

Respiratory and Training Program

The City of Monroe Fire Department is primarily a volunteer department, consisting of 52 paid-on-call volunteers and two career members. Our department provides protection for the county-seat city of 10,800 citizens, along with 2,200 rural citizens. We are located 40 miles south of Madison, Wisconsin.

The City of Monroe Fire Department is seeking funds through the Operations and Firefighter Safety Program to support a newly implemented comprehensive respiratory program and to implement a formalized and mandatory training program within our department and community, and to provide protection to our members at incident scenes, training evolutions, and in the station. We will do this by adding a compliant air compressor system to fill our (and other departments') cascade systems and SCBA bottles, by implementing a quantitative SCBA fit testing program, and by purchasing and utilizing current basic and advanced firefighting training and testing materials to formulate a current, comprehensive, and mandatory training program. These two programs will increase inter-department interoperability, and improve capabilities for all departments in the region. Most importantly, it will enable us to address firefighter safety in two very important areas.

LOCAL FUNDING

The City of Monroe has felt heavy budget restraints through funding cuts from the State of Wisconsin and through lack of local funding through restricted tax increases. The City Council mandated all departments to come in with a zero percent increase on the operations portion of their budgets. These budget restrictions have been ongoing for the last six budget sessions and it does not appear they will be lifted in the near future, making it extremely difficult to access the needed monies to initially fund this project. The state assembly is very near passing (or has passed) a state-wide property tax freeze, which will result in reductions in our department's budget by the rate of inflation from now until 2010. This much-needed respiratory and training program, although critical, cannot be locally funded at this time.

This program is needed to meet state and federal statutory requirements, including OSHA statutes and National Consensus Standard Guidelines, concerning respiratory protection and firefighter training. This grant request addresses a critical safety issue in the south central Wisconsin and northern Illinois areas. It will benefit literally hundreds of firefighters in the region.

BUDGET PLAN

The following is a cost breakdown of the project.

- A. SCBA compressor, cascade system, fragmentation protection fill station, and OSHA-approved air purification unit \$43,250
 - B. Laptop computer (multi-media edition) \$1,579
 - C. LCD projector and 100" screen \$2,000
 - D. One (1) TSI model 8028 Universal Port-A-Count Fit Test System \$14,702
 - E. Firefighter training materials
 - a. Firefighter 1 & 2 \$16,116
(Firefighter 1 & 2 training materials including IFSTA station library and NFPA codes subscription service initial cost)
 - b. Driver/Operator \$ 1,769
 - c. Fire Officer \$ 1,540
 - d. Incident Safety Officer \$ 425
 - e. Basic Rescue & RIT \$ 425
- Total Training \$20,275

Total Grant Request (\$81,806 less 5% match) \$77,716

REQUEST DETAILS

In order to implement these two important programs, we are respectfully requesting funding to purchase the following items. Along with the items, we have listed our reasons for needing each.

RESPIRATORY PROGRAM MATERIALS

One (1) Bauer Inicus III, 6000psi, 13 cfm, SCBA Compressor, OSHA-approved Air Purification System and 3-bottle Fragmentation Protection Fill Station with ASME storage cylinders. Our current compressor has had many mechanical problems since we increased the pressure setting when we upgraded to 4500# pressure SCBA in 2003. The unit has also failed quarterly air quality testing on three occasions (caused by oil contamination due to excessive wear in the compressor cylinders, requiring more frequent filter changes and longer run times to re-supply the system). This unit is an integral part of our respiratory program and helps protect our members' health. This single system also supports 11 other departments and over 200 firefighters, as we fill bottles and cascade systems at our station for other departments as well as routinely provide them with breathing air at mutual aid calls with one of our cascade-equipped engines. We are also listed in the Mutual Aid Box Alarm Association (MABAS) response cards as a supplier of breathing air for numerous departments in southern Wisconsin and northern Illinois. Our current compressor is very old, having been manufactured in the mid 70's. It was not designed to pump the current pressures we are requiring it to attain. If this system were to fail, we would have virtually no ability to fill SCBA bottles in the southern half of Green County. We have been told that very shortly parts will no longer be available for this unit; this lends urgency to replacing the unit as soon as possible. The unit selected will have enough capacity to handle all air requirements for years to come for the 11 departments currently utilizing our system. Inclusion of the fragmentation protection fill station will lend increased safety to operations, and installation of ASME cylinders will preclude additional costs and labor involved with periodic hydrostatic testing of cylinders. This is a very robust unit needed to provide sufficient quantities of compress air to re-fill numerous SCBA bottles, and portable cascade systems quickly after incident responses and training evolutions. Listed price includes shipping of the unit. All installation costs will be provided by locally budgeted funds.

One (1) TSI model 8028 Universal Port-A-Count Fit Test System with required mask sampling adapter kits and portable card printer. This unit will enable quantitative fit testing of SCBA, N95, and particulate masks as required by current standards. We have created a Respiratory Protection Plan for our department, which meets current standards of NFPA 1500, and NFPA 1404, as well as all statutory requirements of OSHA 29 CFR 1910.134. These standards specifically require that the use of a pressure-demand SCBA requires a facepiece fit factor of 10,000. The only test we can use to obtain this factor is the quantitative fit testing procedure, which requires the use of a Port-A-Count testing system. Each of our members will receive an annual fit test, plus any additional fit test required because of equipment changes or other modifications. This machine can also be used by other emergency response agencies in the area. We feel that this system will allow us to become compliant with the mentioned standards, and also provide the best testing procedure for our firefighters' safety. Used in conjunction with initial medical evaluations and periodic pulmonary function testing, this machine will ensure compliance with all state and federal requirements. We must provide the best respiratory protection for our members. That protection has to start with providing them with equipment that is properly fitted and operating correctly. This is not something that we currently can guarantee. This unit will correct that deficiency.

On-site training for equipment purchased will be provided by the vendor. This training will be train-the-trainer instruction so that qualified members can then pass on the knowledge to other firefighters. This will ensure continuity of the program.

One (1) Laptop Computer (3.6gb P4 processor speed, 1gb ram, 100gb HDD, internal CD/DVD recorder, and upgraded audio, capable of linking to Internet through an 802.11g wireless LAN).

This unit will be used to connect to the Port-A-Count machine to run the various test sequences for the quantitative fit testing procedure. The program will record all current test information, compare it to previous test results for analysis, and then upload the information to our department network (via a wireless connection) for storage and retrieval as needed. This process will provide early identification of respiratory problems for any member who may need further intervention by health care professionals, as well as identifying any problems with the assigned equipment. This new computer also will be utilized for the proposed training program that is also part of this application.

This respiratory safety program will improve the effectiveness with which our firefighters operate, will increase fireground safety, and will enhance the overall health of our members. By increasing our effectiveness, we will be better equipped to serve the citizens of our city and surrounding area, as well as be in a better position to aid other departments and their constituents. Most importantly, this comprehensive respiratory protection will protect 100% of our members to highest level possible to prevent exposure to carcinogenic agents, by-products of combustion, and other agents such as CBRNE, or WMD agents.

TRAINING PROGRAM MATERIALS

The second major need is for the department to improve its training delivery and content. We have monthly training sessions, but they are not organized or delivered as required. The major hindrance to complying with this requirement is the absence of qualified instructors and teaching materials. In the past, we borrowed videos, and the training sessions did not meet NFPA standards. Also, in the last two years, nearly 20% of our long-time members have retired. We also have 6 more members who will be retiring in the next 12 months. We have been fortunate to be able to fill these positions with new firefighters but the loss of over 150 years of experience has proven to be a daunting challenge to overcome. The newly hired members are enthusiastic and willing but need much training to bring them to a level of performance that is acceptable by today's standards. A serious lack of training materials is a critical issue in training these new members to any level.

We have two well-qualified instructors within the department who will conduct train-the-trainer classes and instructor certification classes for approximately 11 members of the department to become state-certified instructors. These newly certified instructors will then pass this information on to new members by conducting a 10-week recruit training class followed by 96-hour Firefighter 1 certification classes, leading to all department members being certified as Wisconsin Certified Firefighter 1. Instructors will also present Firefighter 2, Fire Officer 1, Driver/Operator, Basic Rescue & Rapid Intervention Team training, and Incident Safety Officer.

The selected materials also have on-line user training available to assist with training instructors in its usage. This continuing training will ensure that instructors have constantly updated training in the usage and new features of the training software and materials.

This request includes the purchase of lesson plans, teaching packages, videos, DVDs, and related equipment to deliver training. It also includes an Insurance Service Office-required IFSTA station library and initial costs to obtain The NFPA Fire Code Subscription Service. Subsequent annual costs and updates will be provided through local funds. These National Consensus Standards and IFSTA manuals are a critical part of ensuring that we are meeting the requirements, and that we are in fact teaching our members nationally-accepted ways of doing things.

The previously mentioned laptop computer (listed under the respiratory program equipment) also will be utilized for the proposed training program (that is also part of this application) to present DVD video segments and PowerPoint programs.

The computer will also be used to track student progress, to attain acceptable levels of Job

Performance Requirements (JPR), and to maintain training and equipment records. Many members of the younger generation learn best by having the skill demonstrated, seeing the skill accomplished, and then being allowed to perform and practice the skill until an acceptable level of performance is obtained. Using video clips allows each firefighter to see the exact same performance of the skill in a professional and controlled environment. This leads to standardization of requirements wherein all members see and are tested to the same level.

One (1) Portable 2000 lumen LCD projector and 100-inch projector screen to be used in conjunction with our Firefighter, Driver/Operator, and Officer training and safety programs. This unit will enable us to present the programs as needed without having to borrow a projector from the local community college. This will enable us to present classes on short notice (due to weather conditions cancelling outdoor drills, or other unplanned events which disrupt planned activities). We would also utilize this projector when presenting recurring safety training, such as bloodborne pathogens, accountability, CPR/first aid, etc.

If awarded, we will commit to certifying at least 20% (11) of our members as instructors to at least Fire Instructor 1 within 12 months of grant award. We will then train 100% of our current members to Firefighter 1 by January 1, 2008. Additionally, we will train members to Firefighter 2, and Driver/Operator as soon as possible. All training conducted, at all levels, will be instructor-led classes leading to state and/or national certification at the appropriate level. We will certify that we have met the levels of certification as promised.

This training request includes only audio visual materials, lesson plans, testing materials, LCD projector to conduct the classes, and a projection screen. All other costs associated with this program (including student manuals, instructor salaries, firefighter wages and incidental expenses) will be paid through budgeted funds.

All ten current officers will be trained and certified as Fire Officer 1 by January 1, 2008 and ALL newly appointed officers will be required to be certified as Fire Officer 1 prior to appointment.

We will at least annually offer Incident Safety Officer training to all members. Additionally, all 11 members of our safety committee will be required to complete the Incident Safety Officer course prior to April 1, 2007.

We will also purchase lesson plans, DVD training segments, and student materials to implement a basic rescue and RIT program within our department. We have been working towards implementing a Rapid Intervention program at all major incidents for approximately one year, and these materials will allow us to formalize and implement the policy.

There are 11 other nearby volunteer fire departments that have eagerly agreed to participate in this comprehensive and far-reaching training program. We anticipate reaching up to 300 firefighters in the first 12-18 month period with the enhanced training programs. More importantly, this program WILL continue for many years after the performance period of the grant has passed. This program will be a leading stimulus for a cultural change across the region concerning firefighter safety and improved training.

RELEVANT INFORMATION

This equipment supports a currently assigned mission to provide protection to over 13,000 people in our local jurisdiction, and over 32,000 residents countywide. All equipment purchased will be compatible with Mutual Aid Box Alarm System in southern Wisconsin and northern Illinois.

The City has committed to the 5% match (\$4090) and the Fire Chief has committed to continue the programs after the performance period of the grant has ended. We feel that this will change the culture of our department and take us to the next level of operational efficiency and safety.

This upgrade will allow us to meet state statutes, NFPA recommendations, and OSHA 29 CFR1910.134 requirements, and effectively work in a large-scale operation with our neighbors. Most importantly, this program will provide the highest level of protection for our most important asset, our members. This program will address interoperability, and will benefit a large percentage of firefighters in Green County, Wisconsin, and also those in surrounding counties through the MABAS system. We feel that this proposal is a wholly appropriate and responsible use of critical funding, and ask for your favorable consideration.