

Grant Purpose/Abstract

The purpose of the Navajo Nation Fire & Rescue Services completing and submitting this grant is to replace all frontline Self Contained Breathing Apparatus (SCBA) and bottles to become 100% compliant with national standards and laws (i.e. NFPA and OSHA) regarding respiratory protection, and to improve firefighter safety because current SCBA in use are failing during use, are over 15 years of age and may contribute to a significant firefighter injury or death.

Introduction

In order to understand our needs, you as a grant reviewer must know a little bit about the Navajo [Reservation] Nation as this information becomes important later. Imagine for a moment the size of West Virginia. This is how big the Navajo Nation is. The Navajo Nation expands over 26,000 square miles and extends into the States of Arizona, New Mexico and Utah. Much of the Navajo Nation's land base is remote and isolated, making it a very rural community. Each major community of the Navajo Nation is located on the average 70 miles from one another, and from non-Navajo Nation cities. In each major community lies a Navajo Nation Fire Department.

The Navajo Nation actually only has 6 fire stations, which are all located in the State of Arizona. The land base of the Navajo Nation in Arizona is about 20,000 square miles. Other fire stations on the Navajo Nation either belong to community schools (i.e. Bureau of Indian Affairs) or through a community (i.e. Township Fire Department). In New Mexico and Utah, the State's respective counties provide fire protection in these areas.

Besides fire protection, the Navajo Nation Fire & Rescue Services also provides rescue services, EMS and hazardous materials response. The smaller fire stations that reside between the major communities of the Navajo Nation only provide fire suppression, as such we often time proved aid to these departments.

To give you a better picture of the size of the Navajo Nation, the 2000 U.S. Census says that there are 180,000 residents residing on the Navajo Nation, with 168,000 as enrolled members of the Navajo Nation, with the remaining being non-members who reside and work within the Navajo Nation. This however is irrelevant because, if you recall, the Navajo Nation Fire & Rescue Services only protects 6 communities within the Navajo Nation, for a population of only 48,857 people. Each fire station then, on the average, protects 8,000 people with one paid firefighter and, on the average, 10-15 volunteer firefighters. Each fire station is separated from each other between 70 to 150 miles with smaller community fire department residing in between.

Problem

The Navajo Nation Fire & Rescue Services currently has 54 SCBA (both high and low-pressure) and 123 total bottles. This includes 12 SCBA that was just recently donated from the Navajo Generating Station.

Of the 54 SCBA, only 32 are in service, with the remainder (22) being repaired and flow tested, and it is unknown how many will be salvageable. Manufactured in the late and early 80's, many of our SCBA are over 15 years of age, with some already surpassing the 20-year mark. Because of their age, many of our SCBAs experience constant regulator failure, resulting in the inability to receive air. This condition is out

right dangerous for our firefighters, yet we continue to allow its use placing our firefighters in harms way. Many of the screws and rivets that hold the backpack assembly together are also gone and (this is no lie) are being held together with wire and sheet metal screws. Much of straps are worn to the point of breaking and some are soiled from tar and oil, and the products of combustion. In addition, we are unable to locate any purchase records for these SCBA, which leads us to suspect that they were donated to the organization when established in 1983.

Of the 123 total SCBA bottles, 31 of them are past their service life, 30 are steel air bottles (manufactured in 1984), 20 have 2 years left, 13 are out of service due to some form of damage that requires testing, and the remainder (29) has six years left. As such we are not in 100% compliance with current NFPA and OSHA standards regarding respiratory protection.

Many of our neighboring departments, including the B.I.A., are using newer model SCBA - those with integrated PASS devices and lighter bottles. Our sister organization, the Navajo Nation Department of Corrections, are even utilizing newer SCBA (carbon fiber bottles, integrated PASS devices, quick-fills, etc.), yet we are still utilizing older systems.

In addition to our SCBA problems, a number of our SCBA cylinders have expired in their life use. In essence, we are using them past the recommended 15-year life cycle. Because fire headquarters has their own SCBA refilling station, we are able to refill them despite their expiration. In defiance of OSHA regulations, not to mention placing our own personal in harms way from a catastrophic rupture, we continue to utilize these SCBA cylinders.

We do not mean to place our firefighters in harms way. As the fire department for the Navajo Nation, and backup to many other smaller departments on the Navajo Nation, we have no choice to use what equipment they have to protect life, health and property.

Uses/Benefits

Each fire station, with the exception of fire headquarters, is equipped with an engine and rescue. Because we have no back-up vehicles or reserve apparatus, these vehicles serve as our primary response vehicles. If awarded this grant, the Navajo Nation Fire & Rescue Services will place the new SCBA on all department first line vehicles (four to an engine and three to a rescue).

To assure proper care, use and maintenance, so as to improve its effectiveness and life, we will design and conduct training on the SCBA. We will involve the SCBA manufacturer to aid in the designing of the training program, will seek input from other organizations who utilize the SCBA brand we are interested in, and will require all members of the organization to have successfully completed the training program prior to its use. In essence, we will not disseminate the SCBA until everybody within the organization has been properly trained in its use, care and maintenance.

When placed in service, these SCBA will be used in accordance with OSHA regulations that require the use of respiratory protection.

Our Budget

Over the past three years (we are a new administration), we have been attempting to lobby with our [Navajo Nation] Council Delegates to increase our operating budget to replace our SCBAs and spare bottles. Due to the tremendous cost and the decline of tribal funding, our attempts so far have been unsuccessful. Our operating budget is small, averaging around \$593,178 per year. Of that budget 62% is used for personnel salaries and benefits, 13% for vehicle mileage and rental, 14% for supplies (cleaning, office, automotive and some fire equipment – mostly turnouts), 3% for communication and utilities, 5% for repairs and maintenance and 3% for contractual services. As such we are unable to purchase SCBA given other needs, such as vehicle repairs, and excessive expenses incurred from mileage due to extended travel distances and utilities and communication. Negative begets negative with our organization.

As a requirement to this grant, we will allocate the required 10% to a dedicated account within our operating budget. With the new budget year approaching (October), this can be easily accomplished, especially at that matching rate. In other rate, would greatly expend our operating budget.

Conclusion

We are trying our best to protect our people, and to provide the best service possible to our community. Our personnel (volunteers) have the best protective clothing (turn-outs) and a little over half of them are equipped with portable radios, with another local grant aimed at purchasing another 20 more portable radios. Our equipment cache is also being standardized to improve compatibility with the local and surrounding agencies. Having new SCBA will also address this issue of local compatibility to improve firefighter safety (i.e. RIC/RIT applications such as buddy breathing).

Catching up with national standards and laws has been a slow process, however we are making great strides to improve firefighter safety and our level of service delivery to our community. Major purchases, such as SCBA are one of those components we just cannot effectively address due to cost. With a grant such as this, we can ultimately become 100% compliant with national (NFPA) and federal (OSHA) laws and standards.

Justification for Spare and Extra SCBA Cylinders

As you may recall, the distance between Navajo Nation fire stations is anywhere between 70 and 150 miles, and that fire headquarters is the only fire station that has a SCBA refilling station. The reason for the extra SCBA cylinders is because of the distance the fire stations have to travel to refill their SCBA cylinders. Fire headquarters is located on the Arizona and New Mexico boarder, and those fire stations on the western side of the Navajo Nation have to travel over 150 miles just to refill their SCBA cylinders. For those SCBA cylinders that are not past their service life, many are refilled at a neighboring non-Navajo Nation fire department, which still accounts for 50-70 miles of traveling time (adding more mileage to our vehicles resulting in unnecessary expenses). Because many of the SCBA cylinders are past their service life, these SCBA cylinders have to be taken to fire headquarters for refilling. If a fire or incident requiring

SCBA use were to occur, all spare SCBA cylinders would be quickly used up resulting in firefighters having to travel to fire headquarters to refill those SCBA cylinder. Although some of our SCBA cylinder still have service life to them, we are unsure if they can still be used, as many SCBA manufacturers void any and all warranties if SCBA cylinders other than their own are used. Our intention at this point is to salvage the most reliable SCBAs and cylinders and demote them to training use only (i.e. fire academy).

Budget Overview

This is the budget overview, for 53 SCBA with spare bottles and an additional 53 spare SCBA bottles, including indirect cost.

Item	Unit Cost	Qty.	Total
ISI DXL 45 min. SCBA w/ Spare Bottle	\$5,200	53	\$275,600
4500 psi, 45 min. SCBA Bottle	\$ 960	53	\$ 50,880
Indirect Cost at 21.6%	\$ 70,520		
Total			\$397,000
- 10%			
Total			\$357,300

Pursuant to the grant requirements, we are required to match the total amount by 10%.
 $\$397,000 \times 10\% = 39,700.00$. This funding will be allocated in our budget.