

Evaluating A Public Protection Classification Improvement

For

Cumberland Trail Fire District # 4

“Cost Versus Benefit”

**By: Kenneth L. Saffell
Assistant Chief
Cumberland Trail Fire District # 4
St. Clairsville, Ohio**

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Introduction

Insurance Service Organization commonly referred to as ISO is an independent, non-profit organization that provides evaluative services to fire departments and insurance companies with risk analysis. ISO's Public Protection Classification Program evaluates communities based upon a set of uniform criteria. Upon completion of the evaluation the individual community is assigned a Public Protection Classification number from a Class 1 to a Class 10. Class 1 represents the best rating a department can receive, while a Class 10 indicates the department does not meet minimum criteria to be rated.

In November of 1989 the residents of the City of St. Clairsville, Ohio and of Richland Township, which surrounds the City gave approval for the formation of the Cumberland Trail Joint Fire District. Prior to the formation of the District, residents of the City received protection by the former St. Clairsville Volunteer Fire Department. The Public Classification Rating at that time was a Class 5.

The residents of Richland Township received fire protection from St. Clairsville Volunteer Fire Department and Glencoe Volunteer Fire Department. The residents within the township received various public classifications ratings of 5, 7 or 9, dependant upon the distance from the individual fire departments and also in regards to a pressurized water source being available.

In August, 2001 the ISO was present to perform a review of the public classification rating. Upon completion the organization presented a final report showing our public classification rating as a Class 5 and Class 5/9. Which shows no significant improvement as was hoped for with the conversion to a career department.

The problem identified for research was that prior to the formation of Cumberland Trail Fire District most residents (both residential and commercial) received a Public Protection Classification rating of a Class 5 from the Insurance Service Organization. Remote areas of Richland Township, which would eventually become the Fire district received Class 7 or Class 9 rating. Ten years after the formation of the District and a conversion from a volunteer department to a career department ISO's evaluation showed a Class 5 or a Class 5/9 showing only improvement within the split classification area. This brought about the question in relationship to ISO what were the customers receiving for their tax dollars spent. The Fire District had the admirations of improving so that we could give back to our customers, who have given graciously to us.

With this recent completion of the survey the need to know why this status quo rating was received. A plan on how and what areas to improve for a better rating, along with a cost to improve this rating and when to improve all needed to be answered.

The purpose of this research is to review the public classification ratings received, how to improve and to evaluate the least expensive and an effective means of improving the rating. This review will include reasoning, future requirements for improvement, budgetary impact and information on who will benefit.

The study will utilize evaluative research method and be supported by descriptive research. The research questions to be answered are:

1. Why did Cumberland Trail Fire District receive the Class 5 and Class 5/9 rating ?
2. What improvements are needed to receive a better protection classification ?
3. What are the budgetary costs that will help us to reach the improved rating ?

4. What is the least expensive means of improving the public protection classification ?
5. What aspect of our customer service base will benefit the most from an improved public protection classification rating ?

Background and Significance

Cumberland Trail Fire District is dedicated to providing quality and affordable public safety services to all residents and visitors within the Fire District boundaries. It is significant that over the last twelve years that the Fire District has been supported through continuous tax levies to provide the requested services of all our customers. Maintaining this quality service with the experienced growth of the District is challenging. The organization must attempt to provide the best service for every dollar received from our tax payers.

Cumberland Trail Fire District is a joint fire district established in 1989 under the rules of the Ohio Revised Code. At the time of formation, the fire service organization changed from a volunteer staff to a combination department of full time and part time employees. Since the formation the district has provided 24 hours of service, 365 days a year.

Initially the fire district operated out of one fire station with a staffing of two full time firefighters and three part time firefighters. Along with the transition to a combination department, the public classification rating of a five was carried over. This rating was received in 1985 and was given to the City of St. Clairsville and a small portion of Richland and Wheeling Township.

Presently the fire district is operating out of two fire stations with a staffing of five

fulltime firefighters and three part time firefighters. The two stations are responsible for covering an area of 77 square miles. This square mileage represents a significant increase over the previously responsible coverage area .

During the month of August, 2001 the ISO, represented by customer service agent, Mr. Jack Ross completed a grading schedule survey for the first time for the Cumberland Trail Fire District. The process lasted for 3.5 days. After completion of the actual site evaluation, Mr. Ross returned to his office and forwarded the material to ISO for final calculation.

After the passing of a two month period the Fire District received their report card, enclosing the total credit points received out of a possible 100%. The grading sheet provides a breakdown of the grade into four separate categories.

The listed categories are:

Receiving and Handling of Alarms worth 10.00%,

Fire Department with a value of 50.00%

Water Supply total credit of 40.00%

Divergence a calculated negative percentage

A detailed review for Cumberland Trail Fire District's ISO protection classification report may be found in Appendix A.

The grading resulted in the following classification assignment. A Classification Rating of 5, within a five square mile radius of the two fire stations. Also within this radius the area must be protected by a pressurized water source. The area located outside of this five square mile radius received a split Classification Rating of a 5/9. Limited consideration was given to this area having pressurized water systems.

It is the intent of this research project to determine why the fire district received the same classification rating that was previously held by a one station all volunteer fire department. Also the future must be examined to review the least expensive way to lower the public classification rating, while taking into consideration increasing the quality of service.

Upon conclusion of the research project a recommendation will be forwarded to the Chief of the Department suggesting an approach to improve the classification rating along with quality improvement. Upon authorization from the Chief, a detailed plan of positive improvements with budgetary cost within a specific time frame will be presented to the Fire District Board of Trustees.

Literature Review

The intended purpose of this literature review was to gain knowledge to formulate answers to the five proposed research questions. A response was need to know why things stayed the same, what is needed to improve, what will it cost and what is the least expensive way to improve. A final review is needed to respond to who will benefit the most.

In an effort to find information that would provide guidance in resolving the issues various sources were utilized. A web search, personal interviews, telephone interviews and learning resource centers were all utilized to formulate solutions.

Research information from the ISO mitigation office's personal contact Mr. Kevin Gimeno provided the responses need to answer Question One, Why did Cumberland Trail Fire District receive a Class 5 and Class 5/9 rating? Through telephone communication K. Gimeno (personal communication, June 1, 2002) I was informed

of the following information:

- ISO provides two separate documented responses for your most recent community risk analysis survey, they are the following : Classification Details and Certification Improvement Statements.
- The two documents are divided into five separate reports for viewing

Mr. Gimeno went onto explain: “The Classification Detail document is broken into two reports. The first report is your grading sheet providing your credit score minus the deducted divergence versus an available credit amount of a 100 points or percent. The second report relates to the total credit points received by your organization in the three grading portions of the survey. These three grading areas are further sub divided and show your actual credit points versus the available score.”

Mr. Gimeno further stated: “Certification Improvement Statements are three detailed individual reports that cover the three grading areas. These detailed reports provide and show the deficiencies present within each area of your organizations review.” Gimeno continues: ”This is what needs to be corrected to receive additional credit points.”

In closing the telephone conversation in regards to my first issue Mr. Gimeno accepted my request for the written documentation to be forwarded to our organization for review of the two documents directly pertaining to Cumberland Trail Fire District. These became formal written documentation with my answers available as Appendix A, K. Gimeno (personal communication October 11, 2001, January 14, 2002 and July 17, 2002).

In locating a response to question number two, “What improvements are needed to receive a better protection classification?” three sources were utilized. Initially the

National Fire Academy Learning Resource Center was utilized through inter library loan. The document: McIntosh, (1994) Insurance Service Office rating System versus Cost and manpower for the Urbana Fire Department provided information.

McIntosh reported: "For the individual fire department that wishes to improve their Public Protection Classification the customer service representative who performed your latest survey should be contacted. This individual will be the most familiar with your situation." This suggestion was followed up by phoning Mr. Jack.Ross.

Also utilized were the personal written communications from Mr. Gimeno along with the telephone interview suggestions provide by Mr. Ross, J. Ross (personal communication October 28, 2002).stating how to utilize the written correspondences. Between the two communications answers are formulated for my question.

Finding material for a response to questions three and four, "What are the budgetary costs that will help us reach the improved rating?" and "What is the least expensive means of improving the public protection classification?" involved utilizing taking the knowledge gained in review of Questions one and two and formulating a plan based upon ISO fact for improvement. From the plan the need to research three different cost factors and two available funding sources were researched.

Cost factors involved researching the cost for equipment from suppliers. An average of three different suppliers were utilized to create a total cost. A cost factor for additional improvements required research from the Fire District Clerk. D. Pempek (personal communications August15,2002). In the annual budget hearing to the Board of Trustees Pempek reports: "Available cash directed to capital improvements is only \$150,000.00. This does not include a requested reserve amount put aside for benefit increase to the

present employees.” Pempek continues: ”The available capital improvements comes from previous years carry over. Any major capital improvement plans should not have reoccurring or ongoing cost associated with them. If this will be the case we must look to securing additional levy money or increasing charges for service.”

The final research in relationship to funding came from an interview and written correspondence from the assistant county auditor. Mr. Shutek was given a request for levy value amounts that are in affect within Cumberland Trail Fire District. Through verbal and written communication Mr. Shutek confirmed our present levy figures for income. A. Shutek (personal communication November 24, 2002)..During the oral interview Mr. Shutek stated: “Cumberland Trail Fire District is only collecting 3.17 mills of the potential 5.0 mill rate.” Mr. Shutek went onto state if the Fire District would drop the present 5.00 mills of taxable levies based upon the 1989 and 1997 values and place a new single replacement 5.00 mill levy based upon current tax valuations the district would receive an eighteen percent increase. To obtain research information for the final research question, “What aspect of our customer service base will benefit the most from an improved public protection classification?” an ISO web search was first initiated. Found at (http://www.iso.com/studies_analysis/ppc_program/index) of the Mitigation Online Service of ISO the following worthy information was gained:

- Commercial fire insurance premiums are determined by either class rate or specific rate.
- Commercial buildings may be grouped together because of similar types of buildings and construction features. These buildings will receive a class rating.
- On site surveys may be completed for manufacturing buildings, sprinklered

buildings, specific hazard or processing buildings. These buildings will receive specific rates.

- Insurers utilize the public protection classification rating when survey a building which will receive a specific rating.
- Residential property insurance premiums follow the public protection classification ratings, though some ratings are placed into a band of classifications.
- Examples of bands are Class 1 – 6 as one band with the best rates, Class 7-8 as another band with the next rate Class 9 – 10 as the last band with the worst rate.

To confirm and apply the information gathered on the mitigation web site from ISO an actual visit was conducted to a local insurance agent located within the Fire District. On November 21, 2002 at 09:30 A.M. an interview was conducted with Mr. Milan Pilney an independent insurance agent representing the following companies: Indiana Insurance Company, Ohio Casualty Company, Shelby Insurance Company and State Auto Insurance. Mr. Pilney was able to confirm the information gained from the web site, M. Pilney (personal communication November 21, 2002}.

Mr. Pilney provided the following information based upon the Indian Insurance Company:

- Cumberland Fire District homeowners would not see a benefit from improvement from a Class 5 to a Class 4 because of the insurance company's policy of banding Classes 1- 6 in our area.
- Savings for commercial buildings on insurance premiums would be based upon construction type, occupancy use and protection systems in applying a specific

rate for common type structures.

- Cumberland Trail Fire District commercial properties could see an effect of 14% decrease due to the drop in classification on structure insurance premiums.
- Cumberland Trail Fire District commercial content properties would also see a 14% decrease with a classification drop.

Mr. Pilney further went onto state: “I feel very confident in the 14% decrease in premiums based upon the actuary schedules for the Indian Insurance Company. This is due to the fact the affected areas are so similar in construction type, occupancy hazard and the protective systems in place.”

During the November 24, 2002 interview with assistant county auditor the request for tax assessment values for Cumberland Trail Fire District. In Mr. Shutek’s personal communications he explained tax assessment values in the following manner:

- Tax assessed real estate values are calculated at 35% in Cumberland Trail Fire District.
- Total commercial real estate property values located within Cumberland Trail Fire District at 35% are \$32,135,792.00.
- Total commercial personal property content values within Cumberland Trail Fire District at 35% are \$14,061,306.00.

The tax assess values were requested for gaining the needed information to allow for calculation of insurance premium cost for total commercial occupancies located within the fire district. These calculations will show who benefits from a classification improvement by showing cost savings.

Procedures

To determine why Cumberland Trail Fire District received the Class 5 and Class 5/9 ratings the mitigation office of ISO was contacted for in depth reports which existed.

Mr. Kevin Gimeno, a community mitigation analyst became the contact person who provided to me the detailed reports. Upon receipt and review of these reports answers to my first two research questions became apparent . The reports provided were entitled Classification Details and Certification Improvement Statements. A total of four documents were obtained for review.

The Classification Details provide an actual figure of percentage earned versus the total available percentage within the 17 categories, along with your divergence grade, along with the actual report card.

The Classification Details provided the answer as to why Cumberland Trail Fire District received the classification of Class 5 and Class 5/9. The Certification Improvement Statements covered the three separate grading features with in depth improvement measures to correct deficiencies answering question number two..

To report the findings of the Classification Details the follow summarizations and descriptions are observed as follows:

Classification Details

Classification Details are a true report card of the three grading areas that show your actual score versus what was available in seventeen categories plus your assigned divergence. You are able to observe four categories for receiving and handling of alarms, nine categories for the fire department aspect and four categories for water supply. The following combined results are shown for the Cumberland Trail Fire District:

Feature	Credit Assigned	Maximum Credit
Receiving and Handling of Alarms	7.81%	10.00%
Fire Department	22.22%	50.00%
Water Supply	30.04%	40.00%
Divergence (Deduction)	-6.13%	
Totals	53.94%	100.00%

The last grade total observed is a section referred to as divergence. Divergence is a reduction in credit to reflect a difference in the relative credits between the two areas of the fire department scoring versus the water supply scoring. This was designed so that an individual organization does not put all of their efforts into one area while allowing the other to have major deficiencies. The proper method for calculating divergence is a mathematical calculation providing the difference between the quantity of an organizations fire department percentage x 80%, then subtracting this from the quantity of the water distribution percentage. The remaining difference is multiplied 50 %. This provides the total amount of divergence which is subtracted from your total score of the three grading segments..

Cumberland Trail Example: Fire Department Grade of 22.22 % x 80% = 17.78

Water Supply Grade of 30.04% - 17.78 = 12.26

Difference of 12.26 x 50% = 6.13%

The complete actual breakdown for the three grading areas as well as the divergence may be observed in Appendix A contained within.

To formulate a plan which provides an answer to question number two, "What improvements are need to receive a better protection classification rating?", the three separate reports addressing certification improvement statements were utilized. The Certification Improvement Statements are actual areas of deficiencies during the course of grading. They become the actual areas that an organization would correct if the desire

is there to improve the public protection classification rating.

Certification Improvement Statements

Following the recommendations found within the Certification Improvement Statements, provides the answer to my second research question of what improvements are needed to receive a better protection classification. The areas of corrective action located within the three grading sections which need to be under taken to improve to a Class 4 by Cumberland Trail Fire District are as follows and are listed in three summarized reports:

Deficiency Review – Cumberland Trail – Fire Department

Review of the grading sheet completed for Cumberland Trail Fire District the area of greatest need for improvement lies within the fire department section. The district has the following deficiencies:

Deficiency	Points Received	Total Points Available
Additional Responding Manpower	2.89	15.00
Improved Training Program	3.24	9.00
Needed Service Companies	1.37	5.00
Additional Equipment	7.3	10.00
Engine & Ladder Service Within X Road Miles	1.56	4.00
Reserve Ladder Service	0.14	1.00

A total of seven available engine companies were graded. Cumberland Trail only has direct control over three of the engine companies while 4 are neighboring volunteer departments that are responding within the district as automatic aid departments.

Each of these deficiencies must be reviewed for improvement either with increased funding or additional man-hours being applied to correct the problem. When requesting funding the most cost efficient way will be looked at along with the overall improvement in quality of service provided.

Deficiency Review – Cumberland Trail - Water Supply

A review of the water systems within the district reveals that we are faced with the following grading deficiencies and reveals the needed improvement aspects:

Deficiency	Points Received	Total Points Available
Deficient Hydrant Flows	26.10	35.00
Steamer Connections & Supply Line Size	2.04	3.00
Proper Hydrant Inspection	1.90	2.00

Of the three grading schedule segments, water supply is the most difficult for our organization to have a direct impact on because they are ran by two separate governing agencies. One is the Belmont County Water Department located within the township region. While the other is the St. Clairsville City Water Service which covers the City corporation.

Deficiency Review – Cumberland Trail – Receiving and Handling of Alarms

Upon inspection of the grading schedule in relationship to receiving and handling of alarms, one may observe recommendations from the Certification Improvement Statements to improve the receiving and handling of alarms suggest the following areas of improvement:

Deficiency	Points Received	Total Points Available
Additional Communication Operators	1.59	3.00
Secondary Paging For Back-Up P.S.A.P	4.40	5.00
Additional F.D. Listing In Phone Book	1.82	2.00

This would be another area in which we do not have direct control. Our 9-1-1 system is funded and ran by Belmont County for the entire twenty-six departments within the county.

Deficiency Review – Divergence Deduction

In the final aspect of inspection of the improvement statement, one finds a deduction of 6.13% points. This lowered our grade from a point factor of 60.07%. This percentage would have allowed an improvement into a Class 4 of the public protection class rating.

By correcting deficiencies in the fire department section of the grading with a recalculation in divergences one should see a grading improvement.

Improvement

Once an individual reviews the Certification Improvement Statements a developmental improvement plan needs to be formulated, if a department wishes to improve the public classification rating. By formulating a plan based upon Cumberland Trail Fire District's deficiencies an answer can be formulated to question number three of my research project. I wanted to know what are the budgetary cost that would help us improve our classification rating. Also question number four, what is the least expensive means of improving the public protection classification was answered while performing the same procedures which follow:

Through interviewing reviewing, receiving price quotes and calculating various listed deficiencies an answer is received for the associated improvement cost. The first step under taken was the interviewing of the ISO customer service agent (Mr.Ross) Through the interviewing process questions were asked as to what deficiencies, if improved would allow us to acquire a lower rating. Upon conclusion of the phone interview the knowledge was now available to know what areas to attempt to improve.

By utilizing the Classification Details in junction with the Certification Improvement Statements one may show an improvement within a deficient area and recalculate the

divergence and have an idea where the organization would stand. The improvements and new calculations will be reviewed within the results area of the research project.

Step 2 involved interviewing and reviewing facts and figures provided by Cumberland Trail Fire District Clerk, and Belmont County Assistant Auditor. In utilizing this process, a budget review was summarized and provided the following information:

Budgetary Review

When taking into consideration as to the affect on the operating budget some areas of concern needed to be reviewed. This procedure allows for answers to question number four, “What is the least expensive means of improving the public protection classification?” First is the availability of usable funds present to allow for the expenditures for capital outlay. With figures from the annual budget hearing, the fire district clerk, provided documents that review present expenditures versus the revenue received from the tax levies and charges for service.

Also needed is a plan to review capital improvements on the replacement of aging equipment. To move ahead one must protect what is presently needed. Another review required is the affect of maintaining or increasing the present labor forces salary and benefits.

The auditor’s office was utilized to review our present taxable levies. They were able to provide facts which separate our two levies. They also provided suggestions for possible increasing the present levels. Upon taking all of these factors into consideration a formulated plan to allow for improvement was developed.

Step Three involved the additional areas of budget review that include the additional cost of a single fire companies and the equipment which is presently deficient.

Budgetary Review- Additional Fire Company

The fire district had just undergone the process of adding an additional fire station, apparatus and personnel. These three components make up the area of deficiency of having the availability of a fire company within the 1.5 mile range of the pressurized water systems.

With this information a comparison between costs and available capital can be done. Also a cost analysis was done of the worth of taxable mileage presently within the Fire District. This was completed for the reason of making a future decision on an additional taxation issue for our residents to decide.

Budgetary Review – Needed Equipment

After the review of the needed equipment that was presented in the classification improvement statements, development began to compile a comprehensive list. The need to have a total budgetary figure along with the knowledge of percentage to be gained with the addition all needed to be formulated. Cost analysis provided by individual suppliers which are presently used was obtained.

The Final Budget Plan

To be able to answer question number four of the research project the following areas of need included the addition of fire companies and equipment purchases. A budget will be put together to determine the cost to add an additional engine company, taking into consideration all the needed infrastructure. Also a total list of needed equipment will be compiled and submitted to our suppliers for pricing. This would provide a budgetary figure to cover equipment deficiency. Recalculation of improved areas and figuring a new divergence provides a new total credit falling within a new public protection

classification.

The last implementation of the plan would include utilizing actual available funds to place the needed improvements into operation. Through the review process you can calculate if the present budget can support the improvements or if there is a need for additional funding.

Gathered documents consisted of:

- A financial plan developed by utilizing documents provided during the July budget hearing.
- A calculation of the total cost of an additional fire company and the calculated cost of needed equipment.
- Documentation of information for present expenditures, proposed operating increases and an available amount of funds for capital outlay.

The documents allow for calculations to be made for capital outlay that will be needed to improve a majority of the grading deficiencies. Also needed is documentation of is the present mileage of our 3-mill levy enacted in 1989 and the 1998 2-mill levy. Request was made for the amount of worth of a 1-mill levy if it were to be voted upon in the next year. Utilizing cost figures against capital improvement funds or newly generated funds will provide information for developing an improvement plan.

Benefactor

To answer question number five, (“Who would benefit the most from a classification improvement rate of a Class 4?”), an oral interview was conducted at Mr. Milan Pilney’s office of Pilney, Costine and Campbell Insurance of St. Clairsville on November 21, 2002 from 09:30 to 10:30. Mr. Pilney was asked to verify or dispute the information

gained from the online mitigation web site concerning banding of class rates when it came to residential homeowner insurance. Mr. Pilney confirmed that banding of Class 1 – 6 was utilized by the four companies that his firm represented and it was normal policy for the competition within our district to do this also. With this knowledge it is pretty much known our homeowners would not see a benefit to a Class 4.

This led to question number two about the utilization of specific or class rates for commercial structures within the district. He stated the companies he represented would utilize specific rates based upon an onsite review of building construction, occupancy use in relationship to specific hazards and the type of protective systems within the building (M. Pilney personal communication, November 21,2002). Mr. Pilney further stated: “I do not insure or know of any industrial classified buildings located within Cumberland Trail Fire District that have specific class rates applied. The occupancies are all related to commercial personal services or retail.”

The last direction that Mr. Pilney assisted with was to show me how to calculate insurance cost for commercial property insurance and commercial content insurance. This is accomplished by utilizing assessed property tax value, (a cost which is not the actual value of a single piece of property) and calculate this against the listed cost of insurance per \$1,000.00 of value. A present commercial property insurance rate of \$13.00 per \$1,000.00 was given for a Class 5 rating. Mr. Pilney stated: “You will need to receive the assessed tax values for commercial buildings from the auditors office and if a total value is given for Cumberland Trail Fire District you will be able to calculate a total insurance amount for a specific class rate of 5.” Pilney further stated: “Repeat this procedure at a reduction rate of 14% for the drop in classification rate. This same

procedure will work for commercial content insurance once you know the assessed taxable rate and the insurance rate per \$1,000.00.” The rate given for commercial content property was \$1.10 per \$1,000.00 for Class 5 and again a 14% reduction for Class 4.

An example of how the calculation would work follows:

Commercial:	Tax Value in \$	Full Value in \$	Cost of Insurance
Class 5	\$5,000.00	\$6,750.00	\$13.00 / \$1,000 = \$65.00
Class 4	\$5,000.00	\$6,750.00	\$11.18 / \$1,000 = \$55.90
		Savings	= \$10.00

All that is required now is to see how much of a savings will be seen by the commercial property owners located within the district.

Results

The first research question was to determine “Why Cumberland Trail Fire District received the Class 5 and Class 5/9 rating?” Documentation as to this reason was provided through the Classification Details and the Certification Improvement Statements. The deficiencies are as follows:

- Inadequate manpower staffing or additional responding personnel, a deduction of 12.11 credit points.
- Improvement to the training program, a deficiency total of 5.76 credit points.
- Need service companies, a loss of 3.63 credit points.
- Additional equipment on credited apparatus, minus credit points of 2.7.
- Engine and Ladder service within required road miles, a deduction of 2.44 credit points.
- Reserve ladder service, a deficiency total of 0.86 credit points.

- Deficient hydrant flows, a loss of 8.9 credit points.
- Inadequate steamer or supply line size, minus credit points of 0.96.
- Additional hydrant inspections, a deduction of 0.10 credit points.
- Additional communication operators, a deficiency total of 1.41 credit points.
- Secondary paging for the back up PSAP, a loss of 0.60 credit points.
- An additional F.D.listing in the phone book, minus credit points of 0.18.

The deficiencies resulted in 39.65 credit points not earned for the grading evaluation.

The reduced grading points not received along with the points which were received (60.07) account for the total of 99.72 total available points and a Class 1 rating. An improvement by 6.06 credit points would allow for a grading class rate improvement within Cumberland Trail Fire District to a Class 4.

Through the research process a procedural step gained from the telephone interview with Mr. Ross provided the direction to take to allow the Fire District to receive a Class 4 rating, answering question two of “What improvements are needed to receive a better protection classification?”

Cumberland Trail can choose any deficient credit areas within the fire department grading section. Making the necessary improvements listed in the certification improvement statements to gain 4.32 points. By gaining the 4.32 points in this area and not correcting any deficiencies in the water system section a new divergence can be calculated. This new divergence will improve by 1.72 credit points. This represents a total of 6.04 credit points earned. This would allow for the next available grading schedule rate to be achieved.

The findings for research question number 3, “What is the budgetary cost that will

help us reach the improved rating?” required numerous steps and calculation to achieve the following results.

Correcting the equipment shortage problem onboard graded apparatus for \$106,465.00 (price achieved through price quotations) and purchasing a mobile fire simulator burn building for \$152,000.00 (actual contract price) would be two purchases that gains 3.20 credit points. The final calculated price of \$170,183.36 for an additional four personnel and an increase of 1.12 credit points meets the total needed points at a final price tag of \$428,648.36. Cost analysis sheets versus available funding may be reviewed in Appendix B through Appendix D.

Proposed research question number four asked, “What is the least expensive means of improving the protection classification?” and became the most difficult to formulate a result. Least expensive meant looking for areas where a one time investment would generate the most credit points. This was found with the investment of equipment purchase.

Other deficient areas of the fire department section of the Certification Improvement Statements were looked at and increasing manpower over adding a complete station provided the least expensive means of gaining points. The last area to be affected was the training aspect of the fire department section. Cumberland Trail received the Assistance to Firefighters Grant to purchase a mobile burn trailer that will give us the final needed percentage of a credit point to reach an improved rating.

For the price tag of \$428,648.36 the Fire District can overcome three areas of deficiency and improve the classification rating. Of the three areas of improvement, one will cause an increase to the budget on an annual bases. This being the additional

personnel. The other two would only require preventive maintenance with a very limited strain on the budget.

The final research question was to find “What aspect of our customer service would benefit the most from an improved public protection classification rating?” when improvements were made. The results of this became apparent very early into the research process when the ISO web site revealed the banding of classification for residential home owners. This was followed up and found to be true with the interview with Mr. Pilney confirming this. Cumberland Trail homeowners would see no benefit to an improved rating.

Mr. Pilney and Mr. Shutek provide the answer through the interview process and fact sheets which shows our commercial business owners will realize the savings of an improved rating. This is shown in the following calculated worksheets for commercial owners within Cumberland Trail Fire District:

Commercial Real State Insurance Savings For Cumberland Trail Fire District

Commercial Real Estate	Tax Value in \$	Full Value \$	Cost Of Insurance \$
Class 5	\$32,135,792.00	\$91,816,550.00	\$13.00/\$1,000.00 = \$417,765.30
Class 4	\$32,135,792.00	\$91,816,550.00	\$11.18/\$1,000.00 = \$359,278.15
		Savings	= \$ 56,487.15

Commercial Personal Property Insurance Savings For

Cumberland Trail Fire District

Commercial Personal Property	Tax Value in \$	Full Value \$	Cost Of Insurance \$
Class 5	\$96,749,761.50	\$276,427,890.00	\$1.30/\$1,000.00 = \$125,774.69
Class 4	\$96,749,761.50	\$276,427,890.00	\$1.11/\$1,000.00 = \$107,392.24
		Savings	= \$ 18,382.45

Discussion

Upon review of the research results and the findings of others it is noted there are similarities between the results of this review and other review findings. Some of the results to the research questions point to a specific relation to Cumberland Trail, while others became apparently common to others.

McIntosh researched the deficiencies of the Urbana Fire Department in Ohio and found very similar results to deficiencies due to lack of equipment, as was pointed out within this review. He also was concerned with a budget impact of correcting the various deficiencies. Chief McIntosh was primarily interested in how much the savings would be with an improvement. This research was to find which aspect of the customer service base would receive the most benefit while showing what the benefit is. The Chief was also interested if the savings would outweigh the cost. This research was interested in what the improvement cost was, along with the need to know was this a one time cost or an ongoing cost within the budget.

This research was specific as to why a Class 5 was received as opposed to a Class 4. Uniquely the researched Classification Details and Certification Improvement Statements directly relate to Cumberland Trail. From these unique organizational needs, a corrective action plan is formulated which is applied to the individuals deficiencies.

As researcher and author of this project I found some facts of present and future concern should our deficiencies go uncorrected. All of these facts are intertwined and ultimately relate to funding issues, which impact the budget. These facts at some point have to be relayed to the citizens we serve for their approval for correction or being

directed to remain in a status quo position.

The present and future concerns are we need to have 7 engine companies available to cover our district. Presently engine company service is provided for the District by three of our own companies and four automatic aid companies. These automatic aid companies are made up of primarily a dwindling volunteer service and may not be there within the future. Should we loose these companies, replacing them with career people would come with an astronomical price tag. Should the organization fail to receive support from our citizens, one might be looking at regression in classification as opposed to a progression. Commercial owners or homeowners would be looking at increased insurance cost as opposed to savings. This could then result in economic decline.

Recommendations

The results of this research indicates that Cumberland Trail Fire District should continue to maintain the present public protection classification while progressively look at ways to improve the rating. The customers of the Fire District are receiving a decent rating of a Class 5 and Class 5/9 for the large geographical area covered. With this rating customers are receiving the benefit of decent insurance premiums, especially with the banding for homeowners. It is also recommended that the District review the benefits of a classification improvement in relationship to potential economic development within the commercial arena. From increased development the whole District's quality of life can improve allowing additional benefits to homeowners or customers in a spin off fashion.

The findings of the review of the grading schedule through the improvement statements indicate even though through the formation of the District and career department the protection classification and insurance premiums were not changed for

some areas. The review does point out the challenges that lie ahead for maintaining the current classification and what is needed to improve.

Through the review of the budget and the present financial status of the District, one can see additional funding would be needed to reach the improved classification. Of the three areas to improve in for the least amount of cost only one could be covered by capital improvements. Additional funding would need to be secured for additional staffing and maintaining the capital improvements of present equipment and any new equipment. Also additional funding would be utilized to maintain the present operation and provide additional benefits.

After review of the Assistant Auditor's report the recommendation would be made to place a five mill replacement levy on the ballot. This levy would replace the two levies of three mills and a two mills at a rate cheaper to the customers as opposed to placing a new additional two mill levy to gain the approximate same dollar value.

Overall recommendations are to utilize the FEMA grant award to purchase the mobile fire simulator. Then begin to implement the equipment purchase to meet the deficiencies. The final stage would begin with a campaign directed towards our customers relating the benefits of the replacement levy as to what value they will receive and at what cost. Upon successful passage of a replacement levy the personnel phase and the improvement of benefits would be undertaken. Upon completion of the three improvements a new review of the protection classification rating should be requested.

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Appendix B

Deficient Equipment List Pricing

Prepared By Average Vendor Price Quotes

Quantity	Description	Cost Per	Total Cost
4	Piercing Nozzle With Shutoff & Saber Tip	\$1,081.00	\$4,324.00
4	Foam Nozzle	\$667.00	\$2,668.00
5	2 1/2 Nozzle With Straight Tips	\$1,000.00	\$5,000.00
3	2 1/2 Combination Nozzle	\$925.00	\$2,775.00
4	Playpipe Nozzle	\$932.00	\$3,728.00
3	Hose Clamp	\$480.00	\$1,440.00
3	Hose Hoist	\$274.00	\$825.00
15	AFFF Foam 5 Gallon	\$92.00	\$1,380.00
20	Self Contained Breathing Apparatus	\$3,400.00	\$68,000.00
14	Spare Air Cylinders	\$900.00	\$12,600.00
2	6' Pike Pole	\$65.00	\$130.00
1	8' Pike Pole	\$70.00	\$70.00
1	10' Pike Pole	\$85.00	\$85.00
2	12' Pike Pole	\$95.00	\$190.00
3	14' Extension Ladder	\$375.00	\$1,125.00
1	24' Extension Ladder	\$500.00	\$500.00
1	16' Roof Ladder	\$275.00	\$275.00
10	Handlights	\$120.00	\$1,200.00
1	Salvage Cover	\$150.00	\$150.00
		Total	\$106,465.00

Prepared By The Author

Appendix C

Personnel and Additional Station Cost

Employee Salary & Benefit Cost	Hours	Rate Of Pay	Total Cost
Firefighter Paramedic			
Base Salary	2756	\$8.89	\$24,500.84
Scheduled Overtime	156	\$13.34	\$2,080.26
Additional Overtime	100	\$13.34	\$1,333.50
Holiday Pay	120	\$8.89	\$1,066.80
Workers Compensation			\$1,159.26
Police & Fire Pension			\$6,955.54
Life Insurance			\$87.60
Health Insurance			\$5,046.24
Dental Insurance			\$315.60
Recertification @Overtime Rate	30		\$400.20
		Total	\$42,545.84

Station Cost Description	Dollar Amount
Land Acquisition	\$150,000.00
Building Cost	\$450,000.00
Fire Apparatus Cost	\$250,000.00
EMS Vehicle Cost	\$100,000.00
Insurance Cost / Annually	\$250.00
Utility Cost / Annually	\$3,000.00
Total	\$953,250.00

Provide By:

Cumberland Trail Fire District Clerk Darlene Pempek

Appendix D

Tax Levy Value Amounts

1 Mill Amount For 1989 Levy	\$156,163.00	\$156,163.00	\$156,163.00	\$156,163.00
1Mill Amount For 1998 Levy	\$219,203	\$252,703	\$263,279.00	\$275,000.00
Millage For Present Day				\$276,000.00

Prepared By:

Belmont County Assistant Auditor Andy Shutek

