Municipal Services Collaboration Study
Hunting Valley, Moreland Hills, Orange Village, and Pepper Pike

March 15, 2010

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Executive Summary

The purpose of this study was to examine the feasibility of greater service collaboration between the municipalities of Hunting Valley, Moreland Hills, Orange Village, and Pepper Pike. The options presented introduce alternatives for future decisions, and are intended to guide municipal leadership in the delivery of services, including those provided by the safety service departments (dispatch, police, and fire) as well as service departments.

Based on the financial and operational data that were obtained, there appears to be significant benefits to consolidating police and dispatch services, both in terms of service levels and cost reductions. The results for the fire and EMS services are less definite: while there are benefits to an expanded collaboration in terms of a reduction in response time and emergency medical dispatch, additional cost savings would only be obtained by outsourcing fire protection to the Chagrin Falls Suburban Volunteer Fireman's Association and/or converting Pepper Pike's full-time model to one similar to Orange Village's part-time model. The service departments, currently providing garbage, streets and other maintenance services, would clearly benefit from a consolidation in terms of labor costs; however, due to the differences in garbage services provided, with Pepper Pike and Hunting Valley using a backyard pickup and the remaining municipalities using curbside pickup or a private collection service, there would be an opportunity to move all four municipalities to a backyard pickup, and that decision would increase costs only marginally.

This report describes the methodology and options considered for the four municipalities to offer dispatch, police, fire, and garbage services more efficiently. For each service, current operations are described, alternatives offered, and costs given with each option. In the case of fire and garbage service, there are multiple options offered, due to the variations in the extent of collaboration possible, and type of service provided.

The possible annual savings based upon each proposed option for safety services- dispatch, police, fire and the service department are as follows:

Table 1 Projected Annual Savings

Current Operations	Option One	Option Two	Option Three	Option Four
Dispatch	$355K-$473K	$132K	-	-
Police	$704K	$1,239K	-	-
Fire	$236K*	$36K	$136K	$1,289K
Service Department	$531K	($100K)	$167K	-

* Cost shift, not an actual saving

Methodology

Both primary and secondary data were gathered in order to create the financial and operational frameworks needed to assess the feasibility of collaborative municipal services.

Primary data was gathered through multiple qualitative methods and interviews of key personnel. The focus of these inquiries was an understanding of the operational constraints, municipal issues, and unique characteristics of the service delivery area for each of the four municipalities, as well as the determination of the service delivery expectations of their residents. Interviews were conducted with all municipal services directors, fire and police chiefs, as well as other support personnel.

The secondary data collected included three years of financial and operational data. Service delivery metrics and expectations were determined through the evaluation of existing reporting sources including annual fire reports, police incident reports, service reports and internal records. A summary of the secondary data collected was presented to the stakeholders to verify their accuracy prior to building options. Other secondary data research efforts involved examining comparable municipalities and similar collaboration and merger efforts, few of which had yielded positive results.

In developing the options, the research team focused primarily on labor costs and variable costs in the operational models, not on facilities. For all financial considerations, 2008 actual operating costs were used. Projections on equipment needed and facilities are dependent on municipal decisions to collaborate and would vary substantially depending on action taken.

The accuracy of the models is highly dependent on the accuracy of call and operational data collected.

Brief Municipality Overview

A summary of each municipality's current operations is provided in this section.

Pepper Pike

- 2,296 households [1]
- Approximately 6,000 residents
- 7.1 square miles
- 20-member police department
- 11- member dispatch department
- 12-member fire department + part-timers
- 21-member service department

Orange Village

- 1,236 households [1]
- Approximately 3,300 residents
- 3.8 square miles
- 14-member police department
- 41-member fire department
- Nine-member service department

Hunting Valley

- 317 households [1]
- Approximately 750 residents
- 8.0 square miles
- 11-member police department + part timers
- Chagrin Falls Suburban Volunteer Fireman's Association
- Four-member service department + part timers

Moreland Hills

- 1,341 households [1]
- Approximately 3,200 residents
- 7.3 square miles
- 14-member police department + 4 part-time officers
- Chagrin Falls Suburban Volunteer Fireman's Association
- 13-member service department

[1] Data pertaining to number of households is based on 2000 data obtained from U.S Census Bureau.

1. Safety Services

Safety services are provided in the municipalities by four distinct police departments, three separate fire departments and two dispatch centers. Since these services are often working together, and depend on the correct handling of a request for emergency services, the report first explores the feasibility of a joint dispatch center, serving the needs of all four communities. A joint dispatch center would be necessary for several of the options presented for police and fire and EMS services to be implementable.

1.1 *Dispatch*

The purpose of the Dispatch study portion of this four-municipality collaboration study was to look at ways the four departments can collaborate further in their efforts to ensure public safety.

1.1.1 Current Situation

Currently, Pepper Pike has its own Police, Fire, and EMS dispatch service, and the municipalities of Hunting Valley, Moreland Hills and Orange Village use the Chagrin Falls Dispatch Center. The Pepper Pike 2008 budget for dispatch personnel salaries was $363,385. Including benefits, the total cost was $553,000. The total cost of dispatch for the other three municipalities was $236,365.

The dispatch center in Pepper Pike handled 14,487 calls in 2008, and the Chagrin Falls Dispatch Center handled a total of 6,501 for Hunting Valley, 6,769 for Moreland Hills and 7,545 for Orange Village. The combined total for those three municipalities is 20,815 calls. Altogether, the Chagrin Falls Dispatch Center handled 46,780 calls for the eight municipalities it serves (Bentleyville, Chagrin Falls, Chagrin Falls Township, Hunting Valley, Moreland Hills, Orange Village, South Russell, and Woodmere).

In order to be able to implement some of the options proposed for further police and fire and EMS integration, a single Dispatch Center would need to exist for operational efficiency; this Dispatch Center can be created by using the current facilities in existence in Chagrin Falls or in Pepper Pike. In either case, however, such a move makes logistical and financial sense on its own, even if no other further collaboration is elected.

1.1.2 Integrated Dispatch in Chagrin Falls

The number of calls handled by the Pepper Pike Dispatch Center is relatively modest compared to its size; with the same number of consoles and approximately the same number of employees, the Chagrin Falls Center handles roughly three times as many calls. By design, dispatch centers are more efficient when they are larger; according to the National Emergency Number Association (NENA), a medium-size Public Service Answering Point (PSAP), such as the one operated by the Chagrin Falls Dispatch Center, can handle the call volume of a population between 20,000 and 100,000 people, well within what it would have to handle with the addition of Pepper Pike's calls. In addition, given that the communications technology currently employed in the Pepper Pike Police and Fire Stations already works seamlessly with the equipment used by Chagrin Falls Dispatch, there are no apparent technological hurdles for integration.

The savings from this integration range from $355,382 to $472,664 annually based on increased or current staffing levels at the Chagrin Falls Dispatch. The savings were calculated based on the current cost per call that Chagrin Falls charges all of the municipalities it serves. In 2008, Chagrin Dispatch handled 35,229 billable calls for service and charged $592,387 for those calls. The 2008 cost per call is therefore about $16.82. Certain calls such as shift call-ins, or on/off duty notifications, are not billed for as part of these dispatch contracts. Since Pepper Pike's 2008 call volume, less shift call-ins and related non-billable calls, is approximately 11,749, the estimated cost to contract with Chagrin Falls for dispatch services would be $197,618. This would represent a savings of approximately $ 355,382 annually for the city of Pepper Pike.

Table 2 summarizes the potential savings for Pepper Pike, if it were to use the dispatch services offered by the Chagrin Falls Dispatch Center at the current dispatch rates charged by the Center:

Table 2 Pepper Pike Potential Savings with Chagrin Falls Dispatch Center

Pepper Pike Potential Savings			
	Call Volume	Cost Per Call	Total Cost
Before	11,749	$ 47.07	$ 553,000.00
After	11,749	$ 16.82	$ 197,618.18
Savings		$ 30.25	$ 355,381.82

However, the overall cost-per-call estimates could change and be even more favorable, if there are no changes needed in the staffing levels of the Chagrin Falls Dispatch Center. The average cost per call would decrease, and the savings for Pepper Pike would be yet greater. In addition, the other three municipalities would also see a decrease in their dispatch costs.

Assuming no change to the staffing levels in the Chagrin Falls Dispatch Center, an estimate of the savings for all four municipalities can be made: the Chagrin Falls Dispatch Center currently operates on a budget of $592,387, and handles 35,229 calls, for an average cost per billable call of $16.82. If no staffing changes were made, total costs would remain the same, but would now be spread over 46,978 calls, and the average cost per call would decrease to $12.61.

Table 3 shows what the savings could be if the Chagrin Falls could handle the increase in call volume without changing its staffing. Pepper Pike would decrease its costs from $553,000 to $148,155, a saving of $404,845, Hunting Valley would decrease its costs by $19,351, Moreland Hills by $22,809, and Orange Village by $25,659, for a cumulative saving of $472,664. In addition, the municipalities of Bentleyville, Chagrin Falls, Chagrin Falls Township, South Russell and Woodmere would experience commensurate savings of their own.

Table 3 Potential Savings with Chagrin Falls Dispatch Center at the Same Staffing Levels

Chagrin Falls Dispatch Center Savings (same Staffing Level)					
		Call Volume	Cost Per Call	Total Cost	Savings
Pepper Pike	Before	11,749	$ 47.07	$ 553,000.00	
	After		$ 12.61	$ 148,154.90	$ 404,845.10
Hunting Valley	Before	4,596	$ 16.82	$ 77,307.00	
	After		$ 12.61	$ 57,955.60	$ 19,351.40
Moreland Hills	Before	5,421	$ 16.82	$ 91,168.00	
	After		$ 12.61	$ 68,358.80	$ 22,809.20
Orange Village	Before	6,097	$ 16.82	$ 102,542.00	
	After		$ 12.61	$ 76,883.20	$ 25,658.80
Total					$ 472,664.50

If additional staffing in the Chagrin Falls Dispatch Center were needed to handle the increased call volume, the savings would be lower for Pepper Pike, and there could be none for the other three municipalities; however, based upon staffing data from the National Emergency Number Association, it is likely that the staffing level would remain the same.

1.1.3 Integrated Dispatch in Pepper Pike

Another alternative for the creation of a single dispatch service for the four municipalities would be to house it in the current Pepper Pike facility. The size of the Pepper Pike Communications Center allows it to handle the call volume of all four municipalities and, with modest staffing increases (it currently employs six full-time dispatchers, four part-time dispatchers and a chief dispatcher), the center would be able to accommodate the increase in call volume; without further specific analysis of the dispatch center data, it is estimated that the call volume could be handled by adding two full-time dispatchers to the current Pepper Pike Communications Center staff.

The Pepper Pike Communications Center currently handles 11,749 calls (not counting shift calls) for Pepper Pike. A consolidated dispatch center would handle an additional 4,596 calls from Hunting Valley, 5,421 calls from Moreland Hills and 6,097 calls from Orange Village, for a total of 27,863 calls (not counting shift calls). Current expenses for the Pepper Pike Communications Center are at $553,000, but additional staffing costs would increase these costs to $691,823. The average cost per call would therefore be $24.83.

If the Pepper Pike Communications Center were to bill the other three municipalities for the use of the Center at the rate of $24.83 per call, each of the other three municipalities would see an increase in the costs of its dispatch services: for Pepper Pike, dispatch costs would decrease substantially from $553,000 to $291,728, or a saving of $261,272. However, the costs for the other three municipalities would increase substantially: for Hunting Valley, the costs would increase by $36,812, for Moreland Hills by $43,435, and for Orange Village by $48,846.

Finally, it should be noted that shifting dispatch services for Hunting Valley, Moreland Hills, and Orange Village from the Chagrin Falls Dispatch Center to the Pepper Pike Communications Center will have a materially-negative effect on the dispatch costs for the municipalities of Bentleyville, Chagrin Falls, Chagrin Falls Township, South Russell and Woodmere. A regional solution would favor a dispatch center in a single location for all nine municipalities.

Table 4 Potential Savings with Pepper Pike Communications Center

Pepper Pike Communications Center Savings					
		Call Volume	Cost Per Call	Total Cost	Savings
Pepper Pike	Before	11,749	$ 47.07	$553,000.00	
	After		$ 24.83	$ 291,727.67	$ 261,272.33
Hunting Valley	Before	4,596	$ 16.82	$ 77,307.00	
	After		$ 24.83	$ 114,118.68	($ 36,811.68)
Moreland Hills	Before	5,421	$ 16.82	$ 91,168.00	
	After		$ 24.83	$ 134,603.43	($ 43,435.43)
Orange Village	Before	6,097	$ 16.82	$ 102,542.00	
	After		$ 24.83	$ 151,388.51	($ 48,846.50)
Total		27,863			$ 132,178.71

1.2 *Police*

The purpose of the Police study portion of this four-municipality collaboration study was to look at the way the four departments can collaborate further in their efforts to ensure public safety. From our discussions with all four Police Chiefs and our data analysis, we have prepared two options for maintaining or improving police service while maintaining or reducing operating expenses. We focused on variable costs, as they represent the overwhelming majority of the operating costs of the departments.

1.2.1 Current Situation

Cumulatively, the total costs of the four departments add up to $6.3 million, with 56 officers (patrolmen, sergeants and lieutenants), eight part-time officers, and four chiefs. The costs per household are $1,204 per year, with a range of $796 (Moreland Hills) to $3,886 (Hunting Valley). The number of officers averages 5.13 per 1,000 residents, a ratio substantially higher than the national guidelines, which range from 1.5 to 2.2 officers per 1,000 residents, depending on the size of the city, and the risk factors they represent. However, there are substantial variations among the four municipalities, with Pepper Pike at 3.33 officers per 1,000, and Hunting Valley at 21.33 officers per 1,000 residents. However, the Hunting Valley figures are significantly distorted by the small size of the village's population, and the minimum staffing levels necessary for ensuring an adequate police force.

It is very important to note that the four police departments currently provide a level of service that is unparalleled, with much of the police effort geared toward making sure that the residents feel safe in their communities. In addition, the ratios of police officers to the population are very high compared to the surrounding municipalities because the police officers provide services that go much beyond the traditional law-enforcement roles of other municipalities' police departments. Not only are they visible throughout their communities, but the police officers also provide all manners of help to residents when needed, and offer what could be construed as "concierge services." This level of service is one of the many distinguishing characteristics of the four communities, and the options suggested are designed to maintain it.

1.2.2 Option One: Full Collaboration–Ten Cars

The first option is the full collaboration of the four departments and their merge into a single unit. The cost savings would be at least $600,000, and service levels would actually improve over those reached under current operations.

Operationally, coverage would be separated into four zones, one in each of the four municipalities. There would be two patrolmen assigned to each zone. In addition, there would be a sergeant and a lieutenant in city cars, whose responsibilities would be to assist and supervise the patrolmen on duty. They would not have an assigned territory, but would patrol the entire area. Should an incident develop in any of the four municipalities, it would be relatively quick for either or both of the city cars to reach the incident and assist. Should further assistance be needed, other officers from the other zones could be called, providing multiple officers in a serious situation (a major accident on the highway), while maintaining adequate coverage in the remaining zones.

In order to provide enough manpower to staff a single patrolman position around the clock, whether on eight or on 12-hour shifts, it is necessary to have 4.5 officers on the force. Therefore, in order to staff the eight zone cars, a total of 36

patrolmen would be needed. These numbers are identical to the current operational deployment; there are presently 36 patrolmen on the payrolls of the four municipalities. In order to staff the city cars' positions, a total of five sergeants and five lieutenants would be needed. That compares with the current total of 14 sergeants and three lieutenants; some of the sergeants could be promoted to the rank of lieutenant, and some of the sergeants' ranks could be reduced through attrition.

No recommendation is made on the use of eight versus 12-hour shifts; these choices should be made by the Police Chief who eventually leads this cooperative department. From a staffing standpoint, there are no differences in the choice of shift schedule, given our recommendation of keeping the number of patrolmen constant over a 24 hour period.

Table 5 shows the current staffing levels for the four municipalities, and the proposed staffing levels for option one.

Table 5 Current and Proposed Staffing Levels by Time of Day

Staffing levels by time of day (current and proposed)						
Time of Day	**Hunting Valley**	**Moreland Hills**	**Orange Village**	**Pepper Pike**	**Total**	**Proposed**
00:00 – 02:00	2	2	3	2	9	10
02:00 – 06:30	2	2	3	2	9	10
06:30 – 07:00	2	3	3	2	10	10
07:00 – 11:00	2	3	3	3	11	10
11:00 – 16:00	4	3	3	3	13	10
16:00 – 16:30	6	3	3	3	15	10
16:30 – 23:00	2	3	3	3	11	10
22:30 – 23:00	2	2	3	3	10	10
23:00 – 00:00	2	2	3	2	9	10

In addition to the patrolmen providing zone coverage and to the sergeants and lieutenants providing city coverage, there would be three detectives on the force, supervised by a lieutenant detective. All three of these officers would have responsibilities that center on investigative work, but they could also provide street patrol assistance when needed. Currently, investigative work is handled by patrolmen whenever needed with the exception of Hunting Valley, where it is handled with one part-time investigator. By having designated officers assigned to these duties, it allows the Police Chief to keep the remainder of the force on street patrols.

The ratio of police officers to the population would decrease from 5.13 per thousand residents to 3.62 per thousand; although this is a decrease of thirty percent, the new ratio is essentially identical to the current ratios in the three larger municipalities, and the decrease reflects the adjustment of the very large ratio in Hunting Valley. The level of street-patrol services would be maintained, with no decrease in the visibility of police officers; each zone would have two cars,

and the two city cars would patrol that zone as well, although slightly less frequently. On average, there would still be 2.5 cars in each zone at any given time.

In order to improve the level of "concierge services" that the police departments would offer, it is possible that residents of the four communities be given the opportunity to equip their homes with a "Knox Box" that would contain their house keys. This would allow a police officer or firefighter to provide immediate assistance to a resident if necessary. With the same goal of increasing services, we also suggest that all police officers be trained as emergency medical technicians or even paramedics, and have their automobiles be equipped with some first-aid materials (defibrillators, for example), as some already are.

From a financial standpoint, this collaboration would represent significant savings, which would come primarily from reducing the number of chiefs from four to one, and the number of sergeants from 14 to five; both of these reductions could be achieved through natural attrition for the chiefs and promotions and natural attritions for the sergeants. The merger of the four police departments would generate additional salary expenses because of the increase in the number of lieutenants, but these costs would be relatively minimal.

Table 6 shows the current salary information for the four municipalities under current operations.

Table 6 Base Salary Expenses

Base Salary Expenses (excludes benefits)									
	Hunting Valley		Moreland Hills		Orange Village		Pepper Pike		Total
Chiefs	1	$113,856	1	$78,049	1	$86,273	1	$95,920	$374,098
Lieutenants			1	$70,459	1	$78,620	1	$83,560	$232,639
Sergeants	2	$71,832	3	$68,242	4	$71,472	5	$73,140	$999,978
Patrolmen	8	$61,968	9	$59,874	8	$64,976	13	$67,305	$2,429,383
Detectives	0		0		0		0		$0
TOTAL	11	$753,264	14	$892,100	14	$970,589	20	$1,420,145	$4,036,098

Note: all salaries exclude additional compensation for fitness, training, attendance, education, etc.

Table 7 shows a comparison between salary expenditures under current operations and salary expenditures under merged operations. Under that option, the salaries for the chief, lieutenants, sergeants, and patrolmen are "standardized" to the highest salaries of the four municipalities for these ranks, under the assumption that it would be necessary to harmonize compensations for the same rank across all four departments. From a cost perspective, this is a "worst case" assumption, though.

Table 7 Salary Cost Comparison

Salary Cost Comparison between Current and Proposed Operations					
	Current Operations		Proposed Operations		Savings
Chiefs	4	$374,098	1	$113,856	$260,242
Lieutenants	3	$232,639	6	$501,360	($268,721)
Sergeants	14	$999,978	5	$365,700	$634,278
Patrolmen	38	$2,429,383	36	$2,339,136	$90,247
Detectives	0		3	$194,928	($194,928)
TOTAL	59	$4,036,098	51	$3,514,980	$521,118

All other labor-related expenses (health benefits, retirement, uniforms) would be reduced as well. Since they represent approximately 35 percent of the actual salary expenses, an additional $182,391 in savings could be expected, for a total saving of $703,509.

Some of the forecasted savings would be partially negated, at least in the first year, by additional expenses in radio standardization, uniforms, patrol car signage for the city cars, and other initial “standardization” expenses. As the departments grow more integrated, the savings would be realized.

The remainder of the merged departments’ expenses would be essentially unaffected; the police stations would be kept open and remain as currently staffed, to provide residents with the police presence they have grown to expect. Patrol cars would be kept at those stations. However, as they are replaced, their make and model should also likely be standardized.

1.2.3 *Option Two: Full Collaboration–Nine Cars*

The full collaboration of the four departments could also be achieved in a different manner, at yet a lower cost. Under option two operations, there would also be four zones, each of which being staffed with two patrolmen, but there would be only one city car, staffed by a sergeant on some shifts, and by a lieutenant on other shifts. The minimum staffing level for the combined area of the four municipalities would therefore be nine officers, as shown in *Table 8*. However, because of the number of lieutenants and sergeants that would need to be on the payroll in order for this model to work correctly, the staffing level would be at ten officers about 15 percent of the time. In addition, since the number of detectives (three) and lieutenant detective (one) would be no different than in option one, the number of officers that could eventually be "on the street" during an emergency would always be ten, and could be higher.

Table 8 Current and Proposed Staffing Levels by Time of Day

Staffing levels by time of day (current and proposed)		
Time of Day	Current	Proposed
00:00 – 02:00	9	9
02:00 – 06:30	9	9
06:30 – 07:00	10	9
07:00 – 11:00	11	9
11:00 – 16:00	13	9
16:00 – 16:30	15	9
16:30 – 23:00	11	9
22:30 – 23:00	10	9
23:00 – 00:00	9	9

Although a reduction to nine officers on duty represent a decrease in the visible presence of the police department in the community, this number of officers is sufficient to ensure the safety and security of the residents. In order to ensure this level of staffing, the total number of officers who would need to be on the payroll would be 41, as shown in *Table 9*:

Table 9 Number of Officers on Payroll

Lieutenants	2
Sergeants	3
Patrolmen	36
TOTAL	41

The ratio of police officers to the population would be 3.09 per thousand, only slightly lower than it currently is in Pepper Pike, and still much higher than the national standard of 1.5 to 2.2 officers per thousand inhabitants.

Where the likely impact of this option is most likely to be felt is in the additional services that the police departments currently provide. The officers will be busier, but only slightly and certainly still not as busy as their counterparts in other departments.

Financially, a nine-officer option would represent savings of almost $918,078 in salary expenses alone over current operations and of $396,960 over the ten-officer salary expenses, as shown in *Table 10*. Adding benefits and other variable costs linked to labor levels, the savings would be $1,239,405 over current operations and $535,896 over the costs of the ten-officer alternative.

Table 10 Salary Cost Comparison

Salary Cost Comparison between Current and Option Two Operations					
	Current Operations		Option Two Operations		Savings
Chiefs	4	$374,098	1	$113,856	$260,242
Lieutenants	3	$232,639	3	$250,680	($18,041)
Sergeants	14	$999,978	3	$219,420	$780,558
Patrolmen	38	$2,429,383	36	$2,339,136	$90,247
Detectives	0		3	$194,928	($194,928)
TOTAL	59	$4,036,098	46	$3,118,020	$918,078

1.3 *Fire and EMS*

The purpose of the fire portion of this four-municipality collaboration study was to look at how EMS and fire response is provided by the three Fire Departments of Pepper Pike, Orange Village, and Chagrin Falls on behalf of Moreland Hills and Hunting Valley. From our multiple discussions with all Fire Chiefs and our call-data analysis, we have prepared four options for the Mayors to consider as they review options for maintaining or improving response times while maintaining or reducing operating expenses. Consistent with our work in Police and Service, we focused on variable costs. We present these four options below.

Note on methodology: Data was obtained from each of the three fire departments detailing the breakdown of each call responded to in 2008, including address, response time, and type of call. We chose to focus on the driving distance metric rather than response time for two reasons. First, the response time numbers in the raw data appear unreliable, with some response times listed as zero minutes or even as negative numbers. This problem affected less than ten percent of the data, but enough so that we felt the overall reliability of the numbers was low. Second, in making estimates in reduction in response time, we felt that any such estimate would be purely speculative due to variations in traffic at different times of the day, and seasonal changes in driving conditions due to weather. We felt a better way to estimate improvements in service delivery would be to calculate reductions in driving distance, measured in road miles. This is the metric on which we focused.

1.3.1 *Current Situation*

During 2008, Pepper Pike experienced a total of 923 calls which were received through the Pepper Pike Communications Center dispatch. The current staffing model is based upon a 12-member full-time department working 24 hour shifts, with part-time assistance on weekends. Unlike Pepper Pike, Orange Village, Hunting Valley, and Moreland Hills currently contract with Chagrin Falls Dispatch Center to handle call volume. During 2008, the three municipalities experienced a total of 633 calls, 91 calls, and 255 calls, respectively. Cumulatively, Chagrin Falls Dispatch Center experienced approximately 979 calls for these three municipalities. Orange Village's current staffing model is based on a 41-member part-time department working twelve hour shifts with a minimum staffing level of three firefighters at all times. From 7:00 an until 3:00 pm on weekdays, there are six additional firefighters available; however, they are working in the service department, and are not in the firehouse. Hunting Valley and Moreland Hills contract out all fire services to Chagrin Falls Suburban Volunteer Fireman's Association (CFSVFA), which also responds to emergencies in the communities of Bentleyville, Chagrin Falls, Chagrin Falls Township and South Russell.

1.3.2 *Option One: Redistributed Response*

The first option provides the opportunity for overall improvements in response time without an aggregate impact on cost of delivery by creating a virtual, three-location fire service without any organizational changes. This model redefines the boundaries for each of the stations in the four municipalities' area, and determines which station responds to an EMS or fire call, so that the closest station has prime responsibility for providing the initial response. This can be accomplished by the development of an automatic aid system between the Orange Village Fire Department (OVFD), the Pepper Pike Fire Department (PPFD), and the Chagrin Falls Suburban Volunteer Fireman's Association (CFSVFA). This automatic aid system would provide faster response times based on shorter driving distances, and simply ensures that every call is answered by the closest station. This recommendation necessitates the division of Moreland Hills into two areas, one served by the OVFD and the other by the CFSVFA, and the division of Hunting Valley's residences between the PPFD and the CFSVFA.

Currently, the CFSVFA responds to all of Moreland Hills' emergency calls. However, it is more efficient for the western portion of Moreland Hills to be served by the OVFD. In looking at 2008 emergency calls in Moreland Hills for fire and EMS, we have created a geographical model that maximizes service delivery by assigning the OVFD to the western portion of Moreland Hills and the CFSVFA to the eastern portion. *Figure 1* is a map of Moreland Hills showing this proposed division:

Figure 1 Proposed Division Orange Village – Chagrin Falls for Moreland Hills

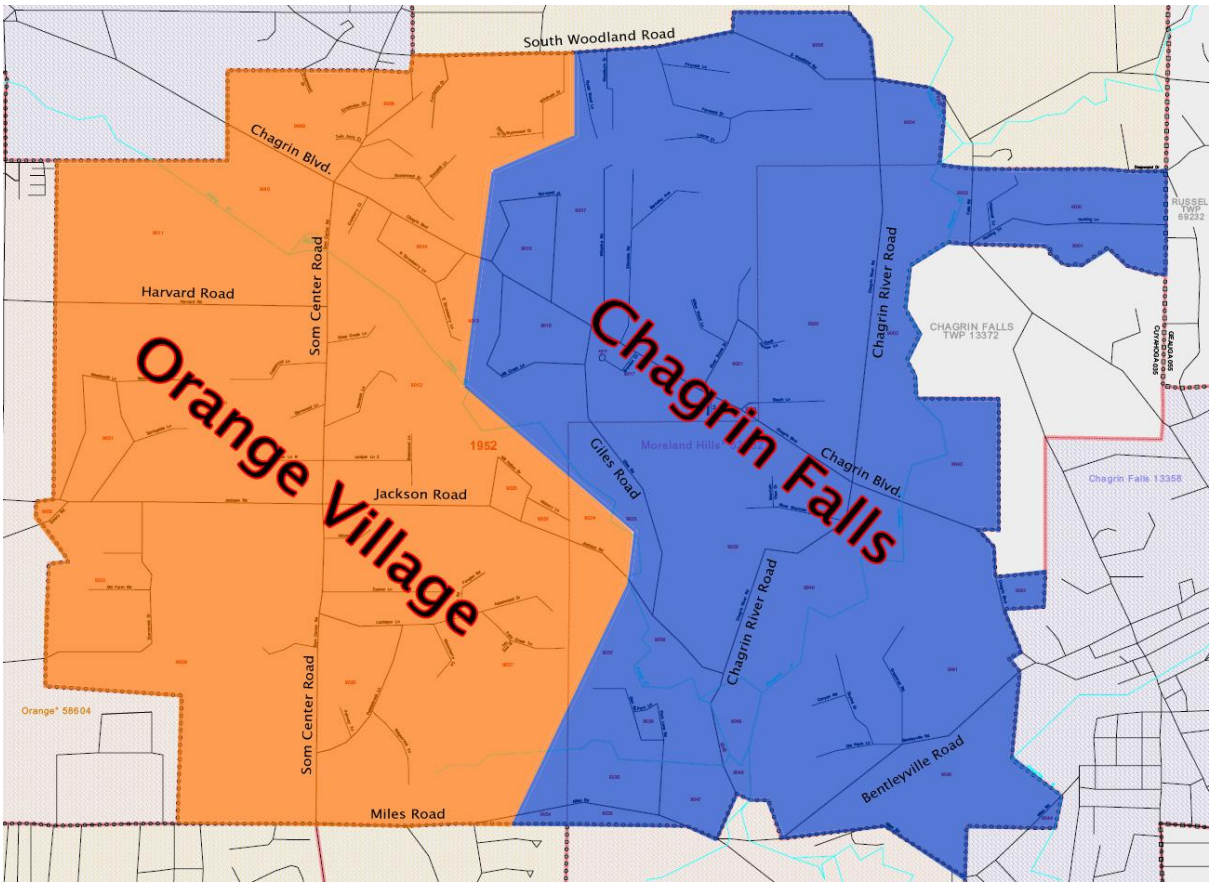


Table 11 Fire/EMS Response Improvements

Moreland Hills Fire/EMS Response Improvements		
	Average Driving Distance (miles)	Total Driving Distance (miles)
Before	3.37	717.4
After	2.22	471.9
Change	**-1.15**	**-245.5**

Under this proposed model, approximately 125 of the 238, or just over half, of the emergency calls that occurred in Moreland Hills in 2008 would have been more quickly served by the OVFD, using the driving distance metric. The average reduction in driving distance for these 125 calls is 1.9 road miles, with a maximum reduction in driving distance of 4.9 road miles and an overall reduction in driving distance of 245.5 road miles. For all 238 emergency calls in 2008, the average driving distance drops from 3.37 miles to 2.22 miles under this new model. This represents a reduction in driving distance of 34 percent, with a likely decrease in response time of a similar magnitude.

The second part of this recommendation is the division of Hunting Valley's fire and EMS calls between the PPFD and the CFSVFA. Currently, the CFSVFA responds to all of Hunting Valley's fire and EMS calls. However, as in the case of Moreland Hills, an overall reduction in response time via shorter driving distances can be realized by an essentially southwest/northeast diagonal division of Hunting Valley between the PPFD and the CFSVFA. The proposed geographical model is shown in *Figure 2*.

Figure 2 Proposed Division Pepper Pike – Chagrin Falls for Hunting Valley

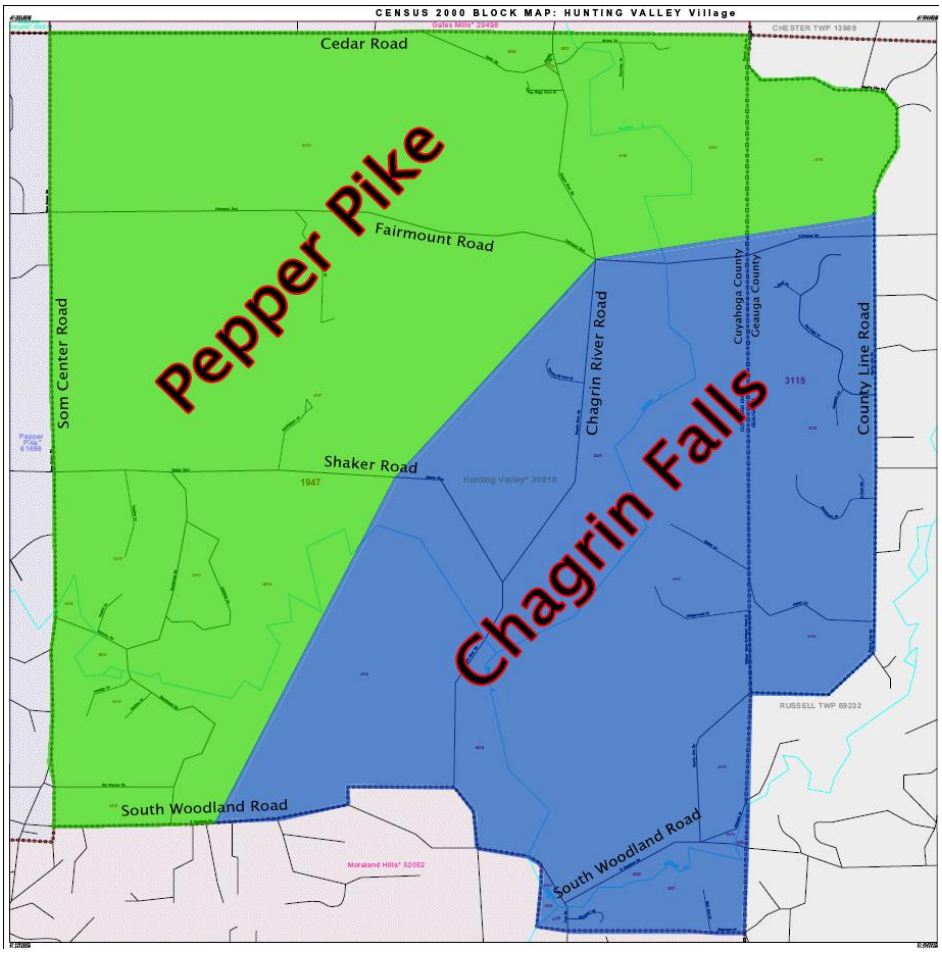


Table 1 Fire/EMS Response Improvements

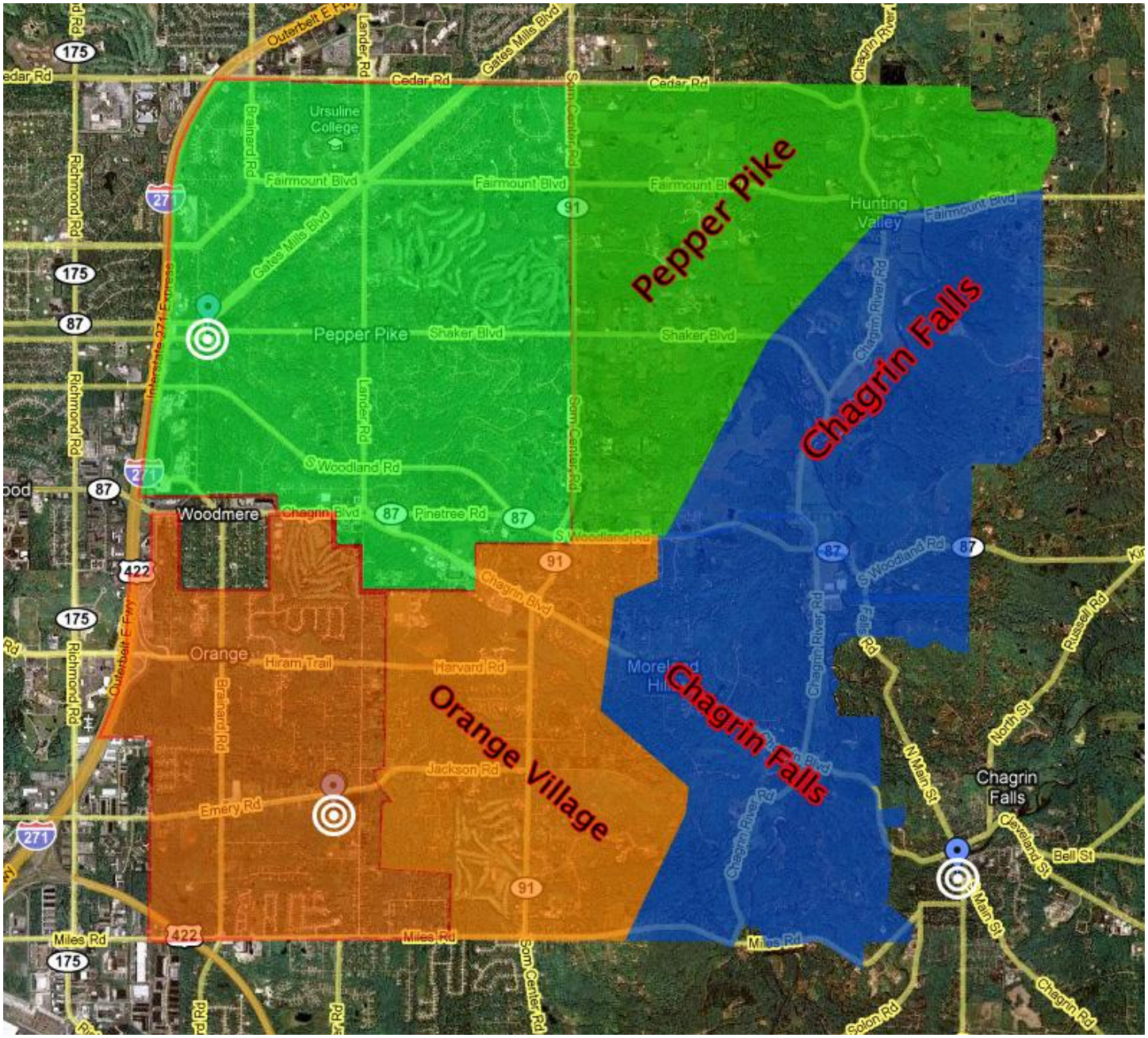
Hunting Valley Fire/EMS Response Improvements		
	Average Driving Distance (miles)	Total Driving Distance (miles)
Before	5.13	317.8
After	3.60	223.2
Change	**-1.53**	**-94.6**

Under this model, approximately 47 of the 71 emergency calls in Hunting Valley in 2008—or about 66 percent—would have experienced a shorter response time if the PPFD had responded, based on driving distance. The average reduction in driving distance is about two road miles, with a maximum reduction of 3.6 road miles and an overall reduction in driving distance of 94.6 road miles. For all 71 emergency calls in 2008, the average driving distance drops from 5.13 miles to 3.60 miles under the new model, a decrease of 30 percent. A corresponding decrease in response time is likely.

This option provides for better service delivery in Hunting Valley and Moreland Hills while incurring minimal, if any, macro-level cost increases. The current CFSVFA contracts with Hunting Valley and Moreland Hills can serve as a starting point for paying PPFD and OVFD on a per-response basis for the additional call volume in the two municipalities that they would need to handle, and billing arrangements could take several different forms depending on the structure of the contracts.

This option of redistributed response for the four municipalities between the three existing fire departments is illustrated in *Figure 3*, and its costs are outlined in *Tables 13* through *16*.

Figure 3 Proposed Redistributed Response



Determining the costs of shifting the primary responder for areas of Hunting Valley and Moreland Hills can be done in one of two ways, resulting in two cost allocation alternatives:

1. **CFSVFA Call Pricing**. The prices that Moreland Hills and Hunting Valley currently pay for fire service do not change, but the proceeds are now collected by Pepper Pike and Orange Village.
2. **Pepper Pike —Orange Village Fire Department Call Pricing**. The price of the calls is determined by the actual fire department response costs for Pepper Pike and Orange Village. The municipalities of Moreland Hills and Hunting Valley pay these costs to Pepper Pike and Orange Village, and they also end up paying a different price for the coverage provided by CFSVFA and for the coverage provided by Pepper Pike and Orange Village.

Under the CFSVFA call pricing alternative, the costs for Hunting Valley are calculated at $1,523.78 per call and the costs for Moreland Hills are calculated at $1,313.11 per call (see *Table 13*).

Table 13 CFSVFA Call Cost Comparison for Hunting Valley and Moreland Hills

CFSVFA Call Pricing			
Municipality	**Budget/Contract Amount**	**# of Calls**	**Average Cost Per Call**
Hunting Valley	$ 138,664.00	91	$ 1,523.78
Moreland Hills	$ 334,844.00	255	$ 1,313.11

Based on 2008 data, 125 calls in Moreland Hills would have been answered by Orange Village, and 47 calls in Hunting Valley would have been answered by Pepper Pike. The municipality of Hunting Valley would now pay Pepper Pike for these calls, at $1,523.78 per call, for a total of $71,618, reducing the cost of the PPFD to Pepper Pike residents by about 3 percent. Similarly, the municipality of Moreland Hills would now pay Orange Village for 125 calls, at $1,313.11 per call, for a total of $164,138.75, reducing the costs of the OVFD to Orange Village residents by 19 percent. The impact of these changes to the Chagrin Falls Suburban Volunteer Fireman's Association would be substantial; it would lose $235,756.41, or approximately 17 percent of its current revenues, with no foreseeable decrease in operating expenses. *Table 14* outlines what the net effect of such a change would be for the four municipalities in the study.

Table 14 Net Results for the Four Municipalities under CFSVFA Call Pricing

Total Costs Under CSVFSA Call Pricing			
Municipality	**Current Budget**	**New Cost**	**Net Change**
Hunting Valley	$ 138,664.00	$ 138,664.00	$ 0
Moreland Hills	$ 334,844.00	$ 334,844.00	$ 0
Orange Village	$ 847,457.90	$ 683,319.15	$ 164,138.75
Pepper Pike	$ 2,274,350.73	$ 2,202,733.07	$ 71,617.66

Alternatively, it would be possible to consider a different cost allocation alternative, in which the area of Hunting Valley served by the Pepper Pike Fire Department would be charged a call price based on the total costs of operating the PPFD, and the area of Moreland Hills served by the Orange Village Fire Department would be charged a call price based on the total costs of operating the OVFD. *Table 15* assumes that the operating costs of Pepper Pike and Orange Village would be unchanged under the proposed model , but would be allocated over a larger number of calls.

Table 15 Pepper Pike - Orange Village Call Cost Comparison with Hunting Valley and Moreland Hills Calls Included

Pepper Pike – Orange Village Call Pricing			
Municipality	**Budget Amount**	**# of Calls**	**Average Cost Per Call**
Orange Village	$ 847,457.90	633(OV) + 125(MH)	$ 1,118.01
Pepper Pike	$ 2,274,350.73	923(PP) + 47(HV)	$ 2,344.69

The financial impact of these different costs for the four municipalities is presented in *Table 16*. As in the CFSVFA call pricing alternative, the impact on the Chagrin Falls Suburban Volunteer Fireman's Association would be substantial; it would lose $235,756.41 or approximately 17 percent of its current revenues, with no foreseeable decrease in operating expenses.

Table 16 Net Results for the Four Municipalities under the PP/OV Call Pricing Alternative

Total Costs Under PP/OV Call Pricing					
	Current Budget		New Budget		Net Change
Municipality	**Calls**	**Total**	**Calls**	**Total**	
Hunting Valley	91 @ $1,523.78	$ 138,664.00	44 @ $ 1,523.78 47 @ $ 2,344.69	$ 177,246.75	($38,582.75)
Moreland Hills	255 @ $1,313.11	$ 334,844.00	130 @ $1,313.11 125 @ 1,118.01	$ 310,455.55	$ 24,388.45
Orange Village	633 @ $1,338.80	$ 847,457.90	633 @ 1,118.01	$707,700.33	$ 139,757.57
Pepper Pike	923 @ $2,464.09	$ 2,274,350.73	923 @ 2,344.69	$ 2,164,148.87	$ 110,201.86

1.3.3 *Option Two: Orange Village Integration into CFSVFA*

This option builds on the first alternative and proposes the full integration of the OVFD into the CFSVFA, making the current Orange station a second location of the CFSVFA. Due to the nature of the two departments' similar part-time staffing models, a reduction in cost would be limited to the overhead incurred by the OVFD. Overall, 2008 per-call costs are relatively similar between the OVFD, the CFSVFA, and the weighted average of Moreland Hills and Hunting Valley's combined Fire and EMS contracts. These costs are summarized in *Table 17*:

Table 17 Call Cost Comparison

Comparison of Call Costs			
Municipalities	**Budget/Contract Amount**	**# of Calls**	**Average Cost Per Call**
Chagrin Falls + Suburban Dept.	$ 1,366,433.69	1,281	$ 1,066.69
Orange Village	$ 847,457.90	633	$ 1,338.80
Moreland Hills	$ 334,844.00	255	$ 1,313.11
Hunting Valley + Moreland Hills Weighted Average	$ 473,508.00	346	$ 1,368.52
Hunting Valley	$ 138,664.00	91	$ 1,523.78
Pepper Pike	$ 2,274,350.73	923	$ 2,464.09

NOTES:

1) All budgets include the average of 2006, 2007, 2008, and 2009 (planned) capital expenses except for Chagrin Falls, whose budgeted capital expenses are $90,000 for 2008.

2) All budgets do include pension payments.

3) Call volume does include mutual aid calls, since the department absorbs those costs.

OVFD averages about $1,339 per call, which is more than the costs that the combined Chagrin Falls Fire Department (CFFD) and CFSVFA experience, at $1,067 per call. The weighted average of Hunting Valley and Moreland Hills' combined cost per call (based on contract amounts with CFSVFA) is $1,368. Realistically, we do not foresee substantial cost savings in addition to OVFD's reduction in administrative overhead, which would include only the Fire Chief's salary and possibly administrative support staff. Even then, the fire department only paid the Fire Chief $26,802 plus benefits in 2008, since the majority of the current Chief's compensation comes from serving as Orange Village's Service Director.

Table 18 OVFD Overhead Savings

Municipality	Estimated Overhead Salary	Estimated Benefits	Estimated Total Savings
Orange Village	$26,802	$9,380.70	$36,182.70

The current contractual arrangements between CFSVFA and the municipalities of Moreland Hills and Hunting Valley most likely would need no revisions, and the contract amount may actually decrease due to the increased proximity of projected calls and the associated decrease in driving distance. However, for the contracts to change monetarily, the CFSVFA would have to change its cost structure (the current cost of service is calculated using the number of calls in the previous year and property values, and is not based on the distances driven).

The benefits to this model are two-fold. In terms of service delivery, the same benefits are realized as in the first option. Response times to western Moreland Hills are improved in terms of reduced driving distance. Financially, Orange Village stands to save a modest amount of money on overhead and administrative expenses. The contract amounts for providing fire and EMS service to Moreland Hills and Hunting Valley also would likely remain unchanged, which in the light of improved service delivery would be attractive to those two municipalities as well.

1.3.4 *Option Three: Full Integration–Full time*

This option builds upon the first two options and involves the integration of Pepper Pike's current full-time firefighters into the CFSVFA system, creating a third station location. No changes would occur in the full-time employment structure of the PPFD. Potential savings involve overhead and administrative support, as is the case with the option that integrates the OVFD into the CFSVFA. However, the savings are more significant than in the second option, as overhead costs are higher in Pepper Pike at an estimated $136,188. The improvement in service level to the western Hunting Valley area is the same as articulated in option one, as the firefighters located in Pepper Pike would now be closer to those calls. The repositioning of staff and equipment in the most efficient manner among the three locations could lead to further, yet difficult to define, savings.

Table 19 PPFD Overhead Savings

Municipality	Estimated Overhead Salary	Estimated Benefits	Estimated Total Savings
Pepper Pike	$100,880	$35,308.00	$136,188.00

1.3.5 *Option Four: Full Integration–Part time*

This option builds upon the prior three, and calls for the conversion of PPFD's full-time staffing model to a part-time system, modeled after the current CFSVFA mode of service delivery, and subsequent integration of the PPFD into the CFSVFA. This option represents the greatest opportunity for savings of any of our recommendations by far, and could total over $1 million in annual savings.

While this option calls for a complete overhaul of PPFD's staffing model, when considering the chart of average cost per call data seen previously in *Table 17*, PPFD currently spends more than twice as much per call than CFSVFA or OVFD. A full-time staffing model costs on average $2,464 per call; changing to a part-time model that averages $1,067 per call like CFSVFA or even $1,339 like OVFD represents a significant potential savings on each of PPFD's calls (a total of 923 Fire and EMS calls in 2008). The data in *Table 20* shows the potential savings based on the cost-per-call precedents set by OVFD and CFSVFA. We see such savings as attainable with a switch to a part-time model.

Table 20 Cost Savings

Estimated Cost Savings				
Current model	**Cost per call**	**PPFD # of Calls**	**PPFD cost if new model used:**	**Cost savings over current PPFD model**
PPFD	$2,464.09	923	$2,274,355	**n/a**
OVFD	$1,338.80	923	$1,235,712	**$1,038,643**
CFFD/CFSVFA	$1,066.69	923	$984,558	**$1,289,797**

The chart shows that, if the PPFD station were to convert to a part-time model, cost savings as high as $1,289,797 per year could be realized, without accounting for further potential reductions in overhead and administrative costs. At the same time, response times as determined by driving distances are improved for much of Hunting Valley, and remain the same for Pepper Pike itself. The Pepper Pike station would become an integrated satellite station of the CFSVFA and serve Pepper Pike and portions of Hunting Valley, as outlined in option one.

This option creates what would be a three-location "Valley Fire District" that maximizes response-time performance and minimizes costs with lean part-time staffing models. This option integrates the three fire departments for the greatest reductions in overhead and administrative costs.

2. Garbage, Streets, Building & Grounds

The purpose of the service study portion of this four-municipality collaboration study was to look at how garbage, streets, buildings and grounds and other services are provided throughout the four municipalities. After discussions with all Service Directors, we examined the wide variety of services that each municipality provides and have categorized services into those that would benefit from collaboration and those that are seasonal and would not gain from collaboration. These seasonal and variable services are dependent upon the availability of specific equipment and labor and therefore collaboration does not offer great economies of scale. The primary focus of this section is on those services where collaboration may provide an increase in the level of service delivery and cost containment. We have prepared three options. To stay consistent with our work in Police and Fire, we focused on variable costs.

2.1 *Current Situation*

Each municipality provides weekly garbage pickup, recycling, building and equipment maintenance, recreational grounds and facility maintenance, street repair, street sweeping, street sign maintenance, storm sewer maintenance, bio-retention basin maintenance, head wall drainage maintenance, catch basin maintenance, grounds services, landscaping, and snow plowing. Significant differences exist in garbage service: Pepper Pike and Moreland Hills provide their own garbage pick-up, but Orange Village and Hunting Valley contract this service out. Recycling pickup, paper shredding, major street repair, and some specialized trades, such as HVAC and elevator maintenance, are also contracted out by some of the municipalities. Each service department's activities are dictated by weather conditions, seasonal needs, and resident issues on a daily basis. Because of the wide variety of tasks that the service departments handle, the departments do not track the specific costs associated with every service.

It is possible to separate the services that the municipalities deliver into two categories, depending on whether economies of scale are possible when equipment usage and labor needs are examined. The first category of services are those that hold potential benefits for cost containment and service improvements as a result of better utilization of equipment and labor. In addition to garbage collection, these services include recycling, paper shredding, building maintenance, HVAC, trade specialties (plumbing, electrical, carpentry, HVAC), equipment maintenance, recreation facility maintenance, residential mailbox installation and replacement, street repair, street sweeping, street sign maintenance, bio-retention basin maintenance, storm sewer and drainage maintenance, and tree maintenance. Delivery of these services can be planned based on projected need in each municipality with centrally maintained equipment and a centrally-managed labor pool. *Table 21* provides an overview of all the services that could be delivered under this model. An 'X' indicates that the municipality provides the service during the year, the number of times a year the service is delivered is indicated by a number before the 'X', and a '$' indicates that residents pay extra for the service. Additional detail is provided if the service is contracted out.

Table 21 Services that Would Benefit from Economies of Scale

Services that would benefit from economies of scale	Pepper Pike	Orange Village	Moreland Hills	Hunting Valley
Recycling - General recycling	X	Waste Management	Recycle Midwest - 2X Mo.	Universal
Recycling - Yard waste recycling	Bagged or bundled	X	X	
Paper shredding	X$	2X Yr. Contracted	2X Yr. Contracted	1X Yr. Contracted
Container drop-off	X$	X$	X$	Universal
Building maintenance	X	X	X	X
HVAC	X	X	Contracted	Contracted
Plumbing	X	X	X	X
Electrical	X	X	X	X
Carpentry	X	X	X	X
Elevator maintenance	Contracted			Contracted
Equipment Maintenance	X	X	X	X
Recreation facilities maintenance	X	X	X	X
Residential mailbox installation	X$	X	Replacement	Replacement
Streets - repair	X - minor	X	X - minor	X - minor
Street - sweeping	6X yr	4X yr	2x yr	1X yr
Street sign maintenance	X	X	X	X
Appliance pick-up	X	X	X	X
Bio-retention basis maintenance	X	X	X	X
Storm sewer maintenance	X	X	X	X
Head wall drainage maintenance	X	X	X	X
Catch basin maintenance	X	X	X	X
Residential flooding assistance	X	X	X	
Rain garden installation and maintenance	X	X	X	
Tree maintenance	X	X		X
Cemetery maintenance	X		X	X
Lighting	X	X		

X – Municipality delivers the service; *n*X – number of times per year the service is delivered; $ - additional charge to residents

The second category of services includes those that are seasonal and variable, and therefore highly dependent upon weather, season, and resident requests. The seasonal and variable services include snowplowing, grounds maintenance, landscaping, leaf collection, and chipping. In the case of these services, it is not possible to gain economies of scale. For instance, all municipalities must provide snow plowing when the weather demands. During a snowfall, all equipment is put into use, with virtually no equipment down-time. Similarly, grounds maintenance, mowing and landscaping services are seasonal, and they utilize all the available equipment and maximum labor. A good example of this situation can be

seen in the leaf collection service provided by Orange Village: on average, over the past four years, Orange Village has spent 489 man hours on leaf collection during the six-week leaf collection season. The 3-to-5-man crew works 7.5 hours per day to keep up with the seasonal leaf pickup. Material collected is composted and returned to residents free of charge. The equipment and crew are being used to full capacity with virtually no room to provide leaf collection for an additional municipality.

Table 22 shows the seasonal and variable services provided by each municipality. In the case of these seasonal services, all of the available equipment and qualified labor have to be deployed at the time of need; snow plowing and chipping down branches after a storm both need to be done over a short period of time in order to allow residents and emergency services to utilize the roads Little would be gained by sharing these resources, as they are needed in all four municipalities at exactly the same time. However, the support system to manage these services can be centralized. Consolidated management would provide the benefits of central oversight for equipment management, purchase and maintenance and therefore should be considered.

Table 22 Seasonal and Variable Services

Seasonal and variable services	Pepper Pike	Orange Village	Moreland Hills	Hunting Valley
Grounds - Mowing, landscaping, pesticide application	X	X	X	X
Leaf collection	Bagged	Six weeks in the Fall	Bagged	
Chipping		4X	X	
Snow Plowing	X	X	X	X

In addition to the services listed in *Tables 21* and *22*, each municipality provides unique services. Orange Village and Moreland Hills offer senior snow plowing. Moreland Hills offers senior garbage pickup. Pepper Pike, Moreland Hills and Orange Village offer residential flooding assistance for interior and exterior problems. All municipalities belong to the Chagrin Valley Watershed Partnership and cooperate in the maintenance of natural watershed areas. A significant area of Hunting Valley is in conservancy (41%) which requires the municipality to follow brush and field maintenance programs. Municipalities also provide holiday decoration and community event support.

Since the bulk of the services provided by the municipalities can benefit from centralized management and support, therefore, it is recommended that consolidation be investigated further.

2.2 *Option One: Consolidated Service Department*

It is recommended that all four municipalities consolidate their respective service departments under one director, with one assistant director. This department would be able to deliver garbage, streets, and building and grounds functions with better utilization of facilities, equipment and personnel. A centralized mechanical facility would be used to repair and maintain all vehicles. The specific housing of the different functions and equipment will need to be made according to available physical space. As an example, the garbage function should operate out of Pepper Pike based on the option to consolidate garbage collection, which follows.

Collectively, the municipalities spend approximately $6.2 million on garbage, streets and building and grounds operations annually, with $3.9 million in personnel costs, or 63 percent. Consolidation of all services under one director and an assistant director would streamline operations, and offer economies of scale in basic maintenance and specialized functions such as garbage collection, street repair, and building maintenance. Currently the municipalities employ a total of 47 service employees, with four directors, three assistant director/crew leaders, two foremen, four mechanics, two operators, twenty-three laborers, two full-time clerks, and seven seasonal workers. A consolidated service department could run effectively on a total of 38 employees, with greatest reductions in directors and laborers. The same number of specialized-service providers such as mechanics, operators, and foremen would still be required.

The cost of personnel represents the most significant cost factor. The remaining $1.1 million are spent on utilities, fuel, maintenance and training. These expenditures are not expected to change with a consolidation, as equipment use and coverage of the municipalities would not be affected. *Table 23* details the personnel count.

Table 23 Current Personnel Count

Current Personnel					
Position	**Pepper Pike**	**Orange Village**	**Moreland Hills**	**Hunting Valley**	**Actual Total**
Director	1	1	1	0.4	3.4
Director Assistant/Crew Leader	1	2	0	0	3
Foreman	1	0	1	0	2
Mechanic	2	1	1	1	5
Operator	0	0	2	0	2
Labor/Driver	15	3	3	2	23
FT Clerical	1	0	1	0	2
PT Clerical	0	0	0	0	0
Temporary/Seasonal	0	2	3	2	7
				Total	**47.4**

The consolidated service department would require some adjustment of salaries. This can occur over time through retirements and new hires. *Table 24* shows the 2008 salaries of all the job types within the service department.

Table 24 Current Salaries

Current Salary Levels				
Position	**Pepper Pike**	**Orange Village**	**Moreland Hills**	**Hunting Valley**
Director	$107,660	$76,050	$66,152	$63,144
Director Assist./Crew Leader	$81,640	$59,076	-	-
Foreman	$64,340	-	$57,900	-
Mechanic	$63,560	-	$56,160	$58,800
Operator	-	-	$56,160	-
Labor/Driver	$61,920	$50,815	$36,000	$48,456
FT Clerical	$40,560	-	$42,163	-
PT Clerical				
Temporary/Seasonal	-	$27,709	$14,500	$21,160

The combined budget of $4.0 million needed to be adjusted for a full accounting for benefits that were not listed under the service department budget for three of the four municipalities. This item was accounted for by estimating total benefits at 35 percent of reported salaries.

The model of consolidation utilizes central oversight, yet maintains the necessary specialty skills needed to effectively deliver service. Economies of scale in purchasing, maintenance of equipment and scheduling can be gained.

Table 25 shows the proposed personnel allocation under a single service department.

Table 25 Proposed Personnel

Proposed Personnel		
Position	**Current Total**	**Projected Collaboration Total**
Director	3.4	1
Director Assist./ Crew Leader	3	1
Foreman	2	2
Mechanic	5	3
Operator	2	2
Labor/Driver	23	21
FT Clerical	2	1
Temporary/Seasonal	7	7
Total	**47.4**	**38**

Projected annual savings in terms of salary was calculated using the weighted average salary of each municipality. There are significant differences in salaries. These differences would be adjusted over time with retirements and new hires. *Table 26* shows the projected annual savings at $488,961.

Table 26 Projected Annual Savings

Salary Costs Comparison		
Position	**Current Salary Costs**	**Projected Salary Costs**
Director	$266,056	$107,660
Director Assist. / Crew Leader	$170,146	$56,715
Foreman	$122,240	$122,240
Mechanic	$295,533	$178,520
Operator	$112,320	$112,320
Labor/Driver	$1,133,850	$1,035,254
FT Clerical	$82,723	$41,362
Temporary/Seasonal	$110,896	$110,896
	$2,295,764	$1,735,559
Total Projected Savings:		**$530,797**

In addition to the evaluation of service delivery requirements and personnel, an in-depth evaluation of garbage collection was conducted. Garbage collection occurs year-round, on a weekly basis and is the most visible residential service. Pepper Pike and Moreland Hills perform their own garbage pick-up, whereas Orange Village and Hunting Valley contract out this service. Pepper Pike and Hunting Valley provide backyard pickup, whereas Moreland Hills and Orange Village perform curbside pickup.

There is a significant difference between the municipalities in service delivery and costs. Consolidation of this service could accomplish the goal of moving all municipalities to "best-in-class" service with backyard pickup; however, overall costs would increase slightly. Recognizing this cost increase, the research team also examined the option of moving all garbage pickup to curbside.

Current garbage costs are shown in *Table 27*.

Table 27 Municipal Comparison of Current Garbage Service and Cost

Current Garbage Service and Cost Comparison					
	Pepper Pike	**Orange Village**	**Moreland Hills**	**Hunting Valley**	**Total**
Total Households	2296	1236	1341	317	5190
Dumping Fees / household	$45.59		$40.97		
Personnel Costs	$347,743		$90,979		
Contract Services	$104,682	$194,727	$96,513	$111,613	
	$452,424	$194,727	$187,492	$111,613	$946,256
Annual Costs/ household	$197.05	$157.55	$139.81	$352.09	$182.32

2.3 *Option Two: Consolidated Backyard Garbage Pickup*

The study considered the possibility that the municipalities consolidate garbage service using the Pepper Pike model of backyard pickup. This model of delivery will improve garbage pickup for Orange Village and Moreland Hills, will reduce costs for Hunting Valley, and will contain costs for Pepper Pike. This model uses a four- or five-man crew: two or three scooter operators, one pickup truck driver, and one large packer driver. The scooters will retrieve garbage from the backyard and after five or six households, transfer the load to the large packer and place recycled materials at the curb for pickup by the pickup driver. The large packer will be parked curbside. The pickup truck and driver will assist the scooter collection and then collect recycled material. The packer will transfer all material to the main collection station. The combination of four and five man crews will allow all collection from each household in the consolidated area once a week. *Table 28* details the personnel and equipment cost for this option.

Calculation of equipment needs and replacement schedule was based on the Pepper Pike model of backyard pickup. Equipment needs (and costs) will be high in the first year of operation and in years three and four. Replacement of scooters will be needed each year, except for year three. It is assumed that personnel costs will remain stable. These calculations are conservative, as they do not account for any currently-available equipment that may be used in the new system or that could be sold. The average yearly cost for the consolidated service is $201.69 per household. This can be compared to current expenditures of $182.32. This represents a cumulative annual increase of $100,000 for "best-in-class" service. *Table 29* shows a five year projection comparing backyard pickup and curbside collection.

Table 28 Personnel and Equipment Cost for Consolidated Garbage Service

Personnel and Equipment Cost for Consolidated Garbage Service							
Consolidated Garbage Cost		Salary	Benefits	Salary + Benefits			Total Personnel
Personnel:							
1-4M crew	4	$ 64,400	$ 22,540	$ 86,940			$ 347,760
1-5M crew	5	$ 49,400	$ 17,290	$ 66,690			$ 333,450
Total							$ 681,210
Equipment cost projection	Cost	2010	2011	2012	2013	2015	Total Equipment Cost
Scooter	$ 30,000	X 9	X 2		X 4	X 2	$ 510,000
Pickup truck	$ 35,000						
Transfer truck	$ 150,000			X 1			$ 150,000
Total		$ 270,000	$ 60,000	$ 150,000	$ 120,000	$ 60,000	$ 660,000

Table 29 Projected Total Cost for Consolidated Backyard Collection

Projected Total Cost for Consolidated Backyard Collection						
Projected Total Costs	2010	2011	2012	2013	2014	5 year total
Personnel	$681,210	$681,210	$681,210	$681,210	$681,210	
Equipment	$270,000	$60,000	$150,000	$120,000	$60,000	
Dumping Fees	$233,550	$233,550	$233,550	$233,550	$233,550	
Total	$1,184,760	$974,760	$1,064,760	$1,034,760	$974,760	$5,233,800
Total per household	$228.28	$187.82	$205.16	$199.38	$187.82	
					Projected 5 year average household cost:	***$201.69***
Current Projected Costs	2010	2011	2012	2013	2014	5 year total
Yearly cost	$1,009,527	$1,009,527	$1,009,527	$1,009,527	$1,009,527	$4,731,282
Total per household	$182.32	$182.32	$182.32	$182.32	$182.32	
					Current 5 year average household cost:	***$182.32***

2.4 *Option Three: Consolidated Curbside Garbage Pickup*

In light of the cost of backyard garbage pickup the study also identified curbside garbage pickup as another option. While this option moves away from the objective of 'best-in-class' service, the economic realities call for its examination. This form of garbage pickup is the most common in Northeast Ohio and across the nation. It relies on residents to utilize standardized collection bins that facilitate easy automated pickup at curbside. This option would cost each household approximately $12.51 per month, or $150.12 annually. This annual cost was calculated based on the operational costs of the Pepper Pike model with curb-side pickup. This would be a $51.57 savings over the proposed consolidated backyard option and a $43.39 annual saving per household over the current methods. *Table 30* shows the cost comparisons. Moving to consolidated curbside pickup would reduce total cost by $268,000.

Table 30 Comparison of Annual Consolidated Backyard and Curbside Garbage Pickup Cost

Consolidated Backyard & Curbside Garbage Pickup Costs		
Total Households: 5190		
Current	$182.32	$946,240
Consolidated Backyard	$201.69	$1,046,771
Consolidated Curbside	$150.12	$779,123

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