

EXTRA-BOARD FIREFIGHTERS

Part Time Employees As An Alternative To Overtime

Executive Fire Officer Program

BY: Tom Riemar, Assistant Chief of Operations
Anderson Township Fire and Rescue Department
Cincinnati, Ohio

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Abstract

In an effort to provide additional manpower during emergency responses, the Anderson Township Fire and Rescue Department increased its minimum staffing levels from eight to ten firefighters per day in July of 1994. The department staffed eleven firefighters per day and allowed for two per day to schedule off for vacation, which created the need for overtime. In addition to the eleven shift personnel, the department had two firefighters used as floaters that would schedule one month in advance to cover three shifts in an attempt to prevent excessive overtime. Unfortunately, the overtime needed to maintain ten firefighters per day was more than the two floaters were able to control. Therefore, a search for another method to maintain minimum staffing while controlling costs and continuing their current service level began. A system, which integrated part-time employees, called “Extra Board” Firefighters was determined to be the best alternative and was officially implemented in 1996. Under the Extra Board system, fully trained firefighter paramedics were assigned to a shift, but only worked when the department was faced with paying full-time firefighters overtime to maintain minimum staffing levels. Extra-Board firefighters were not only required to be available to work their assigned shift, they were also expected to respond on short notice such as when a fellow employee became sick or injured.

This research project attempts to evaluate the effectiveness of the Extra-Board system versus the use of full-time firefighters in an overtime capacity. A combination of historical and evaluative research methods were used to answer the following questions:

1. Was the Extra-Board system effective in controlling overtime expenditures?
2. What was the cost comparison of the overtime used in 1995, to the Extra-Board system used in 1996?
3. What improvements could be made to the current system?

The procedures used in this project were to review written literature on part-time systems to evaluate their success and to review the Extra-Board system to evaluate its effectiveness.

Although no specific literature was available on the success or failure of the Extra-Board system, other publications indicated that part-time systems experienced similar results. Those results clearly indicated that the system was effective in controlling overtime expenditures.

During the 1995 calendar year, the Anderson Township Fire and Rescue Department encountered 6892.05 hours of overtime from its full-time firefighters at a cost of \$190,946.38. The implementation of the Extra-Board system in 1996 reduced those costs by \$90,447.95.

Recommended improvements to the system include creating a larger pool of Extra-Board firefighters with an eligibility list for hiring in the event an Extra-Board firefighter leaves the department. A larger pool of employees would allow for more flexibility in scheduling and reduce problems that occur from employee turnover. Encouraging acceptance of the Extra-Board firefighters by the full-time staff is also important. This may be accomplished by educating the full-time staff that the Extra-Board firefighters are supplemental only, and are not a threat to any full-time jobs.

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Introduction

The Anderson Township Fire and Rescue Department increased its minimum staffing level from eight to ten firefighters in July of 1994, resulting in increased overtime costs. The staffing level of firefighters assigned to each shift was eleven with the ability for two personnel per day to schedule leave. In addition to the shift personnel, two floaters were assigned each month to cover needed staffing positions for all three shifts. This schedule eventually became more than the two floaters could cover. The inability of the two floaters to cover needed positions forced the department to use full-time employees in an overtime capacity, creating larger than expected expenditures. The problem was that the current budget could not support the overtime expenditures created by the staffing increase. This forced the fire department into developing a system to maintain staffing while reducing expenditures.

The purpose of this research project is to study the method used to control overtime expenditures and evaluate its effectiveness.

This research project will contain a combination of historical and evaluative research to answer the following questions:

1. Was the "Extra-Board" system effective in controlling overtime expenditures?
2. What is the cost comparison of the overtime used in 1995, to the "Extra-Board" system used in 1996?
3. What improvements could be made to the current system?

Background and Significance

The Anderson Township Fire and Rescue Department experienced many organizational changes beginning in 1994. The minimum staffing level maintained prior to these changes was eight firefighters per day. Part of the re-organization was to increase the minimum staffing level from eight to ten firefighters per day. This was accomplished by scheduling eleven firefighters per day with two additional firefighters that would be scheduled between different shifts and different stations as needed to prevent the use of overtime. These floaters were scheduled a month in advance to cover all three shifts when overtime would be necessitated by two firefighters being scheduled off. The vacation system allowed for two firefighters to be scheduled off per day, using the floater to control the overtime created by the second person that was off on a scheduled vacation day.

During this period of time, Anderson Township was faced with two firefighters that had sustained injuries forcing them off duty for an extended period of time. This, along with routine illness, was more than the two floaters were able to cover. Even under normal circumstances the floaters could not provide coverage for all the open positions without receiving overtime themselves. The floaters were able to reduce some of the overtime but overall the expenditures were too high.

A search began to find a way to reduce the overtime expenditures while maintaining the ten-firefighter minimum. Many ideas were researched, and finally a system developed by the Lawrence Fire Department in Lawrence, Kansas was determined to be the best alternative. The department had a system that was called "Extra-Board" Firefighters. The system was designed to utilize part-time employees on an "on-call" basis. The employees would be

assigned to a shift for availability, but would only work if called in as replacement to maintain a minimum staffing level. This part-time system was unique in that it did not regularly schedule its part-time personnel, but used them only in place of overtime. The system was modified to fit the needs of the Anderson Township Fire and Rescue Department and fully implemented in January 1996. This system is currently in operation.

The system has had a major impact on the Anderson Township Fire and Rescue Department. In a matter of weeks, noticeable reductions in overtime were visible. Unlike some part-time systems, it utilized fully trained personnel, which enabled the department to continue its history of excellence in delivering customer service.

This research project will review the overtime calculated in the 1995 calendar year and the Extra-Board Firefighters program implemented in the 1996 calendar year, which directly relates to the Problem Solving and Organizational Change and Development chapters of the Executive Development Course at the National Fire Academy.

Literature Review

Although many departments use part-time employees to reduce payroll expenses while maintaining staffing, I found no published works that cover a system like the one originated in Lawrence, Kansas. I reviewed several articles and papers on the use of part-time employees and the following results were discovered.

I was surprised to find that much of the material I reviewed was from fire departments located in the state of Ohio, (Anderson Township Fire and Rescue Department's home state) and many of those departments found success in the use of part-time employees. In an article

by Rielage (Voice August/September 1993), the success of the part-time system used by the Colerain Township Fire Department appeared evident. Colerain, much like Anderson Township, grew in population rapidly and demands on the department grew faster than the funds available for personnel. Rielage wrote of the dangers of using paid on-call personnel and referenced an accident involving responding personnel in their own vehicles. Colerain used their part-time personnel quite differently than Anderson as they staffed part-timers on a daily basis and not just as replacement personnel. The results were staggering as Colerain used a staff of 25 full time and 130 part time personnel to cover 24 daily staffing positions. A full career staff of this size would cost Colerain an additional \$1.4 million. Reilage did state that to make this system work, the part-time employees had to be held to the same standards as full-time employees. They had to dress alike, wear the same gear, and meet all the necessary training requirements in order to be effective.

In his article (Firehouse May 1981) Stevenson discussed the paid on-call system for the three small towns. Those referenced in the article indicated that the system was working. Multiple training sessions were held to keep the personnel proficient but the system still had its problems. The paid on-call personnel typically worked a full-time job elsewhere and responded as needed, which requires the willingness of the primary employer to allow the firefighter to leave when necessary. More and more employers are reluctant to release employees from their primary jobs. Stevenson also referenced a large turnover as employees moved up in their companies and either had no time or were transferred, forcing them to leave the fire department. The system did provide great savings since the department only had to pay

the on-call firefighters when they were actually needed, as opposed to the need to pay personnel to be in house for 24 hours waiting for an emergency.

In a research paper written by Highley (Part-Time Firefighters, Are They Really an Effective Solution for Staffing Problems?) some new questions arose. Although he stated that the part-time solution was valuable and a cost-effective solution for staffing problems, he questioned the associated costs. Many part-time employees move on to other employment, creating a large turnover. Therefore associated costs such as training and testing for replacement personnel must be examined. Stevenson also talked about the fact that more part-time employees were needed to fill one full-time position. Additional costs associated with equipment, uniforms, training and annual physicals will be higher as more employees are needed in a part-time system, (see Appendix A). This is an issue that will be addressed in my evaluation of our system used during the time period evaluated.

It appears that a well-organized part-time system is a valuable way to cover manpower needs while keeping costs down. A research paper written by Ludwick, (Are Part-Time Personnel a Viable Solution For Daytime Staffing Problems), came to the same solution when looking to solve daytime staffing needs. Ludwick also concluded, as others have, that the success of the program relies on reliability, training and competency of the personnel being used. He goes further to say that the “buy-in” of current personnel is needed and assuring them they are not being replaced is critical. Let them know that the system is designed to enhance the current system, not replace it.

It is clear from the literature reviewed that a part-time system is a valuable answer to staffing and budget problems. Others have had success with the part-time system and this will

allow me to compare their success with the system currently in operation by Anderson Township.

Procedures

My research was centered on the system used by the Anderson Township Fire and Rescue Department as stated earlier. The first step taken was to review the payroll records for the years 1995 and 1996. Although Anderson Township increased their minimum staffing in July of 1994, I began my evaluation with the 1995 calendar year. This would give me two complete years, one under each system, to evaluate. The records I was able to obtain were slightly vague, however they did state the amount of overtime hours used in both years and also the part-time hours used in 1996. One limitation was that the full-time overtime hours and costs were overall and not broken down by rank. This would prevent an actual calculation of savings per hour, but did represent what would normally occur with overtime scheduling.

Next, I researched the additional costs above the hourly wage such as retirement, workers compensation, and other costs that the employer incurred by each type of employee. I also researched the cost of hiring and training each employee which was the same for full-time or part-time with the difference to the employer being the number of part-time personnel needed to fill a full-time position.

Finally, I reviewed the information gathered to determine whether or not the system had worked and what problems the department encountered. I also reviewed various documents on part-time systems, but I was limited due to the fact that there were no published works on a system such as Anderson's using part-time personnel on-call for specific shifts. The problems

encountered by both Anderson Township and from the literature I reviewed will affect my recommendations for improvements to the current system.

Results

The following charts represent the results of my research and the costs encountered during the 1995 calendar year utilizing full-time personnel in an overtime capacity to maintain staffing levels versus the “Extra-Board” part-time system implemented at the end of 1995 covering minimum staffing levels for the calendar year of 1996. It should be noted that the part-time employees began at the end of 1995 and covered approximately 28 hours during the 1995-year. I considered this amount to be insignificant, not affecting the study. There were a total of seven part-time personnel in a 100-hour recruit class at the end of 1995. This cost reflects the start of the program, but would not be part of the minimum staffing coverage. Of the seven personnel in training, one was hired full-time immediately, with the others slated for part-time employment. The chart does not, however show the problems related with part-time employees. Anderson Township encountered the same problems I discovered in my research. These problems consisted of employee turnover, training problems and the acceptance of the part-time personnel by the full-time staff. Anderson Township also encountered scheduling problems with the part-time employees, which I contributed to the small number assigned to each shift. Asking an employee to be available every third day, whether or not they are needed, can be a great burden. Employees made other commitments, became sick or were unable to cover all the open slots; a larger pool of part-time employees per shift would be beneficial.

1995	Hours	Cost
Overtime (full time personnel)	6892.05	\$141,970.37
Extra-Board	28	\$301.56
Recruit Program (100hrs/7 personnel)	700	\$7539.00
Benefits (full time/34.25%)		\$48,624.85
Benefits (part time/16.45%)		\$49.60
Cost to maintain staffing levels	6920.05	\$190,946.38
Cost per hour		\$27.59
1996	Hours	Cost
Overtime (full time personnel)	586	\$12,527.77
Extra-Board	6504.12	\$71,859.08
Benefits (full time/34.25%)		\$4290.76
Benefits (part time/16.45%)		\$11,820.82
Cost to maintain staffing levels	7090.12	\$100,498.43
Cost per hour		\$14.17

From the above charts, it is obvious that the system implemented did control overtime expenditures while maintaining staffing levels. In 1996, there was a total of 7090.12 hours worked between the part-time and full-time employees, an increase of 170.07 hours compared to 1995. Even with the increased hours, the savings to the employer was \$90,447.95 overall with no decrease in service. There were some additional costs involved with the larger number

of part-time employees needed for the system to function as opposed to full-time employees. Those costs include equipment, uniforms, testing costs and even physicals (see appendix A).

My research shows that part-time employees did control overtime and maintain staffing levels. The largest problems encountered were acceptance by full-time employees, scheduling, and employee turnover. A larger pool of part-time employees would solve the problem of scheduling and possibly help with turnover. An eligibility list of previously tested employee candidates, ready to be hired, would also improve the system. As to employee acceptance, a combination of the part-time personnel adapting to the full-time employees and educating the full-time staff as to the purpose of the part-time system.

Discussion

In my research, I found that many departments struggled with similar problems relating to part-time employees that Anderson Township encountered with the Extra-Board system. Acceptance by the full-time employees is a major problem for several reasons. The full-time employees view part-time employees as a threat to full-time employment and also perceive them as being lesser-qualified employees. Anderson Township attempted to cure these problems by hiring fully trained personnel. The part-time employees were required to be paramedics with 240-fire training or equivalent. This was unique in comparison to some systems that employ lesser-trained personnel to cut costs. By hiring fully trained personnel, Anderson was putting people in the system that could function easily with the full-time staff, which in turn aided with the acceptance issue. It was easier for them to prove themselves because they were able to function equally on the street. A more difficult task was to convince the full-time staff that the

part-time system was designed to assist the full-time staff by filling positions only when needed and not to replace the current full-time staff. This has been accepted by some, but is an ongoing battle as other full-time staff members struggle to replace the part-time positions with full-time personnel, a task that can not be supported by the budget at this time. There were also some training issues for other departments in maintaining proficiency with part-time personnel. This was not a problem for Anderson as they originally designed an 8-hour training day once a month to maintain skills; this was later dissolved as the part-time employees worked more than enough to stay proficient, partially due to the small pool of employees. The separate training day for part-time personnel was considered to be a problem in that the part-timers needed to be treated equally with the full-time staff. The full-time personnel in Anderson Township disliked the fact that the part-time personnel received training unlike the full-time staff. Turnover was also a problem as Anderson Township started 1996 with six part-time employees and ended the year with only four. This created a scheduling problem, so Anderson had to juggle the part-timers to prevent them from going over the hours allotted by FLSA.

My interpretation of the findings are that the system did work in controlling costs while maintaining staffing levels, although many problems were encountered. The system used by Anderson was no different than the others in respect to the problems that were created by part-time employees. Anderson did find answers to many of their problems, but were unable to solve them all. The cost analysis is reflected in the savings to the employer, but definitely does not represent the scheduling and personnel problems they encountered. I believe that part of the success of the "Extra-Board" system was due to the strong full-time staff that served as a foundation for operations while using the part-time staff as supplemental staffing instead of

overtime. I also believe that the fully trained part-time employees created a more useful pool of employees for staffing while maintaining service levels. Anderson Township was also able to pay their part-time employees the same hourly wage as entry level full-time employees; this helped to assure the full-time staff that lesser employees were not being used just to save money. The savings to the employer were primarily in the ability not to pay out overtime wages to full-time employees and eliminates the large expense of employee benefits that the full-time staff receives.

Again, it is obvious that the benefit to the organization was the ability to maintain staffing while reducing cost. Anderson Township was able to save over \$90,000 in staffing costs for a similar need in hourly replacement. The public received an equal service as the employees used were trained to the same level as full-time employees. There are hidden problems as I discussed in acceptance, training and turnover, but those problems can be reduced with modifications to the system. I need to mention that the employer did incur additional unexpected costs regarding the scheduling process, which took time and effort by full-time personnel on a daily basis. Additional testing and training took place to hire the part-time employees, but for Anderson Township, those costs were partially recovered because three of the original six part-time employees were hired full-time. This was an advantage to the fire department as they were ready for hire; no recruit training or equipment was required as they had what they needed. Although the system is still in place and encountering some of the same problems, the fact that three of the current full-time staff were hired from the part-time system brings credibility to the system. The use of the part-time system as a hiring pool gives

the part-time employees a goal and allows the employer to evaluate potential employees prior to initiating the full-time hiring process.

Recommendations

The most effective change that could be made to the “Extra-Board” system would be to have a larger pool of part-time employees assigned to each shift. Many of the problems encountered include the availability of part-time employees were due to turnover in the part-time ranks, scheduling problems with the part-time employees, and the ability to locate them, especially on short notice. Many frustrating days occurred when paging or calling with no response from the part-time employees. Even though they are on call for a specific shift, it may be difficult to locate them when they are not home. Another problem encountered by the department was the resignation of two part-time employees, leaving the remaining four part-time employees to cover all three shifts. This was difficult to manage while maintaining their hours and not exceeding the allotted hours in the 28-day pay cycle. The Anderson Township Fire and Rescue Department was also unable to use two of the part-time employees at the end of the year because they had reached the yearly-allotted maximum hours for FLSA. Clearly a larger pool of personnel per shift would solve these problems.

When testing for part-time employees, it is my recommendation to create an eligibility list of employees that were tested and passed, but not immediately hired. This would allow for immediate replacement of turnover in the part-time ranks without going through a new hiring process, also reducing the cost of maintaining the program.

Educating the full-time employees is imperative to the introduction of the part-time system. Employees should be aware of budget restraints and manpower needs and how they effect the overall operation of the fire department. Employees need to know their place in the system and that their jobs and future are secure. Anderson Township used part-time employees for replacement only when they fell below minimum manning, not for regular staffing.

The part-time employees also need something to strive towards. The system used by Anderson Township is designed to hire full-time staffing from the part-time ranks, allowing for a smaller testing pool. This creates an atmosphere for part-time employees to perform well, as a minimum number of people will be testing when full-time positions become available.

To summarize my findings, generating a larger part-time pool of well-trained employees with an eligibility list is essential. Educating the full-time employees and establishing desirable goals for the part-time employees should create an excellent working system to maintain staffing levels while controlling expenditures.

References

- Highley, Scott (1994) Part Time Firefighters, Are They An Effective Solution For Staffing Problems? (Executive Fire Officer Research Paper, Emmitsburg MD: National Fire Academy).
- Lawrence Fire Department (Extra-Board Handbook) Lawrence, Kansas
- Ludwick, Michael E. (1996, October) Are Part Time Personnel A Viable Solution for Daytime Staffing Problems (Executive Fire Officer Research Paper, Emmitsburg MD: National Fire Academy).
- Reilage, Robert R. (1993, August/September) Alternate Staffing for Combination Departments, *ISFSI* pgs. 32-33
- Stevenson, Carol (1981, May) Paid-On-Call, An Idea Whose Time Has Come? *Firehouse Magazine* pgs. 46-48

Appendix A

Costs associated with hiring

Turnout Coat	\$525.00 per person
Turnout Pants	\$434.00 per person
Helmet, gloves, hood	\$190.00 per person
Boots	\$ 90.00 per person
Advertising for job	\$700.00
Physical and Psyche	\$690.00 per person
Recruit training (100 hrs)	\$1100.00 per person
Initial Uniform purchase	\$525.00 per person
Testing Process	\$750.00 (manpower and materials)