving equipment, which will minimize the likelihood of mechanical failures and increases service to our customers. This maintenance covers all of the required components that are identified by the manufacturer. This program ensures that the equipment will function properly when called upon.





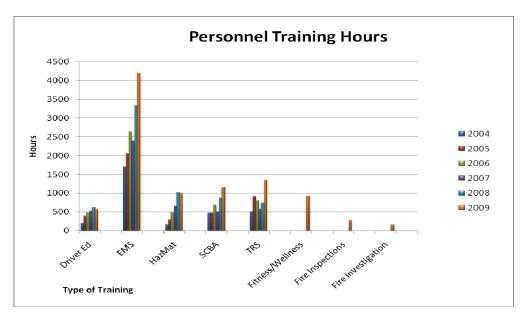
Training Bureau - 2009

Bureau Chief of Training - Bill Whyte

2009 was a year of continued change and development in the Crystal Lake Fire Rescue Department Training Bureau. Training requirements are outlined by several organizations such as Occupational Safety and Health Administration (OSHA), Illinois Department of Labor (IDOL) and the National Fire Protection Association (NFPA). Crystal Lake Fire Rescue Department (CLFRD) personnel participated in over 22,800 hours of training in order to remain proficient in all areas of emergency operations.

2009 Training Bureau Statistics









In 2009, Crystal Lake Fire Rescue Department personnel logged 22,820 hours of training. On an average, each firefighter/paramedic participated in over 351 hours of training annually, or 29.25 hours of training monthly. The training categories for Fire Rescue personnel are:

Training Course	Hours
EMS	4,192
Fire Prevention/Inspections	346
Fitness/Wellness	926
Hazmat	985
Specialized Rescue	1,346
Drivers Classroom	82
Drivers Road Course	204
Drivers Competency Course	83
New Drivers	207
Apparatus Engineers	715
Firefighter Safety	1,213
Fire Investigations	158
SCBA	1,151
Incident Command	197
Officer Development	5,695
Fire Training	5,320
Total Training Hours	22,820

Training a Firefighter/Paramedic requires many hours in the classroom as well as out at a drill site. The following list reflects some of the different types of educational opportunities that have been made available:

- Live fire suppression drills
- Water supply drills
- Forcible entry/exit drills
- Ventilation drills
- Building tours
- Building construction training
- Auto-aid training with neighboring departments
- Aerial operations drills
- Ladder drills
- Incident command training





Professional DevelopmentThe following is a list of professional development courses attended by CLFRD personnel in 2009:

Course	Number of Personnel Attended
CPR Instructor Update	1
Fire Officer I Courses	16
Fire Officer II Courses	4
Fire Officer III Courses	1
Fire Investigator	1
Fire Prevention Bureau	1
Incident Safety Officer	5
Hazardous Materials	5
Specialized Rescue	7
Fire Apparatus Engineer	7
Firefighter II	1
Firefighter III	3
Fireground Company Officer	4
Instructors Conference	2
Light-em' and Fight-em' Training	5
LEPC Seminar	2
Rehab Seminar	14
Reading Smoke Seminar	45
Pride and Ownership	4
Training Officer	1
Honor Guard	2
Fire Pattern Recognition	2
Juvenile Fire Setter / Interrogation/Investigation	3
Fire Pumps	1
Ethics	1
Executive Support Program	1
Skill Path Seminar	1
Vision Mobile / Vision Fire	4
Emergency Response to Terrorism: Basic Concepts	7
Live Fire Training	56





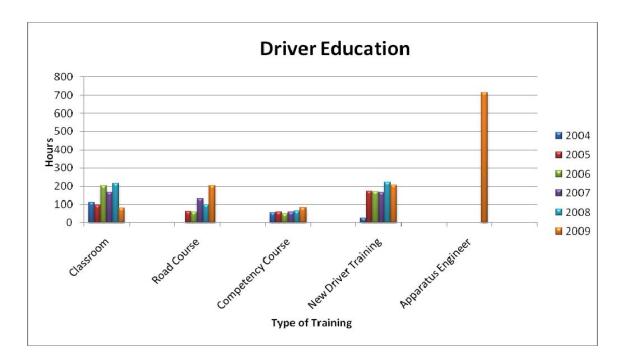
Certifications

The following is a list of certifications that were obtained by CLFRD personnel in 2009:

Certification	Number of Personnel
Firefighter II	2
Firefighter III	3
Fire Officer I	2
Provisional Fire Officer I	1
Fire Officer III	1
Fire Apparatus Engineer	7
Fire Instructor I	6
Fire Investigator	1
Hazardous Materials Incident Command	1
Hazardous Materials Operations	2
Hazardous Materials Awareness	1
Technical Rescue Awareness	9
Technical Rope Operations	2

Driver Education

Driver education continues to be a focus for the Training Bureau. All personnel are required to show proficiency in driving approved apparatus annually. In 2009, Crystal Lake Fire Rescue personnel logged over 576 hours of driver training.







Fire Rescue personnel completed the annual driver competency course at Brock Equipment on Main St. Approximately 25% of firefighter line-of-duty deaths annually are a result of driving accidents involving fire apparatus or personally owned vehicles responding to or from an emergency incident. Fire Rescue personnel participate in driver education training 8-10 times per year to remain proficient in driving fire apparatus.



Engine 341 maneuvers through the cone course

Fire Officer Training

Officer Development continues to be a priority for the Crystal Lake Fire Rescue Department. Each officer is required to attend outside training classes that will educate, enhance, or supplement their own knowledge and experience levels. In 2009, Fire Rescue Department officers logged over 5,695 hours of Officer Development training.

In addition to attending Fire Officer I, II, or III courses, other courses or seminars attended by Fire Rescue officers included:

- The Art of Reading Smoke by Battalion Chief (Ret.) Dave Dodson
- The Art of First Due Company Officer responsibilities
- Fireground Company Officer at the Illinois Fire Service Institute
- Incident Safety Officer





The Art of Reading Smoke

On February 11th, the Crystal Lake Fire Rescue Department hosted the Art of Reading Smoke seminar with Battalion Chief (Ret.) Dave Dodson at McHenry County College.

Over 300 firefighters from around the state of Illinois attended this informative seminar. The Crystal Lake Fire Rescue Department had 45 personnel in attendance at the seminar.

On February 12th, Chief Dodson provided a half-day seminar for Fire Rescue personnel on the Art of First Due Company Officer responsibilities. Forty-two off-duty Fire Rescue personnel and the on-duty personnel attended the course which expanded on the information learned the previous day.



Probationary Employee Program

The Probationary Employee Program was completed in 2009, with 9 new personnel for FY 2008/2009). The first 8-12 weeks, the probationary employees complete an orientation program that includes:

- Administrative issues
- Bloodborne pathogens
- Driver education
- HazMat refresher
- Essential skills assessment
- EMS skills assessment
- EMS system entry
- EMS field Internship

Voluntary Physical Fitness Program

In 2009, Crystal Lake Fire Rescue Department personnel completed over <u>926</u> hours of physical fitness training. Firefighters continue to respond to emergency incidents that require extreme physical output and often result in physiological and psychological outcomes. Such situations, over time, can and do affect the overall wellness of the firefighting and emergency response system.

The voluntary physical fitness program seeks to improve firefighter fitness over time to maintain a fit, healthy, and capable firefighter throughout his/her 25-30 + year career and beyond. An effective program should realize significant cost savings in lost work time, workers compensation and disability.





Acquired Structure Training

Fire Rescue companies were able to practice hose advancement drills in a City owned property at 66 Railroad St. The older Cape Cod home provided the companies with the opportunity to advance a charged hoseline into the structure from the front and rear doors to simulated fires located on the 2nd story or the basement.

Additionally, the companies with the opportunity to practice laddering and cutting a ventilation hole in the roof of the structure. Ventilation is an important tactic that assists the interior fire suppression crew with locating and extinguishing the fire.











Training Trailer

The Self-Contained Breathing Apparatus (SCBA) trailer is owned by CLFRD and is utilized by five McHenry County fire departments through a cooperative agreement. The departments are:

- Huntley Fire Protection District
- McHenry Township Fire Protection District
- Richmond Fire Protection District
- Woodstock Fire Rescue District
- Cary Fire Protection District

The SCBA Trailer had a major maintenance goal accomplished: **a new paint job!** With funding help from the Crystal Lake Foreign Fire Insurance Board, the trailer was stripped of loose paint and rust spots and repainted in a base coat of red with black trim.



Original SCBA Trailer



New Paint Job on SCBA Trailer





The next goal for the trailer is to have decals applied to each side indicating the participating departments and contributing companies that have made this valuable piece of training equipment possible.

National Safety Standdown

The Crystal Lake Fire Rescue Department participated once again in the 2009 Safety, Health, and Survival Week – *Protect Yourself: Your Safety, Health, and Survival Are Your Responsibility* on June 15-17, 2009.

Recommended activities and materials incorporated four key areas that can limit Fire/EMS personnel's risk of injury or death:

- Be the Leader in Safety
- Emergency Driving (Enough is Enough-End Senseless Death).
- Firefighter Heart Disease and Cancer Education and Prevention.
- Structural Size-up and Situational Awareness

Validation Training

Validation drills are an essential part of any training program to ensure that the skills being taught are accomplishing proficiency by all personnel.

The validation drills consist of 14 areas of job function that the company officer picks a drill from. The station assigned to perform the validation drill then gathers the equipment necessary to perform the drill, re-locating to a specific training site if necessary. Validation drills have a time standard in which the drill must be completed.



Truck 381 and crew conducting a master stream drill.







Gold Shift completing the Foam Operations validation drill.

Some of the validation drills are:

- Hose advancement for fire suppression.
- Search and rescue for victims.
- Ground Ladder placement.
- Vertical ventilation.
- Water Supply/Drafting
- Foam Operations

Scott "Pak Tracker" Training

With the purchase of Scott NxG7 SCBA equipped with the "Pak Tracker", neighboring departments Algonquin and McHenry received training in the use of the "Pak Tracker". Both departments respond auto-aid to structure fires for Crystal Lake Fire Rescue as a Rapid Intervention Team (RIT) and will utilize the "Pak Tracker" for monitoring for firefighter emergencies.

The "Pak Tracker" is handheld device that monitors for an emergency signal that is sent from a firefighter's SCBA when a firefighter becomes trapped or is in trouble. The "Pak Tracker" alarms and displays what SCBA has activated. The "Pak Tracker" also provides the person monitoring the device with the signal strength from the SCBA so that a RIT team can rapidly move to the location where the signal strength is the strongest. This can help reduce the time it takes to locating the firefighter.







Fireground Rehabilitation

On September 10, 2009 a Fireground Rehabilitation seminar was conducted by Chief Craig Haigh from Hanover Park Fire Department and the Illinois Fire Service Institute. The seminar was conducted at McHenry County College and was sponsored by the McHenry County Fire Chiefs Association and MABAS Division V. This seminar was well attended by 49 company and command officers from McHenry County, which included 13 officers of the Crystal Lake Fire Rescue Department.

Fireground rehabilitation is important because approximately 50% of all line-of-duty deaths are due to heart attacks attributed to overexertion and stress. The firefighter's response to heat stress is a cumulative result of: work performed while wearing protective equipment; the thermal environment; the firefighter's personal health status, fitness level and hydration level.

Firefighting causes:

- (a) Increase in heart rate
- (b) Decrease in plasma level which leads to decrease in stroke volume
- (c) Increase in core body temperature
- (d) Electrolyte imbalance
- (e) Decrease in blood glucose
- (f) Decrease in immune cells

Firefighting has the potential to serve as the "trigger" for heart attacks and strokes. Fireground rehabilitation is an intervention designed to reduce the physical, physiological, and emotional stress of firefighting in order to improve performance and decrease the likelihood of on scene injury or death.





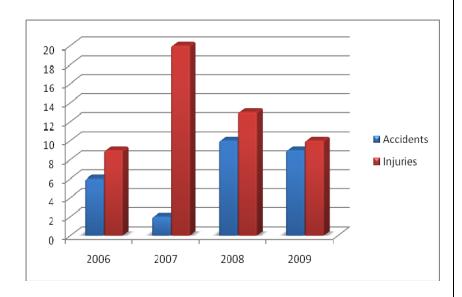
Safety Committee – 2009

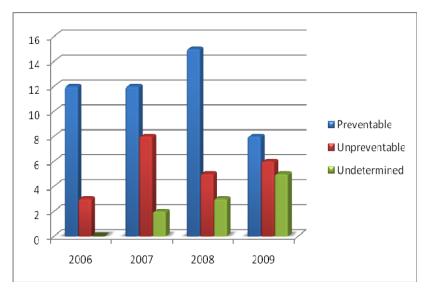
Bureau Chief William Whyte- Fire Rescue Safety Officer

The Crystal Lake Fire Rescue Department Safety Committee continues to be an integral part of the City of Crystal Lake's overall risk management plan and program. Through the Safety Committee, All personnel can communicate safety concerns and ideas to promote a safe work environment for Department employees.

Accident/Injury Investigations

The Fire Rescue Department Safety Committee conducted a total of 19 accident/injury investigations for the year 2009. The graph to the right shows a comparison between previous year's accident/injury investigations.





Reducing the number of preventable accidents was a major focus for the Safety Committee during 2009. By utilizing our Observed Behavior Program, additional training that focuses on common accident themes, and shift goals the Crystal Lake Fire Rescue Department has seen approximately a 23% decrease in the number of preventable accident and injuries. The graph to the left shows a comparison between preventable, unpreventable, and undetermined accident/injury investigations from 2006 to 2009.





Fire Investigation Team - Lieutenant Chris Olsen

Training

Our investigators logged over 150 hours of training through both classroom and handson investigation. We have continued to work closely with other departments in the county during these investigations along with local police agencies and the Office of the State Fire Marshal.

The fire investigators are on track to accumulate the required 100 points per investigator for recertification through the Fire Marshal's Office next year. Investigators are required to accumulate these points over a four year period. A minimum of quarterly training sessions are offered in-house and are open to the other county departments.

Lieutenant Robert Lutherus- Quartermaster

Crystal Lake Fire Rescue provides our personnel with the latest technology in Personnel Protective Equipment (PPE). For our firefighters working at a fire scene, this includes coat, pants, boots, gloves, hood, helmet and Self-contained Breathing Apparatus (SCBA). The Department also follows the standards of NFPA 1851 which pertains to PPE replacement, maintenance, inspections and record keeping. It is the operational function of the quartermaster to ensure that these standards are maintained. In the year 2009, the following was achieved:

- Quarterly inspections of all PPE.
- Improved record keeping of inspections.
- Replacement of 8 sets of PPE that had reached their serviceable life.

Battalion Chief Thomas Pollnow – Juvenile Firesetter Coordinator

The Juvenile Firesetters Program is a voluntary educational program in the dangers of fire play. The program has also assisted the McHenry County Juvenile court system in the education of fire play for the juveniles as part of their court decision.

We had one counseling session for 2009. There were three phone inquiries for information and support.





APPENDIX A

Station Locations

Station Information:

Fire Station One 100 W. Woodstock St.





Fire Station Three 844 Virginia Rd.

Fire Station Four 8705 Bard Rd.







APPENDIX B

Department Roster

Officers

James Moore Fire Rescue Chief Paul DeRaedt Deputy Fire Chief

Jerry Larsen Bureau Chief of Fire Prevention

William Whyte Bureau Chief of Training Robert Olszewski Bureau Chief of EMS

Tom Pollnow **Battalion Chief Battalion Chief** Robert Kohlev John Lardino **Battalion Chief Robert Martel** Lieutenant Kirk Kiermas Lieutenant Robert Lutherus Lieutenant Tim Butler Lieutenant Chris Olsen Lieutenant Dan Grischow Lieutenant James Kalisik Lieutenant Casey Cork Lieutenant Chris Kopera Lieutenant Joyce Stevenson Lieutenant

Members

Aiello, Mike Angelo, Chris Bedore, Chris Behrens, Jim Bever, Tracv Bonney, Jim Borst, Nick Brechbiel, Bob Bucheger, Adam Buterbaugh, John Cook, Darrell Colucci, Gino Forsberg, Joe Fowles, Adam Gabrielson, Toby Geyman, Michael Gundlach, Amanda Hagen, Scott

Havemann. Ed

Howell, Todd

Hurley, Mike

Jakubowicz, Ray Kaiser, Rick Kaltenbach, Dave Kauke, Bryan Kerley, Tim Kownacki, Kevin Kreher, Rich Laufer, Lloyd LeClercq, Dave Landwer, Mark Leuck, Matt Linneman, Tom Ling, David Lucas. Mike Lukas, Mike Lutherus, Art Marino, Brian Menzimer, Brian Odishoo, Tim Olsen, Heidi Olszak, Linda

Pace, Palmer Perenchio, Marty Pierce, Rebecca Pireh, Martin Rozhon, Patrick Ryan, John Schmitt, Kim Shipley, Carolyn Spivey, Jim Stoddard, Rick Sustek, Jim Sypura, Andrew Svejcar, Gary Szatkowski. Dane Tamason, Brian Thuma, Matt Volenec, John Williams, Chris Williams. Dan Wisz. Rob



