Determining a Township's Fair Share Municipal Fire Protection Contracts

BY: James M. Steele
Van Wert Fire Department
Van Wert, Ohio

An applied research project submitted to the Ohio Fire Executive Program

May 2002

ABSTRACT

In 2000, the Van Wert Fire Department began a strategic planning process to identify ways to fund increased manning for the department. Van Wert Fire Department provided emergency services to the City and three townships, two of which envelope the City. Township fire protection contracts were identified as an item that needed to be updated to reflect a more accurate cost sharing among all parties involved.

The problem for the Van Wert Fire Department was to reach an agreement with the administration on the methodology to develop a fair share contractual agreement that would reflect a more accurate benchmark for the cost of emergency services. The impact of the contract implementation needed to be identified as did the impact on the operating budget.

The purpose of this research project was to identify an acceptable and defendable method for calculating emergency services costs, and apply this information in future contract negotiating sessions.

Using historical research and evaluative research methodology, the following questions needed to be answered. First, what contract methods are currently being used by the fire service in our county? Second, what method and factors should the Van Wert Fire Department recommend to the City Administration for use? And last, what is the financial impact of this method on the Van Wert Fire Department's strategic plan?

Research procedures included an analysis of other Van Wert County fire department contracts for determining the cost of emergency services and an analysis of how the Van Wert Fire Department currently charged its three townships for emergency services. Results were drawn from this analysis and a review of literature by various authors. Results indicated that the Van Wert Fire Department had been subsidizing emergency services for its townships and a different formula would reflect a more accurate fair share cost for emergency services.

Recommendations included changing the formula to reflect a fair share cost of the emergency services and working with the townships on new agreements that reflect costs derived from this formula as well as acceptable implementation schedules.

TABLE OF CONTENTS

INTRODUCTION

For more than fifty years the City of Van Wert, Division of Fire, had contracted city emergency services to three surrounding townships. In 2000, following the election, major changes took place within city government. A new Mayor was elected, and a new Safety Director appointed. The new officials reviewed the Fire Departments' strategic plan for growth, and agreed with its conclusion that additional personnel were required for the plan to succeed. They also concluded that after review of the City's revenue stream, the levels of payment from the three townships' fire protection contracts were far below the value of the services being provided. The core question in this process was: what methodology should the City use to develop a definable fair share cost to the contracted township areas?

In the previous two years before the election, City government had been turbulent. The City had used the economic prosperity to correct existing budget deficits. Consequently, funding surpluses for additional personnel, in any City department, was not present nor was it viewed as obtainable in the near future from a general fund in static growth. Due to the structuring of the City income tax, capital projects were not effected.

In 1998, the Fire Department developed a strategic plan for growth. This was a result of continued run volume increases over the past twenty-five years. The Fire Department had rapidly reached the point where has increased beyond the capability of staffing. As part of this strategic plan development, the previous administration concluded that the current township fire protection contracts, which were the Fire Departments only outside sources of funding were outdated and needed to be increased.

The incoming City Administration had a very limited experience in municipal government, and even less experience in dealing with township officials. They did agree with the previous administrations' conclusions, and ultimately decided to attempt correction of the outdated contracts.

The problem was that the City of Van Wert had not renegotiated these contracts since 1948. A methodology to determine a fair and definable cost that would be reflected in the township contracts had to be determined. The financial impact of applying this method on the Van Wert Fire Department needed to be identified as well.

The purpose of this research project was to identify the different methodologies for developing a municipal fire protection contract the reflected a township's fair share.

Evaluative and historical research methodology was used to answer the following questions:

1. What contract methods are currently being used by the different fire departments in Van Wert County?
2. What methods and factors should the Van Wert Fire Department recommend to the City Administration for use?
3. What is the financial impact of this method on the Van Wert Fire Department's strategic plan?

BACKGROUND AND SIGNIFICANCE

The County of Van Wert is located in northwest Ohio, and is bordered on the West by the State of Indiana. Industry and agriculture are the leading businesses in the county (Hubbard 2002). The county has a population of 29,659, of which 10,690 people reside in the City of Van Wert (US Census), which is also the county seat. There are twelve townships within the county, and nine of the townships have at least one village or city located in them. Total population of the cities and villages is 17,296; the remaining 12,363 residents reside in the unincorporated areas of the township (Ohio OSR). Van Wert county residents are predominately German, Irish, Dutch and Welsh and as a majority are religious, conservative Republicans.

The County of Van Wert was formed in 1803, although it was not surveyed until 1819. The Village of Van Wert was laid out in 1835, and incorporated in 1848 (Hubbard 2002). The volunteer fire department became a paid fire department starting in 1869, and remains the only paid fire department in the county. Located in the county there are seven fire departments, of which six are volunteer. Another three departments cover parts of Van Wert County but are located outside of the county proper. Of these three, two are volunteer and one is paid. Mutual aid agreements are present among all departments involved and all departments have fire protection contracts with at least one township.

The Van Wert Fire Department consists of 21 paid and 10 part-paid personnel, operating out of one station. There are two shifts of six personnel, one shift of seven personnel, and two 40 hour personnel who work Monday through Friday (See Appendix A). The part-paid personnel are used to augment the existing full-time staff.

In 2001, the Van Wert Fire Department protected 60 square miles of area and was the primary fire and EMS responders for the area which included the City of Van Wert, all of Pleasant Township, the western half of Ridge Township and part of Hoaglin Township.

This area generated a response volume in 2001 of 1480 incidents. The jurisdiction has a wide variety of protection concerns encompassing residential, commercial, industrial and rural areas. The Fire Department vehicles consist of two ladder trucks, three engines, one grass firefighting vehicle, two staff vehicles, and two ambulances. Van Wert has a class five ISO rating, and provides a wide range of services besides fire and advanced life support emergency medical services. These would include hazardous material mitigation, confined space rescue, code enforcement, inspections and public fire education.

The City of Van Wert has an income tax rate of 1.72% and is distributed as follows: 1% goes to the City's general fund and provide for the operational costs of the Administrative offices, Engineering Department, Fire Department, Municipal Court, Police Department, and Parks Department; 0.5% goes to the Street Department for operations and capital infrastructure improvements; and 0.22% goes to the Fire and Police Departments for capital improvements. The Water Treatment plant, Water distribution, Wastewater Treatment plant, and Wastewater Distribution Departments' are funded entirely through user fees.

In 2001 the Fire Department had an operating budget of 1.39 million dollars and a capital budget of $575,000.00. The three township contracts brought in a total of $33,848.00, and this does directly to the general fund. The services that the Van Wert Fire Department provided are entirely tax supported with no user fees attached to any of the operations. Monies generated from the townships for fire protection come from a set millage, which has been unchanged since 1948.

In the November election of 1999, Van Wert elected its first Democratic mayor since 1952. In 2000 he decided that for the first time since 1948, the City would negotiate an increase in township fire protection contracts. The Mayor committed that the increases in revenue would be used to fund the immediate hiring of two additional firefighters. The Fire Department and the Administration did not reach an agreement with each other on

how much we would charge. The Fire Department favored using a more conservative approach in which the cost of the firefighters would be used to benchmark the rate. The administration had elected to initially use the emergency call volume and the existing fire department operational budget as the sole factors in determining the rate increase. The administration position did evolve from call volume to calculating rates on population density of the townships versus the population density of the City, and the existing fire department operating budget. The Mayor did make public his decision to review the contracts which caused a significant public outcry. This outcry revolved around two questions; how much will the increase be? , and what will happen if the affected township and City Administration do not agree to the increase?

The decision of the City to explore rate increases to these long standing fire protection agreements was justified. Changes in the township protection costs do require adequate research to ensure that the agreements are fair and accurately reflect the fair share costs that these contracting townships should contribute to the operation of the fire department.

LITERATURE REVIEW

When presented with limited or static growth in a city's revenue stream, elected officials frequently require the fire service to evaluate how they can deliver more cost effective and efficient emergency services. The focus for the literature review was on examining existing fire protection contracts within the county, as well as existing information at the state and national level. As in the case of fire protection agreements, the municipality that owns the fire department retains policy and budgetary control (Merrill, 1990)

Intergovernmental service contracts can be defined as "agreements between two units of government in which one pays the other for the delivery of a service to the inhabitants in the jurisdiction of the paying government."(Henderson, 1985). Intergovernmental fire service contracts should not be confused with mutual-aid agreements. Mutual-aid agreements are formal or informal reciprocal arrangements by which the fire departments agree to assist each other in case of need and usually without compensation, except perhaps to replace damaged equipment. (Hoetmer, 1988).

Contracting out services can help relieve budget problems for all involved while providing "benefits in the form of increased levels of service through economies of scale, and by having more equipment and personnel available to serve either's needs" (FEMA, 1993). All fire departments in Van Wert County received revenue from intergovernmental contracts for fire protection service in 2001 (Auditors Office, Van Wert County, 2001)

Many organizations would list "reduced funding, mandates by the public, elected officials and the fire chiefs' desires to look at options, and a specific situation or opportunity as the primary catalysts that lead fire service leaders down the cooperative service part" (Johnson & Snook, 1997). Historically, buying fire protection from another government entity has been a good deal for the "buying" entity. However, with increased

costs and budget constraints, “selling” entities have reexamined their fee structure and quite often, have increased their rate substantially (Merrill, 1990).

One problem with contracting for fire protection is that many communities do not have a system that provides an accurate cost accounting of providing service, making it difficult to establish an appropriate fee structure (Hoetmer, 1988). In Ohio, a township does not have a mandatory duty to provide fire protection for its residents. In Attorney General Lee Fisher opinion he states “Pursuant to R.C. 9.60 and R. C. 505.37, a township may, but is not required to, provide fire protection for the residents of the township.” (Fisher, 1994).

Charges for fire service can be established by a number of methods. The question of what is a fair share of fire service costs has led to the development of many different kinds of formulas, which usually take into consideration one or more of the following factors (Hoetmer, 1988):

1. Fire department operating costs
2. Money paid to support pensions
3. Cost of apparatus and major equipment depreciated over a specific time period.
4. Cost of the physical plant over a given time.
5. Percentage of fire department use by the contracting municipality over a given period.
6. Percentage of assessed valuation of the contracting municipality to the total assessed valuation of all areas protected.

Examples of popular methods used to assess a fair share of costs are the following (Hoetmer, 1988):

1. Fixed formula. Fees are determined on the basis of a formula designed to include as many of the costs of providing fire services as possible.

2. Ratio of calls. Fees are determined by taking the calls of the contracting area as a proportion of the total calls received by the fire department and then applying that percentage to all fire department costs.

3. Per unit cost. Fees are determined by counting the number of structural units being protected and then dividing the department's operating costs by the total number of units in all areas protected to determine a per unit cost.

4. Assessed valuation. The assessed valuation of the contract service area services as the basis for proportionately sharing fire service costs.

5. Population. Since the number of fire responses are fairly reflective of the size of a community's population, this becomes the method for proportionately determining costs.

6. Flat fee or standard base. The fee is based on the ratio of fire calls but a flat fee is levied only when a fire call occurs.

Historically, buying fire protection from a neighboring municipality has provided real bargains for the purchaser (Merrill, 1990). But in today's climate of doing more with less and being accountable for fiscal restraint, municipalities need to decide whether they will subsidize fire protection for its neighbors, furnish it at cost, or attempt to deliver contract fire protection at a profit to help offset rising costs (FIRE/EMS Center, 1997).

Assistance for the involved townships is limited as no set policy or formula exists from their supporting agencies. The Ohio Township Association does not have any township contracts on file. We leave that up to the individual townships and their respected legal advisors to determine the details (H. Fought, 2001).

The literature provided information on various methodologies on calculating costs and their justifications. An underlying theme was that with today's rising costs for fire protection, fire departments need to rethink how they charge for fire protection (Nelson, 2001). The literature also suggests that there is no one right way to develop what is a fair share costing method for fire protection, although Nelson's formula does offer an

excellent guideline to follow. Many factors, such as call volume, population, market value, community demographics, and competition from other departments (public and private) needed to be analyzed before arriving at what could be perceived as a fair cost.

PROCEDURES

A historical review of literature was completed to identify different methods used to assess a fair share of costs for fire protection. Sources for this literature included the National Fire Academy Learning Resource Center, information from the Van Wert Fire Department library, literature from my personal library, and information from sites on the World Wide Web.

In addition, fire protection contracts from the following Van Wert county fire departments were reviewed: Middlepoint, Ohio City, Scott, Wren, and Willshire. Comparisons for consistencies and methodologies for computing fire protection costs for township contracts were noted in each.

Evaluate research was used to draw conclusions from in this research paper. A list of all the townships that currently contract with the Van Wert Fire Department for fire protection was used in this research. The valuation of property for each district, population, number of structures, and call volume information was obtained through County information and fire department records for the three townships that currently use the Van Wert Fire Department as primary response. This information was used in formulas intended to show a fair share distribution of costs for fire protection.

The formula used (See Appendix B) combined the average percent of use of the fire department over the last three years using the following criteria; the district valuation of the area of fire protection to the total valuation protected, the percent of population of the recipient of fire protection to the total population protected, the percent of structures of the recipient areas to the total structures in the protected areas, and the percent of call volume of the recipient of fire protection to the total call volume of the protected area. This was compared with operating costs, capital costs, depreciation and administrative costs to arrive at the cost of fire protection for one year to be charged to the recipient of the service. A spreadsheet was developed (See Appendix B) to enable use of this formula

when adding or deleting townships, or comparing any combination of values that affect costs. Contracting parties may agree to use only one or two of the values when determining costs for fire protection. For purposes of this analysis, developing cost for fire protection was limited to using all four values in the formula and other options were not explored. These four factors were used as I felt that this would be the most equitable formula because it averaged out any individual discrepancies of each value.

The final factor that I analyzed and incorporated into the formula was what City departments must be included to complete actually delivery of the fire protection services. The City of Van Wert has nine departments that are accountable to the Safety-Service Director. Of these nine departments, four actually are needed to delivery adequate fire protection service; they are the fire department, street department, water treatment, and water distribution. This factor was needed from the standpoint that it could be successfully argued that a township was not buying fire protection at the City rate, but it is purchasing the availability the services that assist in the delivery of fire protection to the township

After the information was complied and analyzed, conclusions were drawn and recommendations made. Conclusions were based on evaluative research and the opinions of the authors in the literature review. Recommendations were designed to apply toward assisting the Van Wert Fire Department in determining the best method for developing contracts with the area townships for fire protection. The information researched is assumed to be correct.

The results of this research project were limited to the literature review and the aforementioned evaluative research. Factors that effect results may be changes in property values, call volume, structures, and population. Competition from other entities may ultimately affect what is perceived as a fair-sharing of fire protection costs and was not researched in depth.

Discussion of this research was limited to information that impacted the Van Wert Fire Department. The results and discussion may or may not apply to other fire departments.

RESULTS

This research paper asked the initial question of what methods are currently being used to assess a fair share of costs of fire protection were. Literature and review of existing contracts from other villages suggest that any one or a combination of methods may be used. The more popular methods include:

1. Percent of fire department use by the recipient of fire protection, averaged over time.
2. Percent of valuation of the recipient of fire protection to the total valuation protected.
3. Percent of population to the recipient of fire protection to the total population protected.
4. Fixed formula. Combining many of the costs of providing fire protection.
5. Per unit cost. Dividing operating costs by the number of structures in a given area.
6. Flat rate. Charging a flat rate per call or per hour.

Fire protection contracts were examined from various Van Wert County villages. The results of the examination proved inconclusive. Of the five contracts examined, all used an unfixed formula. Factors used in formulating the costs ranged from comparisons to other districts to other undeterminable factors.

Using a fixed formula based on costs, run volume, percentage of market value, use, number of structures, and population was a decision made by staff of the Van Wert Fire Department after a review of literature and contracts.

In 2001, Van Wert Fire Department charged a rate from a fixed formula, based on undeterminable factors. These factors were undeterminable due to the age of the original contracts and lack of documentation. Based on funds collected in 2001 Pleasant Township contributed $14,244.00, Ridge Township contributed $17,565.00 and Hoaglin

Township contributed $2039.00. In comparison, an annual per capita cost and per day cost for fire protection was:

City of Van Wert	$192.11	$0.53
Pleasant Township	$6.37	$0.02
Ridge Township	$26.81	$0.07
Hoaglin Township	$29.13	$0.08

If a fixed formula (See Appendix B) were used to charge for fire protection, these contributions would amount to $141,676.93 for Pleasant Township, $47,830.31 for Ridge Township, and $8,174.55 for Hoaglin Township. This represents an additional $197,681.97 towards covering the costs of the Van Wert Fire Department for fire protection when compared to fees charged in 2001. Using this fixed formula, an annual per capita and per day cost for fire protection would be:

City of Van Wert	$176.78	$0.48
Pleasant Township	$63.45	$0.17
Ridge Township	$73.02	$0.20
Hoaglin Township	$116.78	$0.32

Hoaglin Township numbers are increased as a result of one large factory in one of the township sections coupled with a limited population of the small district. The City of Van Wert charge was reduced as the cost of two firefighters was $100,000.00, and the remaining $97,681.97 was used to reduce the City residence costs.

If this methodology was successfully used, and agreed upon by the townships, the impact on the strategic plan for the Van Wert Fire Department would be positive.

DISCUSSION

Much of the focus on today's fire department operations is keeping costs to minimal increases while maintaining or increasing service to the community. One way to accomplish this is to look for additional revenue sources. A review of existing or potential fire protection contracts with other government entities should be accomplished. Cities with paid fire departments need to decide whether to subsidize their neighboring townships or deliver fire protection service in a more fair cost sharing manner.

The City of Van Wert was faced with this same decision. They had been subsidizing townships for fire protection for years without reviewing the cost of doing business. As a result, Van Wert was absorbing increases in costs at a disproportionate level when compared to the townships it protected.

Van Wert Fire Department was mandated to work within a budget with limited increases. By looking for ways to generate revenue, fire departments can help offset operating costs. Contracts with townships for fire protection are a viable resource for income. There are other ways to generate revenue involving user fees and these are used frequently, but not yet considered by the City of Van Wert.

As Merrill (1990) suggested regarding selling fire protection service, it is apparent that the Van Wert Fire Department is not alone in its need to revise its agreements and substantially increase its rates for providing fire protection to townships. A fair share approach needs to be maintained that is consistent, fair, and defendable for all parties.

However, as the City of Van Wert decides on raising their rates for fire protection, one must not hesitate to look at possible competition for these township contracts. The involved townships in this case could solicit fire protection from neighboring volunteer fire departments. In this instance, Van Wert needs to justify its charges or decide if it should change its formula to balance fair share with what townships are willing or able to pay.

One other factor to consider about the disparity for charges for fire protection between volunteer fire departments and Van Wert Fire Department is that our department has paid personnel. The other departments are all volunteer personnel. It would be logical to assume that all the volunteer fire department's costs will be less than that of Van Wert. But issues such as ISO ratings, response time and equipment need to be factored in to determine a cost/value or risk/benefit of having one department provide fire protection over the other. Increased savings in insurance rates may alone justify paying a higher price up front for fire protection.

RECOMMENDATIONS

Based on supporting data and information obtained through this research, recommendations would be made to change the manner in which the Van Wert Fire Department charges for fire protection in Pleasant, Ridge, and Hoaglin Townships. Research indicated that Van Wert would benefit from a change that would reflect a fairer sharing of coasts. This would assist Van Wert Fire Department in maintaining quality of service, and meeting strategic plan requirements for manning.

This formula needs to be researched further, taking into consideration demographics, competition and the customer's ability to pay. Further analysis should be undertaken of the Van Wert Fire Department to determine its strengths, weaknesses, opportunities and other revenue sources as it relates to providing and selling fire protection to area townships.

Other townships may be interested in contracting for fire protection. Keeping that in mind, Van Wert needs to be consistent and fair in the manner it deals with all the townships and needs to look for other avenues for additional income from this area.

Finally, Van Wert needs to ensure that it first maintains the quality of service for its own community that it's protects.

The problems and recommendations presented are necessarily unique to the Van Wert Fire Department and are intended to be shared with other departments so they may be able to benefit from them as well.

REFERENCES

Discover Van Wert County. (2002) Van Wert: The Hubbard Company.

U.S. Census Bureau. (2001) Van Wert County Quickfacts , Retrieved March 31, 2002 from the world wide web: http://quickfacts.census.gov/qfd/states/39/39161.html

Ohio Department of Development (2002) Office of Strategic Research, Ohio County Profiles: Van Wert County. Retrieved March 31, 2002 from the world wide web: http://www.odod.state.oh.us/osr/profiles/PDF/VANWERT.PDF

Merrill, G. (1990) On-Call Fire Departments: The Township Board's Responsibilities. Lansing: Michigan Townships Association.

Henderson, L. (1985) Alternative Delivery Systems. Coleman J. & Granito J.(Eds), Managing Fire Services (2nd ed., p. 437) Washington D.C.: International City Management Association.

Hoetmer, G. (1988). Alternative Delivery Systems. Coleman J. & Granito J.(Eds.), Managing Fire Services (2nd ed., pp. 418-444) Washington D.C.: International City Management Association.

Federal Emergency Management Agency (FEMA) (1993). A Guide to Funding Alternatives for Fire and Emergency Medical Service Departments (FA 141). Emmitsburg, MD: United States Fire Administration.

Van Wert County Auditors Office (2002). Nancy Dixon, letter to author, 5 March 2002.

Johnson, J. & Snook, J. (1997). Making the Pieces Fit: Cooperative Service through Consolidations, Mergers, and Contracts. West Linn, OR: Emergency Services Consulting Group.

"Ohio Attorney General" Opinion 94-067. 13 Oct. 1994, Retrieved 10 Dec. 2001 from the World Wide Web: http://www.ag.state.oh.us/opinions/1994/94%2Do67.html

FIRE/EMS Center (1997). Guidelines for Minnesota Fire Protection Contracts. St. Paul: Metropolitan State University.

Heidi Fought <OTAFought@aol.com> “Intergovernmental contracts” 9 July 2001, personal e-mail (9 July, 2001)

Nelson, S. (2001) Determining a fair share cost: Intergovernmental fire protection contracts. Diss. National Fire Academy, 2001.31662

APPENDIX A
Organizational Chart

APPENDIX B
Fire Contract Rate Schedule

FIRE CONTRACT RATE FORMULA

$$X = \{[A + B + C + D + E/20 + F/40] \times [(G + H + I + J)/4]\} \times K$$

Where:

X = Cost of fire protection for one year to be charged to recipient of service.

A = Amount budgeted for operation of the fire department for the current fiscal year.

B = Amount budgeted for capital projects of the fire department for the current fiscal year

C = Utility cost budgeted for the fire department for the current fiscal year.

D = Administrative costs for the fire department for the current fiscal year.

E = Cost of apparatus, depreciation straight lined over 20 years.

F = Cost of building(s), depreciation straight lined over 40 years

G = Percent of fire department use by the recipient of fire protection, over last three years

H = Percent of valuation of the recipient of fire protection to the total valuation protected.

I = Percent of population of the recipient of fire protection to the total population protected

J = Percent of structures of the recipient of fire protection to the total structures protected

K = Multiplication factor based on departments required to delivery fire protection

A = Operational expenses		
2001 budget items	$1,399,306.00	
Total A:		$1,399,306.00
B = Capital Projects		
2001 Projects	$573,129.00	
Total B:		$573,129.00
C = Utility costs		
Gas	$8,335.00	
Electric	$18,935.00	
Total C:		$27,270.00
D = Administrative Costs		
Safety Service Directors Office	$130,997.00	
Divided by number of departments	9	
Total D:		$14,555.00
E = Cost of Apparatus		
Car 1	$20,500.00	
Truck 4	$26,348.00	
Ladder #1	$95,158.00	
Ladder #2	$217,990.00	
Engine #3	$347,000.00	
Engine #5	$107,000.00	
Engine #6	$93,667.00	
Engine #10	$106,930.00	
Medic #8	$79,838.00	
Medic #9	$69,869.00	
Subtotal	$1,164,300.00	
Amortize over period of years	20	

Total E:		$58,215.00

F = Building

Station #1	$600,000.00	
Amortize over period of years	40	
Total F:		$15,000.00
Total Costs:		**$2,087,475.00**

G = Percent of fire department use by the recipient of fire protection, over the last three years.

	# of calls (*)	% of calls
Van Wert	3620	83.12
Pleasant Township	522	11.99
Ridge Township	183	4.20
Hoaglin Township	30	0.69
	4355	100%

* - Call information provided by Van Wert FD. Represents volume from 1/1/99 to 12/31/01

H = Percent of valuation of the recipient of fire protection to the total valuation protected.

	Valuation (*)	% of Valuation
Van Wert	167,871,540	76.13
Pleasant Township	35,979,970	16.32
Ridge Township	13,863,390	6.29
Hoaglin Township	2,804,140	1.27
	220,519,040	100%

* - Valuation figures from Van Wert County Auditor, Nancy Dixon

I = Percent of population of the recipient of fire protection to the total population protected

	# of people (*)	% of population
Van Wert	10690	78.33
Pleasant Township	2233	16.36
Ridge Township	655	4.80
Hoaglin Township	70	0.51
	13648	100%

* - population based on US Census numbers and numbers from Ohio Department of Development

J = Percent of structures of the recipient for fire protection to the total structures protected.

	# of structures (*)	% of structures
Van Wert	4482	76.34
Pleasant Township	1000	17.03
Ridge Township	325	5.54
Hoaglin Township	64	1.09
	5871	100%

* - structures based on listing from 2001 Robinson Directory, represents structures that are classed as residential, commercial, or industrial.

/4 - the totals of the above listed factors are divided by 4, which represent an averaging of the four variables. If any three factors were used, instead of four, the factors would be divided by three.

K = Multiplication factor based on departments required to delivery fire protection.

There are nine departments that answer to the Safety Service Director's office. In this formula four departments were identified as contributing to the delivery of the fire protection service. They are: Fire Department, Water Department, Water Distribution, and Street Department. The factor in this formula was 0.44 (4/9). Departments not included were: Wastewater, Wastewater Distribution, Parks, Engineering, and Police.

Logic for this factor is that the recipient is not "buying" all city department services, only those contributing to the fire protection. An argument could be made that the Engineering Department be included in this factor.

FIRE CONTRACT RATE FORMULA APPLIED

Pleasant Township:

X = (2,087,475) x (.1199 + .1632 + .1636 + .1703 / 4) x 0.44

X = (2,087,475) x (.15425) x 0.44

X = $141,676.93

Ridge Township:

X = (2,087,475) x (.0420 + .0629 + .0480 + .0554 / 4) x 0.44

X = (2,087,475) x (.052075) x 0.44

X = $47,830.31

Hoaglin Township:

X = (2,087,475) x (.0069 + .0127 + .0051 + .0109 / 4) x 0.44

X = (2,087,475) x (.0089) x 0.44

X = $8,174.55