



**Nevada Public Agency Insurance Pool  
Public Agency Compensation Trust**  
201 S. Roop Street, Suite 102  
Carson City, NV 89701-4779  
Toll Free Phone (877) 883-7665  
Telephone (775) 885-7475  
Facsimile (775) 883-7398

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**Notice of Meeting and Agenda for Loss Control Committee of  
Nevada Public Agency Insurance Pool and Public Agency Compensation Trust**

**Date: Thursday, April 2, 2015**

**Time: 10:00 AM**

**Place: POOL/PACT Offices**

**201 S. Roop St. Carson City, NV 89701**

**CONFERENCE CALL-IN # 1-800-351-4899, Passcode: AnnW.**

*NOTICE: Items on the agenda may be taken out of order. The committee may combine two or more agenda items for consideration. The committee may remove an item from the agenda or delay discussion relating to an item on the agenda at any time.*

**AGENDA**

1. Roll
2. Public Comment
3. **For Possible Action: Approval of Minutes of Committee Meeting of February 10, 2015**
4. **For Possible Action: Review and Approval of HILT purchase proposal**
5. **For Possible Action: Review and Approval of Loss Control Excellence Award Applications**
6. **For Possible Action: Review and Approval of Risk Management Grant Application Submitted by White Pine County Fire Protection District**
7. **For Possible Action: Review and Approval of Revised Risk Management Grant Program Guidelines and Supporting Documents**
8. Public Comment
9. **For Possible Action: Adjournment**

**This Agenda was posted at the following locations:**

**NPAIP/PACT  
201 S. Roop Street, Suite 102  
Carson City, NV 89701**

**Carson City Courthouse  
885 E. Musser Street  
Carson City, NV 89701**

**Eureka County Courthouse  
10 S. Main Street  
Eureka, NV 89316**

**Churchill County Admin Complex  
155 North Taylor Street  
Fallon, NV 89406**

**NOTICE TO PERSONS WITH DISABILITIES**

**Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify the Nevada Public Agency Insurance Pool or Public Agency Compensation Trust in writing at 201 S. Roop Street, Suite 102, Carson City, NV 89701-4779, or by calling (775) 885-7475 at least three working days prior to the meeting**



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**DRAFT**  
**Minutes of Meeting of  
Loss Control Committee of  
Nevada Public Agency Insurance Pool and  
Public Agency Compensation Trust  
Date: February 10, 2015**

**1. Roll**

The meeting was called to order by Chairman Cash Minor at 1:00 p.m. Ann Wiswell confirmed that a quorum was present.

Members present: Cash Minor (Elko County), John Dollar (Incline Village GID), Bryce Boldt (City of Boulder City), Bob Spellberg (Gardnerville Ranchos GID), Norma Santoyo (Douglas County), Darren Wagner (City of Yerington), Gina Mendez (City of Mesquite), Dan Murphy (Pershing County School District)

Others present: Ann Wiswell, Donna Squires, Mike Livermore, Rick Hudson, Josh Wilson, Wayne Carlson, Mel Iida

**2. Public Comment**

None

**3. For Possible Action: Approval of Minutes of Committee Meeting of October 9, 2014**

Upon motion and second, the minute were approved.

**4. For Possible Action: Review of Mission Statement, Committee Membership**

Upon motion and second, the existing mission statement was reviewed and approved for the Strategic Plan Years 2015-2018. Voting committee members were reviewed; new voting committee member John Dollar of Incline Village General Improvement District was welcomed to the committee.

**5. For Possible Action: Review of POOL/PACT Loss Trends**

Donna Squires reviewed POOL loss trends with the committee with a special focus on the impact of our aging infrastructure. As the building stock within the risk pool continues to age property claims are becoming more complex, sometimes involving asbestos and/or mold abatement. Local ordinances and ADA requirements also impact the total cost of these claims. The Automobile BI/PD line is being impacted somewhat by a frequency of backing accidents;

whether the member is backing into their own vehicle, a third party's vehicle or a stationary object, backing incidents are on the rise. Further claims data analysis will be done to determine if this is isolated to a few members or a particular type of operation.

Mike Livermore reviewed PACT loss trends with the committee and emphasized the impact of the aging workforce. Shoulder, back and knee injuries continue to dominate the landscape. The heart /lung experience was also reviewed.

**6. For Possible Action: Review and Revise Existing Loss Control Strategies:**

The three year strategic plan places emphasis on these areas of focus:

- OSHA and ADA Compliance
- E-Learning program development
- Emergency Planning
- Continued focus on enhancing POOL/PACT member communication
- Claims Analysis
- Wellness/Body Mechanics
- Auto/Driver Safety training
- Cyber Risk Awareness
- LCEP Administration
- Grant Program Administration

The committee will continue to explore new products and services that can be delivered to the membership to assist in each of these areas. Nineteen new e-learning courses are coming online in 2015. Efforts are being coordinated with the Department of Education to assist in Emergency Planning for School Districts. A new email newsletter has been developed titled "Spark" to assist member administrators in the utilization of the Torch learning management system. LMS, Torch. Special emphasis will be placed on the healthcare sector with regard to development of Wellness and Body Mechanics programs and services over the next three years. The committee viewed a video taken of the Elko County SkidCar and discussed the ongoing efforts to continue support of the three SkidCar frames located in Elko County, Boulder City and Nye County. Resources targeted at Cyber Security exposures will continue to be expanded.

Members continue to take advantage of the Loss Control Excellence Program and the feedback regarding the electronic survey has been positive. There was discussion of adding a section on network security and this will be further evaluated for incorporation into the program survey for 2016.

Upon motion and second, the committee directed staff to revise the Risk Management Grant Program guidelines to limit grant submissions to two annual submission dates and separate the training grants to allow for ongoing submissions throughout the year.

**7. For Possible Action: Discussion and Consideration of Potential New Programs & Services:**

- OSHA Record Keeping & Reporting Compliance Guide
- Internal Fraud Prevention Program

- HILT Injury Prevention Device
- Canine Injury Prevention Program
  
- Cyber Security Services

The committee reviewed OSHA compliance materials created for general industry and agreed that reference materials created specifically for Nevada public entities would be preamble. Staff will research the scope of the project and report back at a later meeting.

Staff reported that a new blended learning course would be developed with the assistance of CPA Michael Bertrand and Churchill County Comptroller, Alan Kalt. Vector Instructional Design will create the course materials.

Josh Wilson and Risk Hudson provided a demonstration of an injury prevention tool called the HILT (Human Injury Limiting Tool). This device would nicely compliment the Stryker products that were deployed three years ago by further reducing injuries involved with cot lifting. Staff will present a formal pricing proposal at a future meeting.

The committee discussed resources available to lower the frequency of dog bite attacks. These attacks affect not only animal control but law enforcement and utility workers as well. Staff will present more options at a future meeting.

**For Possible Action: Discussion Regarding POOL/PACT Risk Management Seminar and School Safety Seminar Day**

Upon motion and second, the committee directed staff to begin planning a Risk Management Symposium to be held in May 2016.

**8. For Possible Action: Discussion Regarding Loss Control Excellence Program. Members to requalify in 2013-14:**

- City of Carlin; expired 2012-13,
- City of Elko
- Elko County
- Eureka County
- Humboldt County; expired 2012-13
- Nevada Rural Housing Authority
- Storey County; expired 2012-13

**9. Public Comment**

none

**10. For Possible Action: Adjournment**

Upon motion and second the meeting was adjourned.



# Quote

**March 31, 2015**

Date

Issued By:

Customer POOL/PACT  
 Contact/Department Ann Wiswell  
 Phone 775-885-7475  
 Email [annwiswell@poolpact.com](mailto:annwiswell@poolpact.com)

Brandon Honea  
254-744-8684  
[Brandon@getahilt.com](mailto:Brandon@getahilt.com)

**Bill To:**

Customer Name POOL/PACT  
 Address 201 South Roop Street, Suite 102  
 City/State/Zip Carson City, NV 89701  
 Contact Ann Wiswell  
 Phone 775-885-7475  
 E-mail [annwiswell@poolpact.com](mailto:annwiswell@poolpact.com)

**Ship To**

Customer Name POOL/PACT  
 Address 201 South Roop Street, Suite 102  
 City/State/Zip Carson City, NV 89701  
 Contact Ann Wiswell  
 Phone 775-885-7475  
 E-mail [annwiswell@poolpact.com](mailto:annwiswell@poolpact.com)

Item	Part #	Description	UOM	QTY	Price	Extended
1	2800	HILT Model 2800 Flexible Stretcher	Each	300	\$ 366.00	\$ 109,800.00
2		Screen Print Each Bag	Each	300	\$ 1.40	\$ 420.00
3		Screen Print Set Up	Each	1	\$ 25.00	\$ 25.00
4						
5						
6						
7		Quantity discount = \$33 per unit				
8						
9						
10						
11						
12						
13						
14						
15					<b>SUB TOTAL</b>	\$ 110,245.00
16					<b>TAX</b>	\$ -
18	Shipping/Handling	<b>For Shipping Specifics &amp; Fees, Refer to PA #: POOLPACT2015</b>		<b>Shipping/Handling</b>	<b>TBD</b>	
18						
19					<b>TOTAL</b>	<b>\$ 110,245.00</b>

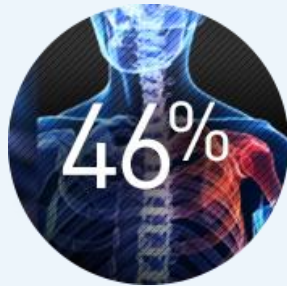
**For further correspondence, please respond to:**

**Brandon Honea**  
**[brandon@getahilt.com](mailto:brandon@getahilt.com)**  
**HILT - Human Injury-Limiting Tool, LLC**  
**P.O. Box 505**  
**West, Texas 76691**  
**254-744-8684**

# Important Message From POOL/PACT: Order Your FREE H.I.L.T. NOW

Dear POOL/PACT,

Your municipal risk sharing pool, the Public Agency Compensation Trust (PACT) has been evaluating an injury prevention tool called the H.I.L.T. for several months. You may have seen the product being demonstrated at your facility or had an opportunity to use a H.I.L.T. PACT has recently ordered sufficient supplies of the H.I.L.T. to provide at least one to each member Fire/EMS department who is a member of PACT at NO COST TO THE MEMBER. The H.I.L.T. is a proven injury prevention tool. Let us help you prevent workplace injuries by getting a H.I.L.T. today. For more information, click the links below to view product demonstrations and review materials. When you're ready, click on the GET A HILT button to answer a few questions. The number of units awarded to your agency will be determined based on number of ambulances, number of EMS calls and over all need.



A NEW BENEFIT OF PACT MEMBERSHIP



[GET A HILT](#)

# Loss Control Excellence Program

Response ID:29 Data

1.

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## 1. Information

### Your Name

Amanda Osborne

### Your Email

aosborne@elkocountynv.net

### Organization Name

Elko County

## 2. Page One

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### 2. SECTION I - Loss Control Organization



	Yes	No
A Loss Control Policy Statement has been issued by entity management that defines the goals, objectives and responsibilities of the loss control program.	X	
The Loss Control Policy Statement has been distributed to all employees.	X	
A resolution/ordinance has been passed by the governing body to establish and promote the loss control program.	X	
New employees are given a copy of the policy statement as part of their orientation.	X	
The policy statement has been posted at prominent locations throughout the agency.	X	
A loss control coordinator has been chosen to organize and oversee the entity's loss control program.	X	
The loss control coordinator reports directly to top management. (i.e. mayor, city manager, county manager, etc.).	X	
The loss control coordinator has completed at least one training class within the last two years that deals directly with loss control, safety, human resources, etc.	X	
The loss control coordinator is a member of a local or national organization that is dedicated primarily to the promotion of loss control and safety. Some examples include PRIMA, ASSE, RIMS, etc.	X	
Funds have been budgeted which are specifically allocated for the loss control program.	X	
A safety committee has been established which is comprised of representatives from each major department or work group in the agency.	X	
The safety committee has an established meeting schedule and announced in a manner so staff, management and elected official are aware of meeting times, locations, etc.	X	
Minutes of each meeting are taken and distributed to committee members and management.	X	
The safety committee has developed a written action plan that includes goals, objectives and projected target dates. The plan is reviewed and renewed at least annually.	X	
The safety committee prepares an annual written report to management which spells out what has been accomplished during the year and what activities and goals are planned for the coming year.	X	
There is a system by which all major locations and work sites throughout the entity receive regular safety inspections.	X	
All safety training documentation is maintained to be readily accessible.	X	
Checklists that are specific to the type of location being inspected are used to document all safety inspections.	X	
Safety inspection results are shared with the responsible supervisor or manager so that corrective action may be taken.	X	
Supervisors and managers are responsible for taking timely action to safety inspection findings and recommendations.	X	
Corrective action resulting from safety inspections is documented in a way to show when and how the hazard was corrected.	X	
A formal program of claims review exists whereby past claims are analyzed in an effort to identify trends or areas of concern.	X	
A hazard communication program is in place which makes MSDS readily accessible at each qualifying location.	X	

### 3. (untitled)

#### 3. SECTION II - Employment

	Yes	No
An entity-wide personnel system has been adopted. The system establishes procedures for application, interviewing, discipline and other human resource functions.	X	
Each personnel file contains: application form, changes in pay record, receipt(s) for notification of changes in policies and procedures, job description, performance reviews, disciplinary actions, training and education documentation	X	
An E.A.P. (Employee Assistance Program) is available to all employees.	X	
Entity has established a Drug & Alcohol Free Workplace program.	X	
Appropriate license and permit checks are performed on all new employees before assuming critical duties.	X	
References are checked on prospective employees prior to offer of employment.	X	
New employees receive training on accident and injury reporting procedures before beginning their assignment.	X	
Medical records are maintained in locked limited access file separate from other files	X	
I-9 forms are maintained separate from other files	X	
Written job descriptions are maintained for each position. Job descriptions include physical requirements	X	
Employees have access to policies and procedures manuals	X	
Required employment related notices/posters are conspicuously displayed at appropriate locations	X	
Standard application form has been reviewed and approved by Pool/Pact Human Resources	X	
Job opportunities are posted and announced in accordance with personnel policy and collective bargaining agreements.	X	
FSLA exempt/non-exempt positions have been identified.	X	
Legal compliance policies include: EEO, ADA, FMLA, FLSA, DOT Drug and Alcohol.	X	
Employees have received harassment and discrimination training and there are procedures for acknowledging and investigating complaint.	X	

#### 4. (untitled)

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#### 4. SECTION III - Vehicle Fleet

	Yes	No
There is a vehicle use policy in place with written rules that outline drivers responsibility while operating agency vehicles	X	
A mobile communications policy is in affect that states the approved methods of cell phone and radio use	X	
Verification is obtained of current valid driver license of the appropriate class for the type of vehicle(s) being operated before drivers begin their assigned duties	X	
Motor Vehicle Records (MVR's) for all drivers of agency vehicles are obtains and reviewed annually	X	
Driving standards have been established to qualify and determine driver eligibility	X	
Drivers are given on-road assessment in a vehicle of the type to be driven under similar conditions	X	
A point or similar-type system has been established so that MVRs can be evaluated in an objective manner	X	
A policy is in place that triggers corrective measures if a driver develops a pattern of traffic violations or preventable accidents	X	
There is a program for replacing vehicles when they reach an established age and/or number of miles		X
The agency has a preventative maintenance program based on manufacturer's recommendations, is performed by qualified persons and includes recordkeeping of all service and repairs	X	
Mechanics are responsible for safety checks of vehicles when routine or emergency maintenance is performed.	X	
Drivers of DOT regulated vehicles conduct pre- and post-trip inspections with deficiencies noted and reported to the supervisor. Inspections include a check of all safety equipment.	X	
Driver of non-DOT regulated vehicles are required to visually inspect the vehicle for unsafe conditions. Unsafe conditions are reported to fleet supervisor	X	
Vehicles are equipped with fire extinguishers, first aid kits and emergency signaling equipment (reflective triangles, flares etc.).		X
Each vehicle has been provided a "glove box" accident reporting packet to be completed at accident scene.	X	
An accident review board or safety committee evaluates all vehicle accidents to determine preventability and to make corrective action recommendations.	X	

## 5. (untitled)

### 5. SECTION IV - FISCAL CONTROLS

	Yes	No
Are there written policies and procedures for the collection, recording, safeguarding and depositing of cash receipts for all locations?	X	
Are responsibilities for cash receipt functions segregated from those for cash disbursement?	X	
Are responsibilities for preparing and approving back account reconciliations segregated from other cash receipt or disbursement functions?	X	
Is responsibility for petty cash accounts vested in one individual?		X
Are only original receipts (no photocopies) used to support petty cash disbursements?	X	
Are physical security safeguards maintained where cash is stored and processed?	X	
Is a balance and summary of all cash receipts prepared daily?	X	
Are purchases of postage paid for by check only?	X	
Are purchases of postage compared to postage meter usage?	X	
Is there a procedure in place to control receipt, issue, inventory and access to blank checks?	X	
Are checks pre-numbered?	X	
Does someone approve bills for payment other than the persons who sign checks?	X	
Is the signature plate and use of the check signing device kept under the control of the official whose name appears on the signature plate?	X	
Are bank statements reconciled monthly?	X	
Are safe or vault contents inventoried monthly?	X	
Are physical inventory counts periodically conducted and reconciled with receiving reports?	X	
Are the duties of programmers and operators separate?	X	
Is access to terminals and data entry restricted to authorized employees?	X	
Is password security over computer systems set-up on an individual basis?	X	
Are employees required to take periodic vacations and in their absence do other employees perform their work?	X	

## 6. (untitled)

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### 6. Do you have Law Enforcement Operations?

Yes

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## 7. (untitled)

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### 7. SECTION V - Law Enforcement

	Yes	No
Agency has adopted a policies and procedures manual which covers jail, patrol and administrative operations.	X	
There is a person assigned to keeping the policies and procedures manual updated and ensuring that all new and updated procedures are distributed to field personnel in a timely manner.	X	
In the past 18 months, the policies and procedures manuals have been thoroughly reviewed by legal counsel for legal content.	X	
All officers are required to be P.O.S.T. certified before they are assigned to unsupervised duties.	X	
There is a policy that provides for the review of all use of force incidents.	X	
Training meets P.O.S.T. minimum continuing education requirements.	X	
All training documentation for paid and reserve officers includes topic description, time, date, location and attendance details.	X	
The department has written standards for employee recruiting and selection. Standards have been reviewed to eliminate any discriminatory requirements or language.	X	
Senior management has received training in employment practices liability.	X	
There are written standards for the type of weapons and ammunition that may be carried by officers.	X	
There is a program by which officers are required to qualify or requalify with weapons in use on at least an semi-annual basis.	X	
The department has a program for the physical readiness of officers. This program includes physical qualifications that are job-related but do not violate the employee's rights under the Americans with Disabilities Act.	X	
The department is included in local and regional emergency response plans and has received training regarding foreseeable emergency situations.	X	
Mutual aid agreements with other jurisdictions are in written form that spells out each department's responsibilities and duties in the event of a mutual aid incident.	X	
Drivers of emergency vehicles receive on-going emergency response and pursuit driving training.	X	
There are written protocols and procedures for initiating and suspending high speed pursuit.	X	
The department either prohibits ride-alongs or has developed a comprehensive civilian ride-along program.	X	
Jail staff have received suicide prevention training.	X	
Prisoners' physical condition is documented at the time of intake into holding facility.	X	
A procedure is in place for protecting the security of prisoners' personal possessions.	X	
The jail can accommodate ADA affected prisoners.	X	

### 8. (untitled)

#### 8. Do you have Fire Service Operations?

No

### 10. (untitled)

#### 9. Do you have a Parks and Recreation Department?

Yes

11. (untitled)

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**10. SECTION VII - Parks and Recreation**

	Yes	No
Grounds and facilities are inspected (at least weekly during high-use season) for safety and liability hazards.	X	
Hazard critical areas such as playgrounds and swimming pools are inspected daily during high-use season.	X	
All inspections are documented by the use of checklists.	X	
There is a system for documenting all repairs or other corrective action.	X	
Written rules and regulations have been established for the use of park facilities by outside groups. Regulations include responsibilities of the user.	X	
A hold-harmless or waiver of liability agreement, in favor of the agency, is required to be executed by the user(s) of the facility.	X	
Users are required to furnish certificates of insurance with the agency named as additional insured on specified high-hazard and/or for-profit events.	X	
Part-time and seasonal workers receive safety training.	X	
Facilities are accessible to individuals with mobility disabilities.	X	

12. (untitled)

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**11. Do you have Street and Road Operations?**

Yes

13. (untitled)

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**12. SECTION VIII - Streets and Roads**

	Yes	No
An inventory of all streets and roads that are owned or maintained by the agency has been completed and is updated annually.	X	
An inventory of all traffic control signs and signals that are owned or maintained by the agency has been completed and is updated annually.	X	
An inventory of all bridges that are owned or maintained by the agency has been completed and is updated annually.	X	
A procedure exists by which all roads, signals and bridges are visually inspected at least annually.	X	
The road, bridge and signal inspection program is documented.	X	
Employees have been trained in work zone protection and barricading for the planning and set up of work zones.	X	
There are procedures in place to reduce claims due to flying gravel and other debris from open trucks (i.e. tarping, sideboards, smaller loads, etc.).	X	
Each vehicle is marked with an identification number so that flying debris claims can more easily be verified or disallowed.	X	
All citizen complaints concerning road conditions and transportation spillage are documented as to date and time received and corrective action taken.	X	
Repairs and maintenance are prioritized as regards potential for accident/injury.	X	
Professional engineers are use for all design work.	X	

#### 14. (untitled)

#### 13. Do you have Utility Operations?

Yes

#### 15. (untitled)

#### 14. SECTION IX - Utilities

	Yes	No
Agency has an in-house call before digging program or subscribes to an outside locating service.	X	
There is a program by which citizen complaints are documented as to time and date received.	X	
Response to citizen complaints is documented.	X	
Systems are regularly inspected and inspections are documented.	X	
A written emergency response plan has been formulated and adopted.	X	
Employees have received training on their duties and responsibilities under the emergency response plan.	X	
Employees have received training in trenching safety.	X	
Employees have received confined space training.	X	
Employees have received training in the safe placement of poles, boxes, transformers, etc.	X	
The agency has a safety awareness program to inform customers of the hazards involved with the product they provide.	X	
A program exists to inform customers when planned interruptions in service will occur.	X	





# Loss Control Excellence Program

Response ID:40 Data

1.

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## 1. Information

**Your Name**

Jeff Coulam

**Your Email**

jcoulam@nvrural.org

**Organization Name**

Nevada Rural Housing Authority

## 2. Page One

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### 2. SECTION I - Loss Control Organization

	Yes	No
A Loss Control Policy Statement has been issued by entity management that defines the goals, objectives and responsibilities of the loss control program.	X	
The Loss Control Policy Statement has been distributed to all employees.	X	
A resolution/ordinance has been passed by the governing body to establish and promote the loss control program.	X	
New employees are given a copy of the policy statement as part of their orientation.	X	
The policy statement has been posted at prominent locations throughout the agency.	X	
A loss control coordinator has been chosen to organize and oversee the entity's loss control program.	X	
The loss control coordinator reports directly to top management. (i.e. mayor, city manager, county manager, etc.).	X	
The loss control coordinator has completed at least one training class within the last two years that deals directly with loss control, safety, human resources, etc.	X	
The loss control coordinator is a member of a local or national organization that is dedicated primarily to the promotion of loss control and safety. Some examples include PRIMA, ASSE, RIMS, etc.	X	
Funds have been budgeted which are specifically allocated for the loss control program.	X	
A safety committee has been established which is comprised of representatives from each major department or work group in the agency.	X	
The safety committee has an established meeting schedule and announced in a manner so staff, management and elected official are aware of meeting times, locations, etc.	X	
Minutes of each meeting are taken and distributed to committee members and management.	X	
The safety committee has developed a written action plan that includes goals, objectives and projected target dates. The plan is reviewed and renewed at least annually.	X	
The safety committee prepares an annual written report to management which spells out what has been accomplished during the year and what activities and goals are planned for the coming year.	X	
There is a system by which all major locations and work sites throughout the entity receive regular safety inspections.	X	
All safety training documentation is maintained to be readily accessible.	X	
Checklists that are specific to the type of location being inspected are used to document all safety inspections.	X	
Safety inspection results are shared with the responsible supervisor or manager so that corrective action may be taken.	X	
Supervisors and managers are responsible for taking timely action to safety inspection findings and recommendations.	X	
Corrective action resulting from safety inspections is documented in a way to show when and how the hazard was corrected.	X	
A formal program of claims review exists whereby past claims are analyzed in an effort to identify trends or areas of concern.	X	
A hazard communication program is in place which makes MSDS readily accessible at each qualifying location.	X	

### 3. (untitled)

#### 3. SECTION II - Employment

	Yes	No
An entity-wide personnel system has been adopted. The system establishes procedures for application, interviewing, discipline and other human resource functions.	X	
Each personnel file contains: application form, changes in pay record, receipt(s) for notification of changes in policies and procedures, job description, performance reviews, disciplinary actions, training and education documentation	X	
An E.A.P. (Employee Assistance Program) is available to all employees.	X	
Entity has established a Drug & Alcohol Free Workplace program.	X	
Appropriate license and permit checks are performed on all new employees before assuming critical duties.	X	
References are checked on prospective employees prior to offer of employment.	X	
New employees receive training on accident and injury reporting procedures before beginning their assignment.	X	
Medical records are maintained in locked limited access file separate from other files	X	
I-9 forms are maintained separate from other files	X	
Written job descriptions are maintained for each position. Job descriptions include physical requirements	X	
Employees have access to policies and procedures manuals	X	
Required employment related notices/posters are conspicuously displayed at appropriate locations	X	
Standard application form has been reviewed and approved by Pool/Pact Human Resources	X	
Job opportunities are posted and announced in accordance with personnel policy and collective bargaining agreements.	X	
FSLA exempt/non-exempt positions have been identified.	X	
Legal compliance policies include: EEO, ADA, FMLA, FLSA, DOT Drug and Alcohol.	X	
Employees have received harassment and discrimination training and there are procedures for acknowledging and investigating complaint.	X	

#### 4. (untitled)

---

#### 4. SECTION III - Vehicle Fleet

	Yes	No
There is a vehicle use policy in place with written rules that outline drivers responsibility while operating agency vehicles	X	
A mobile communications policy is in affect that states the approved methods of cell phone and radio use	X	
Verification is obtained of current valid driver license of the appropriate class for the type of vehicle(s) being operated before drivers begin their assigned duties	X	
Motor Vehicle Records (MVR's) for all drivers of agency vehicles are obtains and reviewed annually	X	
Driving standards have been established to qualify and determine driver eligibility	X	
Drivers are given on-road assessment in a vehicle of the type to be driven under similar conditions	X	
A point or similar-type system has been established so that MVRs can be evaluated in an objective manner	X	
A policy is in place that triggers corrective measures if a driver develops a pattern of traffic violations or preventable accidents	X	
There is a program for replacing vehicles when they reach an established age and/or number of miles		X
The agency has a preventative maintenance program based on manufacturer's recommendations, is performed by qualified persons and includes recordkeeping of all service and repairs	X	
Mechanics are responsible for safety checks of vehicles when routine or emergency maintenance is performed.	X	
Drivers of DOT regulated vehicles conduct pre- and post-trip inspections with deficiencies noted and reported to the supervisor. Inspections include a check of all safety equipment.	X	
Driver of non-DOT regulated vehicles are required to visually inspect the vehicle for unsafe conditions. Unsafe conditions are reported to fleet supervisor	X	
Vehicles are equipped with fire extinguishers, first aid kits and emergency signaling equipment (reflective triangles, flares etc.).	X	
Each vehicle has been provided a "glove box" accident reporting packet to be completed at accident scene.	X	
An accident review board or safety committee evaluates all vehicle accidents to determine preventability and to make corrective action recommendations.	X	

## 5. (untitled)

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### 5. SECTION IV - FISCAL CONTROLS

	Yes	No
Are there written policies and procedures for the collection, recording, safeguarding and depositing of cash receipts for all locations?	X	
Are responsibilities for cash receipt functions segregated from those for cash disbursement?	X	
Are responsibilities for preparing and approving back account reconciliations segregated from other cash receipt or disbursement functions?	X	
Is responsibility for petty cash accounts vested in one individual?	X	
Are only original receipts (no photocopies) used to support petty cash disbursements?	X	
Are physical security safeguards maintained where cash is stored and processed?	X	
Is a balance and summary of all cash receipts prepared daily?	X	
Are purchases of postage paid for by check only?		X
Are purchases of postage compared to postage meter usage?	X	
Is there a procedure in place to control receipt, issue, inventory and access to blank checks?	X	
Are checks pre-numbered?		X
Does someone approve bills for payment other than the persons who sign checks?	X	
Is the signature plate and use of the check signing device kept under the control of the official whose name appears on the signature plate?	X	
Are bank statements reconciled monthly?	X	
Are safe or vault contents inventoried monthly?	X	
Are physical inventory counts periodically conducted and reconciled with receiving reports?	X	
Are the duties of programmers and operators separate?	X	
Is access to terminals and data entry restricted to authorized employees?	X	
Is password security over computer systems set-up on an individual basis?	X	
Are employees required to take periodic vacations and in their absence do other employees perform their work?	X	

## 6. (untitled)

---

### 6. Do you have Law Enforcement Operations?

No

---

## 8. (untitled)

---

### 7. Do you have Fire Service Operations?

No

---

## 10. (untitled)

---

### 8. Do you have a Parks and Recreation Department?

No

12. (untitled)

---

**9. Do you have Street and Road Operations?**

No

14. (untitled)

---

**10. Do you have Utility Operations?**

No



**Nevada Public Agency Insurance Pool  
Public Agency Compensation Trust  
Risk Management Grant Application**

MAR 12 2015

**Grant Application Program Information:**

**Background:** The Nevada Public Agency Insurance Pool (POOL) and Public Agency Compensation Fund (PACT) have funds available to grant to member agencies that have their property/casualty and/or workers' compensation coverage through POOL/PACT for a variety of risk management initiatives.

**Purpose:** To provide members with funding necessary to reduce, mitigate, eliminate or otherwise control risk through the purchase of equipment, training and other resources.

**Funding:** Funds will be distributed as follows:

<b>Risk Management Initiative</b>	<b>Matching Funds Required</b>
Property Risk	50% funding available
Liability Risk	75% funding available
Workers Compensation Risk	75% funding available
Risk Management Training	100% funding available up to \$2,000 per employee

**Submission of Applications:** The Risk Management Grant Program is a rolling fund. Grant applications may be submitted at any time of the year. Grants must be submitted by the designated POOL/PACT Liaison. Applications are to be delivered to:

POOL/PACT  
201 S. Roop Street, Suite 102  
Carson City, NV 89701  
Email: [annwiswell@poolpact.com](mailto:annwiswell@poolpact.com)

It is recommended that the application be sent certified mail to receive an acknowledgement of receipt of the application. Applications will also be accepted in electronic form at the email address above. Applicants that file applications electronically will receive an email confirmation from the Grant Administrator.

**Application Availability:** Applications are available online at [www.poolpact.com](http://www.poolpact.com).

**Award Notification Date:** All applicants will be notified of their receipt or non-receipt of awards within 90 days of submission.

**Selection Criteria:** Applications will be reviewed and funds will be awarded using the following selection criteria:

- Presentation of a logical needs statement
- Organization's compliance with previous loss control recommendations
- Organization's financial hardship
- In depth description of the availability of your 50% of funds
- Grant funds available



**Eligibility Requirements:**

**Eligibility:** Applicant must be a current member of POOL/PACT as of the date that the application for the Grant is being made, and in the year the Grant will be distributed.

**Application Guidelines:**

The POOL/PACT Loss Control Committee has the discretion in approving or denying any, all, or a portion of the grant applications.

All applications must be fully completed including .  
include the following sections:

- Organization information (page 4)
- Narrative (page 5)
- Funding Request (page 8)

**Organization Information:**

Applicant/Member: White Pine County Fire Protection District/White Pine County EMS

Address: HC 33 Box 33447

Ely, NV. 89301

Department Involved: Fire District and EMS

Project Contact: Chief Brett Waters

Phone: 775-293-6515

Email: bwaters@whitepinecountynv.gov

Alternate Contact (if any): Jennifer Hollingsworth

Phone: 775-293-6503

Email: jhollingsworth@whitepinecountynv.gov

The Project Contact and/or Alternate Contact may be contacted to provide additional information regarding the grant request to the Loss Control Committee. If additional information is needed for consideration, the Project Contact and/or Alternate Contact will be notified of the meeting date and time for the Loss Control Committee meeting.

## **Narrative (use additional pages as necessary)**

### **Part I. Needs Statement:**

Explain how this grant will reduce, eliminate, mitigate or otherwise control property/casualty risk or employee injuries. Attach supporting documentation including invoices/estimates:

We at the White Pine County Fire District and EMS have a job that requires extreme exertion at a moment's notice. This type of activity increases the risk of injury significantly. Our jobs require manual labor in a variety of locations with reduced work space, cold and hot environments, lifting and moving in confined spaces and under extreme environmental conditions to name a few.

When we are called into action, there is nobody else left to call. Usually this is in an "Emergency Environment". To reduce the risk of injury, nationally it is recognized that physical fitness is a requirement of the position. We are performing annual physicals on all our staff. We are utilizing a professional nutritionist and physical fitness trainer to assist us in preventing injury.

We have space in our Headquarters Fire Station for exercise equipment but don't have the funding available to purchase the equipment. The Fire Chief has allowed us "On Duty" time to stay fit but without any equipment, our ability to meet this goal is difficult. If you can assist us in providing the funding for exercise equipment, we will offer this to all members of our department, 140 active members, along with other public safety agencies to assist in keeping physically fit. The Fire Chief has already offered our facility to the White Pine County Sheriff for their personnel to work out if we can acquire the needed equipment.

The Fire District would like to facilitate a centralized location to make opportunities available to all employees to maintain healthy behaviors. We believe a workplace health program has the potential to impact areas such as health care costs, absenteeism, productivity, recruitment/retention, and injury prevention. There is a national standard for this type of program which is NFPA 1583: Standard on Health-Related Fitness Programs for Fire Department Members.

It is well documented nationally that Fire/EMS and Law Enforcement officials need to be in shape to reduce injury and death. We have all the components in place to assist us in this goal except for the specific physical fitness exercise equipment. That is what we are asking you to assist us with. With the budget constraints we are currently under, the funding availability for us to purchase this equipment is highly unlikely.

**Part II. Explanation for lack of available funds:**

- a) Explain why your agency needs assistance to fund this risk management initiative.  
Please include an overview of the current budget and planned expenditures

\$20,000 has been budgeted this fiscal year for employee health. Bringing the entire Fire District/EMS Division up to date on physicals is a large endeavor. No additional funding is available for purchase of equipment without outside assistance.

We would like to purchase approximately \$25,000 in fitness equipment for our members to assist them in reaching their health and fitness goals. This will also assist in reduction of "on the job injuries". As we all know, the cost of a workman's compensation claim can be substantial.

With our current physicals and health evaluations, we will be able to work together with the nutritionist and fitness trainer to provide a comprehensive program to reduce our member's risks.

- b) Please describe how the matching funds, if any will be obtained:

As an "In Kind" match if one is needed, we will acquire professional Nutrition and Fitness counseling by certified professionals along with our \$20,000 for physicals currently in process.

**Part III. Project Request:**

If benefits of this project will aid or involve other departments, members or organizations, please describe:

This project will involve all County Fire/EMS staff both volunteer and career and has been offered to the Sheriff Department and NDF Permanent Employees.

## FUNDING REQUEST

Total budget for this risk management initiative: \$ 45,000

Portion funded by applicant: \$ 20,000

POOL/PACT Funding Amount: \$ 25,000

Project and application authorized by: (governing body):

  
\_\_\_\_\_

Signature (POOL/PACT Liaison): Bret Waters Date: 3-6-15

Print Name (POOL/PACT Liaison): BRET WATERS  
Title: District Fire Chief / EMS Supervisor

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username

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## Why do firefighters need to be fit?

Posted by [FF/FLSE Traycee](#) on April 7th, 2010

A firefighters role is extremely varied which involves working in a vast array of situations and environments including:

- Hot and humid atmospheres.
- Dark and confined spaces.
- Oxygen deficient atmospheres.
- Prolonged periods of physical activity.
- Working long hours during the night when your body is telling you to rest.

The day to day work of a firefighter is also extremely varied and calls upon muscular strength, endurance and flexibility at different incidents.

**Tasks that firefighters carry out at incidents can be very physical and include:**

- Running out lines of hose.
- Climbing stairs of high rise buildings.
- Pitching heavy ladders.
- Hauling equipment up the outside of tall buildings using ropes.
- Searching a smoke filled building for persons missing in full fire fighting clothing and breathing apparatus set.
- Using breaking in tools to effect entry through security doors.
- Carrying unconscious persons rescued from property fires.
- Handling heavy hydraulic cutting equipment at road traffic collisions.
- Working in confined spaces such as roof voids or tunnels.
- Wearing hot and humid chemical protection suits.
- Extinguish acres of grassland fires with hand beaters.

A typical house fire during the night is likely to involve a large physical and mental effort. Firstly, the human body is naturally less able during night time hours as it is programmed to sleep, which results in tiredness. On route to the incident, a firefighter is mentally preparing himself or herself to enter a house that is on fire, by dressing in firefighters protective clothing and breathing apparatus set that will protect them.

Once they arrive, the firefighting hose reel has to be dragged from its storage unit ready for deployment before a forced entry via the front door has to be made using breaking in tools.

Once inside, with temperature and humidity now extremely high, a search has to begin for the fire itself and any missing persons. Not only is the firefighter now crawling around in pitch darkness carrying out a detailed search, they are dragging a hose with them and other equipment such as thermal imaging camera.

At this point, a firefighters flexibility and endurance are tested as they negotiate obstacles and tight spaces and while trying to conserve air.

Once water is applied to a fire, the temperature rises further still as steam is produced which can worsen the conditions inside which in turn makes searching more difficult.

Once the missing person is found, the firefighter then calls upon their muscular strength to carry the person from the building, who can sometimes be heavier than they are themselves.

You can clearly see that a firefighter needs to be physically strong, flexible and have muscular endurance to work effectively.



Fitness is also important to combat fatigue. In a 15 hour night shift, a firefighter may attend numerous fires through the night, so needs to be able to cope with tiredness on a regular basis.

The working conditions can be stressful and test not only the physical ability of firefighters, but also their mental strength so it is vitally important that firefighters are fit for duty and may even make the difference between life and death.

**Traycee Biancamano**  
Chief Executive Officer

**United States First Responders Association**

"Public Safety Serving Our Community Through Training, Tactics & Education"

Website: [United States First Responders Association](#)

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## Why is it important to be physically fit?

In HEALTH, FITNESS, SPARTA

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Answer by [Joan Keats](#) CONFIDENCE VOTES 49.5K

- It is important to maintain a healthy weight and avoid unwanted weight gain or obesity. If you stay physically fit you can avoid diseases such as diabetes, high blood pressure, heart disease, and so on. In addition, with physical fitness you enjoy regular day to day activities without experiencing undue fatigue.
- The more physically fit you are through a healthy diet and exercise, the less likely you will die from heart disease and other diet related diseases. The increasing rate of diabetes and weight gain among children and adults is a great example of why a good diet along with an exercise program is important. For every 10 pounds overweight you are your body takes serious abuse. Those 10 pounds affect your knees with 50 pounds of force.
- High blood pressure and heart problems are also associated with poor physical fitness. All highways have u-turns, so people can get back on track. It is never too late. Take that u-turn and *get things going in the right direction.*
- Physical fitness is a general state of a good physical health. Obtaining physical fitness is a result of positive physical activity, proper nutrition, correct diet, and the proper course of physical recovery which is rest. In a nutshell, physical fitness is the fine-tuning of the human body to perform and work well.
- It's not necessary to have a serious exercise routine but a good program that has weight training lifting and *cardio walking* will be a huge step in the right direction. Always remember that you cannot bank exercise. Keep trying and making the effort.
- With good health and energy that provides a positive sense of physical and mental well-being, you can avoid diet related diseases, live a fuller life and have a better quality of life. For additional information about the benefits of exercise, and how to become more physically fit, see the page links, further down this page, listed under **Related Questions**.

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Was this answer useful?

YES SOMEWHAT NO

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An integrative health-care professional, massage therapist, and health sciences educator.

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Author of "MS--Living Symptom Free"

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**Firefighter Physical Fitness Programs:  
Looking for a Standard**

EXECUTIVE DEVELOPMENT

By: Douglas Lautner  
Assistant Chief  
DET 1, AFEREG  
Mercury, Nevada

An applied research project submitted to the National Fire Academy  
as part of the Executive Fire Officer Program

June 1998

## Abstract

Firefighting is a dangerous and physically demanding occupation. In emergency operations a firefighter's physical capacity serves as a valuable resource during fireground operations. At times a firefighter's physical capacity can mean the difference between saving their own lives, or the lives of their coworkers.

The problem that prompted this research was the lack of a definitive standard on firefighter physical fitness programs. The purpose of this project was to evaluate the Range Complex Fire Department's physical fitness program, and to determine if personnel have benefited from participation in the program. The study also evaluated national trends in firefighter physical fitness programs. The descriptive and evaluative research methods were used. The research questions were:

1. What are the components of the fire department physical fitness program?
2. Have there been significant improvements in personnel fitness levels since the physical fitness program was implemented?
3. Should a physical ability test be use as an evaluation tool in a physical fitness program?
4. Should physical fitness programs be mandatory or voluntary?
5. Should aging be considered in the evaluation of personnel fitness levels?

A literature review and four interviews were conducted to locate and identify physical fitness components and to answer the questions raised for this project. One hundred and fifty five survey instruments were utilized to try and measure fire department personnel's perception of the program, as well as determine national trends in firefighter physical fitness programs.

The results of the study identified the components of the department's physical fitness program, and indicated significant improvement in personnel fitness levels. Survey results of department personnel indicated that they had benefited from participation in the program. National survey results identified a trend toward physical fitness programs, with seventy percent of the respondents identified as having a program in place.

This study also determined that content-validated physical ability tests should be used as an evaluation tool in physical fitness programs; physical fitness programs should be mandatory for all personnel, and aging should not be considered in the evaluation of personnel fitness levels.

The recommendations were, that the Fire Department form a fitness committee comprised of all ranks within the department. Department leaders should implement the use of the department's physical ability test for incumbent firefighters at least annually. Fire Service administrators should review National Fire Protection Standard 1500. The National Fire Protection Association should take a more active role in identifying to the fire service that a draft document is available for review on firefighter physical fitness programs.

## Table of Contents

Abstract.....	ii
Table of Contents.....	iv
Introduction.....	1
Background and Significance.....	2
Literature Review.....	5
Procedures.....	23
Results.....	27
Figures. 1.0 through 1.4.....	29
2.0 through 2.4.....	35
3.0 through 3.6.....	44
Discussion.....	52
Recommendations.....	55
Reference List.....	57
Appendix A, (National Physical Fitness Program Survey).....	60
Appendix B, (Survey Cover Letter).....	62
Appendix C, (Range Complex Fire Department).....	64
(Personnel Survey)	
Appendix D, (Range Complex Fire Department).....	67
(Physical Fitness Policy)	

## Introduction

Firefighting is a dangerous and physically demanding occupation. In emergency operations a firefighter's physical capacity serves as a valuable resource during fireground operations. At times a firefighter's physical capacity can be the difference between saving their own lives, or the lives of their coworkers. When firefighters arrive on the fireground, they do so in their "business suits"; each person is wearing approximately fifty pounds of personal protective equipment, (PPE) to include: self contained breathing apparatus (SCBA). Once on scene, firefighters are deploying charged handlines, forcible entry equipment, as well as other specialized equipment that may be needed.

All of these actions are being accomplished before entry into a building is made. Those personnel not in good physical condition are most often physically spent by the time actual firefighting and rescue begins. How many times have we all seen the more physically fit personnel take up the slack for those personnel operating at reduced physical capacity?

The fire service has standards that cover nearly all aspects of fire protection. There are standards for our daily work uniform, inspection and testing of sprinkler systems, as well as the apparatus that transports us to the emergency. The apparatus standard gives us guidelines on how often the apparatus is tested, what equipment is needed to conduct the test, as well as pass/fail criteria. If the apparatus does not pass, it is rehabilitated, retested, and either brought back in service or retired. Fire service personnel are our most valuable resource.

The problem that prompted this research project was the lack of a definitive standard on firefighter physical fitness programs. The purpose of this research was to evaluate the Range

Complex Fire Department (RCFD) physical fitness program, and through surveys determine RCFD personnel's perception of the program, and if they feel they have benefited from participation in the program. A national survey was also conducted to determine fire service trends in physical fitness programs. To complete this study the descriptive and evaluative research methodologies were used to answer the following questions:

1. What are the components of the RCFD physical fitness program?
2. Have there been significant improvements in RCFD personnel fitness levels since the program was implemented?
3. Should a physical ability test be used as an evaluation tool in physical fitness programs?
4. Should physical fitness programs be mandatory or voluntary?
5. Should aging be considered in the evaluation of personnel fitness levels?

### **Background and Significance**

The idea for this project was inspired by a team exercise during the Executive Development course, as part of the Executive Fire Officer Program at the National Fire Academy. The team exercise involved communicating a controversial idea to a classmate and try to have that person understand your point of view on the subject. The subject was mandatory physical fitness programs. During the course, each student is required to present a Management Innovation from their department. My presentation involved the RCFD physical fitness program and its affect on personnel fitness levels. After completing the presentation many of my classmates and I had several interesting discussions, both pro and con on



physical fitness standards in the fire service. The team I was involved with, eventually completed a class project on Entry Level Physical Ability Testing, which led to this paper.

The RCFD is a federal fire department located in Nevada. The initial mission of the RCFD was to provide aircraft crash firefighting and structural fire protection. Over the years the department has evolved to provide additional services such as: hazardous materials response and mitigation, medical response and transport, as well as a number of specialized rescue services. It is understood that information such as population served, when the fire department was organized and other information about the organization is generally discussed in this section. Due to security constraints this information cannot be discussed in this paper.

In the mid 1980's the RCFD administration had attempted to impress upon it's personnel the value of physical fitness as it relates to the job. This was done by utilizing timed smokehouse evolution's in which groups of two firefighters were required to enter a smoke filled maze, locate two victims and remove them within a specific time frame. It became obvious that some personnel were clearly not physically able to perform this task.

The administration of the RCFD has always supported personnel in their endeavor to maintain high levels of fitness. Personnel were allowed and encouraged to use exercise facilities located on the immediate area. However, "not all personnel chose to take advantage. It had become obvious through observations of emergencies and training scenarios that a number of personnel were not up to the task physically to perform" (Roland Benton, Chief RCFD, personal interview, April 10, 1998).

A physical ability test was directed by the chief through our training/safety officer. The test was required of all personnel on a semi-annual basis. The test consisted of: a ladder raise and climb,

deployment of a fifty foot section of three inch hose, the moving of a fifty pound block of wood ten feet with a three pound sledge hammer, the deployment of one hundred feet of inch and three quarter charged hose line, and finally dragging a one hundred seventy five pound rescue mannequin twenty five feet around a cone and back. The test was required to be completed in twenty minutes or less. Those unable to complete the ability test were referred to the department physician for a fitness for duty evaluation. Unfortunately the test was not validated and there were safety issues with timing a ladder climb.

As part of the RCFD's ongoing goal of full compliance with National Fire Protection Association (NFPA) 1500 standard on Occupational Safety and Health Program, a physical fitness coordinator was appointed and directed to implement a mandatory physical fitness program. The Chief of the department indicated that the lack of any definitive standards made implementation of a physical fitness program a difficult issue to address.

An outside program, developed by exercise physiologists specializing in firefighter physical fitness, was eventually purchased. The program, ARA/Human Factors Healthfit®, was used to train our physical fitness coordinator and four assistants.

The relevance for this project is twofold. First, when implementing a program that impacts personnel greatly, that program should be measurably evaluated for its effectiveness on members. Secondly, it is important to compare the program with other departments to determine what changes, if any, are needed to improve the program.

This project is necessary to satisfy the requirements of the of the Executive Fire Officer Program course titled "Executive Development". The project is directly related to unit nine of the Executive

Development student manual, Organizational Change and Development, which relates to evaluation of organizational goals and objectives. 5

### **Literature Review**

The literature review was intended to gain insight into physical fitness programs in the fire service, and to determine if the RCFD physical fitness program is effective. There was an extensive amount of published material on firefighter physical fitness. The bulk of the material was written by two people; Jack O'Connor, Ph.D., and Paul Davis, Ph.D. Both are exercise physiologists specializing in firefighter physical fitness.

The literature review is divided into five sections; the first four sections cover issues raised by the research questions. The last section relates to the problem statement.

#### **Components of Physical Fitness Programs**

The components of a physical fitness program vary widely from department to department. It was decided to start with one of the recognized experts, Dr. Paul Davis. In an interview conducted in April 1998; Dr. Davis indicated that components differ depending on the type of program that a department wants to implement. For purposes of this project Dr. Davis outlined the following components as being "essential" to a successful program.

A telephone interview was conducted with Dr. Davis on April 3, 1998. Dr. Davis identified the following components as essential to a successful program. "The components are: the formation of a committee to plan and implement the program, budgeting, formal written policy, assignment of a health

and fitness coordinator, health risk screening, medical physicals, technical assistance and testing” (telephone interview, Dr. Paul Davis, April 3, 1998).

“The formation of a program committee should be the first step in implementing a program” (Rubin, Nugent, 1992, p. 34). The committee should include all ranks and divisions within the department. “Nothing of importance is going to happen without the consensus of labor and management. It should be agreed that there will be a program; the outcome should never be in question” (Davis, 1997, p. 26). In an article for Health and Safety magazine, Walterhouse (1996) states: “the committee approach allows all who stand to benefit from the program to contribute and “buy into” the program” (p. 1).

Budgeting is vital to the implementation of a fitness program. Without funding there is no program. “Costs include such line items as multiphasic health screenings, fitness coordinator training and exercise equipment purchases” (Davis, 1997, p. 26). Initial start-up costs can be relatively inexpensive compared to overall fire department budgets. The Stillwater Oklahoma Fire Department recently implemented a wellness and physical fitness program. “The initial cost of the program was \$41,119, which included the purchase of workout equipment, fire fitness instructor training and compensation, physical exams and other tests, renovation, and program development” (OSU Wellness Staff, 1998, p. 26).

A formal written policy needs to be in place and expectations laid out in a realistic time frame. “The responsibility for planning, implementing and overseeing the fitness program needs to be officially and properly placed within the organization”...(Davis, 1997, p. 26). Dr. Davis goes on to say: “The

point is that responsibility should be placed somewhere by the chief, and program implementation has to be followed closely” (Davis, 1997, p. 26).

Identifying a fitness coordinator is usually accomplished through the fitness committee. The fitness coordinator ... “needs to be endorsed by the department’s administration and empowered with the appropriate level of authority and responsibility” (Rubin, Nugent, 1992, p. 34). The fitness coordinator should then be trained through an appropriate certification program. “Any training certification program for fitness coordinators should include instruction on how to perform a fitness assessment and use that information to prescribe exercise” (Davis, 1996, pp. 32, 34). Dr. Davis (1994) goes on to say: “Fire suppression personnel who cannot meet minimum performance requirements should be prescribed individualized progressive exercise programs for rehabilitation” (p. 26).

Health risk appraisal and screening are necessary to ensure that fitness program participants do not do further damage to themselves because of physical or health preconditions. In an article for Fire Chief Magazine, Dr. Davis (1994) discusses the issue of screening personnel.

A good screening program will also have a plan for handling any firefighters found to have significant physical problems including high blood pressure or a heart condition. The process should lead to medical assistance or advice from qualified health professionals, as well as a determination as to immediate and long-term fitness for duty. Also, this process should be as unobtrusive and confidential as possible to avoid embarrassing the firefighter or making a big deal about the problem. (p. 28)

A medical physical should also be conducted on all personnel in the department. NFPA 1500 states: “All members who engage in fire suppression shall be medically evaluated periodically as

specified by NFPA 1582, Standard on Medical Requirements for Fire Fighters, on at least an annual basis"...(NFPA 1500, 1992, p. 1500-24). The physical becomes... "the baseline document for a member's fitness history file" (Rubin, Nugent, 1992, p. 33).

In an interview with Dr. Davis, the issue of technical assistance was discussed. "Any department implementing a program who does not have an expert in fitness employed should seek assistance from exercise specialists and the medical community. Help can be obtained from hospitals, universities or independent contractors. The training of in-house fitness coordinators is one way of providing in-house technical support". (Dr. Paul Davis, telephone interview, April 3, 1998).

Testing is the final component listed as "essential" to a fitness program. Two types of tests are used in the evaluation of personnel; Physical Fitness Assessments (PFA), and Physical Performance Assessments (PPA). "The fitness test is health-based and the performance test is job-based" (Davis, Lecuyer, 1995, p. 22).

Physical fitness assessments, also known as construct tests are the more traditional and well known of the two types of tests. Construct tests, use exercise components such as push-ups, sit-ups, and running or walking. These tests are used in initial baseline evaluations of personnel, and serve as the basis for exercise prescription by a fitness coordinator. "All members should undergo a preliminary personal fitness assessment examining the major fitness dimensions" (Davis, Gerkin, 1997, p. 26).

Dr. O'Connor (1994), in an article for Firefighter News discusses and identifies the components of fitness, and how the components are utilized in a fitness program. "Technically there are five components of physical fitness that determine an individuals ability to perform physical work: aerobic capacity, muscular strength, muscular endurance, flexibility and body composition" (p. 38). Dr.

O'Connor goes on to discuss the utilization of the components of fitness in evaluating personnel through the use of a PFA, and why the PFA should only be used to determine general fitness. Physical fitness assessments are...

excellent for the relative evaluation of individual conditioning but are not necessarily job-related measurements. They should be part of each departments supporting physical conditioning program but not used to evaluate job fitness. The real value of construct fitness tests is to establish individual training programs and to track improvements in relative fitness. (O'Connor, 1996, pp. 22, 23)

In reviewing the material on PFA, the use of these tests is important in identifying an individuals general fitness levels. However, there is little evidence that these tests are good predictors of actual job performance. Dr. Davis, (1996) in an article for Health and Safety Magazine expands on Dr.

O'Connors point of predicting job performance based on the PFA by stating:

Physical fitness tests ...are instructive, but not exhaustive in their ability to identify deficiencies.

Translated to the practical application, a fitness test will provide useful information relative to the general dimensions of personal fitness. However, based upon current research, the ability to predict job performance from such tests has an accuracy of only 65%. (p. 12)

The second type of test used in a fitness program involves the use of a physical performance assessment (PPA), also known as a criterion based test. These tests use job tasks that are low skilled, such as: victim drag, hose pull, and ladder raise, and are conducted against a time requirement. These tests are commonly referred to as physical ability or agility tests. Most

departments utilize these tests as part of the hiring process. Research indicates that these tests are a valid indicator of an individual's ability to do the job.

Any department implementing the use of PPA, is required to follow applicable federal laws. "The Age Discrimination in Employment Act (ADEA), Americans with Disabilities Act (ADA), and the Civil Rights Act of 1991 (CRA, 1991) all speak of the issue of "essential functions and job-related standards" (Davis, 1994, p. 14).

The ADA defines essential functions... "as those functions that the individual who holds the position must be able to perform unaided or with the assistance of reasonable accommodation" (Equal Employment Opportunity Commission, U.S. Department of Justice, 1991, p. 50). However, under Title II of the ADA, where reasonable accommodation cannot be made, the use of qualification standards, job test, or selection criteria can be used to screen out or deny a job to an individual... "only where such standards, tests or criteria are job related. Job related means related to the actual performance of the essential functions of the job consistent with a business necessity where such performance cannot be accomplished by reasonable accommodation" (Adaptive Environments Center, 1992, p. 30).

The ADA also speaks of indicators of essential functions. For example: "Time spent performing an essential function may be an indicator whether that function is essential" (Equal Opportunity Employment Commission, U.S. Department of Justice, 1991, 50). A section in the ADA that should be of particular interest to the fire service concerning an indicator of an essential function is, the consequences of failing to require an employee to perform the function. The section states:

The consequences of failing to require the employee to perform the function may be another indicator of whether a particular function is essential. For example, although a firefighter may not



regularly have to carry an unconscious adult out of a burning building, the consequence of failing to require the firefighter to be able to perform this function would be serious. (Equal Opportunity Employment Commission, U.S. Department of Justice, 1991, p. 50)

When fire departments utilize a PPA or physical ability test, the test must be validated according to the Uniform Guidelines on Employee Selection Procedures. The guidelines speak of content-validity which must show job sampling as a means of validating tests with employment implications.

To demonstrate content validity of a selection procedure, a user should show that the behaviors demonstrated in the selection procedure are a representative sample of the behavior(s) of the job in question or that the selection procedure provides a representative sample of the work product of the job. (Burns, 1996, p. 2)

Most fitness experts agree that the PPA is the best method for determining a persons physical ability. Dr. O'Connor (1996), expresses his opinion on the subject by stating:

...the best test for a firefighter is a job-related task test performed in full turnout gear with SCBA. This is the only type of test that will determine if an individual has the physical capacity to perform fireground tasks. The test should include only low skill tasks, such as lifting, pulling or carrying, arranged in sequential order so that different muscle groups are exercised.

Performance times are the most useful criteria. The test should be graded pass or fail with a single standard for all firefighters. (p. 22)

Dr. Davis (1994), goes on the say: "Performance testing is the only objective method by which to establish competency" (p. 26).

Performance testing is widely used in the fire service to determine if a candidate has the physical ability to perform the essential functions of firefighting. However, the issue of evaluating incumbents based on performance testing is a much more controversial subject in the fire service. Experts agree, however, that the PPA is a viable method to determine if personnel can do the job throughout their career's. Walterhouse (1996), in article for Health and Safety Magazine discusses the issue of candidates and incumbents performance testing. "Current firefighters must be evaluated annually by the same validated task-oriented fitness test that is administered to candidate firefighters" (p. 5). Dr. Davis echo's Walterhouse by stating:

If essential functions can be identified and testing for competence measured for hiring purposes, then the same instrument(s) can be used to determine whether incumbents can still perform the job. The law allows for this, and numerous legal cases recognize that physical performance tests are valid instruments for employment decisions. And as a practical matter, how can we require applicants to possess abilities that the incumbents can't demonstrate. (Davis, 1994, p. 14)

Testing is an integral part of any fitness program. Testing serves as a measure for the individual as well as the department of where you are physically. The literature supports the use of fitness assessments and performance assessments; they are related, but different types of tests. The physical fitness test tells you what your fitness level is, and the performance test answers the question; can you still perform the essential functions of the job.

The literature review indicated those components deemed essential to physical fitness programs, and how those components are related to one another. Testing appears the most critical component of a

program. Fire departments must have a method of monitoring and documenting progress and success of personnel.

### **Benefits of Increasing Fitness Levels**

Research indicates that the formation and implementation of physical fitness programs benefit the individual, the organization, and the citizens of the community the fire department serves. Numerous studies indicate monetary savings for departments in the form of reduced workers compensations costs.

A significant reduction in workers compensation costs, compared with physical fitness programs costs, was shown in a study conducted by Ron Bennett of the Aurora Fire Department, Aurora Colorado. The study indicated that between 1991 and 1996,

Average cost per year for the six year period for workers compensation was \$80,974.75.

The average costs of the physical fitness program was \$5000.00. A six year physical fitness program cost of \$30,000 compared to a savings of workers compensation expenses of \$184,464.36. (Bennett, 1997, p. 29)

Walterhouse (1996), goes on to discuss the benefits of participating in a fitness program by stating: "The one common element of reduced work capacity, fatalities, injuries and illness is that they are all affected by improved physical fitness of firefighters, which reduces the adverse affects that protective equipment and the work environment have on firefighters" (p. 1).

Dr. O'Connor discusses the benefits of improving the components of fitness in articles for Firefighter News, and how improvement in fitness levels can reduce injuries and improve efficiency on the fireground.

Muscular strength is considered to be the most important component of fitness on fireground operations. "The basic interface between you and the fire is the equipment you wear and use. It is the equipment that drives the physical fitness requirement and affects performance in firefighting" (O'Connor, 1994, p. 38). Dr. Davis expands on Dr. O'Connor's point by stating: "Increasing your overall strength will allow for greater efficiency in the movement and use of tools and equipment on the fireground, as well as being able to sustain physical effort for longer time periods than less fit individuals" (telephone interview, Dr. Paul Davis, April 3, 1998).

Muscular endurance is considered the next most important component of fitness. Dr. O'Connor (1994), discusses the issue of muscular endurance by stating:

The muscle groups of the upper body (arms, shoulder girdle, back) are continually working as tasks are performed. Poor muscular endurance means short work periods and long recovery times - a luxury usually not available at a working fire.

The consequences of not having sufficient muscle endurance to bring the equipment to bear on the fire are obvious: the effectiveness of the attack is reduced and the fire isn't put out.  
(p. 38)

As with muscle strength, increasing muscle endurance allows for longer work periods and shorter recovery times.

Research indicates that Aerobic fitness has a greater impact on your general and long-term health than any of the five components of fitness. Again, Dr. O'Connor (1996), discusses aerobic fitness by stating:

By definition, the greater the capacity of the cardiovascular system, the greater your aerobic, or CV fitness and the better your ability to sustain physical performance over time without becoming fatigued. A high aerobic capacity also permits someone engaged in an intense physical activity to recover quickly. The benefits of a high state of CV fitness for performance on the fireground should be obvious, even though muscular strength and endurance are probably more important for individual task performance. (p. 20)

Aerobic capacity refers to the maximum amount of oxygen that can be used by a person, stated in liters per minute or milliliters per kilogram of body weight per minute. "Most experts agree that 40 to 45 milliliters of oxygen per kilogram of body weight per minute is needed to function effectively on the fireground wearing SCBA" (O'Connor, 1994, p. 39). O'Connor continues by stating: "This level of aerobic capacity also provides a reserve capacity that facilitates quick recovery from the short but highly intense evolution's that define firefighting" (O'Connor, 1994, p. 39).

In an article titled "The Joy of Flex" Dr. O'Connor (1996), discusses the issue of flexibility and it's relationship to fireground operations. "Good flexibility is important for everyone engaged in dynamic activity, but critical for those who's jobs require lifting, reaching, climbing and other tasks where their bodies bend and move appendages beyond normal ranges. All of these actions define firefighting" (p. 22).

O'Connor (1994), goes on the point out, that "A lack of flexibility in the low back increases the chance of injury and reduces the efficiency of movement" (p. 39). "...fit and flexible individuals recover quicker from musculoskeletal injury" (O'Connor, 1996, p. 23).

The last component of fitness is body composition. A person's body composition is "...usually exhibited as fat, requires a greater energy expenditure to carry around added weight that has no active function in work performance" (O'Connor, 1994, p. 39). Dr. O'Connor (1994), goes on to summarize: "That excess fat is the number one fitness problem in the fire service, as well as the most common risk factor for heart disease" (p. 39). Actively participating in aerobic conditioning, will not only affect your ability to recover quicker from intense physical work, but will also play a major role in weight control.

Dr. Davis (1994), summarizes points made by Dr. O'Connor by stating:

Ascending levels of fitness correspond with increased fire suppression capacity. In fact, studies examining the relationship between task accomplishment and fitness have demonstrated that a physically fit person can accomplish the same tasks in as little as one-third the time it takes an out of shape person. (p. 18)

Based upon the review, when personnel enter into organized physical fitness programs that target the components of fitness, work related injuries can be reduced, and increased efficiency on fireground operations can be expected. Additionally, departments and the communities they serve, can expect cost savings in workers compensation costs, as well as increased productivity.

### **Mandatory or Voluntary Fitness Programs**

When implementing a physical fitness program, the issue of whether or not the program should be mandatory or voluntary is a question fire service administrators must answer. The program should target those individuals in most need of the program. Walterhouse (1996), makes a case for mandatory

programs by stating: "Many individuals are not motivated to exercise on their own. It is therefore, important that physical fitness programs in the fire service be mandatory and incentives for participation and goal attainment be considered" (p. 1). Walterhouse goes on to point out that "NFPA 1500 specifies mandatory physical fitness training and annual medical evaluations for all firefighters" (Walterhouse, 1996, p. 4).

The issue of performance standards is discussed by Dr. O'Connor (1995) in an article for Firefighter News. Dr. O'Connor supports the issue of performance standards for fitness programs. He promotes the following point: "An objective and logical review of the issue of performance standards and firefighting can yield but one conclusion - - there must be standards for physical performance because successful firefighting is directly dependent on physical ability" (p. 31).

Dr. Davis supports and expands Dr. O'Connor's point on fitness standards. "The purpose of adopting physical fitness standards is to ensure that firefighters possess and maintain the physical ability to perform their jobs without undue risk to themselves or others" (Davis, 1996, p. 12). Continuing, Dr. Davis (1996) makes the point that: "A department without clearly defined standards (sometimes known as performance standards) cannot know if its members are truly capable of meeting the arduous demands of fire combat" (p. 12).

Goodson (1994) states: "Only mandatory programs will work because the reality is that those who need exercise the most, those in poor physical condition, are the ones least likely to participate in a voluntary program (p. 21). In an article for Minnesota Fire Chief, Dr. Davis (1996) echoes Goodson by stating:

There is only one type of physical fitness program that can be fully successful. A mandatory one. Voluntary programs historically fail because they cannot require unfit individuals to participate. They are precisely the individuals who need to be identified and helped. Voluntarily permitting the lowest performers to choose whether or not they will meet necessary job standards is contrary to sound leadership and sows the seeds of dissent if not disaster. (p. 13)

Dr. Davis (1996), continues the discussion further by stating that physical fitness standards:

...“provide the only realistic way to verify that every firefighter possesses the physical ability to perform the job” (p. 13).

The review pointed out, that voluntary programs are less effective than mandatory programs because, those in most need of an exercise program cannot be forced to participate. The major benefit of mandatory programs are, that they are all inclusive, everyone, specifically those in most need of exercise are required to maintain minimum fitness levels established by the program.

### **Aging**

Age is often raised as a consideration when evaluating personnel fitness and performance levels. The point most often made is that older personnel tend to lack the same physical capacity as younger personnel. In an article for Minnesota Fire Chief Magazine Dr. Davis discusses the issue of aging as it relates to federal employment law and fireground functions. Dr. Davis refers to the seven year exemption from the Age Discrimination in Employment Act (ADEA) for public safety organizations ending in 1994. Dr. Davis (1994), goes on to say:

In an earlier amendment to ADEA, congress tasked the secretary of labor and the Equal



Opportunity Commission to conduct a study on the feasibility of performance based tests as an alternative to mandatory retirement based on age. The study disproved the myth that public safety is compromised by the continued employment of older workers. The report also noted the accumulated deficits in abilities are only marginally associated with chronological age and can be documented with available tests that are better predictors than age. (p. 14)

Davis and Gerkin (1997), go on to discuss the ability of older workers to slow down the aging process by stating: "Advancing age is clearly a factor in diminished performance, but advanced age per se does not have to affect performance. Ample evidence exists that the effects of aging can be ameliorated through a regular program of physical activity" (pp. 24, 26). Dr. Davis (1994) in an article titled: "Must physical ability decline with age?" states:

...medical science has amassed evidence that individuals may virtually choose not to age.

Said another way; while you can't stop the superficial processes of graying hair or wrinkling skin, you can preserve and extend your underlying functional work capacity. (Davis, 1994, p. 14)

Davis and Gerkin (1997), discuss the issue of job tasks staying the same regardless of who is performing the tasks. "The most obvious is that the job requirements are independent of who is performing the job. In other words, the fire doesn't care who's performing the suppression effort the job is the job" (p. 24). Davis goes on to state: "The exculpatory provisions of the ADEA are being superseded by the ADA and CRA of 1991. These address issues of testing for essential functions and do not allow for different passing standards for the same job" (Davis, 1994, p.56).

The literature reviewed on aging was important for several reasons. First, the literature identified federal employment laws that verify the use of testing to identify if an individual is capable of performing the essential functions of the job. The review also pointed out that a single standard should be used for everyone. The review also identified that the job is the same for everyone. Fireground tasks must still be performed regardless of who is doing the task. And finally, through a regular program of exercise, individuals can slow down the aging process and increase their underlying work capacity.

### **National Firefighter Fitness Standards**

The current standards available to the fire service are: NFPA 1500 Standard on Fire Department Occupational Safety and Health Program, and NFPA 1582 Standard on Medical Requirements for Fire Fighters. Chapter 8 of NFPA 1500 specifies the requirements for fire departments physical fitness programs by stating:

The fire department shall establish and provide a physical fitness program to enable members to develop and maintain an appropriate level of fitness to safely perform their assigned functions. The maintenance of fitness levels specified in the program shall be based on fitness standards determined by the fire department physician that reflect the individual's assigned functions and activities, and that are intended to reduce the probability and severity of occupational injuries and illnesses. (NFPA 1500, 1992, p. 1500-24)

As pointed out earlier in the review, NFPA 1500 specifies that physical fitness programs be mandatory for all personnel.

NFPA 1582 Medical Requirements, discusses the issue of a fire department fitness coordinator interfacing directly with the fire department physician by stating: "An individual from within the department should be assigned the responsibility for managing the health and fitness program, including the coordination and scheduling of evaluations and examinations" (NFPA 1582, 1992, p. 1582-22).

In August of 1994 an NFPA subcommittee presented a draft document for review. The document titled: NFPA 1583- ROP, Recommended Practice for Fire Fighter Physical Performance and Conditioning Programs was made available for public comment. For the first time the fire service had a document that would expand on NFPA 1500 and 1582, and give clear guidance on fitness program components and evaluation of personnel. "The major thrust of 1583 is emphasizing the injury-preventing nature of fitness and the value of rehabilitation" (Davis, 1994, p. 26). The document also emphasized performance standards and the use of PPA for evaluation of candidates and current firefighters.

The issue of performance standards became a controversial issue for groups such as Women in the Fire Service (WFS) and the International Association of Firefighters (IAFF) after the initial 1583 document was released. "The WFS and the IAFF were opposed to the language in the document that contained provisions for fitness and performance standards. Both groups were completely against the use of a PPA in employment decisions" (John Lecuyer, telephone interview, June 3, 1998).

Dr. O'Connor (1995), in an article for Firefighter News took the opposite view of the WFS and the IAFF by stating:

Recently, a few "politically correct" action groups assaulted the NFPA 1583 committee in an attempt to influence the outcome on the committee's work of developing recommendations for

physical performance and conditioning programs for their own purposes. They have every right to do so. However, I find it troubling that there is a chance that politics could prevail over science and common sense. There is something innately wrong with arguing for lowering standards and advocating tests that have no meaning when the fact and reality point to the opposite. (p. 30)

In 1996 the original 1583 committee was disbanded without obtaining approval for the document. In the same year a new committee was formed. "Ironically, the new committee is chaired by the president of the WFS and a majority of the committee members are from those organizations that were opposed to the initial 1583 draft document" (John Lecuyer, telephone interview, June 3, 1998).

The new task group postponed the work conducted by the initial committee on physical performance assessments. "The group will concentrate instead on developing more general health and fitness guidelines for fire service personnel" (Ostrow, 1996, p. 15). Ostrow (1997) goes on to discuss the comments made by the new NFPA 1583 task group chair person.

...the task group agreed that before the fire service might embrace physical fitness testing for recruitment and retention of its personnel, it first must be convinced that physical fitness plays an important role in the health, well-being and effectiveness of its members. (p. 15). "The new NFPA 1583 standard will not set minimal fitness standards, nor will it be intended to disqualify anyone from working on the fireground, the task group agreed" (Ostrow, 1997, p. 15).

The literature review pointed out that NFPA 1500 and 1582 were not definitive with regards to components of fitness programs; the documents only point out that a program should be in place.

NFPA 1583 was the first definitive document attempted, but failed for various reasons. "The new 1583 document is now available for public comment, but this fact is not widely known" (John Lecuyer, telephone interview, June 3, 1998). Research indicates the need for a clear and common consensus on firefighter physical fitness standards.

## **Procedures**

### **Literature Review Methodology**

The first step in the research process was to locate any books, professional journals, and Executive Fire Officer (EFO) research papers related to firefighter physical fitness. An initial computer search was conducted in January 1998 at the Learning Resource Center, located at the National Emergency Training Center in Emmitsburg, Maryland. A review of reference lists of EFO papers helped identify additional references not identified by the computer.

Computer searches were also conducted in February and March 1998 at the Clark County Public Law Library in Las Vegas Nevada, and the National Emergency Training Center's Learning Resource Center on-line card catalog, to locate additional material. The on-line card catalog was located on the world wide web, (Internet) at the following electronic address: <http://www.lrc.fema.gov>.

### **Survey Methodology**

Two survey instruments were used in the preparation of the project. The first, (appendix A) was intended to gather information on a national level for firefighter physical fitness programs; specifically

with regards to evaluation of personnel. The national survey instrument contains seven questions. Five questions required a yes or no response, and two contained multiple choice. A pilot survey was conducted on six RCFD personnel to see if there were any mistakes. Personnel indicated that the surveys were understandable and free of mistakes.

The target population of the national survey was career-paid departments in large metropolitan cities throughout the country. This population was chosen because the RCFD is a career-paid department. The survey was also used to compare our program with other similar departments. Addresses were obtained through the world wide web, utilizing America on-line (AOL) Net Find, at the following electronic address: <http://www.aol.com/netfind>. Packets were mailed to seventy eight departments on March 23 1998. Each packet contained the survey instrument, cover letter, (appendix B) and a self-addressed stamped envelope. Self addressed stamped envelopes were used to aid in increasing responses. Sixty four surveys were returned by the due date of April 25, 1998, for a return rate of eighty two percent.

The second survey instrument (appendix C) was used to gauge the RCFD personnel's perception of the current fitness program. A pilot survey was conducted on six firefighters. They were asked to review the survey for mistakes. The firefighters indicated that the survey was free of mistakes and understandable. The survey contained nine questions. Four questions were yes or no; four were multiple choice, and the last was open-ended to allow for personal viewpoints.

Seventy seven surveys were distributed on March 9, 1998 with a return date of March 23, 1998. Fifty nine surveys were returned by the due date, for a return rate of seventy five percent. It should be noted that the surveys were conducted one month prior to the April 1998 fitness evaluations.

### **Interview Methodology**

Four interviews were conducted between April and June 1998. Two interviews were conducted in person, and two by telephone. The purpose of the interviews were to obtain answers to the questions raised by the research project. Three of four persons interviewed were asked the following questions: What are the components of a physical fitness program? Should a physical ability test be used as an evaluation tool in a physical fitness program? Should physical fitness programs be mandatory or voluntary? And finally, Should aging be considered in the evaluation of personnel fitness and performance levels? In addition, each was asked general information questions regarding their area of expertise.

The four persons interviewed were: Chief Roland Benton, RCFD, Captain Jeffery Whisenant, RCFD Health and Fitness coordinator. Captain Whisenant also provided most of the fitness level data used in this project. Paul Davis Ph.D. and President of ON/TARGET CHALLENGE, Inc., Burtonsville, Maryland. And finally, Lieutenant John Lecuyer, Health and Fitness coordinator for the Aurora Fire Department, Aurora, Colorado. Lieutenant Lecuyer has a Masters degree in Exercise Kinesiology, and was an initial NFPA 1583 committee member.

## Definition of Terms

**VO<sub>2</sub> Max.:** the maximum amount of oxygen that can be used by a person stated in liters per minute or milliliters per kilogram of body weight per minute. It is the best single measure of cardiovascular (aerobic) fitness.

**Physical Fitness Assessment:** a test of a persons general fitness level. Assesses aerobic capacity, muscular strength, muscular endurance, flexibility, and body composition.

**Physical Performance Assessment:** often referred to as a physical ability test. A series of simulated job tasks performed against a time criteria, in full protective equipment to include: self contained breathing apparatus. Measures a persons ability to perform essential functions of firefighting.

**Par-Q:** a series of yes or no questions given to each fire department member before participating in the fitness assessment. A yes response to any of the following questions will require approval from the fire department physician before participation is allowed.

1. Has your physician ever said you have heart trouble ?
2. Do you frequently have pains in your heart and chest?
3. Do you feel faint or have spells of severe dizziness?
4. Has a physician ever said your blood pressure was too high?
5. Has your physician ever told you that you have a bone or joint problem such as arthritis that has been aggravated by exercise or might be made worse by exercise?
6. Is there a good physical reason not mentioned here why you should not follow an activity program even if you wanted to?



7. Are you over age 65 and not accustomed to vigorous exercise?

The Par-Q questionnaire was developed and copyrighted by the British Columbia Ministry of Health.

The Par-Q is part of the RCFD health risk screening appraisal for personnel.

**RISKO®-Heart Disease risk profile:** is the second part of the RCFD health risk screening appraisal for personnel. The profile is a chart with a number value given to the following items: age, heredity, weight, tobacco smoking, exercise, cholesterol and/or % of fat in diet, blood pressure, and sex. Anyone with a score of 31 or higher must obtain medical clearance to participate in the fitness assessment. RISKO® was developed by the Michigan Heart Association with Modifications by ARA/HUMAN FACTORS.

### **Limitations**

Although there was a large amount of material available on the subject of firefighter physical fitness, most was written by a small group of people. Because of this, it was difficult to get a wide range of viewpoints on the subject. Inexperience and a lack of training in interview and survey methodology may have hindered this project to some degree.

## Results

### Survey results

The national survey revealed that seventy percent of the respondents (45 of 64) had a fitness program in place. Thirty percent (19 of 64) indicated they had no program.

Question two asked: Is your program mandatory or voluntary? Fifty six percent (25 of 45) indicated that they had a mandatory program. Forty four (20 of 45) percent responded that they had a voluntary program.

Question three relates to time intervals for fitness evaluations. Seven percent (3 of 45) performed fitness evaluations on a quarterly basis. Seven percent (3 of 45) were conducted semi-annually. Sixty seven percent (30 of 45) were conducted annually, and nineteen percent (9 of 45) responded to "other"; of those, two stated that medical evaluations are used to evaluate fitness, the other seven responded by stating: that no evaluations were conducted.

Question four asked: Does your department utilize a physical ability test? Eighty four percent (38 of 45 ) responded yes, while sixteen percent (7 of 45) responded no.

Question five asked: Is the physical ability test part of your department's physical fitness evaluation? Forty percent (18 of 45) responded yes, while sixty percent (27 of 45) responded no.

Question six related to aging and fitness, and asked: Is age a factor in the evaluation process? Thirty three percent (15 of 45) responded yes, while sixty seven percent (30 of 45) responded no.

The final survey question was used to verify the type of department and if the survey had reached the intended target group. One hundred percent (64 of 64) indicated that they belonged to a career-paid department.

A further breakdown of the survey was done to determine differences between those departments with mandatory programs as opposed to those with voluntary programs. The breakdown will cover Questions two through six of the national survey.

**Figure 1.0**  
**National Survey Question # 2**

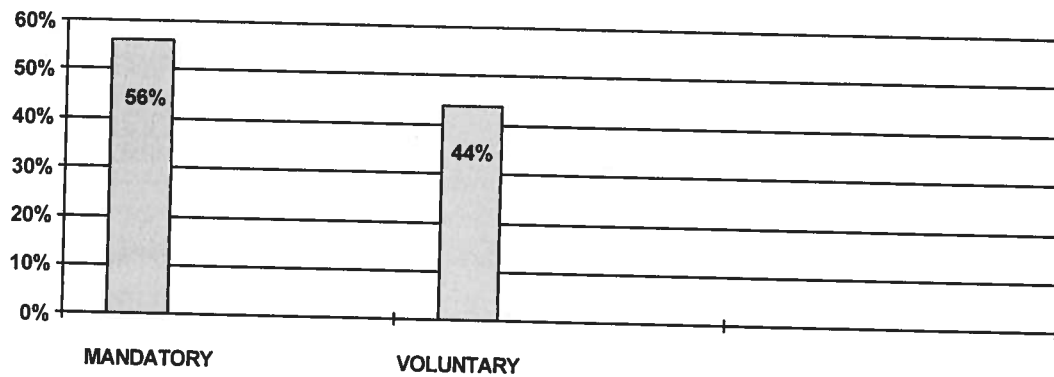


Figure 1.0 shows that fifty six percent (25 of 45) indicated that they had mandatory programs. Forty four percent ( 20 of 45) indicated that their program was voluntary.

Figure 1.1  
National Survey Question # 3

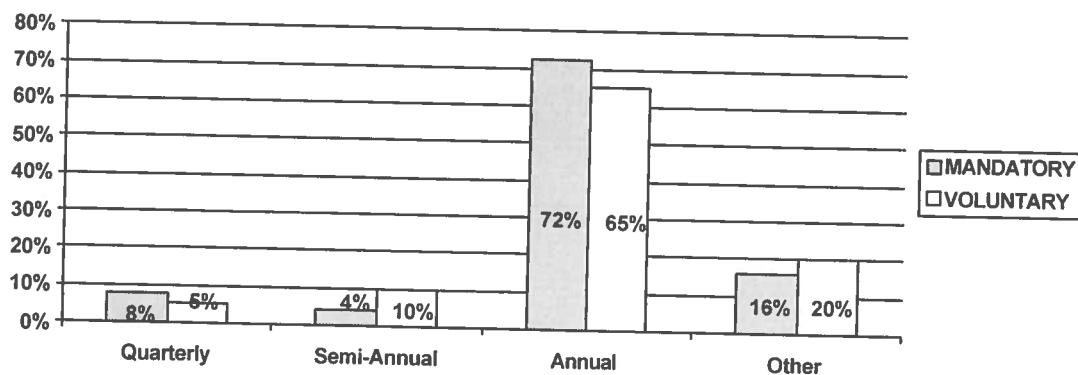


Figure 1.1 indicates the time intervals for fitness evaluations of personnel in mandatory as opposed to voluntary fitness programs. The majority of both programs conduct evaluations on an annual basis. Of the sixteen percent (4 of 25) in the "other" category in mandatory programs, one utilized a physical examination and the other three indicated that there was no evaluation. Of the twenty percent (4 of 20) in the "other" category in volunteer programs, one utilized a physical examination, and the other three indicated that no evaluation was conducted.

Figure 1.2  
National Survey Question # 4

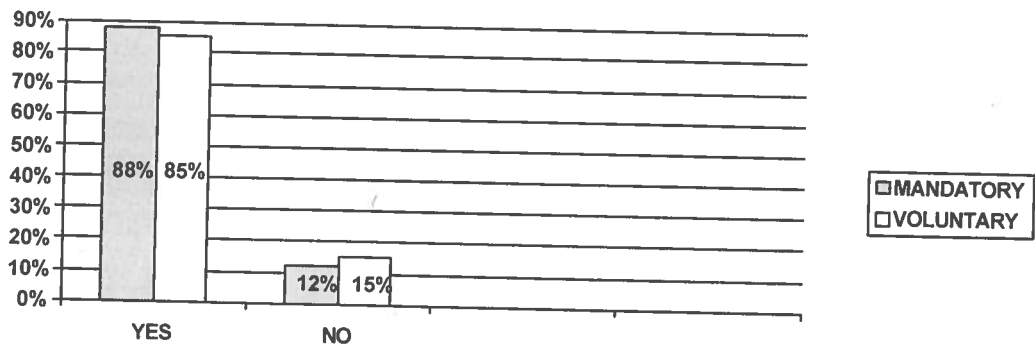


Figure 1.2 graphically illustrates that physical ability tests are widely use in the fire service. Eighty eight percent (22 of 25) of those in mandatory programs utilize the test, while eighty five percent (17 of 20) of those in voluntary programs utilize a physical ability test.

Figure 1.3  
National Survey Question # 5

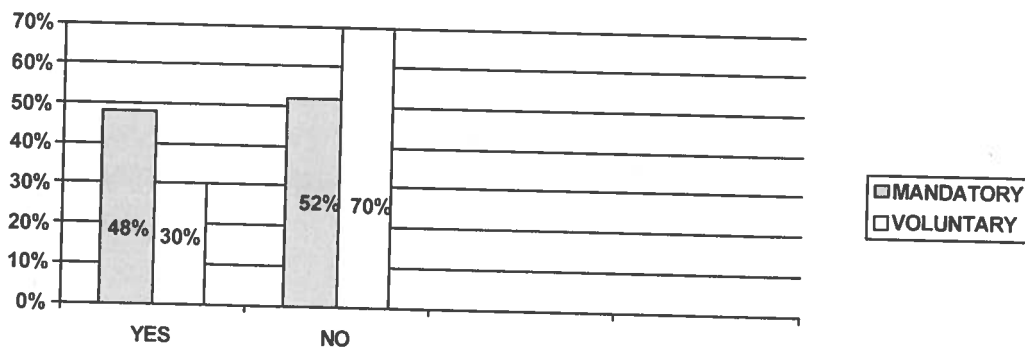


Figure 1.3 shows that forty eight percent (12 of 25) of those in mandatory programs utilize a physical ability test as part of their personnel's evaluation process. Only thirty percent (6 of 20) of those in voluntary programs utilize the test as part of the evaluation process.

Figure 1.4  
National Survey Question # 6

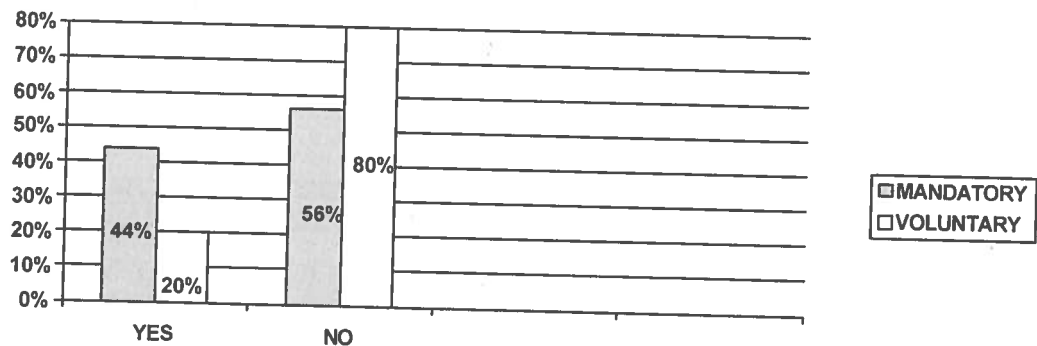


Figure 1.4 illustrates that the majority of both programs do not make allowances for aging in the evaluation process. Forty four percent (11 of 25) of mandatory programs do use age as a factor, while only twenty percent (4 of 20) of the voluntary programs make allowances for aging.

### RCFD Survey Results

The survey of the RCFD personnel was conducted to gain insight into personnel's perception of their physical fitness program. Questions six and seven identify initial and current fitness levels, and will be graphically presented. The survey is broken down into two parts; the first part of the survey will show answers to the questions by all personnel. The second part of the survey focuses on initial baseline, and current fitness levels of personnel by age group and will be graphically presented.

Question one relates to the evaluation process. Personnel were asked if they thought the evaluation process was accurate in determining their fitness levels. Fifty eight percent (34 of 59) indicated that they thought the process was accurate. Forty two percent (25 of 59) indicated that the evaluation process was not accurate in determining fitness levels.

Question two relates to increasing time criteria for physical ability testing as you get older. Forty five percent (27 of 59) responded yes. Fifty six percent (32 of 59) indicated that no changes should occur.

Question three asked personnel if they are in favor of eliminating the physical ability test for those who meet and maintain acceptable fitness standards. Eighty five percent (50 of 59) responded yes. Fifteen percent (9 of 59) responded no to eliminating the test.

Question four asked if personnel have benefited from participation in the physical fitness program. Ninety two percent (53 of 59) indicated that they had benefited from participation. Eight percent (6 of 59) indicated they had not benefited.

Question five asked personnel if they thought that the physical fitness program should be mandatory or voluntary. Seventy eight percent (46 of 59) thought the fitness program should be mandatory. Twenty two percent (13 of 59) felt the program should be voluntary.

Questions six and seven are graphically presented to show personnel's initial baseline fitness levels compared with their current fitness levels. It should be noted that the survey was administered one month prior to the April 1998 fitness evaluations.



**Figure 2.0**  
**RCFD Survey Questions 6 & 7**

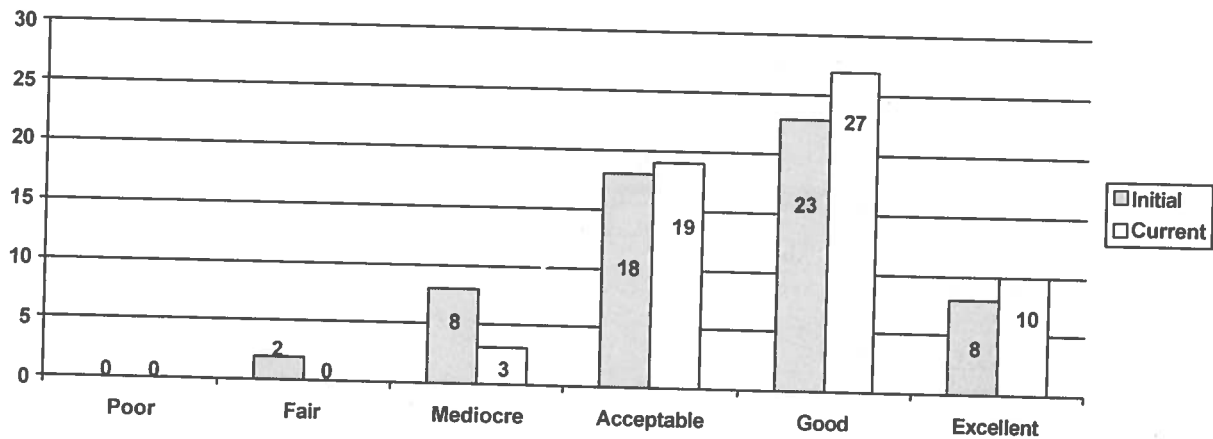


Figure 2.0 represents comparisons of respondents baseline fitness levels and their current fitness levels. The information contained in figure 2.0 illustrates decreases in the three categories below acceptable levels, while fitness levels increased in the levels of acceptable and above.

Question 8 asked for respondent's age group. Seven of the respondents were in the twenty to twenty nine age group, twenty five were in the thirty to thirty nine age group, twenty five were in the forty to forty nine age group, and two were in the fifty to fifty nine age group.

Question nine was an opened ended question, with respondents giving their personal opinions on what changes if any they would like to see in the fitness program. The recommendations varied. One issue mentioned frequently was the aerobic capacity evaluation. This evaluation is conducted utilizing a

step test. Sixty four percent (38 of 59) indicated that they would like to see another method for determining aerobic capacity.

The following figures illustrate fitness levels by age group, with the acceptable category meeting the RCFD minimum fitness standards. The figures encompass questions six, seven, and eight of the survey instrument.

**Figure 2.1**  
**RCFD Age Group 20 - 29**

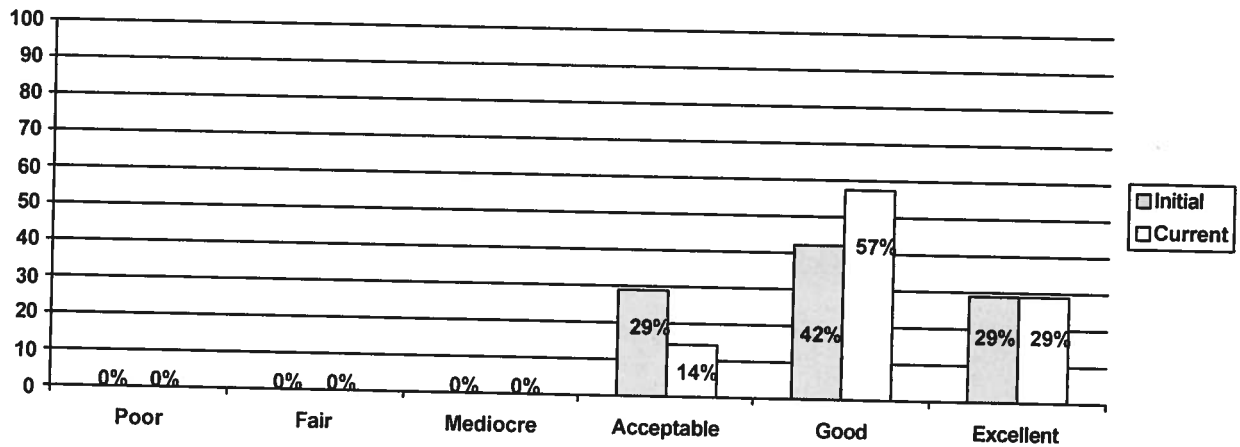


Figure 2.1 illustrates that all personnel in this age group were at or above acceptable fitness levels when initial baseline fitness levels were taken. A fifteen percent improvement has been realized. A fifteen percent decrease in acceptable levels coupled with a fifteen percent improvement in the good category has been shown.

**Figure 2.2**  
**RCFD Fitness Levels**  
**Age Group 30 - 39**

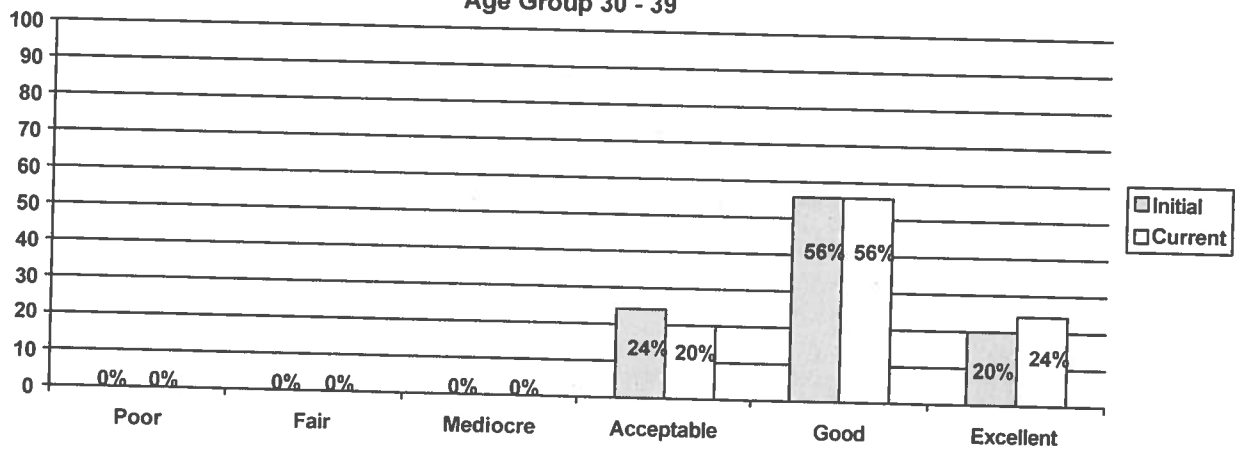


Figure 2.2 shows that all personnel in this age group were at or above acceptable fitness levels when baseline fitness levels were taken. Personnel in this age group had a four percent drop in the acceptable category, were constant in the good category, and increased by four percent in the excellent category.

**Figure 2.3**  
**RCFD Fitness Levels**  
**Age Group 40 - 49**

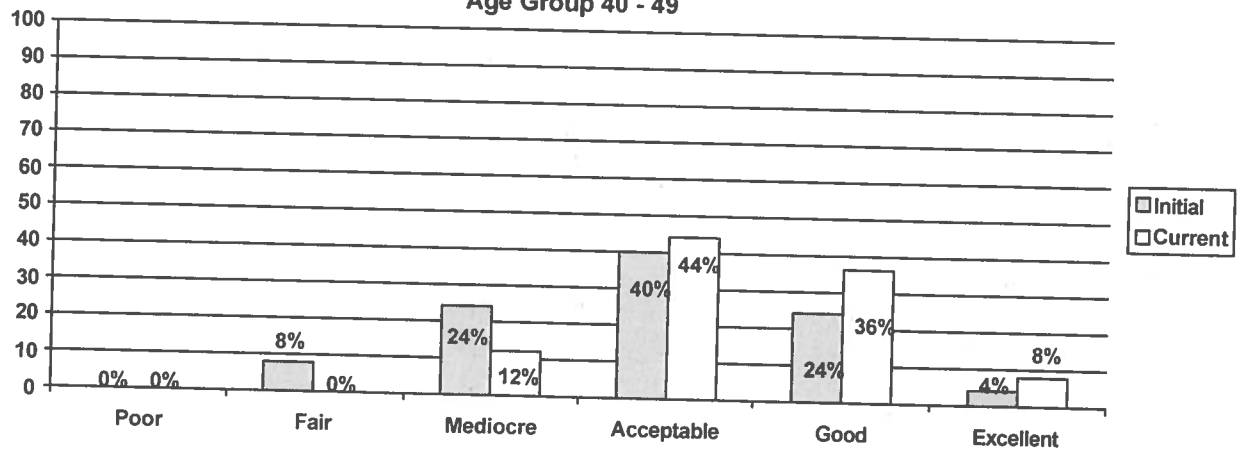


Figure 2.3 indicates that this age group had the most personnel below acceptable minimum fitness levels with thirty two percent. This age group was also able to show the most significant improvement with twenty percent increasing to, or above acceptable fitness levels. Further breakdown of the information revealed a twelve percent increase in the good category, and fifty percent increase in the excellent category.

**Figure 2.4**  
**RCFD Fitness Levels**  
**Age Group 50 - 59**

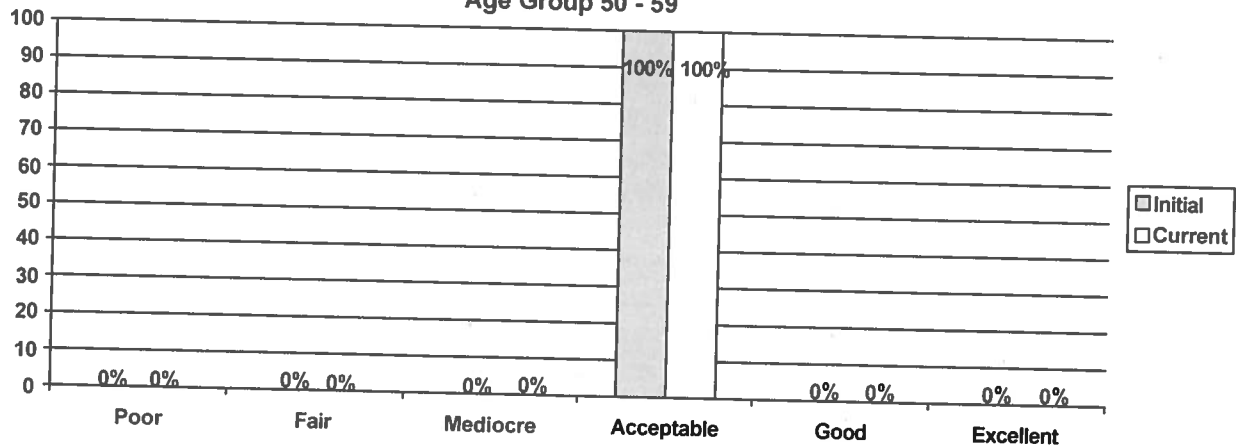


Figure 2.4 illustrates that personnel in this age group have maintained acceptable fitness levels since the fitness programs inception.

### **Interview Results**

The four persons interviewed for this project were: Chief Roland Benton, Captain Jeffery Whisenant, Paul Davis Ph.D., and John Lecuyer health and fitness coordinator, Aurora, Colorado. John Lecuyer was interviewed to provide background information on NFPA 1583. Results from the interview were used in the literature review and discussion sections of this project.

Should a physical ability test be used as an evaluation tool in a physical fitness program was the first question asked. Chief Benton thought that the test was an appropriate measure of personnel's ability to do the job. Dr. Davis indicated that the work sample testing "brings home the mail", and was

the best barometer of firefighter fitness. Captain Whisenant went on to say that those personnel maintaining minimum acceptable fitness standards should be exempt from physical ability testing. Captain Whisenant added: the test is an appropriate tool to determine fitness for duty for those personnel coming back from light duty and work-related injuries.

The second question asked, was whether or not physical fitness programs should be mandatory or voluntary. Chief Benton felt that a mandatory program was the only way to ensure that personnel maintain their fitness levels. Chief Benton also felt that implementation of fitness standards sends a clear message to personnel that administrators are serious about the issue of fitness.

Captain Whisenant agreed that fitness programs should be mandatory. Captain Whisenant felt that a mandatory program was the only way to achieve success.

Dr. Davis agreed that mandatory programs are the only way to verify if members are truly capable of physically performing their jobs. Dr. Davis feels that mandatory programs benefit those in most need of exercise, because they are required to participate.

The final question asked, was if aging should be considered in the evaluation process? Chief Benton felt that age should not be a factor. Chief Benton stated that the job doesn't change; it is the same for everyone.

Captain Whisenant echoed Chief Benton, and felt that if the requirements for the job don't change, there was no reason to make accommodations for aging.

Dr. Davis simply stated: that the "job is the job"; the "hose is the hose"; the job is the same for everyone. Accommodations should not be made for aging.

## Answers to Research Questions

### Question 1:

What are the components of the RCFD physical fitness program?

#### Answer:

The department's physical fitness program is a mandatory program with a minimum fitness standard identified for all personnel. The components are: a health and fitness coordinator, with four assistant coordinators, who provide training and exercise prescription, as well as testing of all personnel. Health risk screening and appraisal, medical physicals conducted annually, technical assistance provided by ARA/Human Factors HealthFit®, incentive program, testing, and a formal written policy, (appendix D) which explains the components of the program.

There are six categories of fitness levels in the program; the levels are: poor, fair, mediocre, acceptable, good, and excellent. Each is given a specific point total; 14 or less for poor, 15 to 39 for fair, 40 to 59 for mediocre. The following categories represent those categories at or above RCFD minimum fitness levels; Acceptable, 60 to 69, good, 70 to 84, and 85 points and above is considered excellent.

### Question 2:

Have there been significant improvements in RCFD personnel fitness levels since the physical fitness program was implemented?

#### Answer:

Yes. The following figures identify the improvements made in the components of fitness.

**Figure 3.0**  
**RCFD Initial Baseline**  
**Fitness Levels, February 1995**

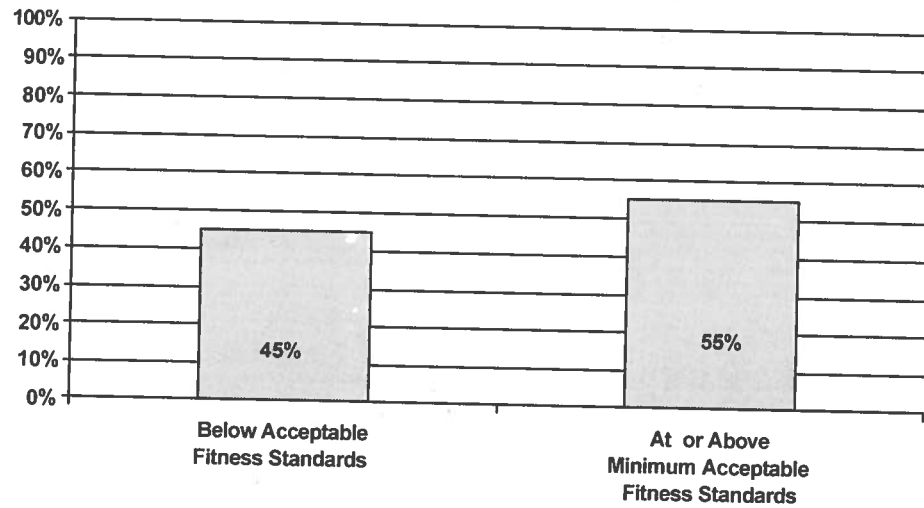


Figure 3.0 graphically illustrates the poor physical condition of the department as a whole. Baseline fitness levels were taken in February 1995, and indicated only fifty five percent at or above acceptable fitness levels.



**Figure 3.1**  
**RCFD Fitness Levels**  
**April 1998**

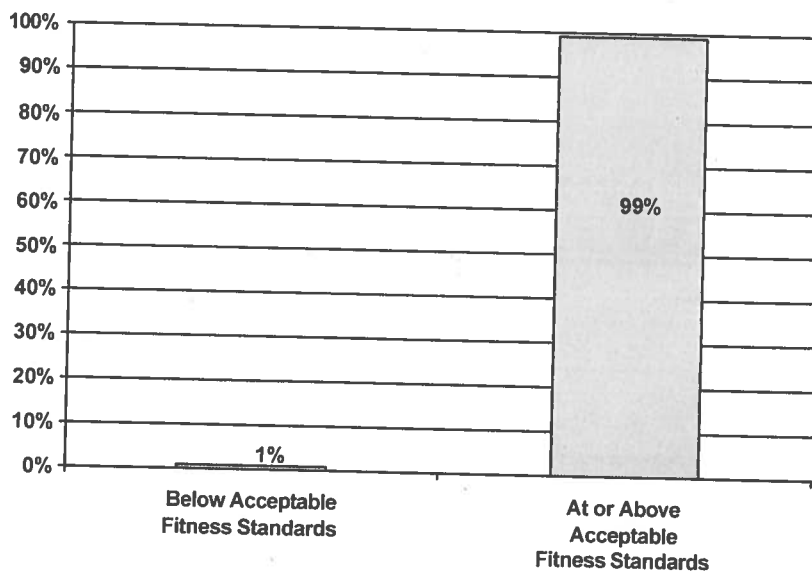


Figure 3.1 indicates the significant improvement in fitness levels since the inception of the physical fitness program. Ninety nine percent of the department is at or above acceptable fitness standards for the April, 1998 Fitness evaluations.

To further illustrate the improvement made by RCFD personnel, a comparison of the initial baseline and current components of fitness are graphically presented.

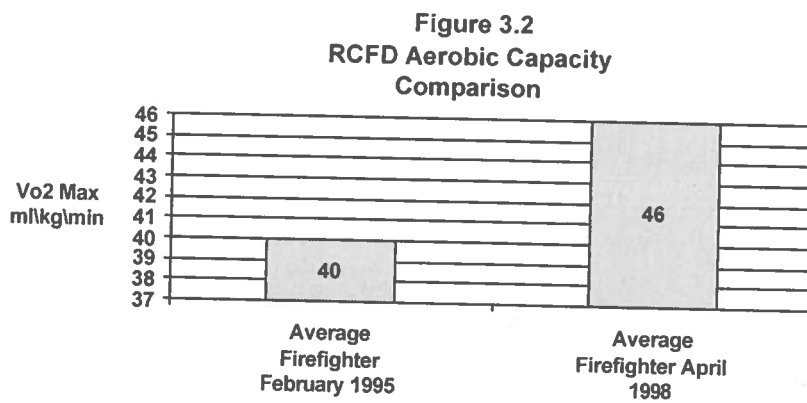


Figure 3.2 indicates improvement in RCFD personnel's aerobic capacity. Initial aerobic capacity of 40 VO<sub>2</sub> Max. was at the recommended minimum for firefighting. The April 1998 level of 46 VO<sub>2</sub> Max. is now above the recommended 45 VO<sub>2</sub> Max. needed to overcome fatigue during firefighting operations.

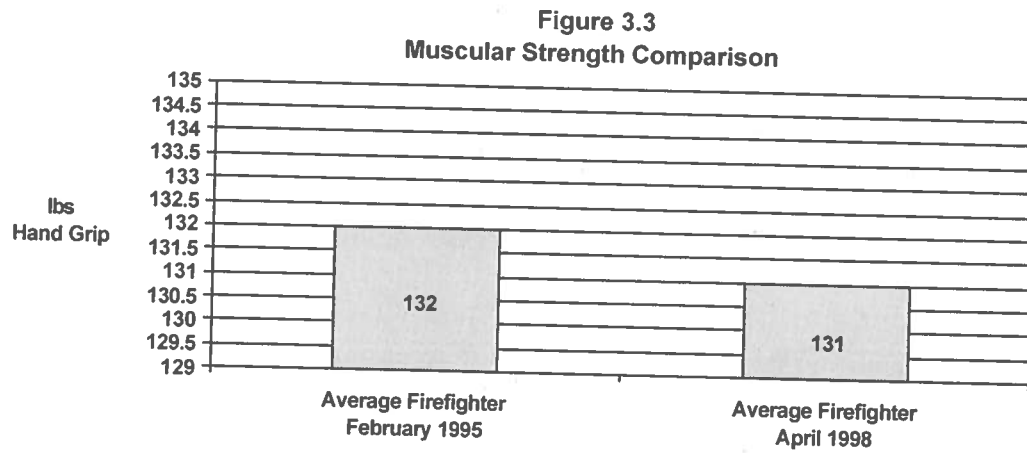


Figure 3.3 indicates a slight decrease in muscular strength when compared to initial baseline scores. However, it should be noted that both levels exceed the ON-TARGET maximums for muscular strength, which is 119 pounds.

**Figure 3.4**  
**Muscular endurance Comparison**

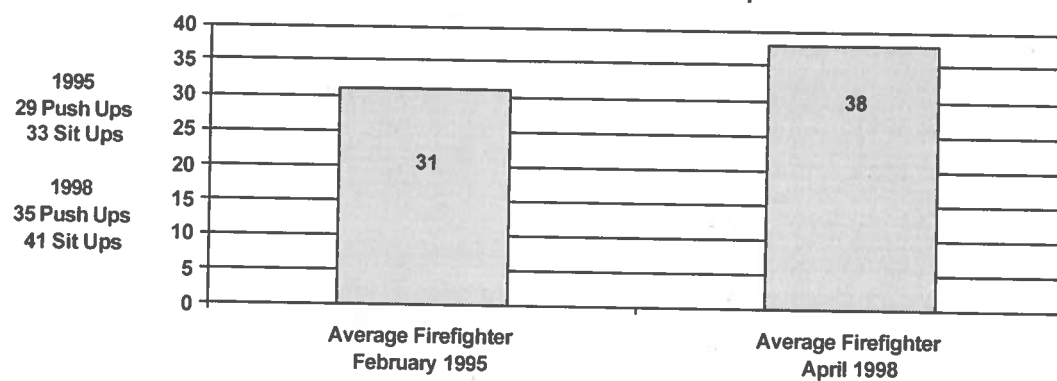


Figure 3.4 indicated significant improvement in muscular endurance. Combining sit-ups and push-ups, then dividing by two, gives an average score in the category. The initial score fell into the average category, while the April 1998 score is in the good category.

**Figure 3.5**  
**Flexibility Comparison**

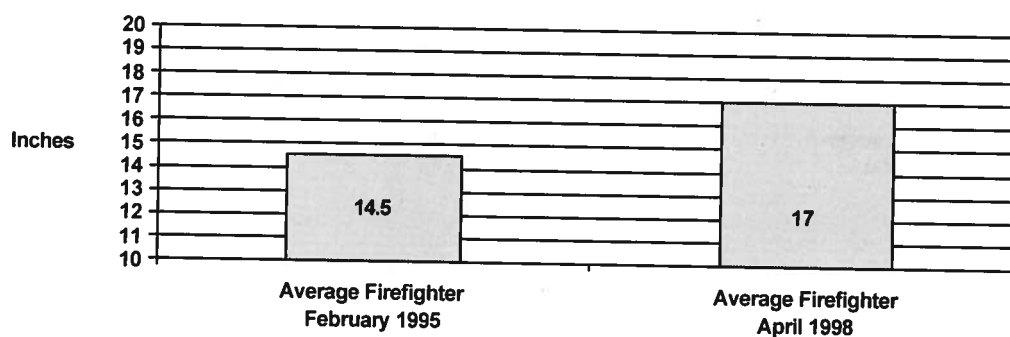


Figure 3.5 indicates that initial flexibility scores were in the good category. Flexibility scores for the April 1998 assessment have improved to the excellent category.

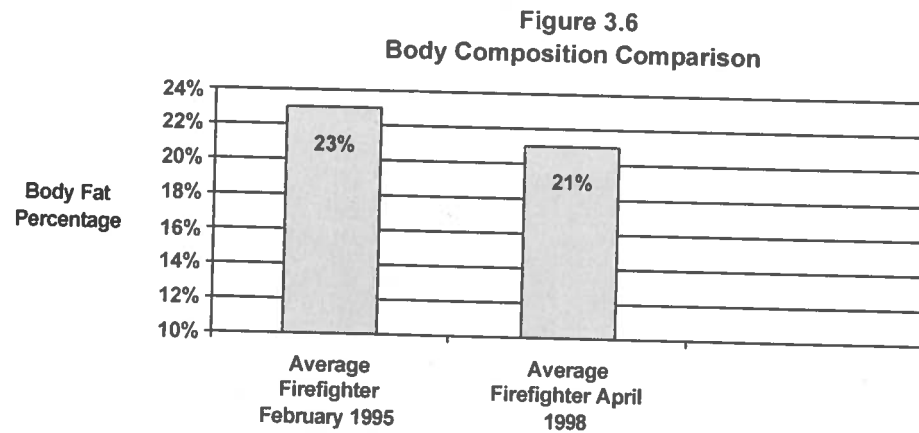


Figure 3.6 shows only a modest improvement in body composition. A two percent improvement has put RCFD personnel in the average category.

**Question 3:**

Should a physical ability test be used as an evaluation tool in a physical fitness program?

**Answer:**

Yes. The research indicated the differences between fitness evaluations and performance evaluations. The physical ability test is non-discriminatory, and job-related. The test is also the best indicator of one's ability to perform the essential functions of the job. Federal law indicates that physical ability tests are appropriate for employment decisions.

**Question 4:**

Should physical fitness programs be mandatory or voluntary?

**Answer:**

Mandatory. Research indicates that mandatory programs are best for the fire service. The benefit of a mandatory program is: that it is all inclusive, everyone, specifically those in most need of exercise are required to participate and maintain minimum acceptable fitness standards.

**Question 5:**

Should aging be considered in the evaluation of personnel fitness and performance levels?

**Answer:**

No. Research points out that the job is the same for everyone. The equipment and the fireground tasks are the same for a 25 year old as they are for a 50 year old. Research also indicates that regular exercise can actually slow down the aging process and increase your work capacity.

**Discussion**

Firefighting is a dangerous and physically demanding occupation. Research indicates that a firefighters physical fitness capacity is a clear indicator of their ability to do the job. Firefighters arrive on scene wearing approximately fifty pounds of personal protective equipment. As rapidly as safe to do, expend enormous amounts of energy deploying the necessary equipment needed to rescue citizens and extinguish the fire.

The literature review identified the benefits of participation in a mandatory physical fitness program. The results of the study clearly showed significant increases in RCFD fitness levels after implementing a mandatory physical fitness program. At the programs inception, the baseline fitness levels were very poor for an organization paid to protect its citizens. Only fifty five percent of personnel were at acceptable minimum fitness levels. Personnel were given a thirty month phase-in period to meet the minimum acceptable standards set-forth by the Chief. Current levels are at ninety nine percent at or above accepted minimum fitness standards. Clearly, the program has been a success.

It is interesting to note that when the RCFD fitness program was implemented, many personnel thought the program was being "shoved down their throats". The survey of RCFD personnel indicated that seventy eight percent (46 of 59) now feel the program should be mandatory. Ninety two percent (53 of 59) felt they had benefited from participation in the fitness program. National survey results indicated that fifty six percent (25 of 45) have a mandatory program in place. It should be noted that voluntary programs do not attract those in most need of fitness.

Evaluation of personnel continues to be a controversial subject in the fire service. The RCFD evaluates it's personnel fitness levels every twenty weeks. As an incentive, personnel who maintain accepted fitness levels, are not required to take the physical ability test. The physical ability test is administered to all candidates and any incumbent not meeting minimum fitness standards. The ability test is also used for fitness for duty decisions for those personnel coming from light duty and work related injuries.

The research supports the use of physical ability testing for both candidates and incumbent firefighters. The national survey results indicated that physical ability testing is widespread in the fire

service. Eighty seven percent (39 of 45) of those departments responding to the national survey indicated the use of a physical ability test. However, only forty percent (18 of 45) were utilizing the test in evaluation of their personnel's physical performance. It is assumed that the majority of physical ability testing is conducted on candidates.

The research confirmed that content-validated physical performance tests identify to fire service administrators and firefighters, that they have the physical ability to perform the essential functions of the job. The review indicates that a job-related physical performance test mirroring the essential functions of firefighting, is the most legally defensible in employment decisions.

Allowing differing standards on the basis of age, race, and sex is now illegal under federal employment law. The literature review was clear in identifying that accommodation for aging was not necessary. The affects of aging as identified by the research can be significantly reduced through a program of vigorous exercise. The review indicated that older workers could slow down the aging process and increase their work capacity by participating in a structured fitness program.

The RCFD does not make accommodations for aging. However, national survey results indicated that thirty three percent (15 of 45) did make accommodations. Surprisingly, when comparing mandatory programs to voluntary programs, forty four percent (11 of 25) of those with mandatory programs indicated that age was a factor in the evaluation process; compared to only twenty percent (4 of 20) for those with voluntary programs.

Results of the national survey indicate that departments are addressing the fitness issue. Seventy percent (45 of 64) indicated that a program is in place. The survey also indicates the differences between departments in how personnel are evaluated, whether or not physical ability tests are used,



mandatory or voluntary participation in a program, and at what time intervals individuals are evaluated.

Clearly a definitive standard is needed.

In discussing national standards on firefighter physical fitness, the research did indicate that there was a draft document available for review. However, the documents existence is not widely known. The author was only able to discover that there was a document after interviewing the health and fitness coordinator for the Aurora Fire Department, Lieutenant John Lecuyer.

Lieutenant Lecuyer went on to discuss the document by stating that he: "thought it was a watered down version of the original NFPA 1583 document"(John Lecuyer, telephone interview, June 3, 1998).

The author was able to find only one article that discussed the issue of the new NFPA 1583 committee and the draft document currently available. The article covered statements made by the new committee chair person. One of the comments made by the chair person is troubling.

While discussing physical fitness testing and whether or not the committee might embrace testing the committee must... "be convinced that physical fitness plays an important role in the health, well being and effectiveness of its members" (Ostrow, 1997, p. 15).

The above statement is troubling, given the amount of scientific research available on the subject of physical fitness. One can draw the conclusion that the new committee is not taking the issue as seriously as the original committee had.

The research validates the physical fitness program implemented by the RCFD administration. Significant improvement in personnel fitness levels, as well as improved attitudes toward the program have occurred.

## Recommendations

The problem that initiated this paper was the lack of a definitive standard on firefighter physical fitness programs. The purpose of the paper was to evaluate the RCFD physical fitness program and identify fire service trends in physical fitness programs. Based on the results of this project the following recommendations are offered.

The RCFD should rethink its position on utilization of the physical ability test as an incentive for maintaining acceptable fitness levels. Research clearly indicated that physical ability testing should be utilized in a comprehensive fitness program, and that all members should participate in a physical ability test at least annually.

The formation of a fitness committee is also recommended. Currently program decisions are made by the fitness coordinator. Survey results indicated that personnel would like to see some changes made in the fitness evaluations; specifically with regards to the use of the step test in determining aerobic capacity. Forming a committee would build on an already good attitude towards the program.

Fire service administrators should review NFPA 1500 which requires the implementation of a mandatory physical fitness program. The NFPA should also make it widely known that a document on firefighter physical fitness is available for review. Some middle ground should be found between the initial 1583 document and the current draft.

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## **Appendix A**

National Survey

## PHYSICAL FITNESS PROGRAM SURVEY

**Instructions:** Listed Below are Questions concerning your Fire Department's Physical Fitness Program. Please place a "X" in the appropriate box that best reflects your honest answer. Thank you for your participation.

1. Does your department have a physical fitness program?

**YES**                      **NO**  
                                     

**NOTE:** If you answered "NO", please stop here and place the survey in the self-addressed stamped envelope. This information is an important part of the research. **PLEASE RETURN TO SENDER.**

2. Is your physical fitness program voluntary or mandatory?

**VOLUNTARY**                      **MANDATORY**  
                                     

3. At what time intervals are your personnel's fitness levels evaluated?

**QUARTERLY**                      **SEMI-ANNUAL**                      **ANNUAL**                      **OTHER**  
                                                                                                                 

4. Does your department utilize a physical ability test?

**YES**                      **NO**  
                                     

5. Is the physical ability test part of your department's physical fitness evaluation?

**YES**                      **NO**  
                                     

6. Is age a factor in the evaluation process?

**YES**                      **NO**  
                                     

7. Is your Department career paid? Please answer **YES**  or **NO**  If "No" indicate type, (Volunteer, Combination, Paid on-call, etc.) \_\_\_\_\_

## **Appendix B**

Survey Cover Letter



460 N. Battle Mountain Dr.  
Las Vegas NV. 89110  
702-459-0316

23 March 1998

Dear Training/Safety officer:

My name is Douglas Lautner. I am an Assistant Chief from Las Vegas NV. As part of the National Fire Academy's Executive Fire Officer program, I am conducting research for a project on Firefighter physical fitness programs. Enclosed is a survey on your departments physical fitness program. Would you please answer the survey questions and return to me by 25 April 1998. I have enclosed a self-addressed stamped envelope for your convenience.

I would like to express my appreciation to you for your assistance in this project. If you would like the results of this project or a copy of the paper when it is completed, or if you have any questions, please let me know. I can be reached at the above listed telephone number or by email at: <lautner@skylink.net>.

Thank You

Douglas P. Lautner

DPL

Enclosures: 2

## **Appendix C**

RCFD Personnel Survey

# PHYSICAL FITNESS PROGRAM SURVEY

**Instructions:** listed below are questions concerning this fire department's physical fitness program. Please place a "X" in the appropriate box that best reflects your honest answer. Question # 9 requires a written response. This survey is voluntary and your name is not required. If you do not wish to participate please return the survey to me. Thank you for your participation.

1. Do you feel that the current evaluation process is accurate in determining your fitness level? YES  NO

2. Should the time limit for the physical ability test be increased as you get older? YES  NO

3. As an incentive, are you in favor of eliminating the physical agility test for personnel who meet and maintain minimum acceptable fitness standards? YES  NO

4. Do you feel that you have benefited from participation in the physical fitness program? YES  NO

5. Do you think the physical fitness program should be voluntary or mandatory?

VOLUNTARY  MANDATORY

6. What was your initial Baseline Fitness Level?

POOR  FAIR  MEDIOCRE  ACCEPTABLE  GOOD  EXCELLENT

7. What is your current Fitness Level?

POOR  FAIR  MEDIOCRE  ACCEPTABLE  GOOD  EXCELLENT

8. What is your current age group?

20-29  30-39  40-49  50-59  60 and Over



## **Appendix D**

RCFD Physical Fitness Program Policy

## **Physical Fitness Conditioning and Training Policy for Fire Protection & Emergency Services**

**Philosophy:** We have the responsibility of deploying a firefighting and emergency response force well versed in many specialized skills. Consistent with this mission, members must maintain a physical capacity to perform arduous tasks of effective fire combat and related duties and each firefighter must be physically and mentally prepared for the associated levels of risk to its members.

Because of the hazardous and physical nature of firefighting/emergency response, the department will not knowingly deploy individuals who are physically unfit to do the job. A primary purpose of the physical fitness program is to promote an appropriate level of physical fitness among our members and to establish an acceptable system which measures basic physical conditioning to ensure every firefighter maintains the physical ability to perform the job as safely and efficiently as possible.

**Purpose:** The Purpose of this policy is to establish a mandatory physical fitness conditioning and training program that meets or exceeds Air Force Instruction 32-2001, Air Force Manual 32-2002, NFPA 1500, and outline procedures for fitness assessments and proficiency criteria.

**Performance Standard:** In order to be considered a combat firefighter, personnel must maintain an appropriate state of physical conditioning. Physical fitness levels must be achieved that will permit the performance of required tasks of emergency response efficiently and without undue risk to themselves or others. To maintain this standard the department has adopted the ARA Human Factors "HealthFit" fitness program, and set our minimum standard at the "Acceptable" level. This is a minimum score of 60 points out of 100.

**Application:** This policy applies to all Range Complex Fire Department members.

**Responsibility:** The physical fitness conditioning and training program will be managed by a primary certified fitness coordinator. Assistant certified fitness coordinators on each shift will conduct program implementation and are responsible for ensuring that each firefighter on their respective shifts meet the physical performance requirements of this plan. Each member is responsible for achieving and maintaining their own physical condition consistent with this program up to and including the management of personal time to allow for quality fitness training. At no time will physical training inhibit the capability to respond to emergencies or other mission requirements.

Participation in general physical fitness training is **Mandatory** for all firefighters. All personnel are expected to participate in physical conditioning a minimum of two out of every three work day periods. These physical conditioning periods should consist of at least 60-90 minutes of appropriate physical exercise<sup>1</sup>. Fitness coordinators will design individual programs for members and will assist personnel as necessary. Members not meeting the minimum standards will be closely monitored with their exercise program for a sixty day period. At the end of the sixty day period they will be re-evaluated in accordance with established guidelines. If the member still has not met the minimum standards then further evaluation will be needed, up to, and including the initiation of the disciplinary process.

If at any time during the testing process it is suspected that there is a physical limitation that is responsible for a member's lowered fitness level, the individual will be immediately sent to the department physician. If it is determined that the member is not complying with the program, that person will be subject to progressive disciplinary action IAW established department policy.

**Limited Duty Rehabilitation:** Consistent with the scope of the policy, personnel on a limited duty status will still be required to maintain their physical fitness level (depending on the type of injury) through a physician approved exercise program.

**Procedures:** A General Fitness assessment will be conducted every 20 weeks after the baseline evaluation. The general fitness assessment documenting the performance of each individual will be maintained by the primary fitness coordinator.

**Medical Clearance:** annual medical examinations in accordance with NFPA 1500 and 1582 are provided to all firefighters. Individuals in full duty status are considered to be healthy and capable of performing fitness assessments, and exercise programs. This program was screened by the department physician who "strongly recommended" this fitness assessment and training program.

To ensure individuals maintain a health status that does not adversely affect job performance, a health risk appraisal will be conducted, using the PAR-Q and RISKQ questionnaires as part of the fitness evaluations. Any "yes response on the PAR-Q, a blood pressure greater than 140/90 (ARA criteria), or a score above 31 on the RISKQ that was not previously noted, would preclude undergoing a physical assessment or engaging in an exercise program until further medical clearance is obtained.

**Incentives:** Where possible, the department will highlight the obvious benefits of exercise to an individual's health, i.e., helping to lower cholesterol, reducing the risk factors that lead to Coronary Heart Disease, helping to lower excess weight, and improving strength, stamina, and

---

<sup>1</sup> Appropriate physical exercise is considered to be a combination of aerobic and strength training

energy. Additionally, we have an award program honoring those members who meet the higher standards of the Excellent/Gold and Good/Silver categories. These individuals are awarded with a T-shirt printed with the appropriate Silver or Gold award logo and a certificate of achievement. The department also awards certificates for "Best in Department" and "Most Improved. Any Combat Firefighter who meets or exceeds acceptable physical fitness standards will not be required to take the physical ability test.

**General Fitness Evaluation:** Every successful fitness program begins with some type of health screening and fitness assessment. This physical fitness conditioning and training policy will provide five major benefits to exercise participants:

1. Minimize risks to individuals with physical limitations.
2. Provide a reference point for comparison with future progress.
3. Develop an exercise program specific to the needs of each subject.
4. Provide realistic expectations for improvement.
5. Provide incentive and motivation for adherence and improvement.

All personnel will undergo a baseline evaluation with a reassessment every 20 weeks. Each assessment will consist of evaluations of the five basic components of fitness:

1. *Aerobic Capacity:* a five minute step test conducted on a 15 ¾ test bench at a ninety beat -per-minute cadence. The exercise heart rate is taken at the end of the test, and from this, an aerobic capacity value is given based on the body's ability to take up and use oxygen (VO<sub>2</sub> Max.).
2. *Muscular Strength:* uses a hand grip dynamometer to test hand grip strength in pounds. Basic grip strength is a general indicator of overall body strength.
3. *Muscular Endurance:* combines the number of sit-ups (maximum number in two minutes) and push-ups added together, then divided to form a numerical value. This value shows the ability to use dynamic strength repeatedly of a given period of time.
4. *Flexibility:* a sit and reach test device is used to measure lower back and leg flexibility.
5. *Body Composition:* circumference measurements of the abdomen an neck (male), and abdomen, neck, and hips (female) to give a value that is calculated to show the percentage of body fat.

After the baseline and each subsequent assessment, a conference will be held with the individual to review test results. The results of the fitness assessments will be the basis of individualizing physical training programs. All assessments will be conducted using the protocols contained in the Fitness Coordinator's Manual. **All assessment data will be treated confidentially.**



**Jennifer Hollingsworth**





**From:** webstore@leisurefitness.com  
**Sent:** Saturday, February 21, 2015 10:13 PM  
**Subject:** Your Shopping Cart Content - Leisure Fitness Equipment



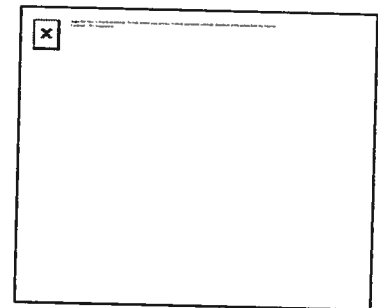
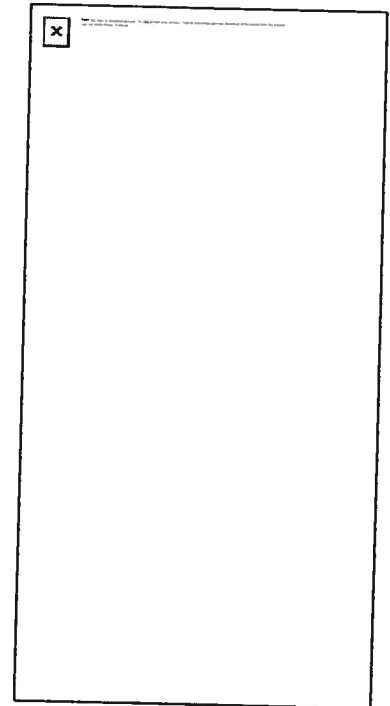
(800) 929-1859 • FIND A STORE

HOME FITNESS • COMMERCIAL FITNESS • BILLIARDS & GAMING

**jhollingsworth@whitepinecountynv.gov**, please find your basket items below:

	Product Name	#	Price
	Precor TRM 811 Treadmill <i>No Entertainment Options - \$0.00</i>	1	\$6,995.00
	Precor EFX 835 Elliptical Fitness Crosstrainer <i>No Entertainment Options - \$0.00</i>	1	\$7,495.00
	Precor Super Bench <i>Gloss Metallic Silver - \$0.00 Black - \$0.00</i>	1	\$1,100.00
	Inflight Fitness 2-Tier Hex Dumbbell Rack	1	\$795.00










**Subtotal: \$16,385.00**



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Shopping Cart				
Item	Options	Unit Price	Qty.	Cost
 <a href="#">York "Legacy" Solid Round Professional Dumbbells - 5LB - 50LB Set</a> <a href="#">[remove]</a>		\$949.00	<input type="text" value="1"/>	\$949.00
 <a href="#">York "Legacy" Solid Round Professional Dumbbells - 55LB - 100LB Set</a> <a href="#">[remove]</a>		\$2,299.99	<input type="text" value="1"/>	\$2,299.99
 <a href="#">Body Solid GVKR60 Vertical Knee Raise &amp; Dip Station</a> <a href="#">[remove]</a>		\$360.00	<input type="text" value="1"/>	\$360.00
 <a href="#">TKO 56cm Fitness Ball with Pump and Chart</a> <a href="#">[remove]</a>		\$25.99	<input type="text" value="1"/>	\$25.99
 <a href="#">Heavy Duty Home Gym Mat - 4' x 6'</a> <a href="#">[remove]</a>		\$99.99	<input type="text" value="10"/>	\$999.90
 <a href="#">Body Solid Functional Training Center</a> <a href="#">[remove]</a>	Protective Mat : None	\$1,940.00	<input type="text" value="1"/>	\$1,940.00
 <a href="#">BodyCraft F660 Hip Sled / Leg Press</a> <a href="#">[remove]</a>		\$1,989.00	<input type="text" value="1"/>	\$1,989.00
 <a href="#">Troy Premium Grade Olympic Plates - 500 Lb Set</a> <a href="#">[remove]</a>		\$899.99	<input type="text" value="1"/>	\$899.99
 <a href="#">Landice U7 Upright Bike</a> <a href="#">[remove]</a>		\$2,595.00	<input type="text" value="1"/>	\$2,595.00
			<a href="#">Update</a>	
			<b>Subtotal:</b>	\$12,058.87
			<b>Total:</b>	\$12,058.87

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**Nevada Public Agency Insurance Pool  
Public Agency Compensation Trust  
Risk Management Educational Grant Application**

### **Grant Application Program Information:**

**Background:** The Nevada Public Agency Insurance Pool (POOL) and Public Agency Compensation Fund (PACT) have funds available to grant to member agencies that have their property/casualty and/or workers' compensation coverage through POOL/PACT for a variety of educational initiatives.

**Purpose:** To provide members with funding necessary to attend training to reduce, mitigate, eliminate or otherwise control risk through the purchase of equipment, training and other resources.

**Funding:** Funds will be provided up to \$2,000 per person/per year for a total of four people from each member entity.

**Submission of Applications:** The Risk Management Educational Fund is a rolling grant fund. Grant applications may be submitted at any time of the year. Grants must be submitted by the designated POOL/PACT Liaison. Applications are to be delivered to:

POOL/PACT  
201 S. Roop Street, Suite 102  
Carson City, NV 89701  
Email: [annwiswell@poolpact.com](mailto:annwiswell@poolpact.com)

Applications MUST be submitted electronically using the online submission form at [www.pool/pact.com](http://www.pool/pact.com). Applicants that file applications electronically will receive an email confirmation from the Grant Administrator. Applications will be approved or declined within 14 business days.

**Eligibility:** Applicant must be a current member of POOL/PACT as of the date that the application for the Grant is being made, and in the year the Grant will be distributed.

**Organization Information:**

Applicant/Member: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

**Educational Needs Statement:**

Explain how attendance at this educational conference, seminar or training event will reduce, eliminate, mitigate or otherwise control property/casualty risk or employee injuries. Attach supporting documentation including invoices/estimates:

**Amount Requested:** \$ \_\_\_\_\_

**Application authorized by (POOL/PACT governing member\*):**

\_\_\_\_\_

**Print Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

\*The POOL/PACT governing member is the individual listed as the voting member of your entity on the POOL/PACT Board of Directors *or* a (1) County, City, Town or GID Manager (2) a Human Resource Manager or (3) a School District Superintendent

**Nevada Public Agency Insurance Pool  
Public Agency Compensation Trust  
Risk Management Grant Application**

**Grant Application Program Information:**

**Background:** The Nevada Public Agency Insurance Pool (POOL) and Public Agency Compensation Fund (PACT) have funds available to grant to member agencies that have their property/casualty and/or workers' compensation coverage through POOL/PACT for a variety of risk management initiatives.

**Purpose:** To provide members with funding necessary to reduce, mitigate, eliminate or otherwise control risk through the purchase of equipment, training and other resources.

**Funding:** Funds will be distributed as follows:

<b>Risk Management Initiative</b>	<b>Matching Funds Required</b>
Property Risk	50% funding available
Liability Risk	75% funding available
Workers Compensation Risk	75% funding available

**Submission of Applications:** Grant applications are given consideration twice yearly.

<b>Application Deadline</b>	<b>Funding Date</b>
June 1	July 1
October 1	November 1

Applications are to be delivered to:

POOL/PACT  
201 S. Roop Street, Suite 102  
Carson City, NV 89701  
Email: [annwiswell@poolpact.com](mailto:annwiswell@poolpact.com)

It is recommended that the application be sent certified mail to receive an acknowledgement of receipt of the application. Applications will also be accepted in electronic form at the email address above. Applicants that file applications electronically will receive an email confirmation from the Grant Administrator.

**Application Availability:** Applications are available online at [www.poolpact.com](http://www.poolpact.com).

**Award Notification Date:** All applicants will be notified of their receipt or non-receipt of awards within 7 days of the funding date.

**Selection Criteria:** Applications will be reviewed and funds will be awarded using the following selection criteria:

- Presentation of a logical needs statement
- Organization's compliance with previous loss control recommendations
- Organization's financial hardship
- In depth description of the availability of the members matching funds

**Eligibility Requirements:**

**Eligibility:** Applicant must be a current member of POOL/PACT as of the date that the application for the Grant is being made, and in the year the Grant will be distributed.

**Application Guidelines:**

The POOL/PACT Loss Control Committee has the discretion in approving or denying any, all, or a portion of the grant applications.

Incomplete applications will be disqualified.

**The following are ineligible for funding:**

- Disposable Goods (safety glasses, ear plugs, gloves, boots, hats, etc...)
- Automatic Electronic Defibrillators
- Software Programs
- Firearms, Less Than Lethal Weapons, tactical equipment (*except for PPE*)
- Exercise Equipment
- Health & Wellness instruction/consulting
- State and/or Federally mandated testing or licensing fees



**Organization Information:**

Applicant/Member: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Department Involved: \_\_\_\_\_

Project Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Alternate Contact (if any): \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

The Project Contact and/or Alternate Contact may be contacted to provide additional information regarding the grant request to the Loss Control Committee. If additional information is needed for consideration, the Project Contact and/or Alternate Contact will be notified of the meeting date and time for the Loss Control Committee meeting.

## **Narrative (use additional pages as necessary)**

### **Part I. Needs Statement:**

This grant will help reduce, eliminate, mitigate or otherwise control the following risk or exposure to our entity (check all that apply):

- Workplace Injuries
- Liability for unsafe premises conditions
- Liability for negligence of entity and/or governing board
- Internal Fraud Prevention
- Property Theft/Vandalism
- Compliance with OSHA regulations
- Compliance with ADA regulations
- Automobile Accident Prevention

Attach supporting documentation including invoices/estimates:

**Part II. Explanation for lack of available funds:**

- a) Explain why your agency needs assistance to fund this risk management initiative.  
Please include an overview of the current budget and planned expenditures

- b) Please describe how the matching funds, if any will be obtained:

**Part III. Project Request:**

If benefits of this project will aid or involve other departments, members or organizations, please describe:

## FUNDING REQUEST

Total budget for this risk management initiative:      \$ \_\_\_\_\_

Portion funded by applicant:      \$ \_\_\_\_\_

POOL/PACT Funding Amount:      \$ \_\_\_\_\_

Project and application authorized by: (governing body):

\_\_\_\_\_

Signature (POOL/PACT Liaison): \_\_\_\_\_ Date: \_\_\_\_\_

Print Name (POOL/PACT Liaison): \_\_\_\_\_

Title: \_\_\_\_\_