

# **Future Public Safety Needs Study**

***for***



***Conducted by***



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## Executive Summary

The intent of the executive summary is to give an overview of the most important issues and opportunities identified by the consulting team during the course of the study. The reader is highly encouraged to read the document in its entirety in order to gain an understanding of the recommendations presented within the report. Reading only the executive summary does not provide ample information on which to base decisions or to judge the recommendations made within this report.

The relationship between Byron and Gaines Townships has a history of non-compatibility, although they share some of the same sources for resources. At the time of the study, Fire and Emergency Medical Services (EMS) were provided by two fire departments located within Byron Township: Byron Township Fire Department located at 2560 84<sup>th</sup> Street S.W. Byron Center; and Cutlerville Fire Department located at 1168<sup>th</sup> Street SW Grand Rapids. The Cutlerville Fire Department created through a Intergovernmental Agreement, recently amended in August 2017. At the time of the study, the Byron Township Fire Chief was also named Administrator for the Cutlerville Fire Department. As this report went for publication, the Byron Fire Chief resigned as Administrator of the Cutlerville Fire Department. This report recommends a new configuration for a shared facility between the two Townships.

Law enforcement for Byron Township is provided by Kent County Sheriff's office. Byron Township participates in the Kent County Township Patrol Program supplementing district patrols with dedicated patrol units assigned specifically to Byron Township.

### **The Issue:**

The issues of the current and historical dysfunctional is not the shared services concept; rather, it's the structure of that agreement which resulted in not a shared facility but the creation of a third fire department.

**The Solution:**

Change the structure of intergovernmental agreement, not the concept of shared service. The Cutlerville Fire Department should be dissolved and merged into one of the two Townships. One Township would have all responsibility for that shared facility.

**Ambulance Service:**

Byron Township should contact the three ambulance providers and negotiate an agreement whereas, an ambulance and staff would be housed in the fire station when that ambulance was not actively transporting patients.

**Law Enforcement:**

Continue current contractual arrangements with the County. As part of the annual budget process, consider additional units of service if improvement is not seen in reduced response time and Township boundary crossover incidents.



## Introduction

McGrath Consulting Group, Inc. was contracted by Byron Township, Michigan to conduct a Public Safety Future Needs Study for law enforcement/police, fire, and emergency medical service. Dr. Tim McGrath, CEO of McGrath Consulting Group served as the overall Project Manager with Chief Ron Moser leading the law enforcement component. Additional consultants provided review and input on specific aspects of the study, based on their areas of expertise.

Although all of the Public Safety services were assessed, the most significant issues dealt with the dysfunction in providing fire/EMS services, centered on a shared third fire department (Cutlerville) with the neighboring Township (Gaines). The study became more complexed when initially one Township expressed dissatisfaction with the Administration of the third fire department (Cutlerville). Historically, the Byron Township Fire Chief was named the Administrator for the Cutlerville Fire Department. The fact that Cutlerville employees were very adamant that the Byron Fire Chief was not their Fire Chief, was only tip of the problem.

Although it might sound as if this misunderstanding could have been easily resolved, it appears the unanswered question of “which Board has authority to govern” the Cutlerville Fire Department: one Township Board, both Township Boards, and/or the Joint Fire Administration Board (JFAB). It becomes less clear when you take into account that the members of the JFAB are also on Township Boards, raising the question which hat are they wearing, and when? Eventually, Byron Township became divided on the issue of the Fire Chief/Administrator for Cutlerville, and for the duration of this study Byron’s Board has remained divided.

The consultants interviewed Township Officials from both Byron and Gaines Township, Leadership of the Byron and Cutlerville Fire Departments (same individual), members of both departments, organized labor, and other interested stakeholders. The interviews with the stakeholders were held in confidences and whenever possible the consultants identified the group of individuals verses a particular individual.

The consultants wish to thank the many stakeholders who provided their perspective on the opportunities facing Byron Township and those that provided copious documentation for review by the consultants.

Recommendations found in this report are prioritized using the table below:

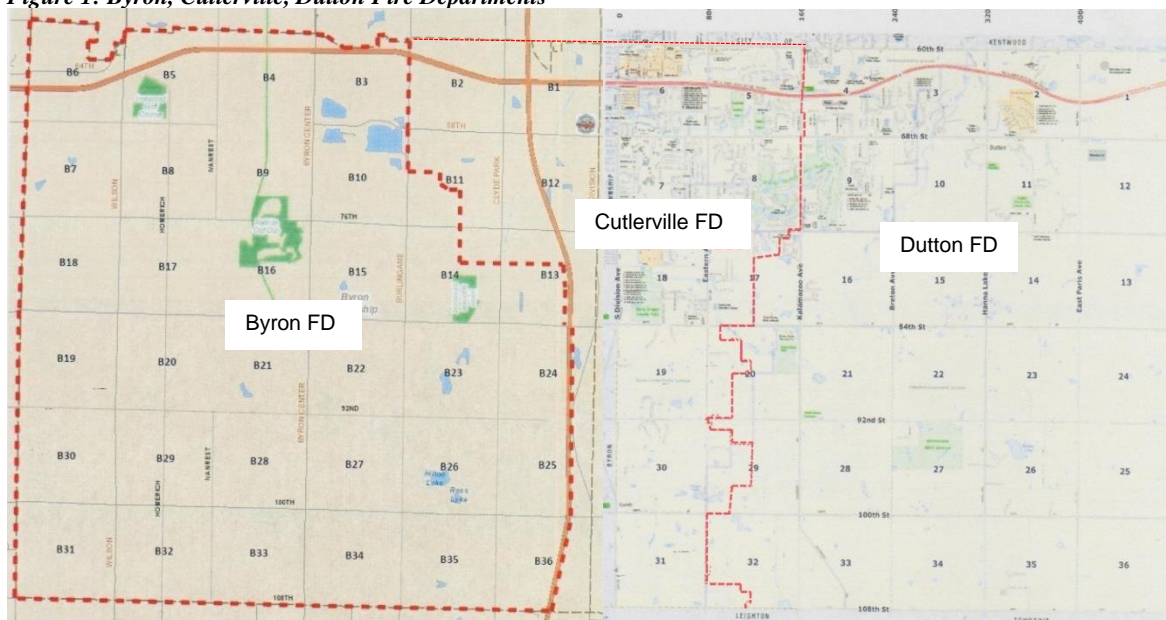
*Table 1: Recommendation Hierarchy*

<b>Priority</b>	<b>Definition</b>	<b>Example</b>
<b>1</b>	<b>Urgent/Immediate</b>	Potential threat to life, legal and regulatory compliance violations; physiological needs; essential preventative action needed
<b>2</b>	<b>Pressing &lt; Priority 1</b>	Significant impact on organization; action needed as soon as possible
<b>3</b>	<b>Important &lt; Priority 2</b>	Organization will benefit by addressing soon; items that should be accomplished
<b>4</b>	<b>Future Consideration</b>	Items need to be addressed; develop future plan of action; low consequences of delay-action
<b>5</b>	<b>Information Only</b>	Organization should be aware; take under consideration

## Fire/EMS Section

The Township of Byron and Gaines entered into an Intergovernmental Agreement for the operation, funding, and maintenance of the Cutlerville Fire Department in May of 2007 and amended most recently in August 2017. The two Townships and three fire departments are illustrated in the figure below:

**Figure 1: Byron, Cutlerville, Dutton Fire Departments**



*Figure is constructed from different maps and therefore district lines are of different widths and color background.*

Area protected by Byron Township Fire Department is illustrated on the left with heavier red dotted lines; Cutlerville Fire Department protection area is illustrated in the center with narrower red dotted lines; Dutton Fire Department protects the remaining portion of Gaines Township and is on the right of the figure.

Cutlerville is an unincorporated community within Kent County which straddles the boundary between Byron Township and Gaines Township. Unincorporated Cutlerville is 6 square miles with a population of 14,370 residents; however, the protection area covered by the Cutlerville Fire Department in each Township is approximately 6 square miles (40%) in Byron and 9 square miles (60%) in Gaines or a total of approximately 15 square miles.

## Public Safety Overview

Two divisions of McGrath Consulting Group, Inc. (police/law enforcement & fire/EMS) conducted assessments of their respective discipline in this study.

### Fire/EMS

Fire protection and EMS is provided by two fire departments in Byron Township through two fire stations. The departments are: Byron Township Fire Station located at 2560 84<sup>th</sup> St. SW Byron Center and a shared fire station with Gaines Township – Cutlerville Fire Department located at 11 68<sup>th</sup> St. SW Grand Rapids.

The Cutlerville Fire Station is staffed with two career firefighters/EMT 24/7 and one part-time 7:00 AM to 7 PM/7 day per week; supported by a group of paid-on-call members. Byron Township Fire Station is staffed with career firefighters/1<sup>st</sup> Responders Monday through Friday 06:00 hrs. to 18:00 hours. Other hours are covered by the paid-on-call.

### Byron Township Fire Department

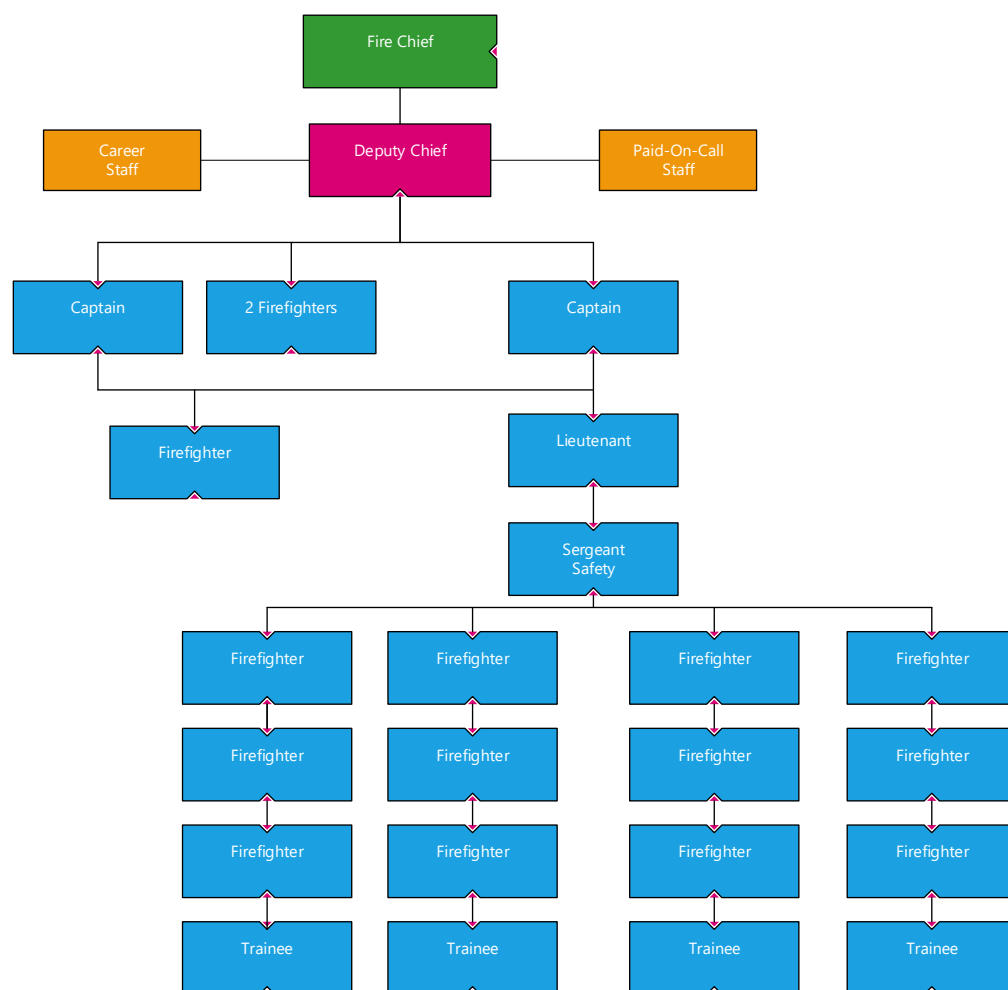
The current Fire Chief/Administrator splits his time between the two fire departments serving half of his 40-hour work week in each department. Both fire departments are combination departments consisting of career and paid-on-call members. The two departments are very different in that one is unionized (Cutlerville) and the other is not (Byron Township). Cutlerville has career on-duty personnel 24/7, whereas, Byron Township has career working just weekday hours. Management/leadership styles often need to be different in union and non-union environments. Therefore, depending on daily workloads each station (in theory) would get access to the Administrator/Fire Chief for half a day and that of course varies depending on what issues need to be addressed and where.

Byron Township Fire Department has three career members, divided into two shifts, on duty Monday – Friday from 6:00 AM to 6:00 PM which is based on a 40-hour work week. Hours after 6:00 PM Monday – Friday and all day on Saturday and Sunday are covered by 20 paid-on-call responding from their residence or place of work. There are both career and paid-on-call officers

(Deputy Chief, Captain, Lieutenant, and Sergeant) who take turn covering calls after the career leave on any significant call; their coverage is for one week.

The Byron Fire Department organization chart is illustrated below:

**Figure 2: Byron FD Organization Chart**



*The organization charts have been reproduced in order to remove member's names*

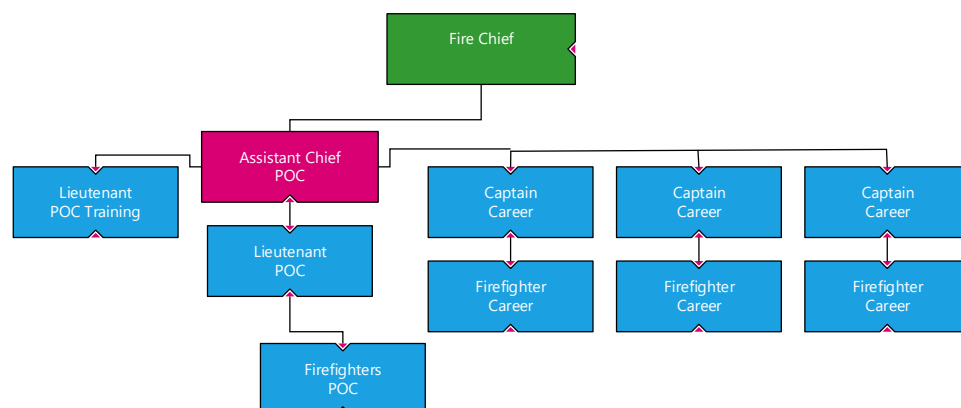
The career and paid-on-call fire department members are employees of the Byron Township and receive their compensation from the Township.

## Cutlerville Fire Department

The Byron Fire Chief serves as the Administrator for the Cutlerville Fire Department which also is a combination fire department consisting of six career employees working a shift consisting of 24 hours on-duty followed by 24 hours off-duty. This shift allows for two career members to be on duty 24/7/365. The career members are augmented by five part-time members who will work a career member's shift when they are off on a scheduled workday. In addition, there are 11 paid-on-call members who respond from their home or place of work when available.

The figure below illustrates the organization chart for the Cutlerville Fire Department:

*Figure 3: Cutlerville FD Organization Chart*



*The organization charts have been reproduced in order to remove member's names*

Career and paid-on-call members are employees of Gaines Township and are paid through Gaines Township which is reimbursed by Byron Township for the percentage of incidents in Byron Township on a predetermined formula of Gaines pays 60% and Byron pays 40% of the salaries. The paid-on-call are paid by the Township in which they respond (potentially the paid-on-call could get two different pay checks – one from each Township).

## Partnership

The Cutlerville Fire Station is a partnership between the two Townships through an intergovernmental agreement. The agreement results in a Joint Fire Department – Cutlerville Fire Department, whose purpose is to provide fire protection and first responder medical emergency

services for the residents and owners of property within portions of Byron and Gaines Township called Cutlerville.

In theory, the Fire Chief serves at the pleasure of the JFAB; however, it appears that each Township Boards are exceedingly involved. The JFAB is comprised of five members: two from each Township and the fifth member appointed by agreement of the four (two Township) members for a period of two years. Each municipal Township Board is responsible for funding 50% of the Cutlerville Fire Department operational budget and the capital budget; the career employee's reimbursement is divided 40% Byron and 60% Gaines Townships.

## Two Townships – Three Fire Departments – Two Fire Chiefs

Between Byron and Gaines Township, the area is protected by three fire departments: Byron Township Fire Department, Dutton Fire Department (Gaines Township), and Cutlerville Fire Department serving portions of both Byron and Gaines Township. The Byron Fire Chief serves as the Chief/Administrator for the Byron Township Fire Department and the Administrator for the Cutlerville Fire Department. The Dutton Fire Chief serves the majority of Gaines Township.

If there is any doubt that Cutlerville is, or is perceived as, an independent fire department, the following will verify it is:

- *Cutlerville has its own National Fire Incident Report System (NFIRS) federal identification number for reporting to Federal Emergency Management Agency (FEMA).*
- *The stakeholder (employees) of Cutlerville and Byron see themselves as separate fire departments. They will fight fires together but do not train together; a very significant safety factor. (The consultants understand for about a three to four-month period they did train together in the evening with the paid-on-call, but the career preferred to do their training during the daytime shift hours; whereas, the paid-on-call were not available).*

### Training

#### ***How You Train Is How You Will Perform On the Emergency Scene***

When asked if a paid-on-call member of Byron could respond to the Cutlerville station for a fire within Byron Township, the answer was a strong NO! The same was true if you reversed the departments when speaking to Cutlerville paid-on-call. **Remember**, these two fire departments fight fires together but don't use the same training curriculum, lesson plans, instructors, or partner for training evolutions as a team. The training officer that was interviewed indicated he has no correspondence with the other's department training officer nor is he ever been contacted about joint training. However, the consultants were told for a short period (several months) Cutlerville and Byron personnel did attempt to train together; however, Cutlerville career members preferred to train during the day – at the time of the study they were not, nor had recently trained together.



## Training – Insurance Services Offices (ISO)

ISO recognizes Cutlerville Fire Department independent of Byron Fire Department, which is uncommon inasmuch as ISO rates the Township, not the fire department; therefore, ISO views Cutlerville as a separate Fire Protection Service Area (FPSA) with its own fire department. The following two tables indicate the total points each department received in their last insurance ISO rating; also the second table illustrates the Training Categories and how many points each department received compared to possible points in those categories:

*Table 2: ISO Training Points Total*

<b>FPSA</b>	<b>Points Awarded</b>	<b>Points Possible</b>	<b>Percent Achieved</b>
Byron Township FPSA	1.76	9.0	19.6%
Cutlerville FPSA	2.0	9.0	22.2%

*Table 3: ISO Training Categories & Scores*

	<b>Byron Township</b>	<b>Cutlerville FPSA</b>	
<i>Categories</i>	<i>Points Awarded</i>	<i>Points Awarded</i>	<i>Points Possible</i>
Facilities, and Use	0.00	0.00	35.00
Company Training	4.97	7.33	25.00
Classes for Officers	7.89	8.25	12.00
New Drivers & Operator Training	0.75	0.75	5.00
Existing Drivers & Operator Training	0.76	0.89	5.00
Training on Hazardous Materials	0.17	0.00	1.00
Recruit Training	5.00	5.00	5.00
Pre-Fire Planning Inspections	0.00	0.00	12.00

## Findings – Training

It is most common for career members to have significantly more training hours than a volunteer/paid-on-call; inasmuch as they are present for 24 hours while on duty. However, neither department even received one-quarter (25%) of the possible points; yet they fight fires together but don't see a need to train together – or even the need to train! This is a safety issue, not only for the firefighters, but the citizens they protect!

### *Recommendation – Training*

- *Whether or not the two departments are joined into a single agency, it is essential that training and competency evaluations be greatly improved and documented. **Priority 1***

## Which Department Should I Join to Serve Byron Township?

### The Need For More Members

Each fire department (Byron & Cutlerville) indicated that they needed more personnel and yet an individual wishing to become a member of the fire department, who lives in Byron Township, would have to choose which department he/she would join. This is exacerbated by each department indicating it is harder to get volunteers/paid-on-call; yet both departments continue to draw from the same pool of available volunteers.

*Figure 4: Department Logos*



These are the identifications the members wear on their uniform, displayed on the apparatus, and the consultants observed off-duty department members wearing clothing that indicated they were members of one of the two department, not both. Although, not known to the consultants, does the same situation exist between Dutton and Cutlerville? One would assume it does.

### Additional Career

The consultants do not recommend additional career members to fill future needed positions; rather these positions should be filled with part-time (paid-on-premise) certified employees. The consultants support continuation of a foundation of an on-duty team of six career members (two per shift) to augment the paid-on-call.

## Leadership

*The last thing that Byron or Gaines Township needs is an additional Fire Chief – whether full or part-time! Byron and Gaines need one Fire Chief and a shared satellite fire station; not a third Fire Chief.*

For some period of time, there has been dysfunction within the Cutlerville Fire Department centering around the Fire Chief. An example, if you refer to the Cutlerville leadership as Fire Chief, you are quickly and repeatedly corrected that “their leadership” is an Administrator not a Fire Chief. Byron personnel refer to their leadership as “Fire Chief”.

Gaines Township is considering and publicly publishing their intent of creating the position of Fire Chief (as a part-time position) for the Cutlerville Fire Department, thereby giving the department greater autonomy. Although, at the time of the study Gaines Township Board has created a proposal to remove the current Administrator (Byron Township Fire Chief) and replace him with a full-time or part-time Fire Chief for Cutlerville Fire Department. The proposal indicated that Gaines Township would cover the cost for this position. At the time of the study, the Byron Township is taking the matter under consideration. Therefore, consideration of the leadership for all departments warrant serious consideration and formalization.

## Recommendation – Cutlerville Fire Chief

- *Do not hire a fulltime or part-time Fire Chief for the Cutlerville Fire Department. The Cutlerville Fire Department should be dissolved and become a satellite fire station with current staffing, but under the authority of one of the two Townships. **Priority 2***

## Findings – Three Fire Departments

Few Townships would embrace the concept of having to deal with two different fire departments to serve their Township. There are too many inconsistencies, especially when it comes to capital apparatus/equipment request. Our clients, who are unable to seek protection from a single department, pursue a single uniformed agreement, resulting in cost savings. Moving the Cutlerville Fire Department into either the Byron or Gaines Township will result in Byron Township dealing with a single service provider.

## Unity of Service

If Byron or Gaines Township continue to be protected by two different fire departments and separate Fire Chiefs, each department would have the authority of Incident Command depending where within the Township the fire occurred.

*The Incident Command System comprises five major functional areas: Command, Operations, Planning, Logistics, and Finance/Administration. The incident commander is the person responsible for all aspects of an emergency response; including quickly developing incident objectives, managing all incident operations, application of resources as well as responsibility for all persons involved. (source: FEMA.gov)*

Therefore, if a fire were to occur on the boundary line between Cutlerville Fire Department and Byron Fire Department, the emergency could be fought under two different leaderships expecting the two department members to function as a single unified team.

## Not Enough Volunteers

Although already discussed above, it is worth recalling to the reader's attention, that there are just so many individuals who are willing to give of their time to serve as a volunteer/paid-on-call member of a fire department. Under the current conditions in Byron Township, both Cutlerville and Byron are competing for their membership. Under the current structure, the new member is restricted from serving in both agencies when needed – not by legislation – but by internal policy.

## The Fire Issues

The relationship between the two Townships has a history of non-compatibility, although they share some of the same sources for resources. Such was the purpose of the intergovernmental agreement in which the area of Cutlerville accounted for a significant number of emergency calls, both police, fire and EMS. Therefore, a partnership was formed to create a fire facility within Cutlerville. Career firefighter were hired, as it was believed that the volume of emergency calls was beyond the capability of paid-on-call members.

The concept of shared facilities, resources, and services is highly supported by the consultants. The issues of the current and historical dysfunctional is not the shared services concept; rather, it's the structure of that agreement which resulted in not a shared facility but the creation of a third fire department; two of those fire departments were to be administered by one Fire Chief who answered to a Board which is composed of predominately elected officials of the two Townships resulting in an environment that potentially could change upon each election and certainly political differences.

## The Iceberg Reality:

*Figure 5: Iceberg*



Like an iceberg, only 10% of the issue is showing and the dangerous 90% remains hidden from view. The issue is much larger than the Administrator/Fire Chief; whether his leadership/management style is problematic for employees at the Cutlerville Fire Department or not, it is only the part of the iceberg showing.

The factual issue is the very structure of the intergovernmental agreement in which a third fire department was created which creates two bosses (although

called a single Board).

Replacing the Administrator/Fire Chief or hiring an additional Fire Chief only addresses one small component of the issue – similar to the part of the iceberg sticking out of the water – this portion doesn't reflect the size and complexities of what lies underneath.

*There is no need for three fire departments between the two Townships; and definitely not three Fire Chiefs.* With that said, it is prudent to have fire/EMS resources in Cutlerville and sharing resources is advantageous to both Townships. The author of this report has his doctorate in consolidations/partnerships in fire/EMS. The author completely supports shared services and partnerships. However, the very structure of the current agreement is the crux of the issue.

The relationship between the two Township is essential to any cooperative effort and goes beyond whether the two supervisors are compatible or share a common bond. One should encourage greater cooperative efforts; however, historically, differences between the Townships and their governing bodies remain.

Regardless of who is Administrator and/or Fire Chief of the Cutlerville Fire Department, he/she has two bosses (supervisors) that have a vested interest (appropriately) in what is best for their Township; they are performing their due diligence. Currently, the direction to the Cutlerville Administrator comes from the JFAB of which both Township Supervisors are a member and have significant influence through their Town Boards as to who the other member is and in part even the member at-large. This is not suggesting that the problem is the supervisors; rather, it would be most difficult for any individual who has authority over the entire Township to divorce themselves from that position to deal with the administration of a third fire department serving both Townships and focusing only on that shared issue. This removes the Township Supervisor serving as both the judge and jury.

#### ***Recommendation – JFAB Board***

- *Neither Township Supervisor (now, or in the future) should be an active member on the JFAB; rather, they should appoint someone to represent their Township position and remain focused on the global issues facing the Townships. **Priority 2***

## Managing Under Multiple Bosses

Having multiple bosses is difficult, but not totally uncommon in today's private sector environment. However, it does become more difficult in the public sector where politics accounts for how those supervisors were elected or often appointed. Add to the environment that one agency is unionized, and the other is not; one agency works traditional firefighter hours 24 on-duty followed by 24 off-duty and the other works only daytime hours on weekdays.

Most individuals who work under multiple bosses learn quickly who is the ultimate boss. In the current case, there has been a change in Supervisors of both Townships and the role of perceived ultimate boss has changed according to the preponderance of stakeholders interviewed. This is not to suggest the dysfunction facing the two Townships is the fault of the supervisors; rather currently, the change in the shared services concept has raised two common issues when multiple bosses are involved:

- *Conflicting Messages: different bosses have different expectations and what pleases one might disappoint another.*
- *Loyalty: Reporting to more than one person often requires you negotiate between competing demands for your loyalty.*

The consultants understand the Cutlerville Fire Department reports by the intergovernmental agreement to a Board (JFAB) consisting of both Supervisors and appointed elected official from each Township and a third "independent" individual chosen through an agreement of the four previously mentioned members. In the JFAB case, the fifth member has been in that position for perhaps greater than 20 years. However, certain fiscal matters are brought back to the entire Boards of both Byron and Gaines Township. It appears at this point the Fire Chief/Administrator begins to receive instructions from multiple individuals; resulting in the question of who is the ultimate boss of the Fire Chief/Administrator; how does a Fire Chief/Administrator function under multiple bosses, and perhaps conflicting interest?

## When Employees Circumvent Chain-of-Command

A chain of command exists in most organizations to assure efficient and accurate communication, orderly and organized business operations, and proper allocation of time and resources. When the chain of command is broken, however, the entire organization can suffer.

In para-military organization (i.e. fire departments) culture, organizations are typically built in a hierarchal structure and follow an established chain of command. To ensure smooth and efficient operations, employees are generally expected to communicate work issues to the supervisor directly above them in the hierarchy for direction and resolution. Ideally, everyone from the top down will adhere to the prescribed chain of command. However, there are instances when individuals will bypass the chain of command and initiate communications with people above them on the hierarchal ladder. Ignoring a department's chain of command, inevitably leads to a whole host of problems, and can throw an organization into chaos. It erodes leadership within the organization. However, if the problem involves the reporting hierarchy individual (e.g. Fire Chief) the employee must have a secondary means of being heard (e.g. Board Liaison).

## Addressing Board/Employee Issues

One member of the Board should serve as the contact person for grievances or complaints brought to the attention of the Board. The title for this individual should be "Board Liaison". If the issue involves a union employee, the contract grievance procedure should prevail; otherwise the following process is recommended.

Board member's interaction with fire department employees is a complex relationship, and a relationship which can easily become problematic. Board members, the Fire Chief, and the union leadership openly acknowledged that talking about fire department issues (usually complaints) occur directly with Board members. For Board members, these situations become very challenging; on one hand, if they do not speak with the employee, they give the impression they are disinterested and/or the employee has less rights than the average citizen who can approach a Board member with concerns at any time. On the other hand, if they do speak with



the employees, they create an opportunity for the employee to bypass the chain of command within the fire department and received information which could be hard to validate.

Furthermore, if the communication is poor within the department or the employees have an ulterior motive, Board members are placed in a difficult position. The consultants understand that unions can have significant political influence. However, Boards, Fire Department leadership, and union leaders largely want the same thing – quality emergency service. So how they go about resolving differences is at issue.

The consultants recommend the following procedure when a Board member is approached by a fire department member wishing to speak about a fire department issue:

- *Have the Board Liaison meet with the member to establish what the issue is*
- *Have the employee put his/her concern in writing (always insist on a written statement)*
- *Inquire if the member has brought this issue to the attention of the Fire Chief*
- *If the employee has not spoken to the Fire Chief*
  - *Tell the employee to speak with the Fire Chief and get back to the Board Liaison as to the results (set a short time frame)*
  - *Inform the employee the Board Liaison will be contacting the Chief within a few days to confirm the issue has been addressed and then remove yourself from becoming the conduit between the parties*
- *If the employee attempts to meet with the Chief have been unsuccessful, and the Board member is again contacted by the employee, refer the employee to the Board Liaison*
- *Question as to the resolution should be communicated between the Board Liaison and the Board member.*

If the employee has spoken to the Chief:

- *Ask the employee if the issue has been resolved*
- *If not, refer the employee to the Board Liaison*
- *If the Board member needs additional information, set a meeting with the Board Liaison*

Employees deserve an answer; however, there is a difference between being heard and getting your way. Board members must avoid becoming the conduit between employees and their department head.

It is not the Board's job to resolve department issues; rather, to ensure that employees have access to the department head and if not the department head's immediate supervisor (Board Liaison). Although the Board might not always agree with the Chief's decision, his/her decision should be respected unless it involves an employee's safety, harassment involving the Chief, or violates Township policy, at which point the Board Liaison must be involved in the resolution. Philosophical differences between the Board Liaison and Fire Chief must be resolved between these two parties and should not involve employees.

## Role/Responsibilities of the Fire Chief

*The followings sections refer to the responsibilities of the Fire Chief and JFAB for the Cutlerville Fire Department under its current structure; it will not be consistent with the final recommendation on structure of the Cutlerville station.*

The Fire Chief is the leader of the fire department. The Fire Chief performs the administrative functions of planning, organizing, direction, coordinating, and controlling the operations of the department and the personnel under his/her jurisdiction. It also requires responsibility for the proper operation, testing, and maintenance of apparatus, equipment, and facilities.

The position requires the utilization of personnel, development and training of personnel, performance evaluation, organization moral, safety of personnel, equipment maintenance and utilization, budget preparation, the enforcement of local codes and ordinances, Michigan state statutes, and federal regulations as well as rules, regulations, policies, and procedures of the fire department. The Fire Chief exercises all lawful powers of the office and issues such lawful order as are necessary to assure the effective performance of the department.

The Fire Chief shall determine the method for delivering the types and levels of service the district shall provide: i.e. fire suppression, fire prevention, safety education, rescue/extrication, water/ice rescue. etc. as approved by the Board. The Fire Chief shall determine the policies of operation as to how the fire department will meet such direction of the JFAB, and be held accountable for the meeting and direction by that board.

## Reporting to Governing Bodies And Public

The Fire Chief is responsible for being the communication conduit between the fire department, governing officials (Board) and the community. The Fire Chief is responsible for proving effective two-way communication related to the activities of the fire department, including attending meetings of the various Boards within the Township. The Fire Chief is responsible for improving relationships between citizens, JFAB, community, and the fire department. The Fire

Chief is responsible for ensuring his/her own actions are for the good of the fire department, not his/her own interests.

### **Administrative Duties**

The Fire Chief is responsible for attending all Board meetings (both Townships and the JFAB, and/or other meetings as required. The Fire Chief assists the JFAB Chair in the preparation of Board meeting agendas. The Fire Chief composes correspondences, reports, memos, letters and other related communication materials for Board meetings.

### **Reception and Customer Service**

The Fire Chief is responsible for providing customer service in an effective and efficient manner. This includes receiving and managing all requests, complaints, and information from the public and transmits to staff and/or Board to process as necessary. This also includes answering phones, providing information to the public upon request, assisting them with questions, researching information or records, and directing the public to the appropriate persons.

### **Monitoring Fire District Budget**

The JFAB approves the annual fire department budget; however, only after approval by both Township Boards. The JFAB is responsible for the monitoring of the annual fire department budget on a routine basis. However, once again, it was confusing as the consultants spoke with Township officials as to who is actually monitoring what. The Fire Chief should supervise the administration of the department budget preparation with assistance of other administrative personnel, developing and maintaining an effective system of reports. Monthly spreadsheets should be developed, reviewed and then submitted to the JFAB by the Fire Chief and/or administrative assistant. These include all private contract financial documents. The Fire Chief and JFAB should work closely in this accountability process and should maintain an ongoing open line of communication regarding the budget.

## **Accounting and Finance**

The Fire Chief in conjunction with the JFAB and Township are responsible for the oversight in processing bills for payment and maintaining all financial records. The Fire Chief is responsible for monitoring the fire department budget on a routine basis. The Fire Chief should supervise the administration of the department budget preparation with assistance of other administrative personnel, developing and maintaining an effective system of reports. Monthly spreadsheets should be developed, reviewed and then submitted to the JFAB by the Fire Chief and/or administrative assistant. These include all private contract financial documents. The Fire Chief and JFAB should work closely in this accountability process and should maintain an ongoing open line of communication regarding the budget. If the department continues with an outside agency, continue to work with them in bill payment, development of reports, and accountability processes. Having a third party adds to the accountability process.

## **Capital Improvement Planning**

The JFAB should develop and adopt a strategic plan which outlines the future vision for the fire department. The JFAB, in conjunction with the Fire Chief, should develop a master plan which clearly defines future capital expenditures for fire apparatus, equipment and facilities. This information is essential in determining future budget implications. Once developed, the master plan and capital expenditures should be reviewed and updated on an annual basis by the JFAB and Fire Chief and presented to both Townships. The JFAB should continue to utilize the expertise of the department's leadership team in the process of capital planning. The Fire Chief monitors the capital improvement plan and develops the specifications for apparatus when replacements are needed. It is the recommendation of the Fire Chief as to the type of apparatus, and equipment that is required.

## **Leadership and Supervision**

The JFAB responsibility is to create policies and ensure such policies are being followed. JFAB policies involve determining the types and levels of service the department shall provide. The Fire Chief shall determine the policies of operation as to how the department will meet such direction from the JFAB and shall be held accountable for meeting that direction.

The Fire Chief is the administrator of the fire department. The Fire Chief performs the administrative functions of leadership, management and supervision. This involves planning, organizing, directing, coordinating and controlling the operations of the department and the personnel under his/her jurisdiction. The Fire Chief is responsible for enforcing all local ordinances, State Statutes, and federal regulations as they apply to fire/rescue services. In addition, the Fire Chief is responsible for developing, instituting, and applying uniformly all department rules, regulations, policies and procedures that direct the operations and personnel within the department. The Fire Chief exercises all lawful powers of the office and issues lawful orders as necessary to assure the effective performance of the department.

### Leadership Soft Skills

Less visible than the technical skills, but equally (many argue more) important, are the leadership soft skills referring to interpersonal relationship aka “people skills”. The Fire Chief is responsible for leading, coaching and mentoring all department personnel. This involves, but is not limited to, leading members by personal example, managing member personnel issues, establishing a positive work environment, instructing members, supporting members and holding all members accountable to the same industry standards and requirements. Developing an established and consistent process and procedure for filling all department promotional vacancies is an essential component to leading, coaching and mentoring subordinate members. Building the leaders and managers of the future fire department is an essential function of the Fire Chief’s position.

Whereas technical skills have been compared to a science, leadership soft skills are compared to art. Leadership soft skills are often overlooked because they are difficult to quantify. However, it is these very skills that make volunteers feel appreciated and wanting to serve. Soft skills results are best achieved when the leader is present in many different situations and can adapt the leadership to the circumstance. Therefore, a full-time Fire Chief has the advantage of being at the right place at the right time, and allows the leader to utilize these important skills:

- *Building and leading effective teams*
- *Building relationships at all levels*
- *Communication*

- *Creating a culture of trust and respect*
- *Emotional intelligence*
- *Learning agility*
- *Motivating and engaging others*
- *Political savvy*
- *Resiliency*
- *Self-awareness*

Source: Kalman, F. (2012). Top 10 Leadership Soft Skills. Chief Learning Officer

## **Role/Responsibilities of the Joint Fire Administration Board**

The JFAB's responsibility is to create and ensure that policies are being followed, not to dictate how the Fire Chief operates. Board policies involve determining what levels of service the department will provide (i.e., fire suppression, fire prevention, rescue, etc.). The Fire Chief should determine the policies of operations as to how the department will meet such direction of the JFAB, and also be held accountable for meeting that direction.

### **Taxpayers Liaison**

Each JFAB member is the communication conduit to the public who provides the fiscal resources for the fire protection district. Their responsibility is to improve the relationship between the citizens, the fire department and the JFAB itself. They are to resolve issues that were not resolved by the Fire Chief. They must ensure that their actions are for the general public's good-not their own interests. They should be the cheering squad for the department and aid in supporting and "selling" their endeavors.

### **Report to the Two Township Governing Bodies**

The minutes of each JFAB meeting should be distributed to the respective Township Boards. The JFAB members are the direct intermediaries for the governing officials of each Township. They should be the conduit providing clear two-way communication of the activities of the district to the respective community as well as provide information to the district from the community.

### **Appointment of the Fire Chief**

The Fire Chief should be appointed by the JFAB as stated in the intergovernmental agreement.

### **Monitor Fire Department Budget**

Although the JFAB approves the fire department budget, there is a significant lack of accountability as to the state of all budgetary items including revenue generated by the department to the JFAB. This type of information would be provided to the Township Boards in



the form of a spreadsheet on a monthly basis. The Fire Chief and the JFAB should work closely in this accountability process and should maintain an ongoing open line of communication regarding the budget.

### **Performance Review of the Command Staff (Chief)**

It is essential that the JFAB has a formal annual evaluation of the performance of the Fire Chief. Also at that time, the JFAB should define their expectations for the Chief, (in writing), for the next fiscal year as well as address the progress made during the current budget year. The Fire Chief should evaluate the Assistant Chief annually and present that evaluation to the JFAB for discussion. The Assistant Chief should evaluate each officer holding a rank below Deputy Chief. All evaluations conducted by the Assistant Chief shall be submitted to the Fire Chief for review.

### **Oversee all Department Fiscal Activities**

The JFAB is responsible for reviewing monthly activity reports of all matters that involve the expenditure or revenue generated by the department. The JFAB should have approval of all expenditures above a specified amount.

### **Capital Planning**

The JFAB should develop and adopt a strategic plan that outlines the future vision for the department and a master plan which incorporates future capital expenditures such as apparatus replacement programs. This knowledge is essential in determining future budget implications. Once established, the master plan and capital expenditures should be reviewed and updated annually. The JFAB should continue to utilize the expertise of the department's leadership team in the process of capital planning.

### **Set Department Goals in Conjunction with the Chief**

The key word here is with not for the Fire Chief. The final decision is that of the JFAB, but setting departmental goals must involve the open and honest discussion with the Fire Chief. Once established, the chief must fulfill, implement, or carry out the Board's directives.

Goals should be:

- *Specific – define exactly what is to be expected*
- *Measurable - a feedback system to indicate progress and accomplishment of the goal*
- *Attainable – ensure the Fire Chief has the needed resources to accomplish the goal*
- *Relevant – a set priority of importance to the delivery of quality, cost-effective services*
- *Time Frame – a method to communicate progress and a well-defined outcome as to when the goal is to be completed*

### Ensure Open and Honest Communication

The JFAB must ensure they are sending a consistent message and clear direction to the Chief. Correspondence should be in writing and issues brought to them by department members should not be addressed until that member has spoken to their immediate supervisor following the proper chain of command. An exception to this is where the matter involves an immediate supervisor.

Board and fire department leadership must be cautious in employee issues as it can easily become “Like a kid playing parents off each other, ask the person who you know will give you the answer you want,”

*“Having one boss makes me responsible and accountable; having two bosses makes me a referee”.*

### Resolving the Issues:

Bring the two Township Boards and JFAB together for a single day summit in a site outside the location of either Township, facilitated by a neutral negotiator. The summit would allow all Board members to have equal status and time to contribute to the discussion. Part of the activities included in the summit should be modeled after a Strength, Weakness, Opportunity, Threat (SWOT) exercise; although limited to the issue of shared fire/EMS services. The negotiator will

facilitate the summit under the agreement that when differences arise the determining factor should be:

### **“What Is Best for Those Needing Emergency Services”**

During stakeholders’ interviews, the consultants were repeatedly told that there has been issues between the Townships and historically it involved the fire services. Therefore, a summit is a prudent investment into the future of shared services. The facilitator will encourage all Board members to focus through the windshield (future opportunities) versus the rearview mirror (past disagreements).

## Change the Structure

*This section will address how to simplify the intergovernmental agreement, while maintaining the current staffing model and achieving future cost avoidance.*

*Change the structure of intergovernmental agreement not the concept of shared services.*

The Cutlerville Fire Department should be merged into one of the two Townships and no longer be considered a third fire department; rather, it should become a satellite station for one of the two Townships; the JFAB would no longer exist. The Township that absorbs Cutlerville station should create an intergovernmental agreement in which the other Township pays an agreeable contractual amount for services provided by the station in Cutlerville for emergency responses into their Township (see fiscal section for description of service formula).

The host Township which has taken Cutlerville under its authority should develop an ad-hoc committee (name can be changed but for clarification in the report it would become confusing if it was called a Board) of three representatives from each Township whose authority should lie in creating the terms and expense of the contract; not administrative oversight of the fire department.

In the current intergovernmental agreement, certain individuals (positions not names) were ineligible for membership on the JFAB. Anyone serving in the capacity of Township Supervisor should be included in this list, delegating that responsibility to another individual. The contract should be for multiple years with renewal (divided adjustable costs) agreed upon annually through the ad-hoc committee. It is worth repeating, the JFAB oversees the fiscal aspects of providing needed resources and has no involvement in the day to day operations of the fire department.

As in any contractual agreement, the municipality seeking services must due their due diligence to ensure the cost for emergency services aligns with their fiscal ability to enter into an

agreement. It is doubtful that either Township could absorb the cost of the Cutlerville station and its resources in its own; therefore, good faith bargaining should continue.

### Recommendation – Cutlerville

- *The Cutlerville Fire Department should be dissolved and merged into one of the two Townships. The facility and resources should remain and serve the 15 square miles (approximate) district within the two Townships. One Township would have all responsibility for that facility, inasmuch as it becomes a satellite facility for that Township. **Priority 2***
- *A contractual agreement, with the other Township, would be created by the ad-hoc committee. The ad-hoc committee's sole responsibility would be to create the budget of the Cutlerville station and have no influence on the administration of that facility. **Priority 2***

### Leadership

The consultants referenced the current dysfunction involving the shared fire/EMS that is provided through the Cutlerville Fire Department as looking at an iceberg and only focusing on the part showing. The consultants could spend copious time on determining if the Fire Chief is, or is not the position, and for some if the tip of the iceberg was to change shape somehow the danger below the water line would cease to exist. This study is not about the Fire Chief, Township Supervisors, or any individual. If the current structure of two fire departments for Byron is not changed, regardless who would become Fire Chief within three to five years, the Byron Board would find themselves in the same position as today.

Under the recommended structure of shared services on a contractual basis, the Township that absorbs the Cutlerville station will determine who should be the Fire Chief who oversees their two fire stations (not two fire departments), personnel, and resources that can best serve the needs of Byron Township.

Once litigation between leadership and municipality begins, published articles in the press of dissatisfaction with leadership by Township officials, employees bypassing the chain of command and going directly to Board members, accusations of insubordination are less than desirable. The consultants heard significantly more about how people have been wronged. It

should be obvious that if shared services are a serious consideration, a very comprehensive structure change needs to occur.

## Public Safety Answering Point

All fire/EMS and police 9-1-1 emergency calls are received by Kent County Sheriff's Office (KCSO) with the backup PSAP being the Grand Rapids Police Department (GRPD). Regardless of which PSAP receives the 9-1-1 call, it is entered into the CAD system which will forward the emergency call to the correct dispatcher (PSAP position). No manual transfer of the call is needed between the PSAP.

The KCSO PSAP is located in Grand Rapids, MI. The KCSO employs 61 individuals assigned to the PSAP working four shifts. Staffing levels are fluid throughout the day depending on the volume of 9-1-1 calls being received and dispatched. Maximum staffing on any shift would be 16 telecommunicators; minimum staffing on any shift would be 9 telecommunicators.

Emergency Medical Dispatching (EMD) is performed by the ambulance companies providing service in Kent County. When the call is transferred to EMS, each of the three agencies has its own EMD service. At this point, KCSO will drop the call and the ambulance service remains on the line providing pre-arrival instructions.

All KCSO PSAP telecommunicators meet the State of Michigan training guidelines of 40 hours basic class plus continuing education. In addition, KCSO telecommunicators receive 24-36 hours of in-house "block training" that exceeds the state's requirements.

## Emergency Activities

Data retrieval became somewhat difficult due to the fact that the Fire Chief is the Administrator of the Cutlerville Fire Department and Administrator/Fire Chief of the Byron Township Fire Department. Therefore, when data was presented to the consultant, the Fire Chief would include all of Cutlerville Fire Department data; other data would be limited to all of Byron Township Fire Department and the portion of Cutlerville Fire Department that pertained to Byron Township.

Throughout this section of the report, the consultant will limit their data to that which impacts the client (Byron Township) and when the activities of Cutlerville Fire Department activities involve Gaines Township it will be so noted. *It is important the reader read the Caption on all figures and tables to ensure they understand what data is being presented.*

**Table 4: Byron/Cutlerville NFIRS**

<b>Cutlerville Fire Department (Byron Township)</b>						
<b>NFIRS Series</b>		<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>% of Total</b>	<b>National %</b>
100	Fires	Data Not Retrievable	22	30	3.3%	4.7%
200	Overpressure/Explosion		0	1	0.1%	0.2%
300	Rescue/EMS		523	583	70.4%	64.1%
400	Hazardous Conditions		17	29	2.9%	3.7%
500	Service Calls		41	27	4.3%	7.1%
600	Good Intent Calls		120	112	14.8%	10.5%
700	False Alarm/False Calls		30	33	4.0%	8.7%
800	Severe Weather		1	0	0.1%	0.1%
900	Special Incidents		0	2	0.1%	0.7%
<b>Total Calls</b>			<b>754</b>	<b>817</b>	<b>100%</b>	<b>100%</b>

**Note:** “% of Total” refers to % of calls (category/total calls 3 years)

<b>Byron Township Fire Department</b>						
<b>NFIRS Series</b>		<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>% of Total</b>	<b>National %</b>
100	Fires	42	34	49	4.7%	4.7%
200	Overpressure/Explosion	1	2	1	0.2%	0.2%
300	Rescue/EMS	473	567	719	66.5%	64.1%
400	Hazardous Conditions	28	31	65	4.7%	3.7%
500	Service Calls	24	30	93	5.6%	7.1%
600	Good Intent Calls	80	97	143	12.1%	10.5%



<b>Byron Township Fire Department</b>						
<b>NFIRS Series</b>		<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>% of Total</b>	<b>National %</b>
700	False Alarm/False Calls	58	44	58	6.0%	8.7%
800	Severe Weather	0	3	1	0.2%	0.1%
900	Special Incidents	1	1	0	0.1%	0.7%
<b>Total Calls</b>		<b>707</b>	<b>809</b>	<b>1,129</b>	<b>100%</b>	<b>100%</b>

**Note:** “% of Total” refers to % of calls (category/total calls 3 years)

## Partnership Shares

The intergovernmental agreement required that employee costs for the Cutlerville station would be divided on a Gaines Township = 60% and Byron Township = 40%. The Byron Township Board received data on the distribution of calls made by Cutlerville Fire Department on whether they were in Gaines or Byron Township. This information came from two sources:

- *Byron Township Treasurer*
- *Byron Township Fire Department*

Unfortunately, the figures did not match. Although the differences were not excessive, there should be concern as to why the data was in conflict. The Township fiscal year starts April 1 ending on May 31; whereas, the fire departments records data from January 1 ending December 31. The consultant had sufficient data to compare two years of Cutlerville distribution of calls for 2016 and 2017 as illustrated in the tables below:

**Table 5: Township Distribution of Cutlerville Calls 2016 & 2017**

		<b>Byron</b>	<b>Gaines</b>			<b>Byron</b>	<b>Gaines</b>
Jan-16		40	60	Jan-17		71	114
		43	90			71	85
		61	85			95	100
		69	108			52	95
		71	87			76	92
		79	102			65	85
		69	105			83	120
		84	102			59	95
		53	96			78	86
		74	101			71	100
		71	108			62	100

Dec-16	<b>Byron</b>	<b>Gaines</b>	Dec-17	<b>Byron</b>	<b>Gaines</b>
	76	92		92	103
	<b>41.0%</b>	<b>59.0%</b>		<b>42.7%</b>	<b>57.3%</b>

**Table 6: Fire Department Distribution of Cutlerville Calls 2016 - 2017**

	<b>Cutlerville Fire Department</b>				<b>Byron FD</b>
	Byron	Gaines	Other	Total	Bryon
2016	754	1,162	113	2,029	809
	37.2%	57.3%	5.6%	100%	
2017	817	1,114	119	2,050	1,129
	39.9%	54.3%	5.8%	100%	

The table below illustrates the differences in the Cutlerville Fire Department call distribution from data calculated by Byron Township and that calculated by Byron Fire Department.

**Table 7: Differences In Cutlerville FD Call Distribution**

	<b>Byron Township</b>			<b>Gaines Township</b>	
	Byron FD	Township		Byron FD	Township
2016	37.2%	41.0%		57.3%	59.0%
2017	39.9%	42.7%		54.3%	57.3%

The differences can be explained by noticing the fire department's percentages are lower in all categories. The fire department excluded the "Other" calls (most likely mutual aid) made by Cutlerville to other fire departments; whereas, it appears the Township simply took the total calls for Cutlerville into Byron Township and subtracted it from the total calls shown by Cutlerville for the year. It should be noted that the fire department's percentages, although correct, do not add up to 100% of Cutlerville calls. The Township most likely did not have information that indicated that the "Other" category of calls were not exclusively in Gaines Township.

In addition, although the Byron Township fiscal 12-month year and the fire departments fiscal 12-month year starts and ends on different months, the consultant merged the data so the percentages shown below all represent the same 12-month period. The information from the fire department is taken from the NFIRS data submitted to the state. The information from the

Township are worksheets provided to the Board and the consultant. It is unsure of where the data was originated from.

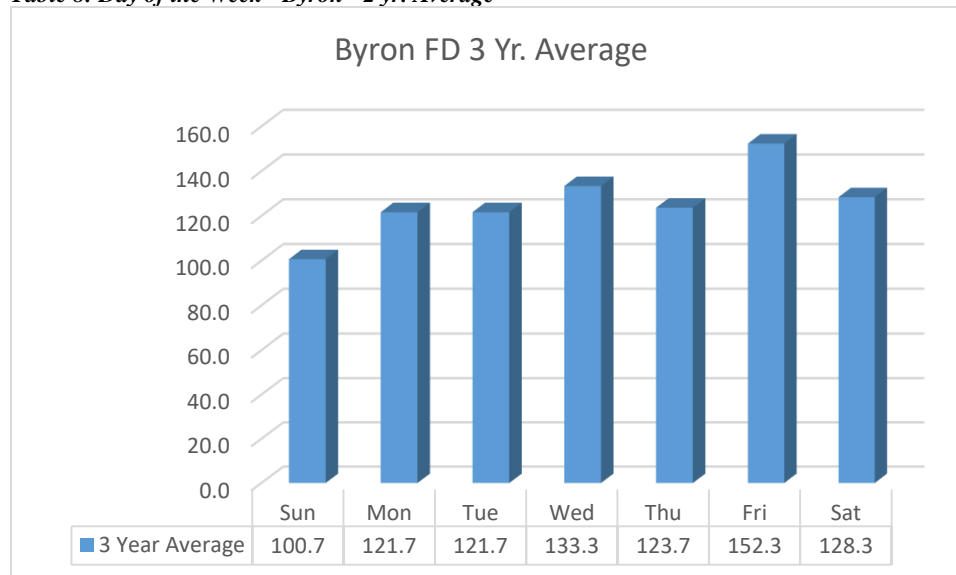
## Day of the Week

Incidents reviewed by day of the week is one metric utilized by leadership to manage the resources of the organization. Coupled with other data statistics, this information could be of value if a pattern emerges suggesting staffing will be problematic or additional resources will most likely be needed. It allows fire department leadership to staff or add resources during these high-volume call periods.

### Byron Township FD

The day for day of the week for Byron Township is illustrated in a three year (2015 - 2017) time frame. The data illustrates that Fridays are the busiest; whereas, Sunday is least busy.

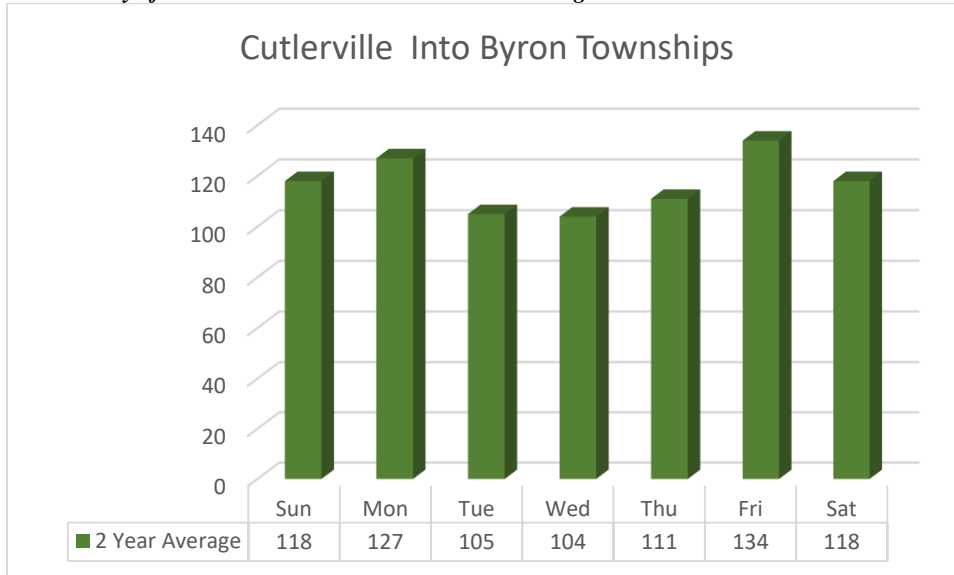
**Table 8: Day of the Week - Byron - 2 yr. Average**



### Cutlerville Fire Department Into Byron Township

The figure below illustrates the number of emergency calls the Cutlerville Fire Department responded to within Byron Township in 2016 and 2017:

**Table 9: Day of the Week - Cutlerville FD – 2 Year Average**

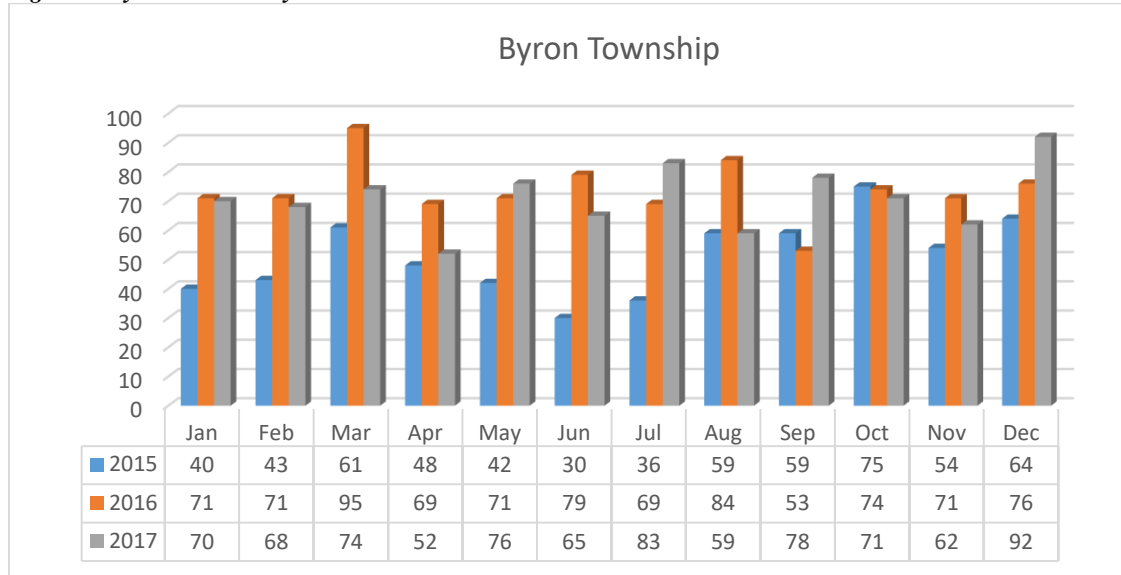


## Calls by Month

Fire Department leadership should be particularly interested in data which indicates when the department is at its busiest for month, day of the week, and time of day. When a significant pattern is discovered, that indicates the probability that emergency incidents will occur at a certain time, it allows the department to anticipate staffing levels and make contingency plans for when they know adequate personnel or other resources needed for emergency response might occur.

Most of Michigan has a four-season climate as does the majority of the states in the mid-west. Therefore, there are a vast variety of activities from spring- summer outdoor activities such as golfing, fishing, water recreation, hiking, etc. to fall-winter activities e.g. skiing, ice activities, hunting, skating, etc. Each of these seasons bring new challenges to the fire /EMS department. The figure below illustrated the call break-down for Byron Township and the Cutlerville Fire Department calls into Byron Township:

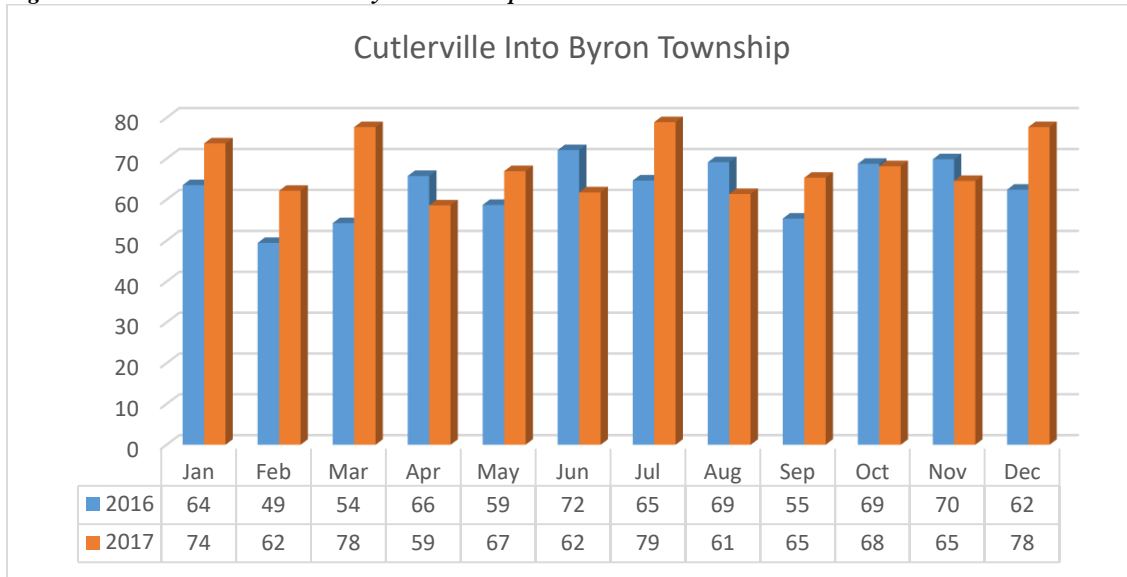
**Figure 6: Byron FD Calls by Month 2015 - 2017**



*Note: the Fire Chief was unable to separate the Cutlerville calls to isolate the number that went solely into Byron Township. The consultant realized that the total number of calls within a year are equal regardless if they are divided into calls by day of the week or month. Therefore, the consultants determine the percentage of calls that Cutlerville responded into Byron in the category of “calls by day of the week” and applied that percentage to calls by month.*

The figure below illustrates an estimate number of calls that the Cutlerville Fire Department responded into Byron Township on emergency calls.

**Figure 7: Cutlerville FD Calls into Byron Township 2016 - 2017**



## Future Ambulance Service

In as much as emergency medical calls account for the highest percentage of emergency responses, it is prudent to examine if ambulance response to residents/guests in Byron Township would benefit from examining future EMS responses. The table below illustrates the number and percentage of EMS calls from both Cutlerville (into Byron Township) and Byron Fire Department:

*Table 10: EMS Call Percentage*

<b>Cutlerville Fire Department (Byron Township)</b>						
<b>NFIRS Series</b>		<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>% of Total</b>	<b>National %</b>
300	Rescue/EMS		523	583	70.4%	64.1%

<b>Byron Township Fire Department</b>						
<b>NFIRS Series</b>		<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>% of Total</b>	<b>National %</b>
300	Rescue/EMS	473	567	719	66.5%	64.1%

Byron Township Fire Department provides 1<sup>st</sup> Responder EMS response to medical level 1, 2, and 3 emergencies; whereas, Cutlerville Fire Department provides 1<sup>st</sup> Responder EMS response at the Emergency Medical Technician – Basic (EMT-B) to medical level 1 and 2 emergencies.

*Table 11: EMS FD Response Levels*

<b>EMS Priority Response Levels</b>		
<b>EMS Priority</b>	<b>Nature</b>	<b>Response Mode</b>
Level 1	Life Threatening / Potential Life Threatening	Lights & Siren
Level 2	1st Responders (compliance MMVC)*	Lights & Siren
Level 3	Non-life Threatening	No Light or Siren
* Michigan Motor Vehicle Code		

Neither Byron nor Cutlerville Fire Departments provide patient transport services, which are provided by civilian ambulance services.

## Fire Station Housing of An Ambulance

The consultants were asked to assess the current arrangement with the ambulance services which transport patients from calls in Byron Township. Three ambulance services were identified by

the Kent County Sheriff's Office Communication Center (PSAP). All three ambulances have facilities in Grand Rapids:

- *AMR – 517 Division Ave S. Grand Rapids, MI*
- *Life EMS – 1275 Cedar St. NE, Grand Rapids, MI*
- *Rockford Ambulance – 2728 3 Mile Rd. NE, Grand Rapids, MI*

The fire department indicated that AMR and Life EMS are the primary two providers. The department EMS personnel indicated there is often an extended wait for an ambulance to transport patients, which is one of the primary reasons the fire department provides First Responder EMS services.

Stakeholders from the Township indicated that discussions with the ambulance providers resulted in being cost prohibited. The volume of EMS calls was insufficient for any of the current providers to locate a facility in Byron Township. The cost of building/leasing a facility was not profitable.

However, the consultants suggest that the Township open discussions with the three providers separately and offer them the ability to house their ambulance and on-duty staff in either the Byron or the Cutlerville fire station. This would limit the expense to the ambulance service and although the ambulance would not remain in the station 24/7 responding to only EMS calls generated by the fire department, they would be in the station when not transporting patients. Both the Byron and Cutlerville station could easily accommodate the apparatus and staff. There would need to be rearrangement of apparatus and living quarters; however, this would reduce the number of First Responder calls the fire department responded to when the ambulance was housed within their station. The fire department would be available to assist the ambulance crew if needed by being requested, not automatically sent when the ambulance was in the fire station.

#### ***Recommendation – Ambulance Service***

- *Byron Township should contact the three ambulance providers and negotiate an agreement whereas, an ambulance and staff would be housed in the fire station when that ambulance was not actively transporting patients. **Priority 3***



## Facilities

### Byron Township Fire Facilities

The Byron Township Fire Department covers an area which is 30 square miles with a population of about 20,000 people for fire, rescue and first responder EMS. The fire department utilizes one station for its protection area coverage with the exception of a shared facility in Cutlerville. The department does participate in both auto aid and mutual aid when requested.

*Figure 8: Byron Township Fire Station*



The Byron Township Fire Station is located at 2560 – 84<sup>th</sup> Street Southwest 49315. This station is operated by paid personnel during weekday hours and by paid on call after 6:00 PM and weekends.

The station was built in 1996 and opened in 1997. The station is headquarters for the department and has facilities for both paid and paid on call members. The station is a one story non-combustible building that has no fire alarm system, only a security system that is not monitored by an outside agency. The Physical Fitness room, has a couple of sprinkler heads off of a domestic water line which is not alarmed or monitored.

## Fire Suppression System (Sprinklers)

The fire station has no automatic fire suppression system (sprinklers). The fire alarm system is within house and if activated, a signal is not sent for notification if the facility was vacant. There are approximately 150 fires in fire stations annually in the United States of which 37% are the structure themselves and 44% are the apparatus (source: U.S. Fire Administration). The leading cause of fire station fires is electrical followed closely by cooking, often when crews respond to an emergency and forget to shut off the stove. The consultants recommend that all new and existing fire stations be equipped with fire suppression (sprinklers) and fire alarm systems that are monitored by an outside source. (source: U.S. Fire Administration Topical Fire Research Series).

**Figure 9: Fire Station Fire - No Protection System**



### **Recommendation – Fire Suppression/Alarm System**

- *Byron station should be equipped with an automatic fire suppression system (sprinklers) which activation is monitored by an outside source. The local fire alarm system should also be monitored by an outside source. **Priority 1***

## Overall Facility

The station has an emergency electrical generator that runs on natural gas and supports 100% of the needs of the station during power failures. The fire station is 11,700 square feet in size. The

station is Americans with Disabilities compliant and has equal accommodations for both men and women.

## Headquarters

The wing of the station that contains the firefighters support and headquarters has 4,524 square feet. This space includes:

- *Training room*
- *Chiefs Office*
- *Station office*
- *Paid on Call office*
- *Physical fitness room*
- *Two individual washrooms, two separate showers*
- *Dayroom (lounge) and kitchen*
- *One washroom each for men and women*

## Apparatus Floor

The apparatus floor is 7,098 square feet in size. This includes the hose tower compressor room, and the laundry storage room. The apparatus floor has five bays, three of which are drive through (egress/entry front and back). All eight overhead doors are 14 feet wide by 14 feet high. All overhead doors are controlled by both wall mounted buttons and vehicle remotes.

The apparatus floor is heated with gas forced air ceiling units and a heat plenum. The water is drained off the truck floor by trench drains at the front and rear of the station.

## Apparatus – Station 49

- *Medic 48*
- *Rescue 45*
- *Engine 44*
- *Ladder 47*
- *Tender*
- *Brush 46*
- *Chief's car*
- *Insulation Vacuum*

- *Light tower*
- *Public Education Trailer*
- *John Deer Gator*

## Emission Exhaust

The station is equipped with Plymovent® to capture and remove exhaust gases from the vehicles. There are two vehicles, however, that do not have the Plymovent® connections: Medic 49 and Brush 46 units.

Emission exhaust is a serious concern to all fire/EMS personnel. The Byron Township Fire Department does not fully address the requirement of NFPA 1500 - Standard on Fire Department Occupational Safety and Health Program – Annex A – A.10.1.5 – 2018 edition which requires that apparatus emission exhaust must be limited to the lowest feasible concentration, according to NIOSH and OSHA.

### ***Recommendation – Emission Exhaust***

*A 100% emission exhaust capture system be utilized on all department vehicles stored within the station; additional ceiling mounted “Air Scrubbers” be installed to capture any small engine exhaust from tools e.g. generators. **Priority 1***

## Self-Contained Breathing Apparatus (SCBA) Fill Station

The station is equipped with an SCBA air compressor and associated fill station. Currently there is no outside piped air intake to supply the compressor with fresh air. It is recommended that air for the SCBA compressor be drawn from an outside source. The consultants are specifically referring to the section entitled “Other Specific Requirements” using the following site: [https://www.osha.gov/dts/osta/otm/otm\\_viii/otm\\_viii\\_2.html#10](https://www.osha.gov/dts/osta/otm/otm_viii/otm_viii_2.html#10) in their request for immediate action on outside air supply.

The documentation for the SCBA fill station appears to be in order for air quality testing and maintenance and the current SCBA fill station meets industry standards.

### ***Recommendation –SCBA Fill Station***

- *The department should install a pipe directly to the outside of the building to supply intake air for the air compressor used to fill the Self-Contained Breathing Apparatus bottles. **Priority 1***

## Cutlerville Fire Station

The Cutlerville Fire Department covers an area of 13.6 square miles with about 6 square miles of that area in Byron Township. There is a population of 14,370 in Cutlerville per the 2010 census. The Cutlerville Fire Department utilizes one fire station to provide fire, rescue, and EMS to the EMT level.

*Figure 10: Cutlerville Fire Station*



The Cutlerville Fire Station is located at 11 – 68<sup>th</sup> Street Southwest 49548. The building is Americans with Disabilities compliant.

The station is staffed by career & part-time personnel 24 hours 7 days a week, with the Captain responsible for daily operations. The fire station was built in 1980 with a major addition in 2017. Construction is a one story, non-combustible structure.

## Fire Suppression and Fire Alarm System

The station has a complete automatic fire suppression system (sprinklers). The system is not monitored by any outside agency. There is no fire alarm system within the facility. The State of Michigan does not require alarm monitoring, however the consultants believe it is a safety issue and protection against the loss of the facility if the crew were not in quarters.

### *Recommendation – Alarm System*

- *The two Townships should install a fire alarm system and have that and the fire suppression system monitored by an outside agency. **Priority 1***

## Facility

The fire station is a total of 10,606 square feet and comprises an area of 2304 square feet.

The station is set up in three sections: east side of the station contains the following rooms accessed from the apparatus floor:

- *Physical fitness room*
- *Storage closet*
- *Laundry room*
- *Self-Contained Breathing Apparatus compressor*

As was the case in the Byron station, the air intake for the SCBA compressor doesn't draw air from outside of the facility. The department provided the compressor appropriate testing records and is an OSHA approved filling station.

### *Recommendation –SCBA Fill Station*

- *The department should install a pipe directly to the outside of the building to supply intake air for the air compressor used to fill the Self-Contained Breathing Apparatus bottles. **Priority 1***

The station has an emergency electrical generator that runs on natural gas and supplies 100 % of the needs of the station during power failures.

The east side of the facility includes the following rooms:

- *Kitchen*

- *Training classroom*
- *Washroom*
- *Vacant office*
- *Mechanical room.*

## Apparatus Floor

The apparatus floor was substantially expanded in their recent addition. The apparatus floor has a total of 5,092 square feet. The following equipment is assigned to the station:

- *Medic 38*
- *Engine 35*
- *Rescue 39*
- *Platform 37.*
- *Reserve Engine 36*

The apparatus floor has four bays double deep (allowing more than one vehicle per bay) and of drive through design. All eight overhead doors are 12 feet wide by 14 feet high and are controlled by both wall mounted buttons and vehicle remotes. The truck floor is heated by natural gas radiant heat. Water is removed from the truck floor by trench drains.

## Emission Exhaust

Currently, there is no emission exhaust removal system. The explanation received was that the manufacturer has drastically improved the quality of the emissions and that they were looking into possibly installing the Ward diesel filters on the apparatus. The consultants do not believe that this satisfies the standards completely.

Emission exhaust is a serious concern to all fire/EMS personnel. The Byron Township Fire Department does not fully address the requirement of NFPA 1500 - Standard on Fire Department Occupational Safety and Health Program – Annex A – A.10.1.5 – 2018 edition which requires that apparatus emission exhaust must be limited to the lowest feasible concentration, according to NIOSH and OSHA.

The consultants recommend an emission exhaust system which attaches directly to the exhaust pipe of the fire apparatus and will automatically disconnect as the vehicle exits the station. In addition, the stations should have ceiling mounted air scrubbers to capture exhaust emitted from sources other than vehicles (e.g. power saws, generators, etc.)

#### ***Recommendation – Emission Exhaust***

- *The apparatus floors should be equipped with exhaust capturing devices directly attached to the tailpipes of the apparatus and removes all exhausts to the outside. Also, there should be air scrubbers installed to clean the air should small tool engines be run on the apparatus floor. **Priority 1***

The west portion of the building encompasses 3,210 square feet and includes the following:

- *Lobby*
- *Radio room/ station watch office*
- *Chiefs office*
- *Assistant chief's office*
- *three restrooms (1 men, 1 women, and 1 single use)*
- *Locker room – (showers for men and women)*
- *Bunk rooms*
- *Dayroom (lounge)*
- *Kitchen.*



# Apparatus

## Byron Township Fire Department

The Byron Township Fire Department apparatus inventory is illustrated in the table below:

*Table 12: Byron FD Apparatus*

<b>Apparatus</b>	<b>Manufacturer</b>	<b>Apparatus Type</b>	<b>Year</b>	<b>Mileage</b>	<b>Hours</b>	<b>Pump</b>	<b>Tank</b>
Car 1	Ford Explorer	Comand	2016	47,227	N/A	N/A	N/A
AC Car	Ford F-150	Command	2003	30,149	N/A	N/A	N/A
Brush 46	Ford F350	Brush Truck	2015	2,494	N/A	250	200
EMS Gator	Deer 610 XL	Off Road	2007	N/A	N/A	N/A	N/A
Insulation Vac	Home Made	Sucks Insulation	1995				
Safety Trailer	Surrey	Public Education	1994	N/A	N/A	N/A	N/A
Medic 49	Ford F350	Utility	2,000	3,860	N/A	N/A	N/A
Engine 45	Quality	Pumper	2003	11,024	N/A	2,000	900
Rescue 48	Ford/Hme	Squad, Mini Pump	2015	17,463	N/A	1,500	400
Tender 47	Freightliner	Pumper/Tender	2007/2016	8,937	N/A	1,500	2,850
Ladder 44	American La France LTI	75' Rearmount Ladder	2002/2016	11,332	N/A	1,500	500
Light Tower	Unkown	Ligh source		N/A	N/A	N/A	N/A

### Apparatus Maintenance

The apparatus maintenance program is overseen by the Fire Chief/Administrator. When a problem is detected, it is designed to be written on a white board that was installed in the station. A ticket is filled out and attached to the calendar after the incident entry into the emergency log. If a serious issue, one of the Chief's is notified. One of the chiefs will call an apparatus repair firm whose employees are certified Emergency Vehicle Technicians. Depending on the issue, the repairs might be done in-house or taken to their facility. The same firm conducts the annual pump testing and Department of Transportation testing.

Ladder testing, both for the aerial platform and the ground ladders, is contracted to another area firm. Repair work and preventative maintenance of the automobiles and light truck is completed by a local vendor.

The department should be commended on its ability to have two of the vehicles (Truck 44 & Tender/Pumper 47) purchased at significant savings, and were refurbished or rechassied, one with a new title.

When apparatus repairs/work is completed, the vendor keeps a record of their work with all the information on diagnosis, parts, cost of labor, what was done and the outcome of the repair. A copy is sent to the Fire Chief, who keeps the document and places it in the vehicle's files to maintain a complete account of the mechanical condition of the apparatus.

Good records are essential especially if there is an accident or injury or death involving an incident with department apparatus. In such a case, it is essential to provide complete and accurate documentation on the apparatus issue, detailed work completed, parts used, cost, and diagnoses made. These records must be kept over the life of the vehicle. Insurance Service Office and Fire Service Rating Schedule requires that all annual testing documentation must be kept for 10 years even if the apparatus has been retired and/or replaced.

Currently, the small tools are maintained in house with several qualified personnel to address minor apparatus issues. If the repairs are outside the ability of the in-house personnel, the apparatus is sent out to the appropriate vendor. At a minimum, biannually, all maintenance records should be audited by the Chief or his designee to check for completeness. This includes apparatus, autos and light vehicles, and larger pieces of equipment. The apparatus is fueled through the State of Michigan Fleet Fuel Program where they can go to any fuel station with their state issued fuel dispenser card for that apparatus.

#### ***Recommendation – Maintenance Audit***

- *Biannually all maintenance records should be reviewed for completeness and accuracy by the Fire Chief. **Priority 3***

#### **Apparatus condition**

The apparatus appears to be in good condition and stocked with the tools and equipment listed by NFPA 1900 and the Insurance Service Office 2013 Fire Suppression Rating Schedule.

Everything appears to be in good functioning condition. Engine 45 and Ladder 44 carry extrication equipment and Rescue 48 carries the Comby™® tool.

A Comby® tool is a combination of hydraulic rescue tools and are used by emergency rescue personnel to assist vehicle extrication of crash victims, as well as other

rescues from small spaces. ... Hydraulic rescue tools are powered by a hydraulic pump, which can be hand-, foot-, or engine-powered, or even built into the tool.

### Odometers vs. Engine Hour Meters

An hour meter is a gauge or instrument that tracks and records overall elapsed time that the engine is actually running and is normally displayed in hours and tenths of hours. The table “Apparatus/Vehicle Inventory” lists the apparatus/vehicles that have both odometers and engine hour meters. Unfortunately, the department does not have engine hour meters on their apparatus.

Engine hour meters are used to log running time of equipment to assure proper maintenance of expensive machines or systems. This maintenance typically involves replacing, changing or checking parts, belts, filters, oil, lubrication or running condition in engines, motors, blowers, and fans, to name a few.

Fire trucks, ambulances, and police cars may all have significantly higher running times compared to mileage. Fire trucks can be running for hours at the scene without clocking a single mile. The same is true with ambulances whose on-scene idle time might be less than a fire engine but occurs more frequently. If maintenance is performed on these vehicles based on odometer readings only, engine life may be affected.

Maintenance personnel understand the wear issues surrounding a vehicle’s engine hour time compared to road miles; and therefore, Board members should not base replacement needs on apparatus/vehicle appearance and mileage, but should take into account all factors including engine hours.

### *Recommendation – Engine Hour Meters*

- *All future apparatus purchased by the fire department should include an engine hour meter to prolong the life of the vehicle. **Priority 5***

### Sufficiency of Apparatus

Sufficiency of apparatus can be considered in two divergent ways: the amount of apparatus and its capability. The consultants have observed fire departments that have an abundance of

apparatus, often resulting in apparatus that is rarely, if ever, deployed, or more apparatus than the department is able to staff. In other instances, departments are under-equipped and/or the apparatus is lacking the tools required to perform tasks on the emergency scene. The apparatus and equipment are appropriate for the department and satisfy both NFPA 1901, and the Insurance Service Office 2013 Fire Suppression Rating Schedule.

## Apparatus Replacement

Fire apparatus, like all types of mechanical devices, have a finite life. How long that life may be depends on many factors, such as mileage, engine hours, quality of the preventative maintenance program, technology advancements, quality of the driver training program, rule enforcement, quality of the original builder and components, availability of parts, and custom or commercial chassis, ability of the district to generate funding, general appearance, etc.

Over the years, the NFPA has attempted to define life expectancy of apparatus with little success. The 2016 edition of NFPA 1901 recommends fire departments evaluate whether to retain fire apparatus in first-line service for more than 15 years as a result of safety considerations.

*Annex D, titled Guidelines for First-Line and Reserve Fire Apparatus due to changes in NFPA 1901, especially relating to safety fire departments, should seriously consider of keeping fire apparatus more than 15 years in first-line service.*

*It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA 1912; and incorporate as many features as possible of the current fire apparatus standard (section D.3). Apparatus that were not manufactured to the applicable NFPA fire apparatus standard or that are over 25 years old should be replaced.*

Another significant factor in equipment replacement as outlined in the NFPA standard, is the rapidly changing area of technology, much of which is directly related to firefighter safety. Based on this factor, apparatus technology becomes an issue when considering replacement. NFPA recommends apparatus older than 15 years should be considered for reserve status only if these NFPA standards have been followed: required maintenance of the vehicle being adequately maintained, and the overall condition of the vehicle has been determined to be safe. Apparatus

that were not manufactured to the applicable NFPA Fire Apparatus Standard or that are over 25 years old should be replaced.

The Byron Fire Department does not have a funded replacement program. The consultants understand that in 2016 a program was submitted for approval but was not implemented. The consultants recommend an appropriate Apparatus Replacement Schedule as illustrated below:

**Table 13: Recommended Apparatus Replacement Schedule**

<b>Apparatus</b>	<b>Recommended Replacement</b>
Engine/Pumper	20 Years + 5 years reserve
Pumper / Tender	20 Years + 5 years reserve
Aerial	20 Years + 5 years reserve
Mini Pumper	15 Years + 3 years reserve
Rescue	15 Years + 3 years reserve
Brush Truck	15 Years + 3 years reserve
Cars	10 Years no reserve
All Trailers	As Needed
Gator	As Needed

The table below shows the status of current apparatus based on the recommended replacement schedule.

**Table 14: Apparatus Replacement Due**

<b>Apparatus</b>	<b>Apparatus Type</b>	<b>Year</b>	<b>Recommendation</b>
Engine 45	Pumper	2003	2023
Tender 47	Pumper/Tender	2007/2016	2027
Ladder 44	75' Rearmount Ladder	2002/2016	2027
Brush 46	Brush Truck	2015	2030
Rescue 48	Squad, Mini Pump	2015	2030
Medic 49	Utility	2,000	Past Due (2015)
Car 1	Comand	2016	2026
Car 2	AC Ford F-150	2003	Past Due (2013)
EMS Gator	Off Road	2007	As Needed
Insulation Vac	Sucks Insulation	1995	As Needed
Safety Trailer	Public Education	1994	As Needed
Light Tower	Lighting		As Needed

## Cutlerville Fire Department Apparatus

The table below illustrates what apparatus is assigned to the Cutlerville station:

*Table 15: Cutlerville Fire Station Apparatus*

Apparatus	Manufacturer	Apparatus Type	Year	Mileage	Hours	Pump	Tank
Medic 38	Ford Explorer	EMS Quick Response	2017	17,518	N/A	N/A	N/A
Engine 36	Toyne	Reserve Engine	2002	42,327	12,955	1,500	500
Engine 35	Metro Star	Prime Engine	2015	26,088	2,602	2,000	800
Rescue 39	Danko	Multi Mini Pumper	2015	11,142	N/A	168	400
Platform 37	E-One	95' Aerial, Quint	2003	44,921	4,117	2,000	400

### Apparatus Maintenance

The apparatus maintenance program is overseen by the Fire Chief/Administrator. When a problem is detected, it is designed to be written on a white board that was installed in the station. A ticket is filled out and attached to the calendar after the incident entry into the emergency log. If a serious issue, one of the Chief's is notified. One of the chiefs will call an apparatus repair firm who employees certified Emergency Vehicle Technicians. Depending on the issue, the repairs might be done in-house or taken to their facility. The same firm conducts the annual pump testing and Department of Transportation testing.

Ladder testing, both for the aerial platform and the ground ladders, is contracted to another area vendor. Repair work and preventative maintenance of the automobiles and light truck is completed by a local vendor. When apparatus repairs/work is completed, the vendor keeps a record of their work with all the information on diagnosis, parts, cost of labor, what was done and the outcome of the repair. A copy is sent to the Fire Chief, who keeps the document and places it in the vehicle's files to maintain a complete account of the mechanical condition of the apparatus.

Good records are essential, and an area in which the department needs to improve. Good records are especially important if there is an accident or injury or death involving an incident with department apparatus. In such a case, it is essential to provide complete and accurate documentation on the apparatus issue, detailed work completed, parts used, cost, and diagnoses

made. These records must be kept over the life of the vehicle. Insurance Service Office and Fire Service Rating Schedule requires all annual testing documentation must be kept for 10 years, even if the apparatus has been retired and/or replaced.

#### ***Recommendation – Maintenance Records***

- *Greater emphasis must be placed on vehicle maintenance documentation and record keeping. The documentation must be complete and accurate in order to fully document all maintenance on the apparatus for 10 years (ISO standard) after the apparatus no longer is in the department's inventory. **Priority 2***

Currently, the small tools are maintained in house with several qualified personnel to address minor apparatus issues. If the repairs are outside the ability of the in-house personnel, the apparatus is sent out to the appropriate vendor. At a minimum, biannually all maintenance records should be audited by the Chief or his designee to check for completeness. This includes apparatus, autos and light vehicles, and larger pieces of equipment. The apparatus is fueled through the State of Michigan Fleet Fuel Program where they can go to any fuel station with their state issued fuel dispenser card for that apparatus.

The consultants advise that biannually the maintenance files be audited by the Administrator or his designee to check for completeness. This includes Apparatus, Autos and light vehicles, and small tools.

#### ***Recommendation – Maintenance Audit***

- *Biannually, all maintenance records should be reviewed for completeness and accuracy by the Administrator. **Priority 3***

The apparatus is fueled through the State of Michigan Fleet Fuel Program where they can go to any fuel station with their state issued fuel dispenser card for that apparatus.

#### **Apparatus condition**

The apparatus appears to be in good condition and stocked with the tools and equipment listed by NFPA 1900 and the Insurance Service Office 2013 Fire Suppression Rating Schedule. The

equipment appeared to be in good functioning condition. Engine 35 and Rescue 39 carry extrication equipment.

## Odometers vs. Engine Hour Meters

An hour meter is a gauge or instrument that tracks and records overall elapsed time that the engine is actually running and is normally displayed in hours and tenths of hours. The previous table, “Cutlerville Fire Station Apparatus”, lists the apparatus/vehicles that have both odometers and engine hour meters.

## Sufficiency of Apparatus

Sufficiency of apparatus can be considered in two divergent ways: the amount of apparatus and its capability. Recently, the department took delivery of a used Engine/Pumper, Engine 36 as a reserve engine that appears to be in good condition, satisfying the requirement of the 2018 Fire Suppression Rating Schedule requiring a reserve engine for up to eight engines in service. The concept of responding to EMS calls in a Quick Response vehicle is prudent as it saves undue wear on larger apparatus. The consultants support the amount of apparatus housed in the Cutlerville station.

## Apparatus Replacement

Over the years, the NFPA has attempted to define life expectancy of apparatus with little success. The 2016 edition of NFPA 1901 recommends fire departments evaluate whether to retain fire apparatus in first-line service for more than 15 years as a result of safety considerations.

*Annex D, titled Guidelines for First-Line and Reserve Fire Apparatus due to changes in NFPA 1901 especially relating to safety fire departments should seriously consider of keeping fire apparatus more than 15 years in first-line service.*

*It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA 1912; and incorporate as many features as possible of the current fire apparatus standard (section D.3). Apparatus that were not manufactured to the applicable NFPA fire apparatus standard or that are over 25 years old should be replaced.*



Another significant factor in equipment replacement worth reemphasizing, as outlined in the NFPA standard, is the rapidly changing area of technology, much of which is directly related to firefighter safety. Based on this factor, apparatus technology becomes an issue when considering replacement. NFPA recommends apparatus older than 15 years should be considered for reserve status only if these NFPA standards have been followed: required maintenance of the vehicle being adequately maintained, and the overall condition of the vehicle has been determined to be safe. Apparatus that were not manufactured to the applicable NFPA fire apparatus standard or that are over 25 years old should be replaced.

The Cutlerville Fire Department does not have a funded replacement program. The consultants understand that in 2016 a program was submitted for approval but was not implemented. The consultants recommend an appropriate Apparatus Replacement Schedule as illustrated below:

**Table 16: Recommended Apparatus Replacement Schedule**

<b>Apparatus</b>	<b>Recommended Replacement</b>
Engine/Pumper	20 Years + 5 years reserve
Pumper / Tender	20 Years + 5 years reserve
Aerial	20 Years + 5 years reserve
Mini Pumper	15 Years + 3 years reserve
EMS Quick Response Vehicle	10 Years no reserve
Rescue	15 Years + 3 years reserve
Brush Truck	15 Years + 3 years reserve
Cars	10 Years no reserve
All Trailers	As Needed
Gator	As Needed

The table below shows the status of current apparatus based on the recommended replacement schedule.

**Table 17: Apparatus Replacement per Recommended Schedule**

<b>Apparatus</b>	<b>Apparatus Type</b>	<b>Year</b>	<b>Recommendation</b>
Medic 38	Quick Response EMS	2017	2027
Engine 35	Engine	2015	2035
Rescue 39	Mini Pumper/Squad	2015	2030
Platform 37	95' Aerial Quint	2003	2023
Engine 36	Reserve Engine	2002	2022

## Fiscal

*This section will analyze the financial position of the Cutlerville Fire Department providing a detailed analysis of the funding/revenues and expenses including the operating and annual replacement plan of the fire department.*

The information and data utilized in this analysis includes:

- *Byron Township 2017-2018 Proposed Budget*
- *Intergovernmental Agreement for the Operation, Funding and Maintenance of the Cutlerville Fire Department; Amended, Restated and Adopted – August 14, 2017*
- *Budget Report for Byron Township – Dated August 29, 2018*

The Byron and Gaines Townships entered into an intergovernmental agreement that was last updated August 14, 2017. The intergovernmental agreement creates a joint fire department known as the Cutlerville Fire Department. The Cutlerville Fire Department is overseen by a joint board known as the JFAB that is charged with reviewing and approving the fire department budget, funding sources, disbursement of funds and overseeing purchases and maintenance of fire department equipment.

Article six of the intergovernmental agreement covers the fiscal year and funding of the fire department. The intergovernmental agreement sets the Cutlerville Fire Department's budget year as January 1<sup>st</sup> to December 31<sup>st</sup>, matching Gaines Township's fiscal year. The funding of the fire department is broken into four additional sections:

- *Funding*
- *Insurance recovery fund*
- *Retention of earnings*
- *Ownership of fire department assets.*

The Cutlerville's annual budget must be approved by both townships individually.

**Table 18: Cutlerville Fire Department's Four Year Budget Overview**

Category	15-16 Activity	16-17 Amended Budget	17-18 Budget Request	18-19 Amended Budget
<b>Salaries</b>	\$52,034	\$30,000	\$30,000	\$30,000
<b>CFD Fulltime</b>	\$133,908	\$259,000	\$250,000	\$320,000
<b>CFD Commission Salary</b>	\$780	\$800	\$1,000	\$1,000
<b>Social Security</b>	\$3,981	\$2,500	\$2,500	\$2,500
<b>Supplies</b>	\$8,987	\$3,200	\$1,000	\$1,000
<b>Building Supplies</b>	-	\$500	\$1,000	\$1,000
<b>Medical Supplies</b>	-	\$3,000	\$1,000	\$1,000
<b>Uniforms</b>	-	\$3,500	\$3,000	\$3,000
<b>Fuel</b>	\$3,873	\$4,000	\$5,000	\$5,000
<b>Contracted Services</b>	\$3,051	\$3,500	\$3,500	\$3,500
<b>KCEMS</b>	\$503	\$600	\$1,000	\$1,000
<b>Dues &amp; Membership</b>	\$88	\$100	\$500	\$500
<b>Physicals</b>	\$4,572	\$4,300	\$5,000	\$5,000
<b>Telephone</b>	\$2,005	\$2,500	\$3,000	\$3,000
<b>Expenses and Mileage</b>	-	-	\$300	\$300
<b>Training</b>	\$2,097	\$2,700	\$3,000	\$3,000
<b>Insurance and Bonds</b>	\$2,608	\$700	\$4,400	\$4,400
<b>Utilities</b>	\$11,085	\$12,000	\$5,000	\$5,000
<b>Maintenance</b>	\$5,056	\$4,000	\$3,000	\$3,000
<b>Equipment Maintenance</b>	\$3,385	\$3,000	\$2,500	\$2,500
<b>Truck Maintenance</b>	\$13,538	\$7,500	\$10,000	\$10,000
<b>Assessment from Kent County</b>	\$30,185	\$30,500	-	-
<b>Fire Dispatch Services</b>	\$8,842	\$8,600	\$9,000	-
<b>Total Appropriations</b>	<b>\$290,578</b>	<b>\$386,500</b>	<b>\$344,700</b>	<b>\$405,700</b>

The Cutlerville Fire Department is funded through approved funding formulas. The formula for non-employment and on-call operating expenses is funded 50% by Gaines Township and 50% by Byron Township of the approved budget.

Full-time and on-call expenses are paid by actual call response percentages. Full-time expenses are defined as actual salary, wages and benefits (including insurance) of full-time firefighters. On-call expenses are defined as on-call compensation. A four-year analysis of budgets and call responses was completed utilizing the supplied documents. The non-employment and on-call operating expenses in fiscal year 15/16 made up 36.01% of the budget and in fiscal year 18/19 makes up 13.73% of the operating budget. The budget documents provided and utilized for this

analysis had zero dollars budgeted in fiscal years 17/18 and 18/19 for the Kent County assessment as well as the fire dispatch services in fiscal year 18/19.

**Table 19: Non-Employment and On-Call Operating Expenses Funding**

	FY 15-16	FY 16-17	FY 17-18	FY 18-19
Byron Township	\$52,318	\$48,750	\$32,350	\$27,850
Gaines Township	\$52,318	\$48,750	\$32,350	\$27,850
<b>Total</b>	<b>\$104,636</b>	<b>\$97,500</b>	<b>\$64,700</b>	<b>\$55,700</b>

The responses by Township have remained within a 3.5% window during the last four years. The total responses during the four-year period have increased by 500 responses, however the percentage of responses occurring in each Township has remained relatively consistent. The four-year cumulative percentage of responses by township averages are; Byron Township 41.42% and Gaines Township 58.58%.

**Table 20: Responses by Township**

	15-16	16-17	17-18	YTD 18-19
Byron Township	611	883	850	477
Gaines Township	945	1200	1144	700
<b>Total Responses</b>	<b>1,556</b>	<b>2,083</b>	<b>1,994</b>	<b>1,177</b>

**Table 21: response Percentage by Township**

	15-16	16-17	17-18	YTD 18-19
Byron Township	39.27%	42.39%	42.63%	40.53%
Gaines Township	60.73%	57.61%	57.37%	59.47%

The intergovernmental agreement spells out that the townships will pay all employee expenses based on the emergency response percentages. As mentioned earlier, the emergency response percentage by the Township have not widely varied, however the employee expenses have nearly doubled in the last four-years. This increase to employee expenses has created 86.72% of the budget to be dedicated to employee expenses compared to four-year prior employee expenses consumed 63.99% of the budget.

*Table 22: Employee Expenses by Response Funding Percentage*

	FY 15-16	FY 16-17	FY 17-18	FY 18-19
Byron Township	\$73,019	\$122,507	\$119,364	\$141,855
Gaines Township	\$112,923	\$166,493	\$160,636	\$208,145
<b>Total</b>	<b>\$185,942</b>	<b>\$289,000</b>	<b>\$280,000</b>	<b>\$350,000</b>

Combining the formula based funding with the agreed upon budgeted amounts paid for the non-employment and non-call operating expenses with employee expenses displays the amount each township was budgeted to fund for the last three budget cycles and forecasts the funding total for fiscal year end 18-19.

*Table 23: Amount of Budget Paid by Township Based on Funding Formulas*

	FY 15-16	FY 16-17	FY 17-18	FY 18-19
<b>Byron Township</b>	\$125,337	\$171,257	\$151,714	\$169,705
<b>Gaines Township</b>	\$165,241	\$215,243	\$192,986	\$235,995
<b>Total</b>	<b>\$290,578</b>	<b>\$386,500</b>	<b>\$344,700</b>	<b>\$405,700</b>

*Table 24: Percentage of Budget Paid by Township Based on Funding Formulas*

	15-16	16-17	17-18	YTD 18-19
Byron Township	43.13%	44.31%	44.01%	41.83%
Gaines Township	56.87%	55.69%	55.99%	58.17%

Analyzing the budgeted percentage each township is responsible for paying versus the response location by township displays that as employee expenses are the overwhelming portion of the budget, they will be the driving force behind the budget ratio. Thus, the percentage of the townships funding of the operating budget will be driven by response location.

*Table 25: Percentage of Budget Compared to Responses*

	15-16	16-17	17-18	YTD 18-19
Byron Responses	39.27%	42.39%	42.63%	40.53%
Byron % of Budget	43.13%	44.31%	44.01%	41.83%
Gaines Responses	60.73%	57.61%	57.37%	59.47%
Gaines % of Budget	56.87%	55.69%	55.99%	58.17%
<b>Difference</b>	<b>3.86%</b>	<b>1.92%</b>	<b>1.38%</b>	<b>1.30%</b>

The three remaining sections covering the funding of the department include insurance recovery fund, retention of earnings and ownership of fire department assets. Each section is very specific in nature and clarifies important matters dealing with revenue and purpose. The insurance recovery fund is funded with proceeds of any insurance policy paid to the Cutlerville Fire Department for services rendered by the fire department.

The documents provided were reviewed for current fund balance, however, the consultant was unable to accurately attain and/or verify an amount. The insurance funds are set aside and are to be utilized at the discretion of the JFAB. The JFAB may use the funds to purchase equipment, matching funds for grants or towards the cost for acquisition, construction and financing of real property or improvements to real property.

Byron and Gaines Townships retain their own interest and investment income on all monies held or budgeted for the funding of the fire department. The ownership of the fire department's assets requires a solid inventory system for long term tracking of assets purchase by purchase date, percentage paid by each township and source acquired from. Accurate tracking of assets is essential if the partner agencies ever decided to disband the joint agreement.

Article seven of the intergovernmental agreement covers the fire department's budget and expenditures. Section 7.1 identifies the Fire Chief as responsible on an annual basis for development of an operating line item budget to be presented to the JFAB for review. The JFAB makes written recommendation to the townships for action on approving the proposed budget.

Upon passage of the fire department's budget by both township boards, the approved budget constitutes the budget for Cutlerville Fire Department for that fiscal year. The annual budget approval process has appropriate oversight provisions for the partnering governing bodies.

Six of the next seven sections of article seven deal with oversight and procedure for administering the budget. The six sections are; copies of budget, disbursements according to budget, budget transfers, additional items to be included in budget, emergency expenditures and

annual audit. All the procedures in these six sections are well thought out and are needed for strong oversight and fiscal responsibility. The remaining section 7.6, covering the annual replacement plan, stands out as short in duration, vague and insufficient.

Intergovernmental Agreement Section 7.6 Annual Replacement Plan. Along with the annual budget, the Fire Chief shall also prepare and submit a replacement plan covering all Fire Department Equipment. The plan shall identify, at minimum, any Equipment or capital items (i.e., buildings, real property and similar items) proposed to be acquired, expanded or replaced in the next fiscal year and any fiscal years thereafter, the age and current condition of the Equipment and capital items, any repairs or deficiencies with the Equipment or capital items, the estimated cost to acquire, expand or replace the Equipment and capital items, and information on the proposed new Equipment or capital items to be acquired which will replace the existing Equipment or capital items. The JFAB may include in the annual budget any Equipment or capital items listed in the replacement plan. The Fire Chief shall work with the JFAB to develop a schedule for the acquisition and replacement of Equipment and capital items so that new Equipment and capital items may be purchased using funds allocated in the budget.

Section 7.6 requires the Fire Chief to prepare and submit an Annual Replacement Plan covering all fire department equipment. The intergovernmental agreement defines Equipment- All apparatus, devices, hardware, materials, including, but not limited to, turn-out gear, computers, software, electronics, communications devices, tools, or firefighting implements, and vehicles necessary for the proper operation and maintenance of the Fire Department which allows the Fire department to provide the Services to and within the Participating Municipalities.

An annual replacement program is too short in duration for planning replacement and equipment. Section 7.6 does suggest that it shall include equipment to be replaced in the next fiscal year and any fiscal years thereafter and to develop a schedule for the acquisition and replacement of equipment. However, there is no formal approval process of the plan outside of an individual item being included in the approved annual budget. The planning document should not replace the need for annual budget inclusion and approval, however it deserves annual approval

acknowledging the document is officially considered the future capital map of the fire department.

*Recommendation – Fiscal*

- *The annual line item operating budget needs to be expended in detail for transparency and accuracy of long-term planning. **Priority 4***
- *With the four-year increase from 63.99% to 86.72% of the budget being dedicated to employee expenses, the department needs to evaluate the sustainability of this trend. **Priority 3***
- *An inventory of all assets needs to be created and maintained identifying purchase dates, percentage paid for asset by each Township and funding source. **Priority 3***
- *Update the Annual Replacement Plan to a five-year Capital Improvement Program that is formally approved by the JFAB. **Priority 2***
- *The definition of Equipment included in the Capital Improvement Program needs to be updated with a minimal dollar amount and a useful life cycle as considerations. **Priority 3***



## Creating A New Funding Formula

*The previous section addressed the current funding of the Cutlerville Fire Department; whereas this section will address how a shared service agreement might be constructed, which results in a shared station, not a third fire department and the funding formula will adjust costs as any of the three components of the formula change.*

The problem with a set percentage is that it does not allow for changes if either Township's situation changes; therefore, although it might have been very accurate when created, the Townships have changed at a different pace and a better funding formula is needed.

In the State of Michigan, the value of property could be determined by three terms as illustrated in the table below:

**Table 26: Michigan Property Value Terms**

Michigan Property Tax Law	
Assessed Value	The assessed value is determined by a property's market value. Set by the assessor, the assessed value when multiplied by two will give an approximate market value of the property. The assessor is constitutionally required to set the assessed value at 50% of the usual selling price or true cash value of the property.
State Equalized Value	SEV is the assessed value that has been adjusted following county and state equalization. The County Board of Commissioners and the Michigan State Tax Commission must review local assessments and adjust (equalize) them if they are above or below the constitutional 50% level of assessment.
Taxable Value	A property's taxable value is the value used for determining the property owner's tax liability. Multiplying the taxable value by the local millage rate will determine your tax liability. Taxable value increases from year to year by the rate of inflation or 5%, whichever is lower. Transfers of ownership and improvements to the property will increase the taxable value more than the rate of inflation but never more than the assessed value.

## Components of the Funding Formula

Ideally, if the formula of contribution was designed so it could fairly fluctuate depending on changes within either Township (e.g. significant growth), the percentage of contribution by each

Township would compensate for those changes and adjust automatically without having the governing bodies creating a new percentage formula.

The most common partnership in municipalities has three primal components:

- State Equalized Value (SEV)
- Population
- Call History

The Townships are not limited to these three components; however, adding additional factors increases the probability of subjectivity which most often results in disagreement of “what is a fair share”. A sample of what a formula of this nature would include is illustrated in the table below:

*Table 27: Funding Formula Components - Sample*

Proposed Funding Formula							
Township	SEV	%	Population	%	2016 - 2017- Years Total	%	Contribution Percentage
Byron	\$ 1,300,287,100	56.94%	23,835	46.98%	3,509	49.82%	<b>51.52%</b>
Gaines	\$ 983,475,100	43.06%	26,897	53.02%	3,534	50.18%	<b>48.75%</b>

The advantage of adopting a formula similar in structure to the above examples is that it does not require either party (Township) to have to renegotiate the actual fiscal agreement, as the formula will adjust as changes in any or the components change.

#### ***Recommendation – Funding Formula***

- *The Township should develop a new agreement in which the fiscal resources invested in the shared fire/EMS station incorporates the components described in the above table/section. **Priority 2***

## Police/Law Enforcement Overview

This report is broken into two sections. An independent study of future needs of the Fire Department and emergency medical service, and an independent future needs study for law enforcement/policing service.

### Department Overview

Law enforcement services in Byron Township are provided by the Kent County Sheriff's office. That agency is led, at the time of the study, by Sheriff Michelle LaJoye-Young. The Sheriff's Department is comprised of 650 personnel. Of that number, 180 are deputies assigned to law enforcement duties, 210 are correctional officers, and the remaining 260 are civilian support staff including records personnel, dispatchers, cadets, clerks and others.

*The mission of the Kent County Sheriff's office is to preserve and protect the safety and security of the residents of Kent County and to provide for a safe and secure correctional facility.*

The department has two law enforcement divisions, being patrol and the investigative bureau. The patrol division is the largest component of the law enforcement divisions. The law enforcement patrol division is responsible for an area that spans 872 miles, with a population of over 230,000 residents. The Sheriff has primary law enforcement responsibility for the unincorporated area of the county that consists of 21 independent townships. The patrol division manages 11 different contracts for patrol services and accounts for 44 deputies. Byron participates in the Township patrol program supplementing district patrols with dedicated patrol units assigned specifically to the Township.

The Patrol Division is organized by 5 geographic sectors. These are identified as; the Central sector, North sector, Cedar Springs unit, South sector, and East sector. Additionally, the Division staffs specialized tactical teams and a K-9 unit.

Byron Township is in the South patrol sector which includes the townships of Byron, Gaines, Caledonia, and Bowne. Each Township is 36 mi.<sup>2</sup> in area; therefore, the patrol responsibility for the South sector is 144 mi.<sup>2</sup> There is a dedicated Lieutenant that serves and commands the East and South sectors.

The Investigative Division includes specialty and general investigative functions. Included within that division are the Major Case team, General case team, Family Services team, Kent Metro cold case team, Kent area narcotics enforcement unit, the intelligence analyst, and scientific support unit/property. The investigative division is comprised of 41 investigative staff.

In addition to the law enforcement divisions, the department has a support services division (community services/volunteers, training unit, Park police, communications center, radio services, secondary road patrol, traffic safety unit, Marine unit, underwater recovery team, records unit, special events). The Community Services Unit oversees the School Resource officers assigned throughout the county. The Sheriff's department also is responsible for emergency management and the corrections division.

## Governance

Byron Township is governed by elected officials including the Township supervisor, four Trustees, Township Treasurer and Township Clerk. The Township receives policing services from the Kent County Sheriff's Department.

Byron Township is in the southern patrol sector of the Sheriff's department and is located at the very southwest corner of Kent County. In addition to the standard patrol service provided in that sector, the Township has entered into a contract with the Sheriff's Department for additional patrol services. The first contract was awarded in the year 2000 and has automatically renewed for additional one-year periods thereafter. Recently, the Township and County amended that agreement to increase the amount of service it receives from the County. The amended

agreement is to remain in full force and effect until December 31, 2019 and shall automatically renew for additional one-year periods unless either party delivers written notice of nonrenewal.

In addition to the standard and additional patrol service, the Sheriff's office staffs a School Resource Officer (SRO) on a full-time basis at the high school. That position is funded with Byron Township paying 35%, the school district 35%, and the County Sheriff's Department paying 30% of the wages and benefits for that officer.

The Fire Administrator/Public Safety Director is appointed by the Township Board. Related to law enforcement services, the Administrator/Director serves primarily to manage the contract as well as serving as the Township liaison to the Kent County Sheriff's Department. This position is responsible for general law enforcement oversight, establishes within Township policy, appropriate service and staffing levels, and maintains awareness of new trends and developments in the field of law enforcement.

## Emergency Activities

The Kent County Sheriff provides quarterly and annual reports on emergency activities to the Byron Township Board. These reports provide statistical information on police service in Byron Township. These reports include information on calls for service, number of traffic stops, reported offenses (criminal), average hold time for calls, and average patrol response time for calls. Comparisons of this data is shown in tables one through five.

*Table 28: Comparison of Calls for Service 2017-2018*

Timeframe	1st. Quarter	2nd. Quarter	3rd. Quarter	Total
2017 Calls for Service				3,700
1/1 - 9/30 2018	1,044	1,253	1,253	3,532
2018 Quarterly Average			1,177	

*\* Does not include traffic stops*

The 3,532 total calls for service through September 30, 2018, equate to 93.5% of 2017 total calls for service. Adding the quarterly average of 1,177 to the total of the first three quarters of 2018, it is estimated that the deputies will respond to 4,709 calls. This shows an increase of 932 calls or 24.6% from year 2017 (exclusive of traffic stops).

*Table 29: Comparison of Traffic Stops 2017-2018*

Timeframe	1st. Quarter	2nd. Quarter	3rd. Quarter	Total
2017 Traffic Stops				1,542
1/1 - 9/30 2018	543	452	361	1,356
2018 Quarterly Average			452	

The 1,356-total traffic stops through September 30, 2018, equate to 87.9% of 2017 total traffic stops. Adding the quarterly average of 452 to the total of the first three quarters of 2018, it is estimated that the deputies will conduct 1,808 traffic stops. This shows an increase of 266 or 17.2% from 2018.

*Table 30: Comparison of Reported Offenses 2017-2018*

Timeframe	1st. Quarter	2nd. Quarter	3rd. Quarter	Total
2017 Reported Offenses				1,321
1/1 - 9/30 2018	397	403	407	1,207
2018 Quarterly Average			402	

The 1,207 total reported offenses (criminal) through September 30, 2018, equate to 91.3% of 2017 total calls for service. Adding the quarterly average of 402 to the total of the first three quarters of 2018, it is estimated 1,609 offenses will occur. This shows an increase of 288 offenses or 21.8% over 2017.

*Table 31: Comparison Average Hold Time for Calls for Service 2017-2018*

<b>Timeframe</b>	<b>1st. Quarter</b>	<b>2nd. Quarter</b>	<b>3rd. Quarter</b>	<b>Total</b>
2017 Average Hold Time				16 min. 55 sec.
1/1 - 9/30 2018	14 min. 14 sec.	11 min. 8 sec.	11 min. 43 sec.	
2018 Quarterly Average			12 min. 22 sec.	

The Hold Time for a call for service is defined as the amount of time expended from the time the call is answered by the tele-communicator until the call is dispatched to the deputy. The average hold time for a call in 2017 was 16 minutes and 55 seconds. The average hold time for the first three quarters of 2018 is 12 minutes and 22 seconds. This shows a decrease of four minutes and 33 seconds or a 26.8% reduction in hold time. Unlike the fire service, which has response time standards, none exist in the police field. The decrease in the amount of time to receive the call to actual dispatch is encouraging. The municipality should continue to track the times to ensure the dispatch times do not increase.

*Table 32: Comparison Average Response Time for Calls for Service 2017-2018*

<b>Timeframe</b>	<b>1st. Quarter</b>	<b>2nd. Quarter</b>	<b>3rd. Quarter</b>	<b>Total</b>
2017 Average Response Time				26 min. 44 sec.
1/1 - 9/30 2018	22 min. 52 sec.	19 min. 15 sec.	20 min. 7 sec.	
2018 Quarterly Average			20 min. 44 sec.	

The Response Time for a call for service is defined as the amount of time expended from the time the call is answered by the tele-communicator until the first deputy arrives on the scene. The average response time for a call in 2017 was 26 minutes and 44 seconds. The average response time for the first three quarters of 2018 is 20 minutes and 44 seconds. This shows a decrease of six minutes or a 22.4% reduction in response time. It is positive to see the initial trend of time to respond to a call decrease. The additional staffing that occurred in October

appears to have had an effect. However, the Township should continue to track quarterly the time for calls to ensure they continue to decrease – or there are reasons for lengthy response times.

*Table 33: Squad Assists to Gaines/Gaines Byron 2017-2018*

<b>Squad Assists</b>	<b>2017</b>	<b>% of Total</b>	<b>1/1 - 9/30 2018</b>	<b>% of Total</b>
Byron to Gaomes	538	39.2%	461	39.1%
Gaines to Byron	834	60.7%	718	60.8%
<b>Total</b>	<b>1,372</b>	<b>100%</b>	<b>1,179</b>	<b>100%</b>

Both Byron and Gaines Townships staff additional road patrols. The Sheriff's Department tracks the frequency of time in which a road patrol deputy from one Township responds to the other Township to assist on a call for service. In 2017, this occurred 1,372 times. Of that total, the patrol assigned to Byron responded to Gaines 538 times, or 39.2% of the total. Gaines responded to Byron 834 times or 60.7%. The percentages of the 1,179 responses for January 1 through November 20, 2018 are almost identical to 2017; thus, the percent of calls sent/received have remained relatively unchanged. During this time, Byron responded to Gaines 461 times, or 39.1% of the total. Gaines responded to Byron 718 times or 60.8%.



## Public Safety Overview

Utilizing estimated data for 2018 based on the first three quarters of the year, comparisons can be drawn on emergency activities. It is estimated that calls for service will increase by 24.6%, traffic stops will increase by 17.2%, and offenses will increase by 21.8%.

The average hold time for a call for service is estimated to decrease by 26.8%. The average response time is estimated to decrease by 22.4%.

Road patrol response crossing Township borders for both years show that Byron responds to Gaines 39% and Gaines responds to Byron 60% of the total number of assists. The area commander for the Sheriff's Department advised that approximately 50% of the Gaines responses to Byron are for calls at Tanger Mall. It would be favorable for the cross Township response to be approximately 50% for each road patrol response from one Township to the other. Reciprocity should strive to be as equal as possible.

The data shows significant increases in calls for service and offenses. Lesser, but still significant, increase is shown in traffic stops. However, this is a self-initiated activity by the deputies as opposed to a citizen call for assistance.

Very significant decreases in both hold and response times are shown. This is a very positive improvement as Township officials wish to see reductions in response times. The decreases may be a result of the power shift that began on January 1, 2018, which increased the number of patrol units available to take calls. This needs to be tracked even further to determine if the percentages will change due to the addition of the three units of extra patrol (12 hours 7 days a week) that was recently added to Byron Township. Thus, the Township should receive quarterly and annual reports (Hot Spot reports) to illustrate the number of calls for service and emergency activity.

### *Recommendations – Public Safety Overview*

- *Request that the Sheriff's Department add patrol boundary crossover to the quarterly and annual Hot Spot reports. **Priority 3***

- *Request the Hot Spot reports reflect differences in raw numbers and percentages for the current quarter and year to date for calls for service, offenses, average call hold time, average call response time, and boundary crossover. **Priority 3***
- *Quarterly, the Board should track the boundary crossover numbers and percentages to see if improvement occurs. **Priority 3***
- *Quarterly, the Board should track numbers and percentages of average call hold time and average call response time. **Priority 3***

## Staffing

Byron Township is in the South sector of the jurisdiction of the Kent County Sheriff. This sector includes the Townships of Byron, Gaines, Caledonia, and Bowne. The South sector has three cars assigned 24/7 that patrol the entire sector. One Sergeant is on duty at all times. On January 1, 2018, the department added a power shift car that is assigned every day from noon until 12 AM. A Lieutenant commands the sector. The Lieutenant is assigned Monday through Friday on days.

Byron Township, since 2000, has entered into a contract in which the Township pays for the service of one additional officer, 24/7, dedicated solely to patrol Byron Township. Effective October 1 of 2018, the Township amended the contract to increase the amount of service it receives from the County by adding an additional 12 hours per day, 24/7 police officer. The hours of this additional police service are from 7 AM until 7 PM. Finally, there is a school resource officer (SRO) assigned to Byron Township's high school, who works during the school year. That SRO is in uniform and available to respond to other areas if needed.

There is also a dedicated general case detective assigned to serve Byron Township (and part of Gaines Township). The department has a large staff to support the line functions of patrol and detectives in areas related to training, human resources, communication, etc.

With the additional deputies assigned in October, it appears that there is adequate staffing to respond to Byron Township's emergency incidents. However, as indicated, the Township will need to continue to track emergency activity and response times to ensure adequate coverage.

## Fiscal

The current 2018-2019 fiscal year operating budget of Byron Township is \$3,230,190. Of that amount, \$578,000 is allocated for two Law Services line items, which includes \$540,000 for additional road patrol's and \$38,000 to staff the school resource officer at the high school. This amount is paid to the Kent County Sheriff's Office. The allocation for these services is 17.8% of the operating budget.

As previously discussed, the County and Township first entered into an agreement for additional road patrol's in 2000. The Township, since that time, has been receiving additional service 24 hours per day, 365 days per year. Thus, the Township receives an additional 8,760 hours of patrol services a year above and beyond the regular patrol staffing in the patrol sector.

The Township pays the County 100% of the cost of the additional County Road Patrol Officer's wages and benefits. In February 2018, the County Sheriff's Department provided a presentation to the Township Board. The county, at that time, provided cost estimates for this service at \$770,000 per the current fiscal year, at the current billing rate.

Recently, the Township and Kent County amended the original agreement to add an additional 1.5 units of service assigned to the Township for 12 hours per day, seven days per week, and 365 days per year. The Sheriff's office calculates 1.8 officers per one unit of service. This calculation is based on what is known as the *relief factor*.

The Sheriff's Department calculates the *relief factor* by subtracting the estimated number of hours not available from employees due to time off, from the total number of hours in the work year. Then, the total hours required to staff the position is divided by the number of hours available. The following estimates are provided by the Sheriff's Department.

*Table 34: Township Road Patrol Calculation*

<b>Deputy Working Hours</b>		<b>2,080</b>
Minus		Per Year
	Holidays	88
	Personnel Days	24
	Vacation (13 yrs.)	168
	Sick Time	32
	Training	57
	Workers Comp/FMLA/Other	100
Hours Not Available to Work		469
Hours Available For Work		1,611
1 Unit of Service (8 hrs/365 days)		2,920
<b># of Deputies Required For 1 Unit of Service</b>		<b>1.8125</b>

To provide the 2,920 hours of service requires 1.8125 (2,920/1,611) deputies of service 365 days per year.

The Lieutenant of the Sheriff's office advised the consultants that the estimated cost in 2019 will be \$815,702, based on hours and projected salary increases. This increases the additional 8,760 of patrol staffing by 4,380 hours. The Township will now be receiving 13,140 additional patrol hours per year.

Consultants surveyed area police agencies to compare costs for policing services to Byron Township. Five agencies (Kentwood, Lowell, Walker, Sparta, and Grandville) responded to our survey. The agencies were asked the following five questions.

**QUESTIONS:**

1. What is the population of the jurisdiction served by your police agency?
2. What are the square miles served by your police agency?
3. How many authorized sworn officers (all ranks) does your agency have?
4. How many authorized civilians does your agency have?
5. What is the amount of the current fiscal year police operating budget?

The results of the survey are listed in the following table.

**Table 35: Comparison of Police Cost for Services**

Agency	Population	Sq. Mi.	Sworn Staff	Civilian Staff	Annual Budget	Annual Cost Resident	Daily Cost
Kentwood	51,000	21	69	10	\$ 10,900,000	\$ 213.72	\$ 0.585
Lowell	4,000	3	5FT, 10 PT, FTE = 2	1 FT, 1 PT	\$ 736,428	\$ 184.10	\$ 0.504
Walker	24,000	27	36	14	\$ 5,500,000	\$ 229.16	\$ 0.627
Sparta	4,233	2.47	5 FT, 9 PT	1 PT	\$ 799,130	\$ 188.78	\$ 0.517
Grandville	16,000	7.67	25	2.5	\$ 3,961,518	\$ 247.59	\$ 0.678
Average Cost/ Without Byron						\$ 212.67	\$ 0.582
Byron 2018-19 Amended Budget						\$ 25.13	\$ 0.068

As can be seen from the comparative data, costs for policing services for Byron Township are the lowest of the agencies. The average cost per resident for the responding agencies per year is \$212.67. Byron residents annual cost calculation is \$25.13. On a daily basis, the average cost per the responding agencies is 58.2 cents per resident per day. Byron resident's daily cost is 6.8 cents per day.

In 2019, the cost for total road patrols increased to an estimated \$815,702. Adding an estimated 2.5% increase to the School Resource Officer, increases that cost to \$38,950. Total Law Services for those two items are estimated at \$854,652. The average annual cost per resident in 2019 increases to \$37.15, and the per day cost increases to 10.1 cents. These costs are well below those shown for other police agencies in Table 27.

The Township is best served by continuing to contract for police service from the Kent County Sheriff's Department. Advantages include, but are not limited to the following:

- There is significant overall cost savings by contracting instead of staffing an independent police agency.
- The Township pays only for additional road patrol units at the hourly rate of pay and benefits of the deputies.
- The Township pays no overtime for shift fill-in or when deputies are held over.
- The Township does not pay for equipment, vehicles, maintenance, uniforms, or training.
- The Township has no pension liability for deputies.

#### **Recommendations - Fiscal**

- *Continue current contractual arrangements with the county. **Priority 2***

- *As part of the annual budget process, consider additional units of service if improvement is not seen in reduced response time and Township boundary crossover incidents.*  
***Priority 3***

## Recommendation Summary

Fire/EMS Services		
Category	Priority	Recommendation
Training	1	<i>Whether or not the two departments are joined into a single agency, it is essential that training and competency evaluations be greatly improved and documented.</i>
Fire Suppression/Alarm	1	<i>Byron station should be equipped with an automatic fire suppression system (sprinklers) which activation is monitored by an outside source. The local fire alarm system should also be monitored by an outside source.</i>
SCBA Fill Station	1	<i>The department should install a pipe directly to the outside of the building to supply intake air for the air compressor used to fill the Self Contained Breathing Apparatus bottles</i>
Alarm System	1	<i>The two Townships should install a fire alarm system and have that and the fire suppression system monitored by an outside agency</i>
Cutlerville Fire Chief	2	<i>Do not hire a fulltime or part-time Fire Chief for the Cutlerville Fire Department. The Cutlerville Fire Department should be dissolved and become a satellite fire station with current staffing, but under the authority of one of the two Townships.</i>
JFAS Board	2	<i>Neither Township Supervisor (now, or in the future) should be an active member on the JFAB; rather, they should appoint someone to represent their Township position and remain focus on the global issues facing the Townships.</i>
CutlervilleFD	2	<i>The Cutlerville Fire Department should be dissolved and merged into one of the two Townships. The facility and resources should remain and serve the 15 square miles (approximate) district within the two Townships. One Township would have all responsibility for that facility, inasmuch as it becomes a satellite facility for that Township.</i>
Township Agreement	2	<i>A contractual agreement, with the other Township, would be created by the ad-hoc committee. The ad-hoc committee's sole responsibility would be to create the budget of the Cutlerville station, and have no influence on the administration of that facility.</i>
Maintenance Records	2	<i>Greater emphasis must be placed on vehicle maintenance documentation and record keeping. The documentation must be complete and accurate in order to fully document all maintenance on the apparatus for 10 years (ISO standard) after the apparatus no longer is in the department's inventory.</i>
Fiscal	2	<i>Update the Annual Replacement Plan to a five-year Capital Improvement Program that is formally approved by the JFAB.</i>
Funding Formual	2	<i>The Township should develop a new agreement in which the fiscal resources invested in the shared fire/EMS station incorporates the components described in the above table/section</i>
Ambulance Service	3	<i>Byron Township should contact the three ambulance providers and negotiate an agreement whereas, an ambulance and staff would be housed in the fire station when that ambulance was not actively transporting patients.</i>
Maintenance Audit	3	<i>Biannually, all maintenance records should be reviewed for completeness and accuracy by the Administrator.</i>
Fiscal	3	<i>With the four-year increase from 63.99% to 86.72% of the budget being dedicated to employee expenses the department needs to evaluate the sustainability of this trend.</i>
Fiscal	3	<i>An inventory of all assets needs to be created and maintained identifying purchase dates, percentage paid for asset by each Township and funding source.</i>
Fiscal	3	<i>The definition of Equipment included in the Capital Improvement Program needs to be updated with a minimal dollar amount and a useful life cycle as considerations.</i>
Fiscal	4	<i>The annual line item operating budget needs to be expended in detail for transparency and accuracy of long term planning</i>
Engine Hour Meters	5	<i>All future apparatus purchased by the fire department should include an engine hour meter to prolong the life of the vehicle.</i>



<b>Law Enforcement Services</b>		
<b>Category</b>	<b>Priority</b>	<b>Recommendation</b>
Public Safety Overview	3	<i>Request that the Sheriff's Department add patrol boundary crossover to the quarterly and annual Hot Spot reports.</i>
Public Safety Overview	3	<i>Request the Hot Spot reports reflect differences in raw numbers and percentages for the current quarter and year to date for calls for service, offenses, average call hold time, average call response time, and boundary crossover.</i>
Public Safety Overview	3	<i>Quarterly, the Board should track the boundary crossover numbers and percentages to see if improvement occurs.</i>
Public Safety Overview	3	<i>Quarterly, the Board should track numbers and percentages of average call hold time and average call response time.</i>
Fiscal	2	<i>Continue current contractual arrangements with the county.</i>
Fiscal	3	<i>As part of the annual budget process consider additional units of service if improvement is not seen in reduced response time and Township boundary crossover incidents.</i>

## Appendix A – Data Request Fire/EMS

Data Requested – McGrath Consulting Group, Inc. - *Fire/EMS Component*

Show each year data separately i.e. 2015, 2016, and 2017 – do not group years together

*We request data in an electronic format on a flash drive or disk*

If an area does not apply simply indicate NA

*Do not send this information. Once collected we will meet with you on site to review it.*

*Call if you have any questions – especially before conducting hand counts*

- **General Information**
  - Overview of the department
    - History
  - Overview of the area protected
    - District
    - City/Village
  - Population – Residents of Protection Area
  - In-flux or Out-flux of Daytime Population
  - Department's Strategic Plan
- **Response District –**
  - Map of Coverage Area
  - Map of the District
  - Map of Area of Concern for Relocation of Station
  - Map of Contiguous Surrounding Area Showing Department Stations Locations
  - Total Square Miles Protected
  - Square Miles of Hydrant Area
  - Square Miles of Non-Hydrant Area
- **Personnel Management/Human Resources**
  - Current Roster of Members
  - Personnel (information needed for all employees)
    - List of members (sworn and non-sworn)
      - Hire date
      - Age or date of birth
  - Organizational Chart
  - # of Career
  - # of Paid On Call
  - # of Paid On Premise
  - # of Volunteers

- # of Other Employees (Include civilian)
- Rank Structure (Number of Employees in Each Category)
  - # of days at maximum daily staffing
  - # of days at minimum daily staffing
- Current salary of each employee (name, rank, salary)
- Spreadsheet – name, rank, current salary,
- (if possible, a spreadsheet with the benefit breakout -health, pension, taxes, etc. for fiscal year of the study)
- Labor agreement
- Department's By-Laws (if corporation)
- Police & Fire Commission or Civil Service Regulations
- Employee Policy & Procedure Manual (prefer electronic version)
- Promotional Process – including forms utilized
- History of Turnover (All Employees Last 3 Years – Include Reason and/or Exit Interview Data)
- Recruiting/Retention Programs
- Hiring Process (all forms)
  - Application
  - Hiring packet
  - Reference questions
  - Interview questions
  - Etc.
- Grievances/Discipline Issues
- Performance Evaluation process and forms
- Last year's overtime by employee – include rank
- FLSA pay cycle (if not in contract)
- SOG/SOP Manual – prefer electronic copy – (sure to include HR policy section)
- Department Employee's Handbook
- New employee Orientation Process – (packet and/or forms)
  
- **The Department**
  - Department SOG's
  - Department Rules & Regulations
  - Annual Reports – Last 3 Years
  - Current ISO Rating
    - Provide complete ISO document
  - Last ISO On-Site Evaluation (copy of point distribution sheet)
    - Last On Site Evaluation
  - Accreditations
  - Others
  
- **Emergency Activities –**

- Total calls last ten years (no breakdown just total calls per year)

- **Last 3 Years (All Sub-Sections)**

NFIRS Series	Nature of Call	Calls 2015	Calls 2016	Calls 2017
100	Fires			
200	Overpressure/Explosion			
300	Rescue/EMS			
400	Hazardous Conditions			
500	Service Calls			
600	Good Intent Calls			
700	False Alarm/False Calls			
800	Severe Weather			
900	Special Incidents			
	<i>Total Calls</i>			

- # Of Emergency Responses
  - **NFIRS) Type of Responses:** *For each of the 3 years*
  - EMS Responses # of:
    - 1<sup>st</sup> Responder
    - ALS
    - BLS
    - Non-emergency Transports/Transfers, etc.
  - Incidents by Time of Day
  - Incidents by Day of the Week
  - Incidents by Month
  - Calls Breakdown by Area (City, District, Town, Etc.)
  - Distribution by Shift
  - Distribution by Station
  - Response Times: (include documentation from dispatch)
    - Notification time
    - Turnout time
    - Drive time
    - Mitigation time
  - Mutual Aid – Auto Responses (Given & Received) – With Whom? – Copy(ies) of Written Agreement
  - Simultaneous (Overlapping) Call Data
- 
- **Dispatch (PSAP)**
    - Who provides dispatch

- Location (address) of dispatch center
  - Cost
  - Dispatch data – time from receiving call to FD notification
    - *A data printout showing CAD verification times - from call received until agency is dispatched. CAD shows minutes and seconds.*
  - Who answers 9-1-1
  - Who answers cellular 9-1-1
  - # of Employees
  - # of Shifts
  - Staffing per Shift (minimum & maximum)
  - EMD Program
  - Dispatchers/Call Taker Certifications
- **Fire Station(s) – include mailing address for each station – include City & Zip**
    - Current Facilities
      - # Of Stations – Street Address
      - Square Footage – (Floor Plans for each if available)
      - Age
    - Future Facility Plans/Needs Documents
- **Apparatus & Equipment –**
    - Type of Apparatus (I.E. Engine, Ambulance, Utility, Truck – Include Manufacturer)
    - Apparatus department ID number
    - Pump & Tank sizes
    - Mileage
    - Engine Hour Reading (if appropriate)
    - Vehicle VIN Number
    - Age of Apparatus
    - Manufacturer
    - Replacement Schedule
    - Apparatus maintenance records
      - Internal
      - External
    - Special Teams Apparatus
    - Specialized Equipment: Haz Mat, Water Rescue, Etc.
    - Radio, Type and Frequencies
    - Computers (Number of, Type, Age, Replacement Plan)
      - In Apparatus?
      - Software Programs
- **Training**

- Training Records (Last 3 years) for each member
  - Training schedule
  - Training hours per month per employee
  - Training Curriculum & Lesson Plan
  - Instructors qualifications
- Training Manual
- Certifications Categories (state)
- Special Teams – certifications
- All current employees' certification level
  
- **Fire Prevention –**
  - Number of inspectable occupancies
  - History of Inspections & Re-Inspections (Last 3 Years)
  - Identification of Codes Adopted
  
- **Safety Education**
  - Public Safety Education Programs
  - Public Safety Education Data (Last 3 Years)
  
- **Fiscal**
  - Past three years of audited year financial statement
  - Current year audited financials
  - Past three years' budget
    - Operating – include all revenue and expenses
    - Capital - include all revenue and expenses
  - Financial policies and procedures
  - Purchasing policies
  - Equipment or Capital reserve fund ledger
  - Overtime records
  - Ambulance information –
    - Ambulance revenue current year and two previous years
    - Ambulance billing contract
    - Copy of ambulance rates charged and authority for those rates i.e. ordinance
  - Identification of all accounts for the department
    - Account details for each of the above accounts – last three years
  
- **Revenue**
  - List of grants applied for and/or received for current year and two previous years
  - List 2% fire dues received current year and two previous years

- List and explanation of any other department revenue received i.e. inspections fees, permit fee, etc.
- Other information needed:
  - Equalized Assessed Valuation (EAV) if multiple communities for all
- **Resource Hospital**
  - Project Medical Director contact information
  - Involvement level with resource hospital
  - Breakdown of where patients are transported (3-year period)

Any Additional Information Deemed Important