

An Evaluation of Howland Township Fire Department's Part-time Program

By: Lance Blair
Lieutenant
Howland Township Fire Department
169 Niles Cortland Rd NE
Warren, Ohio 44484

A proposed research project submitted to the Ohio Fire Executive Program

February 26, 2013

CERTIFICATION STATEMENT

I hereby certify that the following statements are true:

1. This paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

2. I have affirmed the use of proper spelling and grammar in this document by using the spell and grammar check functions of a word processing software program and correcting the errors as suggested by the program.

Signed: _____

Printed Name: _____

ABSTRACT

Howland Fire Department, like many departments, is budget limited. With the budget limitations, the department must utilize part-time members to help maintain daily staffing. The problem the department is having is that the current part-time program does not meet the needs of the fire department. The research project began to find an appropriate amount of part-time members to have on staff to meet the needs of the department. The project evolved into an evaluation of the current part-time program and how to improve the current program. The research would attempt to answer the following questions.

1. What is the appropriate number of part-time members to meet the staffing requirements as established by the Howland Township Fire Department?
2. How can current scheduling practices be improved?
3. What are some of the obstacles and reasons the open shifts aren't being filled?
4. What is the cost of the recommendation or modified part-time staffing plan?

A literature review and survey were performed to research how other fire department's part-time programs were administered and how they performed. A second survey was sent to the department's part-time members to try and find why shifts weren't being filled. Data was collected to analyze trends of how many hours per year needed covered by part-time members. The final result of the research found that an average of 14,000 hours per year were needed covered. The research found the part-time employees have a limited number of hours to give and the average part-time employee at Howland works 663 hours per year. This would require 22 part-time employees to cover the 14,000 hours per year. The research found it difficult for the department to find part-time members to work after the schedule is posted.

The research recommended the following; the department should require full time members to submit time off prior to the schedule being posted. If the department does not change the part-time scheduling it should have a minimum of 22 part-time members on the roster. The department should change the part-time program from a fill in to one that has two 24 hour positions per shift for part-time. To staff these positions the department should assigned part-time members to (A) (B) or (C) shift and be required to work 24 hours per week. If part-time members work 24 hours per week the department would need 16 part-time members. The cost of the modified part-time program would be \$225,003.14 this is currently within what the department budgets for its current part-time program.

TABLE OF CONTENTS

CERTIFICATION STATEMENT 2

ABSTRACT..... 2

TABLE OF CONTENTS..... 4

INTRODUCTION 5

 Statement of the Problem..... 5

 Purpose of the Study 5

 Research Questions..... 5

BACKGROUND AND SIGNIFICANCE..... 6

LITERATURE REVIEW 12

PROCEDURES..... 19

 Definition of Terms..... 20

RESULTS 23

DISCUSSION 28

RECOMMENDATIONS 37

REFERENCES 39

APPENDIX 1 – Hours needed covered 2007-2010..... 43

APPENDIX 2 – survey 44

APPENDIX 3 – HFD part-time survey 53

appendix –4 part-time survey results 55

INTRODUCTION

Statement of the Problem

The problem this study will address is the current part-time staffing program does not meet the needs of the Howland Township Fire Department. In 2002 Kramer & Associates did an analysis of Howland Fire Department Operations in a section titled National Staffing Trends they concluded that the Howland fire Department should have 28 fulltime firefighters or part-time equivalents adding to fulltime with an approximate on duty force of 7. The average amount of hours over four years needing covered by the part-time program was 14,077.83. The four year average number of hours the part-time program covered was 11,926.56. Over the last four years the part-time program has failed to cover 2150.77 hours.

Purpose of the Study

The purpose of this study will be to make recommendations to the Fire Chief and Township Trustees on how to improve the current part-time program.

Research Questions

Descriptive and evaluative research methods were used to answer the following research questions:

- 1. What is the appropriate number of part-time members to meet the staffing requirements as established by the Howland Township Fire Department?*
- 2. How can current scheduling practices be improved?*
- 3. What are some of the obstacles and reasons the open shifts aren't being filled?*
- 4. What is the cost of the recommendations or modified part-time staffing plan*

BACKGROUND AND SIGNIFICANCE

The Howland Township Fire department is a full service department with three stations two of which are staffed 24 hours a day. The department responded to 3081 fire, emergency medical and rescue calls in 2010. In addition the department also provides fire code enforcement and fire prevention education along with event coverage for a township of approximately 25 square miles with a full-time population of 19,106.

Howland Township has always prided itself on being financially sound and fiscally responsible so each department has to watch how it spends its money. This is why the fire department is a combination department that uses full-time, part-time and volunteer members to provide service to the township. The township continues to see a decrease in funding; this is due to the six year property valuation, reduction in Undivided Government Fund and the phase out of Tangible property tax. The fire department will see a reduction of approximately \$150,000 in its budget over the next few years because of this.

The fire department has an operating budget of approximately \$3.0 million annually coming from two revenue streams; Fire District Fund 10A and Ambulance & Emergency Medical Fund 30A. Fire District Fund 10A is generated through tax levies. The fire department has 3 levies; 1 mill on the 1981 property valuation, 1 mill on the 1983 property valuation and 3.5 mills on the 2005 property valuation. Currently these levies bring in approximately \$2.3 million annually. The three biggest appropriation amounts in 2010 were full-time firefighter salary and benefits. (\$2,114,997.30), buildings and equipment (\$112,427.16) and EMS payment account (\$106,199.03). The EMS payment account is used to reimburse the 30A fund for resident “write offs”. [This is the amount that the residents insurance does not cover for using the emergency

medical services.] The department has noticed this amount increasing every year from a little over \$72,000 in 2009 to an estimated \$110,000 in 2011.

The Ambulance & Emergency Medical Fund 30A is generated through EMS third party billing. The department bills over \$1 million annually and collects between \$500,000 and \$700,000 annually. The part-time budget comes from this account and budgets \$200,000 to \$250,000 annually. The billing company charges between \$95,000 and \$100,000 per year and this account is used to pay that. The rest of this account is used for the full-time administrative assistant's salary and benefits, the department's worker compensation bill, ems supplies and equipment, repairs and other expenses. This amount is between \$250,000 and \$300,000 per year. With the current economic climate in the state and county, it is unlikely that the township will put on a fire levy to increase the department's budget.

In 2002 the trustees hired Kramer and Associates to conduct a study on the Howland Fire Department. The section of the report titled staffing and deployment.

According to Kramer & Associates (2002) Using 17,500 as the base population for Howland Township, the number of full-time firefighters, or part-time equivalents adding to fulltime, would be $1.6 \times 17.5 = 28$. A close approximation of an on-duty force would be this number divided by 4, or 7. (p. 6)

In 2003 the trustees authorized the full-time staff to increase to 25. Of the 25, 22 are line personnel working a 24/48 schedule. This gives the department three shifts of seven full-time personnel plus one bump person. It takes four full-time members to staff one 24 hour position 100% of the time ($24 \times 365 = 8760$. Divide that number by 2672.8. That is the number of hours a full time member is scheduled. That equals 3.27 or four.). The department has seven 24 hour

positions to staff therefore it would take 28 full-time members to keep seven on duty 24 hours a day. If you Take \$2,114,997.30 and divide by 25 the current fulltime staff it gives you an approximate cost of one full-time member per year. That number is \$84,599.89. If you took the \$84,599.89 figure multiplied by the 28 the cost becomes \$2,368,796.92 per year. This is why the department uses a combination of full and part-time personnel to keep an on duty staff of seven.

Each shift has seven fulltime personnel assigned. Each shift has a captain, lieutenant and five firefighters. The personnel are divided between the two busiest stations; five at Station 30 and two at Station 32. Normally only two full-time members can be off per turn, the exception is when that turn is in cycle and an extra person, “bump shift” is working then three can be off. Each shift has minimums that must be met. First five full-time members must be on duty; second the shift must have one fulltime officer working; third there must be two paramedics on duty, one can be part-time. If these minimums aren't met overtime is used to fill the positions. It takes a minimum of six personnel; full or part-time on duty to staff both stations, currently overtime is not used to keep both stations staffed. There were 62 times from 2007 to 2010 that the on duty staffing was five and the second station was closed. The department has learned to function with seven on duty. If the on duty staff falls below seven the department must change its operations.

Each full-time line personnel work 24 hours on duty 48 hours off duty, the work week is 51.4 hours or 2672.8 hours per year. To achieve this each member gets six scheduled days off plus four reduction days. Each shift is on a 19 day cycle each working 144 hours in those 19 days. Every 38 days the shift is scheduled to be on duty 168 hours, during this cycle one member needs to take a 24 hour shift off or “scheduled day off”. The department has one full-time member assigned to the bump shift. This member works the same 24/48 schedule but bumps through each turn when they are in cycle. Each fulltime member gets between five and fifteen,

24 hours turns, “vacation time” depending on years of service, plus one 24 hour turn off “personal day” and one 24 hour turn off “holiday”. Each member is allowed 48 hours off education time but all do not utilize this time off. Each member can earn compensatory time off and is allowed to earn up to 480 hours. Each member earns 4.6 hours sick leave for every 80 hours scheduled to work. This equals approximately 156 hours per year.

Full-time members pick time off by seniority up until March 1st; it becomes first come first serve after that date. Each member is encouraged to submit time off prior to the monthly schedule being posted. The only standing rule is they must request time off at least 48 hours prior to taking the time off. If they take time off after the monthly schedule is posted they are supposed to try and find a part-time member to cover. They can still take the day off even if they don't find coverage. The department has found it difficult to find part-time coverage once the schedule is posted.

The Howland Fire Department began using part-time personnel in 1993; originally this program was started as a means to supplement the full-time staff Monday through Friday between 7am and 4pm at the two outlying stations. At the time staffing was three at each station until 4pm. After 4 pm only station 30 would be staffed with three to five depending on how many fulltime members were working. In 1994 the part-time program was expanded to keep staffing at station 30 at five after 4pm seven days a week. In 2000 the full-time shift staffing was increased to six. Monday through Friday each station would be staffed with three until 4pm, after 4pm and weekends only station 30 would be staffed with six 24 hours a day.

In 2003 after the Kramer Report the trustees authorized an increase to the fulltime staff of seven per shift. The department would now staff the two busiest stations 24 hours and the third station 7am to 4pm Monday through Friday. In 2004 a budget crisis hit the department and all

the part-time were laid off. A new levy was approved in 2005 and the part-time members were brought back. Even with the new levy, it was decided the department budget could only sustain two stations staffed 24 hours a day. Currently the part-time members are used to cover for full-time when they utilize earned time off and keep the daily staffing of seven 24 hours a day.

The fire department hires its fulltime from the part-time ranks so the department has an extensive application process to be hired. There are minimum requirements to be met prior to applying.

1. Must be 21 years of age
2. Must have a valid Ohio FFI Level/ FFII is preferred
3. Must have a valid Ohio EMT-Basic Level/Paramedic is preferred
4. Must have a Valid CPR Certification and an ACLS for Paramedic Level
5. Must have Trumbull County Ems Protocol

If candidates meet these requirements they must submit a completed application form for consideration. This form must have a background check completed prior to submitting the completed application. Once the application is turned in, the candidate will be interviewed and required to take a written fire and ems test. If they pass the test and interview they are required to have a pre-employment drug screening. If the drug screen is clear, candidates shall complete three non-compensatory eight hour ride-along (one with each shift) prior to being eligible to work. Shifts must be completed within a reasonable time frame and only one of the three will be permitted to be during the weekend hours. Successful candidates will be sent for a physical after completion of their ride along. After successful completion of a physical they can sign up and be placed on the schedule.

Currently part-time members mark down their days and hours available on a calendar, usually they are 12 or 24 hour shifts. This is to be completed prior to the 20th of each month. The part-time members are scheduled where they are needed. The part-time are not required to work or sign up a minimum number of hours. They have a maximum number of 144 hours in a 19 day cycle and no more than 1500 hours per year. This is due to the townships interpretation of ORC 505.6 (g) (1). The department does not have a minimum number of part-time members to keep on the roster.

In 2007 the department had 18 part-time members and the number of hours not filled was 1678.7. In 2008 the department had 16 part-time members and the number of hours not filled was 1949.7. In 2009 the department had 22 part-time members and the number of hours not filled was 1906.2. In 2010 the department had 17 part-time members and the number of hours not filled was 3068.45. (See figure 1 in appendix 1 for a detailed breakdown)

The fire department usually budgets between \$20,000 and \$30,000 for overtime in a year; this amount covers overtime for minimum manning and full-time members returning on “all calls.” The overtime rate is different among members; this is due to paramedic pay and longevity pay being added if applicable to the base rate then times 1.5. The average overtime rate is around \$27.00 per hour. If the department used overtime to fill the hours not covered by part-time, in 2007 the overtime would have been \$45,324.90 in 2008 \$52,641.90 in 2009 \$51,467.40 in 2010 \$82,848.15. The fire department budget could not sustain this, so the department does not use overtime to fill the uncovered hours and the shifts run short.

The significance of the study and possible impacts are; identifying deficiencies in the current part-time program, and how to improve the current part-time program while remaining within the budget.

LITERATURE REVIEW

When it came to how many part-time employees it took to cover one full-time employee spot, many things were considered; how many hours does a full-time employee work, how many hours were needed covered by a part-time employee, and the rules on the amount of hour The literature review started by looking at past OFE and EFO students that did research on combination department staffing and looked to see if anyone came up with a solid number of part-time vs. fulltime to cover the number of hours required. No solid numbers appeared; many of the results centered on math problems concerning the hours needing coverage. An internet search for “combination fire department staffing” was completed to see if anybody came up with a solid number since those research projects were done. Again, there was no solid number and most discuss NFPA 1710 & 1720 with responses to structure fires; some talked about specific apparatus staffing. When it came to on duty staffing it mostly came down to what the community could afford and desired.

The research looked at part-time fire fighter programs and found many different options on how the programs functioned. Some departments regulate how many hours a part-timer can work some don't. Some departments set minimum certification requirements and base hourly pay accordingly. When it comes to part-time fire fighter programs, the research found that however a program is set up; it must be evaluated to see if it is meeting the needs of the department and if there are any ways to improve the program.

The literature review found the number of part-time members needed to staff a 24 hour shift varied from 3.5 to 6.5.

Barnes (2002) OFE research project on Aurora Fire Department Staffing, his department currently staffs two part-time positions per day and it takes four part-time employees to fill these

positions. His department had 26 part-time employees, he took 26 divided by four and got 6.5 part-time employees to cover a daily shift. Broska (2008) OFE research project, used a survey and found an achievement rate of full staffing of 95% was the maximum. To reach this achievement rate, he analyzed his survey and found it would take 5.38 part-time employees to fill one full-time position. Majerick (2009) applied research project, his data concluded it takes 3.5 part-time employees to fill one full-time position.

The research found no matter how many part-time members on the roster, if they fail to sign up or work a certain number of hours, the program will fail to meet the needs of the department. Reviewing part-time programs at various departments in Ohio, research found the type of shifts a part-time employee could work varies from 8, 10, 12, or 24 hour shifts. It depended on how flexible the departments wanted to be. Many departments set a minimum and maximum number of hours a part-time employee is to work.

According to Painsville, Ohio part-time job description (2010), Part-time firefighters are required to work a minimum of 24 hours weekly of which 12 hours shall be between the hours of 0730 and 1930.

According to Washington Township Fire Department, Montgomery County, Ohio, part-time job description (2010). Part-time firefighter/EMTs will be assigned to a set platoon working either a 12 hour shift every third day/night, a 12 hour shift every sixth night, a 24 hour shift every sixth day. They are required to work a minimum of 48 hours every 28 day schedule. In house firefighters must not have over 1470 hours in a calendar year.

In the city of Westerville (2011) part-time job application under job description it states. Part-time employees with the Westerville Division of Fire will be used to fill fulltime vacancies

as they occur. Part-time Fire Technicians will be assigned to one of three 24/48 hours shifts, and will be required to work a minimum of three shifts per month.

Many departments outside Ohio use part-time employees, but do not have the 1500 hour rule so they can require their part-time employees to work more hours.

Mountain View Fire District Denver Colorado recruitment page (2010) Paid Part Time Program Mountain View Fire Protection District launched the Paid Part Time Program (PPT). Firefighter will be paid a salary for hours worked. A minimum of 48 hours will be required per month, up to a maximum of 120 hours.

The Glenwood Springs Fire Department Colorado Part Time Fire Reserve Program Informational Packet (2010) Compensation/ Work Schedule for Part-Time Reserve Members: Part-time Reserve Members are required to work a minimum of 48 shift hours per month and cannot exceed 48 shift hours in a week.

The Whitestown Fire department Job opportunities page (2012). Available firefighter positions are from 8:00 am to 8:00 pm on all shifts. Part-time firefighters must commit to 110 shifts per year.

The research indicates that some fire departments are using peak time staffing over constant staffing. Many departments find that peak time staffing is a cost saving program designed to put extra staffing at times when call volumes are at their highest. Curtis (2011) OFE research project found that expanding the department's current part-time program to cover two additional 12 hour shifts, 0800 to 2000 Monday through Friday would increase the service provided by the department during those hours. He conducted an internal survey to his department's volunteers and found peak load staffing would not have a negative impact on the department's volunteers' attitude about responding back as needed. His research found it would

take an additional six to ten part-time members to cover the additional 120 hours per week. Currently his department's budget would need to find a new source of income to cover the cost. Olson's (2006) research found that peak call volumes were between the hours of 0800 to 2000 hours, Monday through Saturday. His research indicated that an additional four persons during those times would improve the service his department could provide to the community. His research did not cover how much the staffing would cost or how to generate the new revenue needed. Mustafa's (2009) evaluation of peak load staffing rescue unit in Seminole County Florida has found that the part-time peak load staffing unit did reduce the need to use mutual aid in its district and dispelled the theory that adding a constant staffing unit was more efficient.

Howland Local 2786 Contract (2010) sets the work period and work schedule for all fulltime members covered under IAFF Local 2786. Members assigned to a 24 hour shift will work a 51.4 hour workweek which is equal to 2672.8 hours per year and sets the number of days off. Each member on a 24 hour shift will get six scheduled days off to reduce the work week to 53 an additional four reduction days to reduce the work week to 51.4. Full-time members get 48 hours of education time off, plus one personal day and one holiday. It sets vacation days from five to 15 (24 hour shifts) depending on years of service. Howland Local 2786 Contract (2010) sets the wage for a Firefighter/EMT \$16.75 per hour plus \$1500 per year paramedic bonus. This equals \$46,269.40 paramedic base salary. Firefighter base salary is \$44,769.40. All fulltime firefighters must have a minimum EMT-Basic certification. The township will also "pick-up" the employees 10% pension contribution.

Howland Township sets the hourly rate for a Part-time Firefighter/EMT at \$11.48, Firefighter/ Paramedic at \$11.93. (Howland Township 2010)

Howland Township will pay for all fulltime employees health insurance. The 2011 the premium was \$900 per month or \$10,800 per year for a family. (Howland Township Insurance Committee 2011)

A Star Beacon article by Carl E Feather (Nov 2011) “Report: Health insurance premiums in Ohio rose 43% in seven years. This article shows according to The Commonwealth Fund Ohio’s employer health insurance premium rose 43% from 2003 to 2010. The report’s authors project the health insurance premium will be \$24,000 annually by 2020.

Howland Township Fire Department Appropriation Status report Account 10A Fire Fund (2010) shows the department spent \$1,554,287.07 on salaries plus \$331,640.50 on retirement contributions plus \$229,069.73 on health insurance. This totaled \$2,114,997.30 for the fulltime employees’; if you divide that by 25 it averages \$84,559.892 per fulltime employee.

Howland Fire Department daily logs (2007-2010) showed the department was manned with 7, an average of 65.2% during those years. (See figure 2 appendix)

Howland Fire Department Annual reports (2007-2010) to get the number of part-time members on the roster during those years. The reports showed an average of 16.2 part-time members per year. (See figure 3 appendix). The report did show that the department achieved a higher percentage of full staffing with 16 or 17 part-time members. The department achieved full staffing 74% of the time in 2009 and 2010. In 2009 the department had 16 part-time employees and 2010 the department had 17 part-time employees.

Howland Fire Department Yearly sick leave report (2007-2010) showed an average of 2881.56 hours of sick leave used between those years. Howland Fire Department Comp time use report (2007-2010) showed an average of 998.325 hours used per year. Howland

Fire Department Vacation use Report (2007-2010) showed an average of 7116 hours of vacation used per year; add another 1056 hours for holiday and personal day.(See figure 4 appendix)

Howland Fire Department annual part-time hours worked report (2007-2010) shows Part-time personnel worked an average of 11,926 hours per year. It should be noted that these reports show all hours worked but does not break down hours on duty and the hours the member received because of coming back for an all call. (See figure 5 appendix)

A Columbus dispatch article by Elizabeth Gibson (2010) “Townships’ fire crews worried by cap on hours” talks about a cap of 1500 hours per year that part-time employees can work before they have to be offered health and pension benefits. It all comes down to how your Township interprets the law. Howland Township sets the limit of 1500 hours per year a part-time employee because it interprets the law as you must offer benefits if an employee works over 1500 hours per year.

The Ohio Revised Code 505.60 Health insurance for township officers and employees. Section (G) (1) as used in section 505.601 in Ohio revised code. “Part-time township employee” means a township employee who is hired with the expectation that the employee will work not more than one Thousand five hundred hours in any year. Chief Pantalone spoke to the law director about the 1500 hour rule. He told the law director that many departments in Trumbull County have their employees sign a waiver allowing them to work more than 1500 hours. He stated the law director said that doing that may cause more issues and not even sure if it is legal and recommended not doing it. (Pantalone, personal communication, February 2012)

Looking at most literature on part-time firefighters and even part-time employees in general there are some mutual advantages and disadvantages. The Advantages are lower cost, this is due to lower hourly wages and part-time employees generally do not receive health or life

insurance. Part-time firefighters they do not receive a pension like fulltime firefighters. Currently employer's contribution into the Ohio Police/Fire pension is 24% of the employee's annual salary (OPFP 2001). Part-time usually only receive social security and the employer's tax rate is currently 6.2% (SSA.GOV 2011). Part-time employees can bring diversity along with new and specialized training to an organization. If an organization hire from it part-time program then it already knows the work habits of those employees and many of the cost associated with hiring new employees is already paid.

Disadvantages include high turnover rate of part-time employees' especially part-time firefighters. Rindler (2010) found average length of service to be 2-3 years. Stacy (2008) found the average length of service to be 3-5 year. Haigh (2005) found average length of service to be 5.85 years. The usual length of service for a fulltime firefighter is 25+ years. Another disadvantage is lack of dedication and loyalty. Most part-time firefighters are looking for fulltime positions. Many leave part-time jobs to get fulltime jobs. Some part-time firefighters will give more time to a fire department if they know that a fulltime position is opening and that department hires form its part-time staff. Many part-time firefighters work at many fire departments and may give more time to a particular department if the wages are better and there are more incentives. (Rindler 2010, Bromen 2000). Another disadvantage is overworked employees, again many part-time firefighters work at multiple places, they may go from one job to the next without any breaks.

PROCEDURES

The applied research project used data collected from Howland Township and Howland Township Fire Department. The data collected focused on the fire department budget, number of time off hours used by fulltime members and the number of hours covered by part-time members. The data used was from four years 2007,2008,2009,2010.

The applied research looked at past OFE and EFO applied research projects focusing on part-time firefighter programs. The applied research used an internet search of fire departments that had part-time programs and how they were run. The research looked at how other industries calculated staffing needs.

Two surveys were created for the research. The internal survey (Appendix 3) was conducted and directed to part-time members of the department from the years of 2007, 2008, 2009 and 2010. These are the years that I had data for. The department had contact information for 12 current and past part-time members. 12 of 12 surveys sent out were returned. This survey collected data regarding the employment status of the part-time members, how they were scheduled and how many hours outside of Howland they worked. It collected data about days or shifts that they were unable to work at Howland and data about potential changes in the scheduling practices of Howland.

An external survey (Appendix 2) was conducted and directed towards fire departments that used part-time firefighters. The survey collected data regarding the qualifications of part-time firefighters, the hiring process, the scheduling process, minimum or maximum number hours required to work, the part-time program budget and the pay levels for part-time firefighters. The survey was sent to the Northeast Ohio Fire Chief's district. The research would use results from departments that most resembled Howland Fire Department. A

total of 254 surveys were sent to fire departments, 36 fire departments completed the survey. Of the 36, 16 used part-time firefighters. Of the 16 returned survey's 4 had characteristics of Howland; therefore all 16 surveys were used for data about how their part-time programs are ran.

Data analysis and literature review was used to complete this research regarding how the Howland Fire Department could improve the current part-time program.

Definition of Terms

All Call- For the purpose of this research an all call is defined as having 911 tone out all off duty and volunteer members of the fire department for assistance.

Career/Fulltime- A fire department employee who works either a 40 hour work week or a 51.4 hour work week and receives pay and benefits from the township.

Combination Department- A fire department that consists of fulltime, part-time and volunteers members.

FLSA- Fair Labor and Standards Act as it applies to this research the 7K exemption that fire personnel at the township are covered. It states a fire employee will work 144 hours in a 19 day cycle and will only receive overtime pay if they work over 144 hours in that cycle.

National Fire Protection Association [NFPA]. (2001). NFPA 1710: Standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments. Quincy, Massachusetts: NFPA.

National Fire Protection Association[NFPA]. (2001). NFPA 1720; Standard for the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by volunteer fire departments. Quincy, Massachusetts: NFPA.

Mostly fulltime Fire Department- Means the makeup of the department is over 51% fulltime employees.

On Duty Staffing- Will be the amount of personnel scheduled to cover a 24 hour shift.

Part-time- A fire department employee who fills as needed for fulltime employees and will work no more than 1500 hours during the year.

Volunteer- Will be an employee of the fire department that does not receive any pay or benefits or is compensated at a much lower rate.

Limitations

The research conducted found a wealth of information on fire department staffing; but very little on the number of part-time employees it takes to cover a 24 hour position. It is known it takes four full time employees for every one 24 hour position to be covered if the desired result is 100%. A few research papers did discuss how many part-time members it took to cover one 24 hour position; numbers ranged from 3.5 to 6.5. This was a good starting point but many factors can change these numbers. An example is; rules stating the number of hours a part-time employee can work to how many hours that need covered. There is no one way to figure the numbers out; it is up to the individual department to find the best option for its needs.

Another limitation is the data retrieved from the department. Department rules state that pre scheduled earned time off cannot create overtime. The only earned time off that can create overtime is the use of sick leave. The data showed how many hours of each was used however

when it came to the use of sick time it was not easily shown how many hours of sick time had been covered by overtime. Data about the part-time members had some limitations. It showed the total hours worked in a year. It did not differentiate between on duty time, hours worked because of hold overs, coming back for all calls, or working special details.

The survey return rate on the external survey was low, of the 254 sent 36 were completed. Of the 36; 16 used part-time employees the other 14 did not. The 16 that used part-time only 4 had characteristics of Howland. 15 of the 16 stated that their part-time program was meeting the needs of the department.

The Howland Fire Department had limited contact information on past part-time employees. I could survey 12 part-time employees 12 surveys were returned. That meant I had results from 3 of the 15 on the roster working in 2007, 6 of the 15 in 2008, 11 of the 20 in 2009 and 12 of the 17 working in 2010. Currently The Howland Fire Department website shows 11 part-time members at the time of this writing the department has 15. Of the 11 shown I did survey 5 of them all 5 returned the survey. 2 that are on the list have worked less than 100 hours and numerous tries by the department to contact them have gone unanswered.

RESULTS

The research collected data from the fire department for four years, 2007-2010. The data showed an average of 14,077.33 hours needed covered. The data showed part-time covered an average of 11,926.56 hours over those four years. This resulted in an average of 2,150.77 hours not being covered per year. A survey was sent out to 254 fire departments, 36 surveys were completed, of the 36, 16 used part-time firefighters; four surveys closely resembled Howland. This resulted in a sample too small and so all 16 surveys were used for data about they ran their part-time programs. An internal survey to current and past part-time members was sent out. The department had contact info for 12 part-time members so 12 were sent out. 12 surveys were returned. The breakdown was as follows; three of the 12 were working in 2007, six of the 12 were working in 2008, 11 of the 12 were working in 2009 and 12 were working in 2010.

1. What is the appropriate number of part-time members to meet the staffing requirements as established by the Howland Township Fire Department?

One 24 shift equals 8,760 hours per year; if you divide that number by the three that equals 2920 hours that each of three shifts is required to cover. Take 2920 divided by 2672.8 that each full time member is scheduled to work this equals 247.2 hours short per member. Multiply by seven the number of members per turn that equals 1730.4. Multiply by three the number of turns that equals 5,191.2 hours short. The bump shift is scheduled to cover 2,382 of those hours. Take 5,191.2 minus 2,382 that equal 2,809.2 this is the amount of hours short. This number never changes. If you add vacation, comp time, sick leave and holiday and personal day to 2,809.2 this will equal the amount of hours needing covered per year.

To get the potential hours that may need covered add up the amount of all earned time off except for sick time plus the 2809.2 that always need covered. Sick time cannot be counted because some of that time may need to be covered by overtime. In 2007 the potential hours was 15,934.76. In 2008 the potential was 16,882.45. In 2009 the potential was 17,115.31. In 2010 the potential was 17,505.61.

In 2007 the number of hours needing covered was 14,441.45. In 2008 the number was 13,342.7. In 2009 the number was 13,432.2. In 2010 the number was 15,092.95. The four year average was 14,077.325 hours needed covered. A part-time member at Howland is only allowed to work a maximum 1500 hours per year. Take 14,077.325 divided by 1500 that equals 9.38 or 10. This is the minimum number of part-time members needed if all worked 1500 hours per year.

In 2007 18 part-time members covered 12,762.75 hours or an average of 709.04 hours per member. In 2008 16 part-time members worked 11,393 hours or an average of 712.06 hours per member. In 2009 22 part-time members worked 11,526 hours or an average of 523.91 hours per member. In 2010 17 part-time members worked 12,024.5 hours or 707.32 hours per member. The four year average each part-time member worked was 663.08.

If you use net annual work hours calculation 14,077.33 (four year average hours needed covered) divided by 663.08 (four year average hours worked by part-time) this equals 21.23 or 22 part-time members needed to cover all hours.

2. How can current scheduling practices be improved?

Currently part-time members at Howland Fire are not required to sign up or work a minimum number of hours and are not guaranteed a minimum number of hours. The external survey found six or 40% did require part-time firefighters to work a minimum number of hours and nine or 60% did not, one skipped this question. The six that did require a minimum had different options; two required 24 hours worked per month, one required 48 hours per month, one required to sign up for a minimum of 28 hours and work a minimum of 14 hours per month, one required eight hours per month plus attend training every third Thursday. Part-time firefighters at Howland can sign up and work 12 or 24 hour shifts. The survey showed 12 hour shift was most popular with 11 responses or 73.3%, the second popular was a 24 hour shift with nine responses or 60%, eight hour shift, eight responses or 53.3%, 10 hour shift, seven responses or 46.7%, 14 and 16 hour shift both had three or 20%.

The results of the internal survey showed that four liked the idea of requiring a minimum number of hours to work, four disliked and four were undecided. The survey asked if Howland assigned part-time to a shift. The responses were six liked, two disliked and four were undecided. 11 of 12 liked the idea of Howland guaranteeing a minimum number of hours to work.

3. What are some of the obstacles and reasons the open shifts aren't being filled?

Data has showed it would take a minimum of 22 part-time members at Howland to cover all the hours needing covered. In 2007 the department started the year with 13 part-time members and ended the year with 15. In 2008 the department started with 11 and

ended with 15. In 2009 the department started with 12 and ended with 20. In 2010 the department started with 17 and ended with 14.

The fire department does not require part-time members to work a minimum number of hours per year; data showed the following. In 2007; six worked more than 1,000 hours per year. Of the six; one worked over 1400 hours, four worked between 500 and 1000 hours and six worked less than 500 hours. Of the six; three were hired after August of 2007. In 2008; six worked more than 1000 hours, four of the six worked more than 1400 hours. Five worked 500-1000 hours and five worked less than 500 hours. Of the five; four were hired in September of 2008. In 2009; three worked more than 1000 hours, one of the three worked more than 1400 hours, eight worked 500-1000 hours and nine worked less than 500 hours. Of the nine; six were hired in September of 2009. In 2010; six worked more than 1000 hours, one of the six worked more than 1400 hours, five worked 500-1000 hours and five worked less than 500 hours. All five were hired prior to 2010.

The results of the survey showed that 12 of the 12 had full time jobs. Eight of the 12 worked a 24 shift at their fulltime jobs, one worked a 16 hour shift, one worked a 10 hour shift and two worked eight hour shifts. Those that worked a 24 hour shift; three worked a 24/48 schedule, two worked two 24 hour shifts per week and the days would vary and one worked three 24 hour shifts per week and the days would vary. The three that worked an eight hour shift were all day turn. One of the three was on call every other weekend and not available to work part-time on those weekends. The one that worked 16 hour shift worked three days a week and those days would vary.

The survey asked what shift/turn were part-time most unable to work at Howland, A, B, C or all. Six answered all, three answered (A turn), one (B turn) and one (C turn). The survey asked if there was a day you would not sign up and work at Howland. Two of the 12 answered yes. One stated Saturdays and one stated Sundays. The survey asked if the part-time worked frequent overtime at their full time jobs and had to call off working at Howland. Five stated yes, seven stated no and one stated was a salary employee and would not get overtime but did work 40-60 hours per week plus being on call every other weekend.

The survey asked the part-time members if they had a part-time job other than Howland, 10 stated yes. The survey asked how many hours per month they worked at the other part-time jobs, six stated 48 hours or more, four stated 24 hours or less.

Full time members at Howland are encouraged but not required to put in time off prior to the monthly schedule being posted. The department finds it difficult to fill spots after the schedule is posted. The survey asked the part-time members if they signed up at Howland and were not scheduled to work would they work someplace else that day. Eight stated yes and four stated no. The survey asked if after the monthly schedule was posted were you more or less likely to work if called. Eight stated yes and four stated no.

4. What is the cost of the recommendation or modified part-time staffing plan?

The fire department's part-time budget is between \$200,000 and \$250,000 per year. A part-time firefighter/paramedic makes \$11.93 per hour. If the department schedules two part-time members per 24 hour shift this would equal 17,520 hours scheduled; the cost in wages and tax would be \$225,003.14

DISCUSSION

When the part-time program began in 1993 it was used to increase staffing at peak call hours and low volunteer availability. In the beginning the part-time program usually covered four to six positions eight hours a day Monday thru Friday. The part-time program evolved through the years to what it is today. In 2003 after a study, by Kramer and Associates, found that on duty staffing for Howland Township should be seven. The trustees hired more full time members bringing the number up to seven full time members per shift plus one bump person. Today the part-time program is used to fill in for full time members when they use earned time off to keep the daily staffing at seven. Fire department data showed some deficiencies with the current part-time program and some changes were needed in how the program is run. To date no changes have been made. The reason that no changes have been made is no one from the department has researched and given recommendations on what changes could be made.

In order to figure out how many hours our part-time members needs to cover we must calculate how many hours the department full time members cover. One 24 hour shift equals 8,760 hours per year. This is calculated by taking 24 hours times 365 days. If you divide that number by three it equals 2920 hours. This is the number of hours each shift is required to cover. The hours a full time member works is set by a collective bargaining agreement with IAFF Local 2786. Each full time member works a 51.4 hour work week or 2672.8 hours per year. This shows a shortage of 247.2 hours per year for each member. Each shift has seven members and there are three shifts. The total number of hours short is 5,191.2. The department has a one person bump shift which is scheduled to cover 2,382 of the 5,191.2 hours, leaving a total of 2,809.2 hours always needing covered. When you add earned time off the number climbs. Each shift works a 24 hour on duty followed by 48 hours off schedule. The department is

on a 19 day 144 hour FLSA cycle. The bump shift works a 24/48 but “bumps” through each turn when they are scheduled to work more than 144 hours and needs to take 24 hours off. That means every 19 days one shift will have eight members instead of seven.

Department rules dictate that each shift must have a minimum of five full time members working, if less than five are working then overtime must be used. Department rules dictate that scheduled time off cannot create overtime. Scheduled time off can be vacation days, reduction days, holiday and personal days, FLSA days or SDO’s, education time and comp time. All scheduled time off, with the exception of education time and comp time, must be taken in 24 hour increments. Normally a shift can only have two personnel off at a time. The exception to this is when the shift is in cycle and has the extra firefighter (Bump shift) then three personnel are allowed off. Sick time is the only earned time off that may create overtime. Overtime is only used if the shift falls below five full time members or if there isn’t an officer or if there aren’t two paramedics working. All earned time off that does not create overtime is covered by part-time members.

Two 24 hour shifts a day is equal to 17,520 hours per year. I looked at the potential time off not including sick time for the years 2007 to 2010 and found the following: in 2007 the potential time off was 15,934.76 hours, in 2008 the potential was 16,882.45 hours, in 2009 the potential was 17,115.31 hours and in 2010 the potential was 17,505.61 hours. The four year average was 16,859.53 hours per year. Many factors can change the potential time off. The amount of comp time earned in a year and years of service which will increase the amount of vacation time. See chart for vacation time earned. Also members may carry up to one week of vacation time per year that could mean one to three 24 hour shifts per year. The department can calculate the potential time created by using scheduled time but cannot see the use of sick leave

every year. Some sick leave can be covered by part-time or may create overtime due to falling below the minimum of five full time members on duty. While the average potential time off was 16,859.53 hours, the actual four year average needing covered was 14,077.33 hours and this included the use of sick time.

Years of Service	24 Hour Shifts	Hours
1-5	5	120
6-10	8	192
11-15	10	240
16-20	13	312
20+	15	360

Vacation Time Earned

Department data has shown that the part-time program has failed to cover an average of 2150.77 hours per year (2007-2010). Part of this research would try and identify why so many hours weren't being covered. While it may appear obvious that the department doesn't have enough part-time members to cover the hours, there may be other factors involved.

The department does the schedule monthly. The part-time sign up a month in advance the days and hours available and are placed where they are needed. If all full time members put in their time off prior to the schedule being completed, this makes it easy to fill in the open slots.

The department encourages full time members to submit their time off prior to the schedule being done but it is not required. The only requirement is the scheduled time off must be submitted one shift or 48 hours before using the time. The department has found it difficult to fill those positions once the schedule is posted. The internal part-time survey showed that eight out of 12 part-time members would be unavailable or work someplace else if not scheduled at HFD that day. The department should consider making a rule requiring full time members to submit time off prior to the schedule being done. This is unpopular with the rank and file and the current chief and may need to be a negotiated item. While this would make it easier for the scheduled time off, the department would probably still find it difficult to fill the position when a member uses sick time and it does not require the use of overtime to fill that position.

The internal survey, while limited to those part-time members that worked between the years of 2007 to 2010; the results would probably closely resemble the part-time today. The survey showed all 12 had full time jobs and 10 of 12 had a part-time job other than Howland. Of the 12, 10 had a full time job in the fire or emergency medical services. The most common shift in this area for fire and ems is 12, 16 or 24 hour shifts. The results showed eight had a 24 hour shift, one a 16 hour shift and one an eight hour shift. The results showed nine worked 48 hours per week, one worked 72 hours per week and one worked 40 hours per week. The other two part-time had jobs outside of fire and ems; one worked Monday thru Friday 9 to 5. The other worked 40 to 60 hours per week, had Tuesday off and was on call every other weekend. Those that worked another part-time job, five worked 48 hours per month at that job, two worked 10 to 20 hours, two worked 48 or more hours and one worked 24 hours. The results showed that the hours our part-time could give was limited. I tried to see if the 24 or 16 hour shifts at their full time jobs correlated with our (A), (B) or (C) shifts; to see if our part-time were

unable to work one of those shifts. The results were inconclusive. Six correlated with all shifts, three with (A) shift and one each for (B) and (C) shift. The survey also asked about having to work frequent overtime at their full time jobs and having to report off from Howland. The results showed five did work frequent overtime and had to report off from Howland.

How many part-time members should Howland Fire have? The research found a range of 3.5 to 6.5 part-time members to cover one 24 hour position. Barnes 2002 OFE research found it would take 6.5 part-time members at his department to fill one 24 hour position. Majerick 2009 EFO research found it would take 3.5 part-time to fill one 24 hour position at his department. Broska 2008 OFE research did a survey to other departments and found that 5.38 part-time members for one 24 hour shift would yield the best results. I found that these may be good starting points but many things can dictate how many part-time it takes to fill a 24 hour position. Howland follows the 1500 hour rule as stated in ORC 505.60. This limits our part-time members to 1500 hours of work per year. One 24 hour position equals 8760 hours per year; at Howland it would take 5.84 part-time employees to fill that position. The number 5.84 would be correct if all part-time employees at Howland worked 1500 hours per year. Department data showed an average part-time employee works 663.08 hours in a year. That means currently it would take 13.21 part-time employees to cover one 24 hour position or 26.42 part-time employees to cover two 24 hour positions. The department does not have a dedicated 24 hour shift for part-time so we must look at the amount of potential hours needing covered per year. This will change from year to year. The four year average of potential time off was 16,859.33 hours. Department data showed that the average amount of actual hours needing covered per year was 14,077.33 hours (2007-2010). With the average part-time employee working 663.08 the department would need 22 to 26 part-time members. Currently Howland Fire has 15 part-time

members on the roster. Two of the 15 have worked less than 100 hours and have failed to return messages left by the department about their status and one only works in the inspection bureau 24 hours per week. If the department looked at requiring part-time work a minimum number of hours that could change the number of part-time members needed.

With the current part-time program needing a high number of part-time members the department has found it difficult to hire and maintain an appropriate amount of part-time on the roster. This could be due to many factors. When the part-time program started in 1994 Howland Fire was the only department in the area to use part-time employees and the pool of candidates wanting to work at HFD was large. To date 13 fire departments in Trumbull county use part-time firefighters and this has decreased the pool of firefighters in the area. Many of those departments have a set number of positions needing filled per day and can guarantee a certain amount of hours to work and many exceed the 1500 hours that Howland restricts its part-time employees to. Howland would find it hard to be able to guarantee a number of hours. This is because we have a limited number of positions to fill per day. When the program started that wasn't a problem; there were four to six, nine hour shifts Monday through Friday with one or two, seven hour evening shifts plus one or two, 16 hour shifts on the weekends. Today the part-time are used to fill in for the full time when they use scheduled time off and there may zero to three, 24 hour positions. While department data has shown an average of 14077.33 hours per year needing coverage we don't know when those hours will be used. Historically during the first three months there are days that no full time member is off and this limits the number of hours during those months. The internal survey showed 11 of 12 part-time liked the idea of guaranteed hours.

The certification requirements for Howland have changed; when the program started the requirements were basic firefighter (36 hour) and emergency medical technician basic. Today the requirements are FF I and Emt-basic with FF II emt-paramedic preferred. The department has not hired an Emt-basic in 2 or 3 years. The hiring procedure has changed dramatically; this is due to the department hiring full time exclusively from its part-time and volunteer members. The department has found the process (as described in the background and significance section) takes approximately two months to complete. The department has found this process has helped in several areas. First it gets well qualified people that want to work for HFD and it streamlined the full time hiring process. But the department has found that it is also limiting the number of applications, and the people actually completing the process and getting hired is limited. The department hired four in 2011 and five in 2012. Two of the nine hired in 2011 and 2012 had previously worked at Howland before and were fast tracked because they had much of the process completed before. The department may want to revisit the hiring process and resume hiring firefighter/EMT-basics.

Howland should look at changing the current part-time program that is one that fills in to one that has dedicated positions for part-time. Some fire departments have a more formalized part-time program; they have a certain number of positions per shift dedicated for part-time and they require their part-time members work a minimum number of hours and still keep under the 1500 hours in a year. Washington Township Fire department in Montgomery county require their part-time to work a minimum of 48 hours in a 28 day cycle. Westerville Fire Department requires their part-time to work 72 hours per month and Painsville City fire Department requires 24 hours per week. Some fire departments also assign part-time to a certain shift. Washington Township places their part-time on set platoon of 12 hours every third day/night, or 12 hour

every sixth night or a 24 hour shift every sixth day. I believe these are some options that could work for Howland. If Howland had two dedicated positions per shift this would create a flex daily staffing with nine being the maximum and seven being the minimum. With the two dedicated positions it would make it easier to guarantee a certain number of hours for the part-time members and would almost always keep the daily staffing at seven. To staff the two part-time positions the department would need to hire more part-time and should look at requiring part-time work a minimum number of hours and being placed on one of three shifts. I think the department should start by requiring part-time work 24 hours per week this would be 96 hours per month or 1152 hours per year which is still under the 1500 hour restriction. With the hour requirements the department would need to keep at least 16 part-time members on the roster. If the department does not have hour requirement the department would need 26 part-time members. I don't believe that we could ever achieve 26 part-time members on the roster.

Howland Fire has always had their part-time members sign up on the schedule and they will be placed as needed. The department has never required part-time personnel to work a minimum number of hours. Any change to the current part-time would have to take into consideration of the current part-time members. The internal survey showed that 11 of 12 would like the idea of a guaranteed number of hours to work, but only four would like the idea of being required to work a minimum number of hours. The survey asked about assigning part-time to a certain shift, six stated they would like the idea with the other six being undecided or disliking. If Howland looked at changing the part-time program we would have to grandfather the current part-time employees or risk losing them. I do believe if asked most of our current part-time would work 24 hours per week and fulfill those hours on a certain shift.

The department never has solid money figure to budget for part-time because the amount of hours changes from year to year. The department usually budgets \$200,000 to \$250,000 per year for part-time coverage. If the department would staff two dedicated part-time shifts it would give the department a solid money figure. To staff two 24 hour part-time positions it would cost \$225,003.14 in wages.

RECOMMENDATIONS

Research has shown that part-time firefighter programs are useful and reduce cost for fire department staffing. Like any other program if it is not constantly evaluated and improved its effectiveness will diminish. The Howland Fire Department's part-time firefighter program is no different. The department's part-time program has helped with daily staffing at a reduced cost but has deficiencies. The following recommendations will help better the current part-time program.

The department must look at how many hours need covered per year and keep a minimum number of part-time on the roster to cover those hours. The four year average (2007-2010) showed that 14,077.33 hours needed coverage. A part-time firefighter can only work a maximum of 1500 hours per year. The math shows the department needs at least 9.38 or 10 part-time firefighters. In reality the average part-time firefighter at Howland Fire works 663.08 hours per year. Using that number; the math shows that the department needs 21.23 or 22 part-time members to cover the hours. If the department's part-time scheduling stays as is, then the department must have a minimum of 22 part-time members on the roster.

To meet the number of part-time members required, the department should look at changing the minimum qualifications of part-time from FF II/Paramedic to FF II/Emt-Basic. This may allow the department to reach the required number easier.

The department does not require full time members to request time off prior to the monthly schedule being posted. The department finds it difficult to fill the hours after the schedule has been posted. The department should require full time members to request time off prior to the schedule being posted.

The department should change the current part-time program, which is a fill in program, to one that has dedicated shifts for part-time personnel. The department should create two 24 hour positions per shift for part-time personnel. This would equal 17,520 hours per year to cover. This would change the department daily staffing and create a flex staffing. The department would have a maximum of 9 personnel on duty with a minimum of 7. With flex staffing the department would have to create a staff deployment policy. This would be completed by the officer staff.

To staff the two part-time positions; the department would have to change the part-time job description and expectations. Part-time members will be required to sign up and work 24 hours per week. This could be one 24 hour shift or two 12 hour shifts per week. This would be 96 hours per month or 1152 hours per year and is under the restriction of 1500 hours per year. The department will assign part-time members to one of three turns A, B, or C and will fulfill their hours on that turn. The current part-time members will be asked but would be exempt from the requirement. With the 1152 hours per year the department must maintain a roster of at least 16 part-time members.

The cost for two 24 hour part-time positions would be approximately \$225,003.14 per year in wages. The existing part-time budget covers these recommendations.

REFERENCES

- Howland IAFF Local 2786 Contract. (2010, April 1). *Holwand IAFF Local 2786 Contract*.
Warren, Ohio, United States.
- Washington Township Fire Department*. (2011). Retrieved February 2012, from
<http://www.washingtonTwp.Org/fireEms/policies/procedures>
- City of Glenwood Springs*. (2012). Retrieved March 2012, from [http://www.ci.glenwood-springs.co.us/departments/humanresources/Reserve%20Documents/Part-time Reserves](http://www.ci.glenwood-springs.co.us/departments/humanresources/Reserve%20Documents/Part-time%20Reserves)
- City of Painesville*. (2012). Retrieved February 2012, from Employment:
<http://painesville.com/vertical/sites%20B66FDE066>
- City of Westerville*. (2012). Retrieved March 2012, from
<http://www.westerville.org/index.aspx?page112>
- Mountain View Fire District*. (2012). Retrieved February 2012, from
<http://mvfpd.org/recruitmentparttime.html>
- Whitestown Fire Department*. (2012). Retrieved March 2012, from Job Opportunities:
<http://www.whitestownfire.com/jobs.html>
- Barnes, D. (2002). *An Evaluation of the Aurora Fire Department Staffing*. Retrieved June 2011,
from Ohio Fire Chiefs Association: Http://associationdatabase.com/aws/OFCA/asset-manager/getfile/18536/barnes_david
- Bromen, N. P. (2000, December). *Understanding Part-time Staffing Issues In The fire Service*.
Retrieved June 2011, from Applied Research Projects:
www.usfa.dhs.gov/pdf/efop/efo20673.pdf

Bromen, N. p. (2001). *Quantifying the Shrinking Part-time Staffing Pool southwest Ohio*.

Retrieved June 2011, from Applied Research Projects:

www.usfa.dhs.gov/pdf/efop/efo33560.pdf

Broska. (2008, May 1). *How Many Part-time Personnel are Required to Staff One Full-time Position*. Retrieved June 2011, from Ohio Fire Chiefs Association:

http://associationdatabase.com/aws/OFCa/asset_manager/getfile/18544/broska_Glen

Clark, R. (2011, September). *Township Faces Reductions In Funding*. Retrieved November 2011, from Rick Clark For Trustee: www.clark4trustee.com/taxes_funding

Curtis, C. (2011). *Staffing Inadequacies During Peak Hours at Granville Township Fire Department*. Retrieved March 2012, from Ohio Fire Chiefs Association:

<http://associationdatabase.com/aws/OFCa/asset-manager/getfile/41542/curtis.c>

Feather, C. E. (2011, november). *Report:Health Insurance Premiums in Ohio rose 43 Percent in Seven Years*. Retrieved November 2011, from Star Beacon:

<http://starbeacon.com/local/x1295777007/Report-Health-insurance-premiums-in-Ohio-rose-43-percent-in-seven-years>

Gibson, E. (2010, April 25). Township fire crews worried by cap on hours. Columbus , Ohio, United States. Retrieved from <http://www.dispatch.com/content/stories/local/2010/04/26-townships-fire-crews-worried-by-cap-on-hours.hwtc>

Haigh, G. (2005, July). *Viability of Part-time Firefighter Program at Hanover Park*. Retrieved June 2011, from Applied Research Projects: www.usfa.gov/pdf/efop/efo38096.pdf

Highley.S. (1994, May). *Part-time Firefighters are They an Effective Staffing Solution*. Retrieved June 2011, from applied Research Projects: www.usfa.gov/pdf/efop/efo

Howland Fire Department. (2007-2010). *Annual Sick Leave Use Report[s]*. Warren, Ohio:

Microsoft Excel, V. Stroup Administrative Assistant.

Howland Fire Department. (2007-2010). *Annual Vacation Use Report[s]*. Warren, Ohio:

Microsoft Excel, V. Stroup HFD Administrative Assistant.

Howland Fire Department. (2007-2010). *Daily Log[s]*. Warren, Ohio: Filemaker Pro 7.0, AC

Thomas, Capt Beck.

Howland Fire Department. (2007-2010). *Howland Fire Annual Report[s]*. Warren, Ohio:

Howland Township Fire.

Howland Township . (2010). *Fiscal Officer, Robert Costello*. Retrieved 2011, from Howland

Township: <http://howlandtownship.org/fiscal-officer/189>

Howland Township Fire Department. (2007-2010). *Annual Overtime Report[s]*. Warren, Ohio:

Microsoft Excel, V. Stroup HFD Administrative Assistant.

Majercik. (2009). *A Comprehensive Economic Evaluation of Staffing Options For The McHenry*

Township Fire Protection District. Retrieved Sept 2011, from Applied Research Project:

www.usfa.dhs.gov/pdf/efop/efo44303

Miller, R. (2007, May-June). *Comparing NAWH and Relief Factor Calculations*. Retrieved June

2011, from Caselaw.org: <http://caselaw.org/Files/Sheriffs%20Magazine/10%20NSA>

Mustafa, I. (2009). *Evaluation Of Peak Load Unit Utilization in the Seminole County Fire*

Department. Retrieved March 2012, from Applied Research :

<http://www.usfa.fema.gov/pdf/efop/efo43838.pdf>

Ohio, S. o. (n.d.). Ohio Revised Code 505.60. *Ohio Revised Code 505.60*. Columbus , Ohio,

United States: State of Ohio.

Olson, D. (2006). *Career Emergency Services Strategic Staffing Plan for South Kitsup Fire and Rescue*. Retrieved February 2012, from Applied Research:

<http://www.usfadhs.gov/pdf/efop/efo39812.pdf>

Rindle, M. (2010, December 20). *City of Piqua Fire Department Part-time Staffing Evaluation*.

Retrieved Oct 2011, from Piqua firefighters Local#252:

<http://piquafire.com/Piqua%Fire%2011IAFF%2052.htm>

Stacy, S. (2008). *Failing Part-time System-Planning For The Future*. Retrieved June 2011, from applied Research Projects: www.usfa.dhs.gov/pdf/efop/efo42931.pdf

William Kramer and Associates. (2002). *Analysis of Fire Department Operations*. Cincinnati.

APPENDIX 1 – HOURS NEEDED COVERED 2007-2010

	2007	2008
Always needed	2809.2	2809.2
Sick Leave	3236.25	2569.50
Comp Time	908.00	998.0
Vacation	6432.00	7080.00
HD/PD	1056	1056.00
Total	14441.45	13342.7
Part time worked	12762.75	11393.00
Short	1678.7	1949.7
	2009	2010
Always	2809.2	2809.2
Sick	2159.25	4217.75
Comp	1026.5	1060.8
Vacation	7416.0	7536.0
HD/PD	1056	1056
Total	13432.2	15092.95
Part time	11526.00	12024.5
Short	1906.2	3068.45
4 year average needing covered – 14077.33		
4 year average covered by PT- 11926.56		
4 year average short by PT- 2150.77		

APPENDIX 2 – SURVEY

1. Does your department utilize part-time firefighters?

yes no

If no please stop taking the survey

2. What is the population covered by your department?

Less than 5,000

5,000-10,000

10,000-15,000

15,000-20,000

Greater than 20,000

3. How many fulltime employees? How many part-time employees?

Fulltime _____

Part-time _____

4. What is the part-time annual budget?

Less than \$50,000 \$100,000-\$150,000 \$200,000-\$250,000

\$50,000-\$100,000 \$150,000-\$200,000 Greater than \$250,000

5. What is the minimum certifications for part-time firefighter?

28 hour Firefighter 28 Hour EMT 28 Hour Paramedic

Firefighter I FF EMT FF IP Paramedic

Firefighter II FF IICEMT FF IIP Paramedic

6. What is the hourly wage for Part-time?

Firefighter I _____

Firefighter II _____

Firefighter IICEMT _____

Firefighter IIP Paramedic _____

Firefighter IIP Paramedic _____

7. What is the number of positions filled with Part-time per 24 hours shift? Full time?

Full time _____

Part-time _____

8. Are part-time firefighters used to fill in for full time when on vacation, FLSA Days, Sick Leave Etc ?

- Yes
- No

9. Approximately how many hours per year are needed covered by part-time?

10. Do you require your part-time firefighters to work a minimum number of hours?

- Yes
- No

If yes explain

11. Is there a maximum number of hours a part-time firefighter can work?

- Yes
- No

If yes explain

12. What kind of shifts can your part-time firefighters work? Check all that apply

- | | | |
|---------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> 8 Hrs | <input type="checkbox"/> 12 Hrs | <input type="checkbox"/> 16 Hrs |
| <input type="checkbox"/> 10 Hrs | <input type="checkbox"/> 14 Hrs | <input type="checkbox"/> 24 Hrs |

Other (please specify)

13. Briefly describe your part-time scheduling process.

14. Do you find it hard to fill certain shifts? Check all that apply

- | | |
|---------------------------------|-----------------------------------|
| <input type="checkbox"/> Days | <input type="checkbox"/> Weekends |
| <input type="checkbox"/> Nights | <input type="checkbox"/> Holidays |

Other (please specify)

15. Do you offer incentives to part-time firefighters for working certain shifts? Yes No

If yes explain

16. Do you offer benefits to your part-time firefighters? Yes No

If yes explain

17. How does your department recruit part-time firefighters? Check all that apply Newspaper Ad Internal Ad Word of mouth

Other (please specify)

18. What is your process for hiring part-time firefighters? Check all that apply Written Test Medical Exam Polygraph Exam Physical Ability Test Drug Test Interview Psychological Exam

Other (please specify)

19. Is your fire department finding it hard to get qualified part-time candidates? Yes No

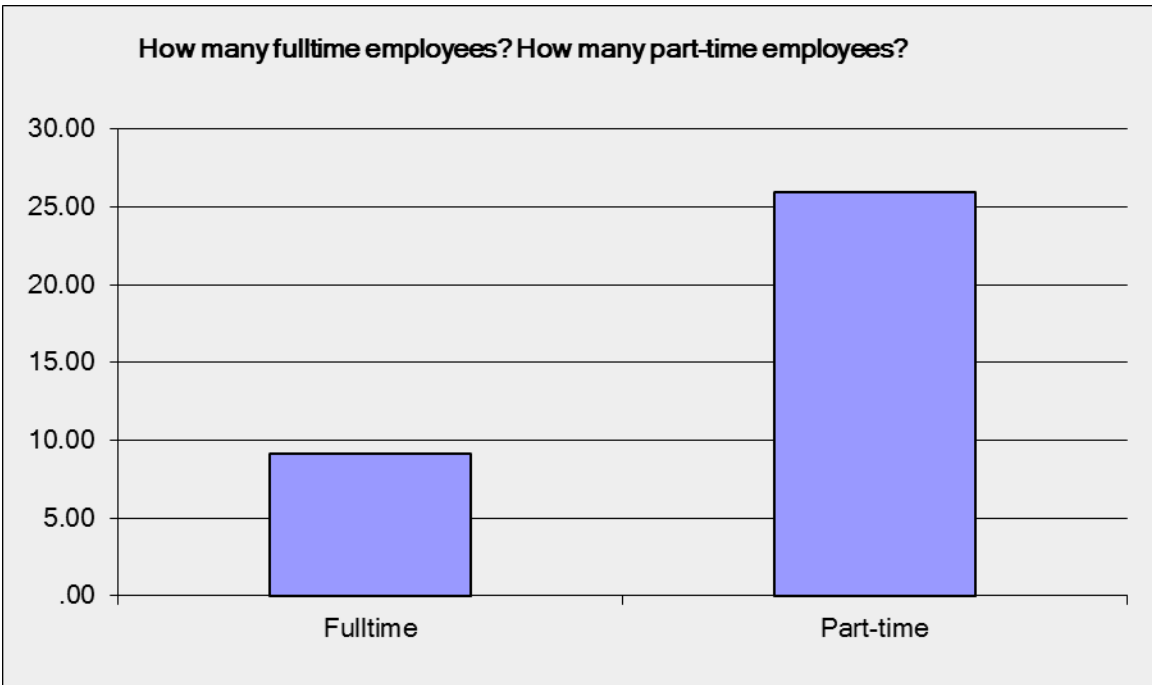
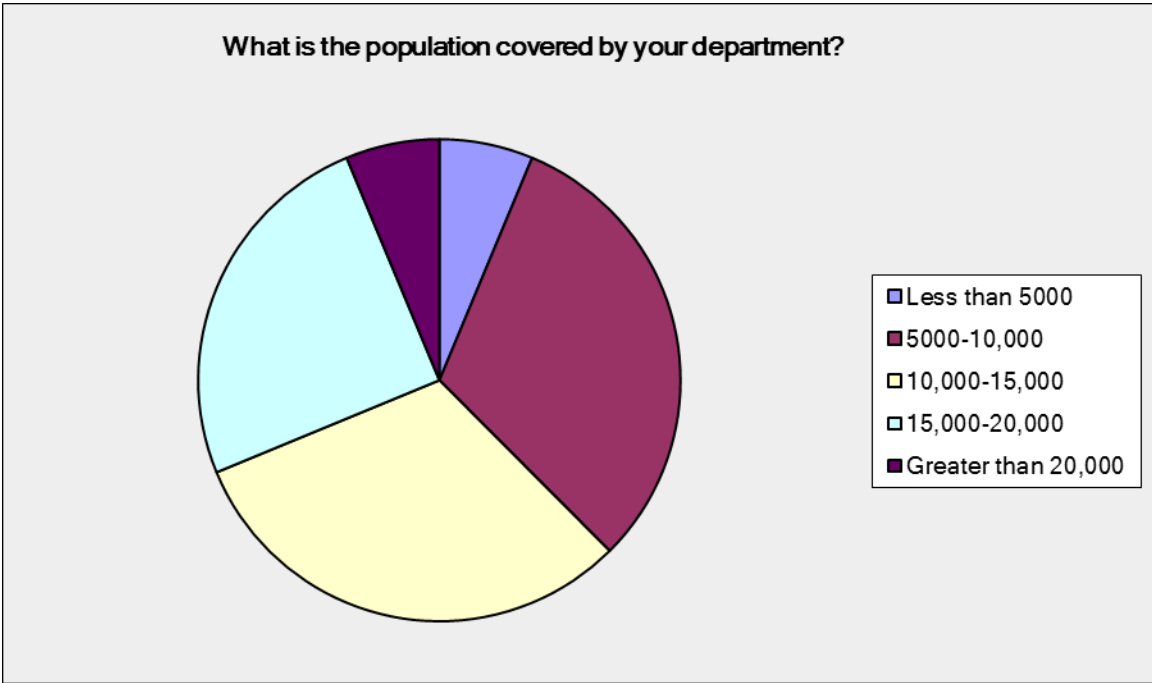
If yes explain

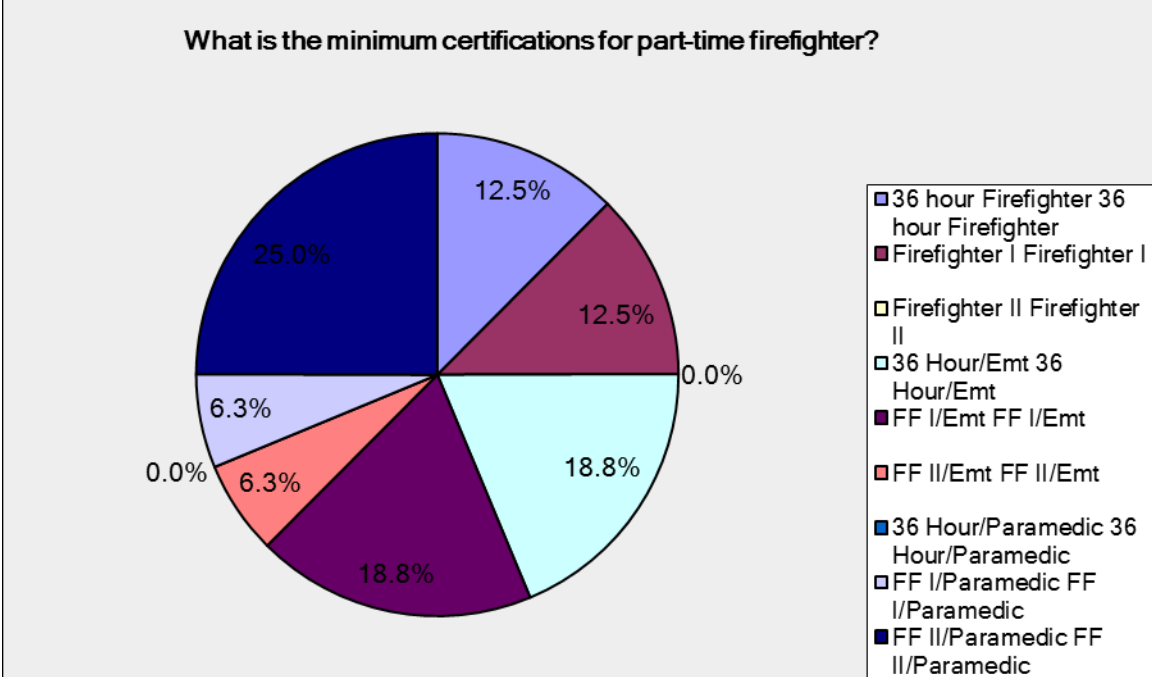
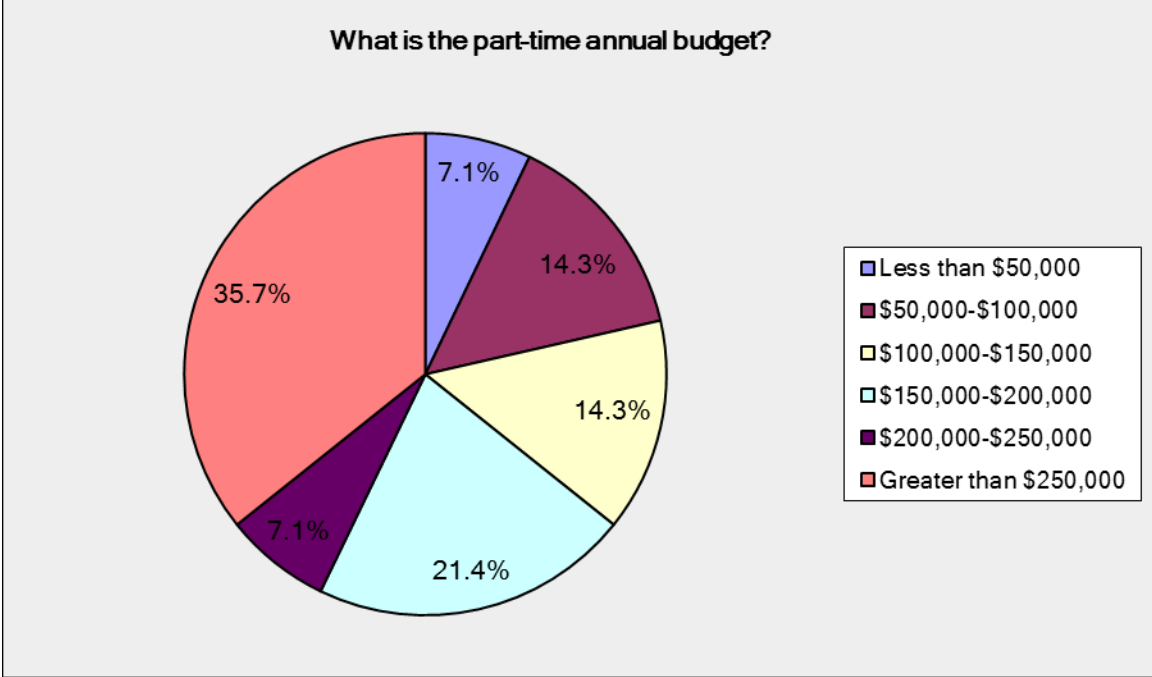
20. Is your department's part-time program meeting the needs of your department?

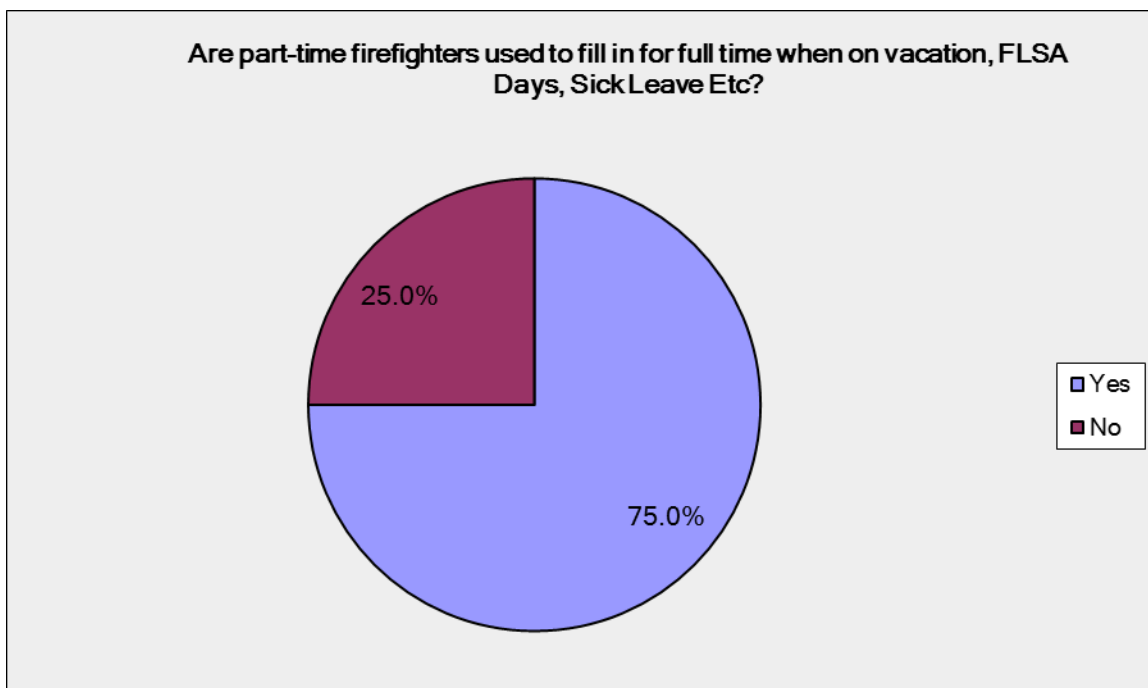
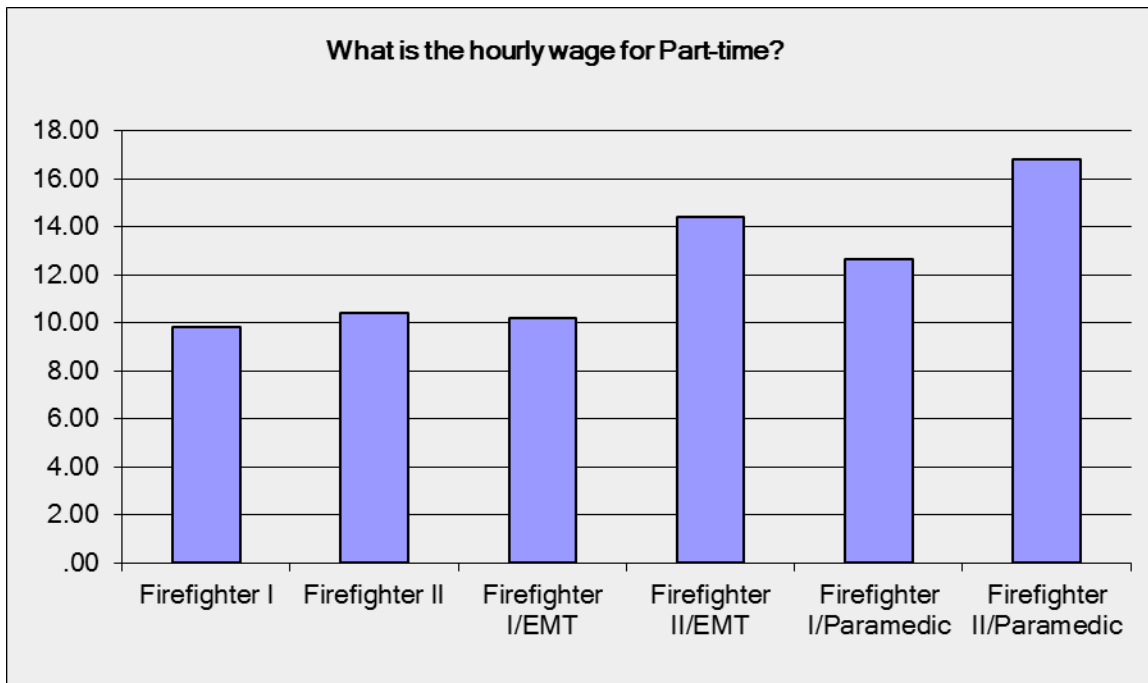
Yes

No

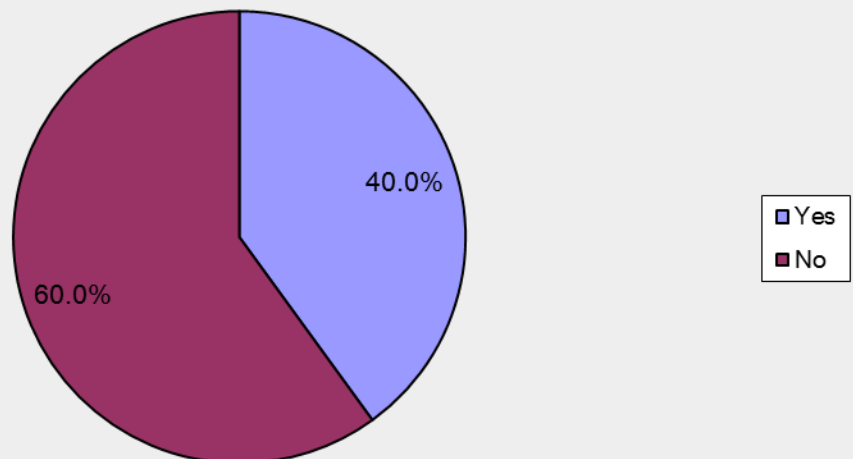
If no explain



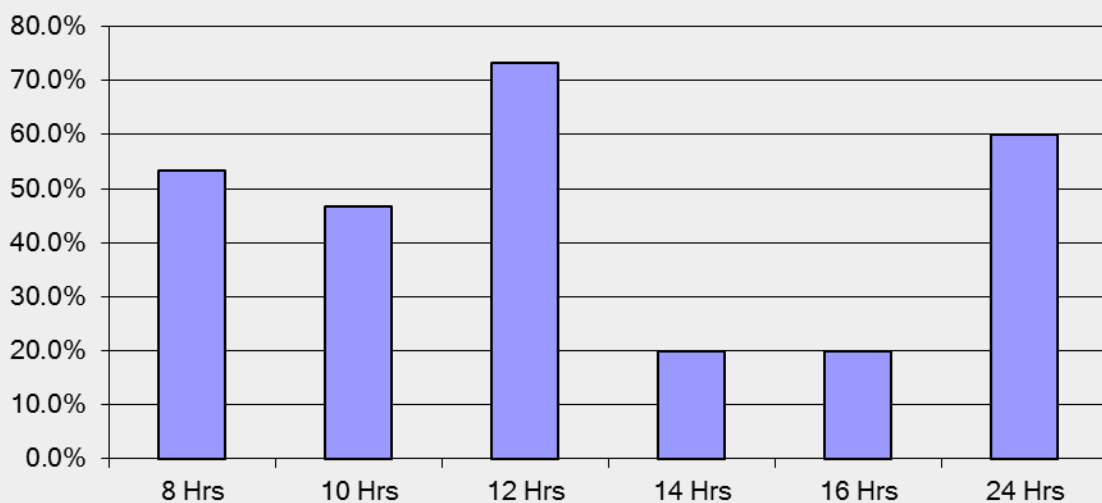


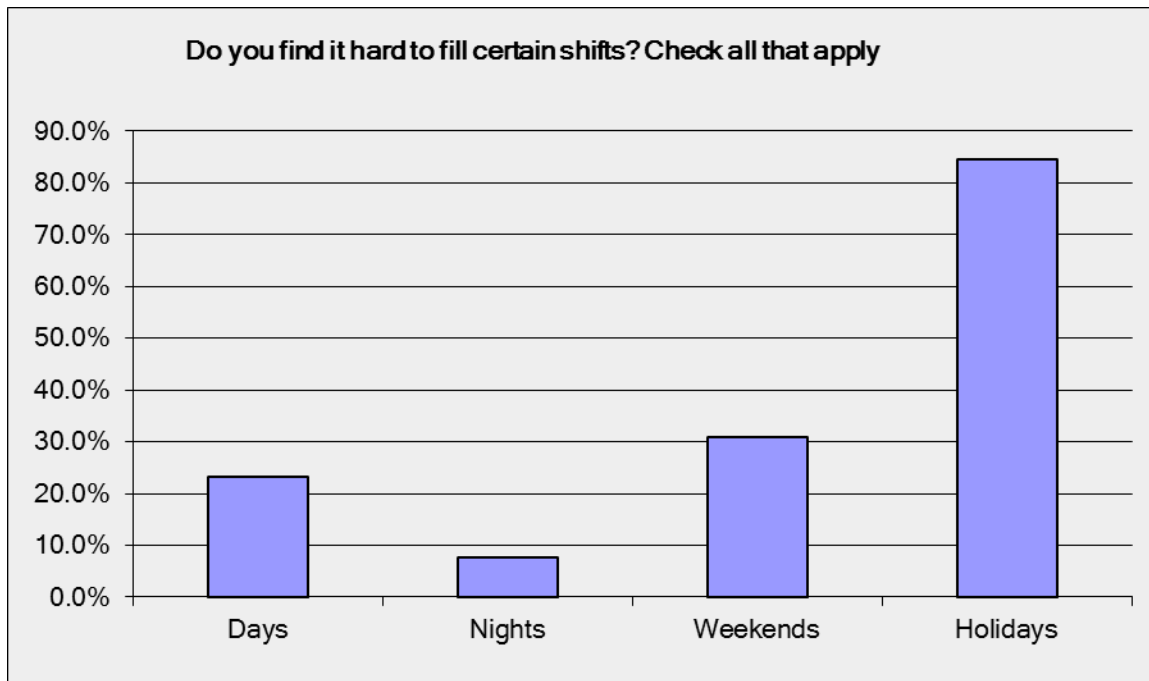


Do you require your part-time firefighters to work a minimum number of hours?



What kind of shifts can your part-time firefighters work? Check all that apply





APPENDIX 3 – HFD PART-TIME SURVEY

Survey for current/past Howland Fire Part-time personnel

What year were you hired part-time

1. Do you have a fulltime job? What kind of schedule do you work and how many hours per week?
2. Do you frequently work overtime at your fulltime job?
3. Have you had to call off from Howland due to overtime? If yes approximately how many times?
4. Other than Howland fire how many part-time jobs do you have?
5. How many hours per week or month do you work at your part-time job?
6. Are you required to work a minimum number of hours at your part-time job? If yes explain.
7. Considering both your fulltime and part-time job what turn/s are you most unable to work at Howland?

A	B	C
---	---	---
8. What are the factors that assist you in deciding where to schedule your time at your part-time job?
 Circle all that apply

Amount of hours available	Wages	Training available	how many calls
the department runs	Possible opportunity for fulltime	Other. If other	
explain			

9. Are there certain days or times you are unable or will not work at Howland? If yes explain.

10. If you signed up at Howland and were not scheduled to work did you work someplace else that day?

11. After the schedule was posted at Howland and a shift came open were you more or less likely to work it if you were asked?

12. If Howland guaranteed a certain number of hours? Would you

Like

Dislike

Undecided

13. If Howland required a minimum number of hours to work? Would you

Like

Dislike

Undecided

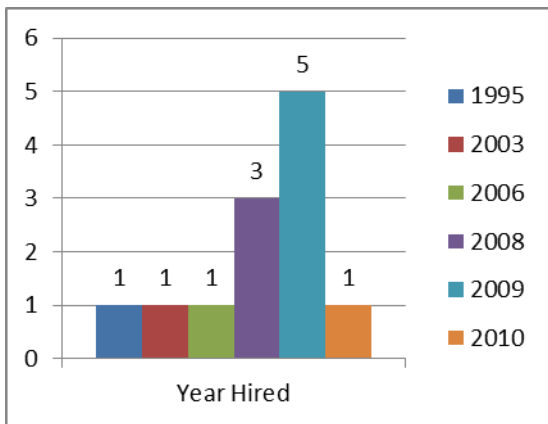
14. If Howland assigned you to a shift to work? Would you

Like

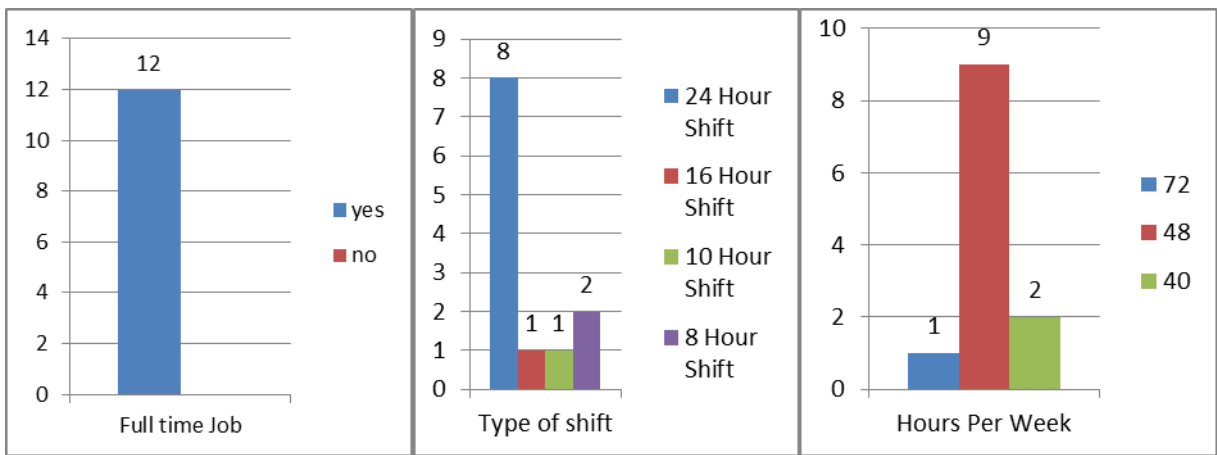
Dislike

Undecided

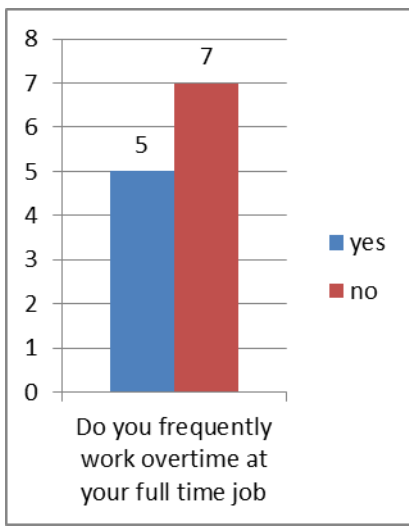
APPENDIX –4 PART-TIME SURVEY RESULTS



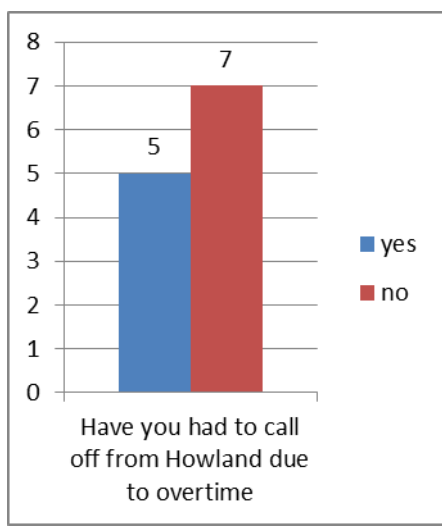
Question 1



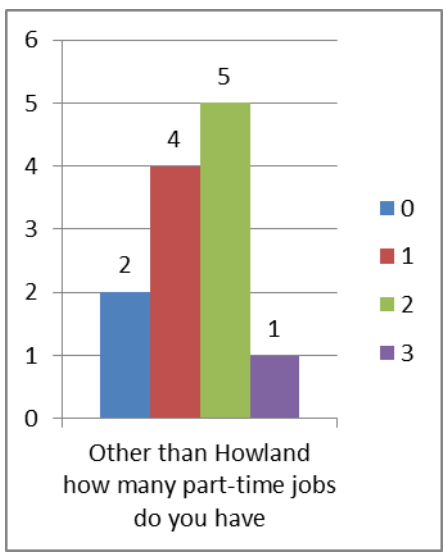
Question 2



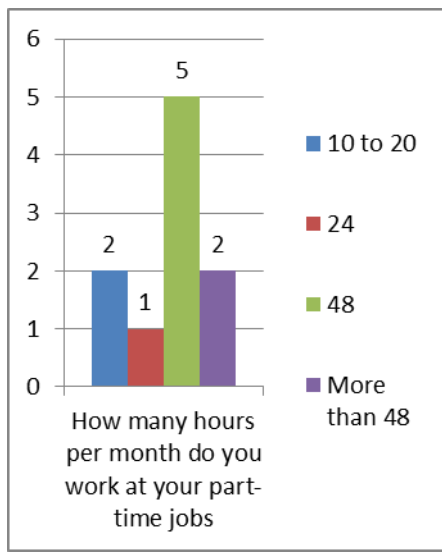
Question 3



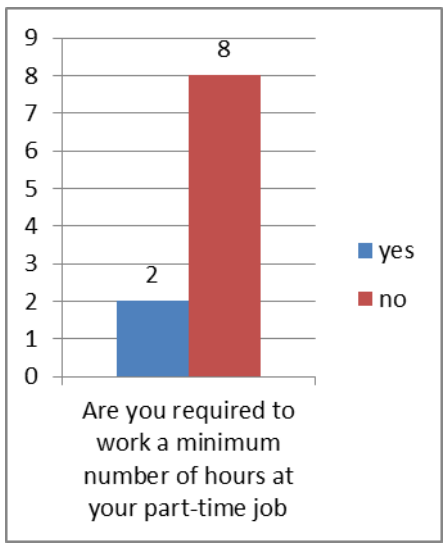
Question 4



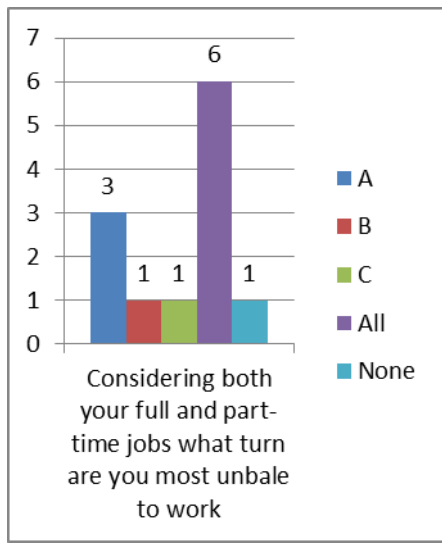
Question 5



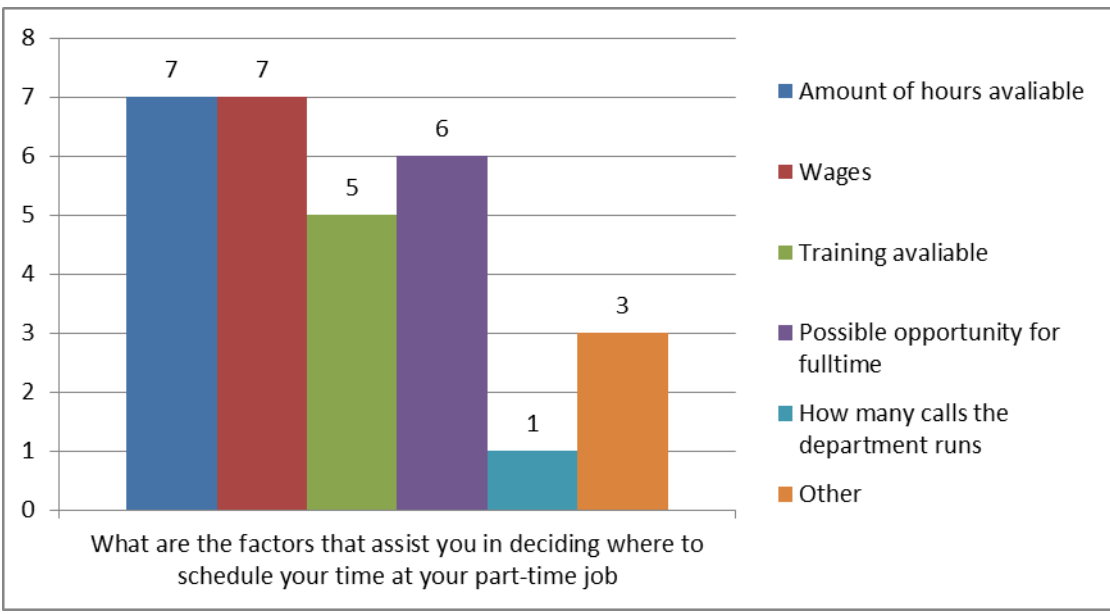
Question 6



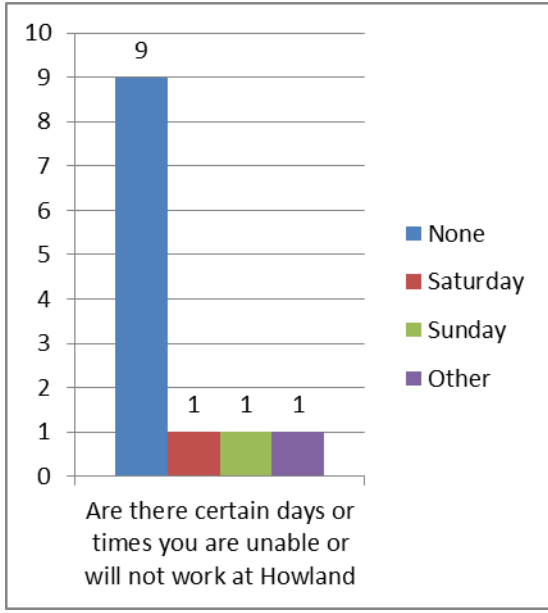
Question 7



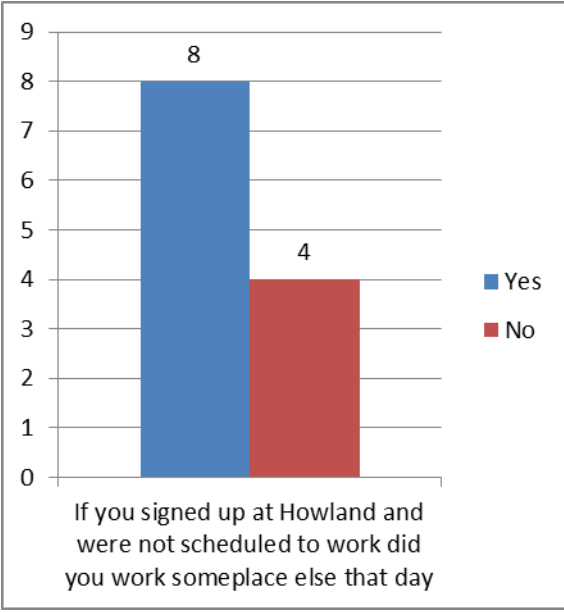
Question 8



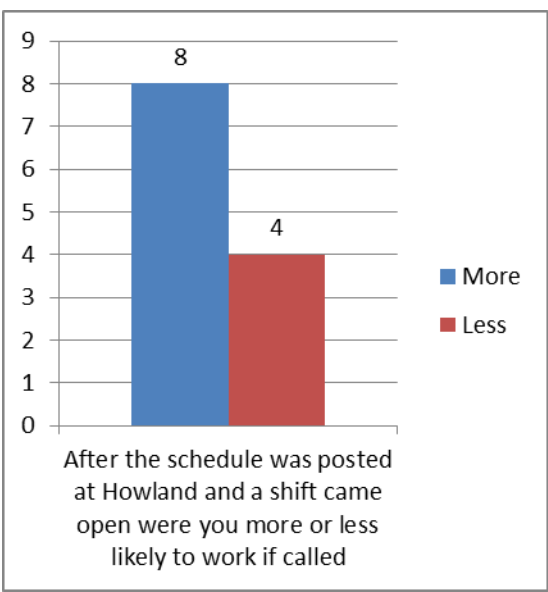
Question 9



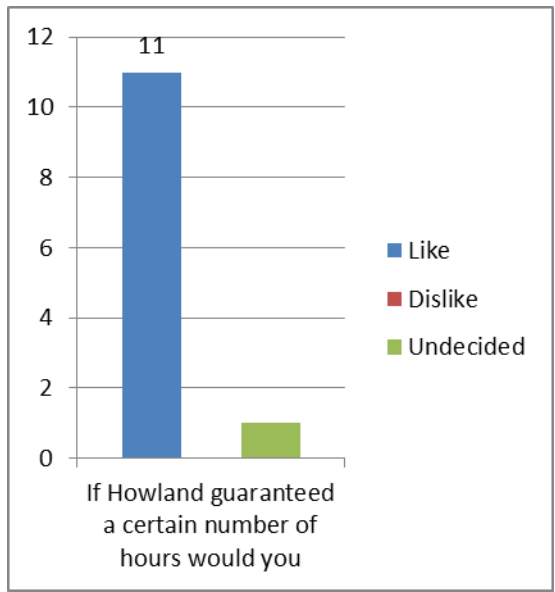
Question 10



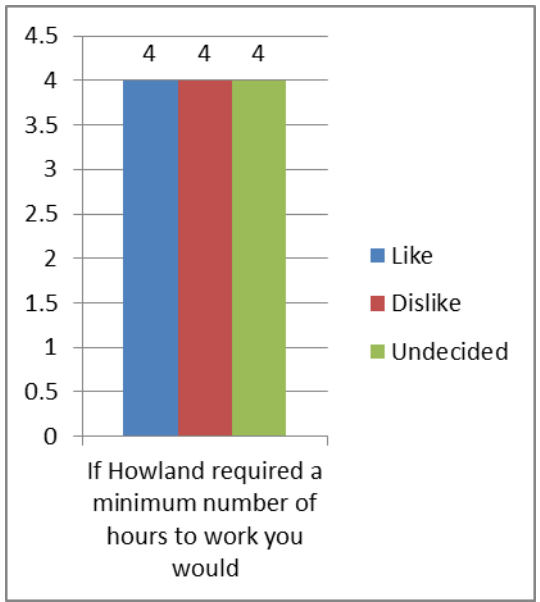
Question 11



Question 12



Question 13



Question 14

