



Insights and applications for better financial management

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September 28, 2017

Mr. Randy Pfau
Executive Director
Saginaw County 911 Communications Center Authority
618 Cass Street
Saginaw, MI 48602

Dear Mr. Pfau:

We have concluded our study of the Saginaw County 911 Communications Center Authority's (SC911) operational efficiency. The goal of the study has been to identify any aspects of the Authority's operations which could be improved to:

- Increase operational efficiency
- Save money
- Provide more effective service
- Stabilize or enhance revenues
- Establish funding and operational strategies to ensure long-term sustainability of the Authority.

The study included an evaluation of SC911 revenues and expenditures, equipment and service contracts, facilities, equipment, staffing, labor contracts, call volumes, back-up options, and other operational and financial information. As part of this study, we surveyed five surrounding county dispatch operations (Bay, Genesee, Gratiot, Midland, Tuscola) and two other centers with which the consulting team is familiar. The survey was used to establish benchmarks, elicit operational strategies, determine comparability of costs and staffing, and ascertain funding approaches.

Through this report, we intend to share with the Authority, its Board, and its employees, the findings of our evaluation, and recommendations for improvements. We acknowledge some of the recommendations may be perceived as aggressive. However, the unsustainable outlook of the Authority's budget suggests aggressive measures will be necessary to avoid serious fiscal stress within a short time.

Background

The Saginaw County 911 Authority is a countywide agency providing emergency police and fire communications and dispatch services to all municipal jurisdictions in the County. As such, the Authority operates an Emergency Communications Center, staffed 24 hours a day with specially trained dispatchers. To aide in delivering services, the Authority utilizes state of the art technology equipment to receive calls, identify caller locations, dispatch emergency personnel and provide emergency instructions to callers as needed.

The Authority is funded almost entirely from surcharge fees levied on 911-capable devices registered in the county. In recent years, the number of “landline” phones has fallen sharply, as consumers shift to wireless and “voice over internet protocol” devices. These newer devices and associated service providers are far more difficult to identify and quantify, compared to the traditional landline phone services. Additionally, current legislation does not include any compliance enforcement mechanism, which makes it difficult for the Authority to know if it is receiving the full amount due from providers. As a result of these constraints and market changes, the Authority has seen revenues stagnate for several years, and this trend is expected to continue.

While revenues stagnate, the cost of operations continues to increase. In addition to the cost of wages and benefits for active employees, the Authority has a significant investment in capital which must be maintained and replaced, and legacy costs of pensions and retiree healthcare benefits continue to require substantial annual contributions to fund.

In recognition of the unsustainable and growing disparity between revenues and expenditures, the Authority contracted with Municipal Analytics to evaluate its operations to identify any cost savings or revenue enhancement options which may balance the budget and provide for long-term financial stability. The project team consisted of three consultants, each of whom specializes in different aspects of emergency 911 communications center operations:

- John Kaczor, Principal of Municipal Analytics: financial evaluation
- Kerry Laycock, CMC, SPHR, Organizational Consultant: operational and staffing optimization
- Spring Tremaine, former dispatch center director: technology, staffing and contract management

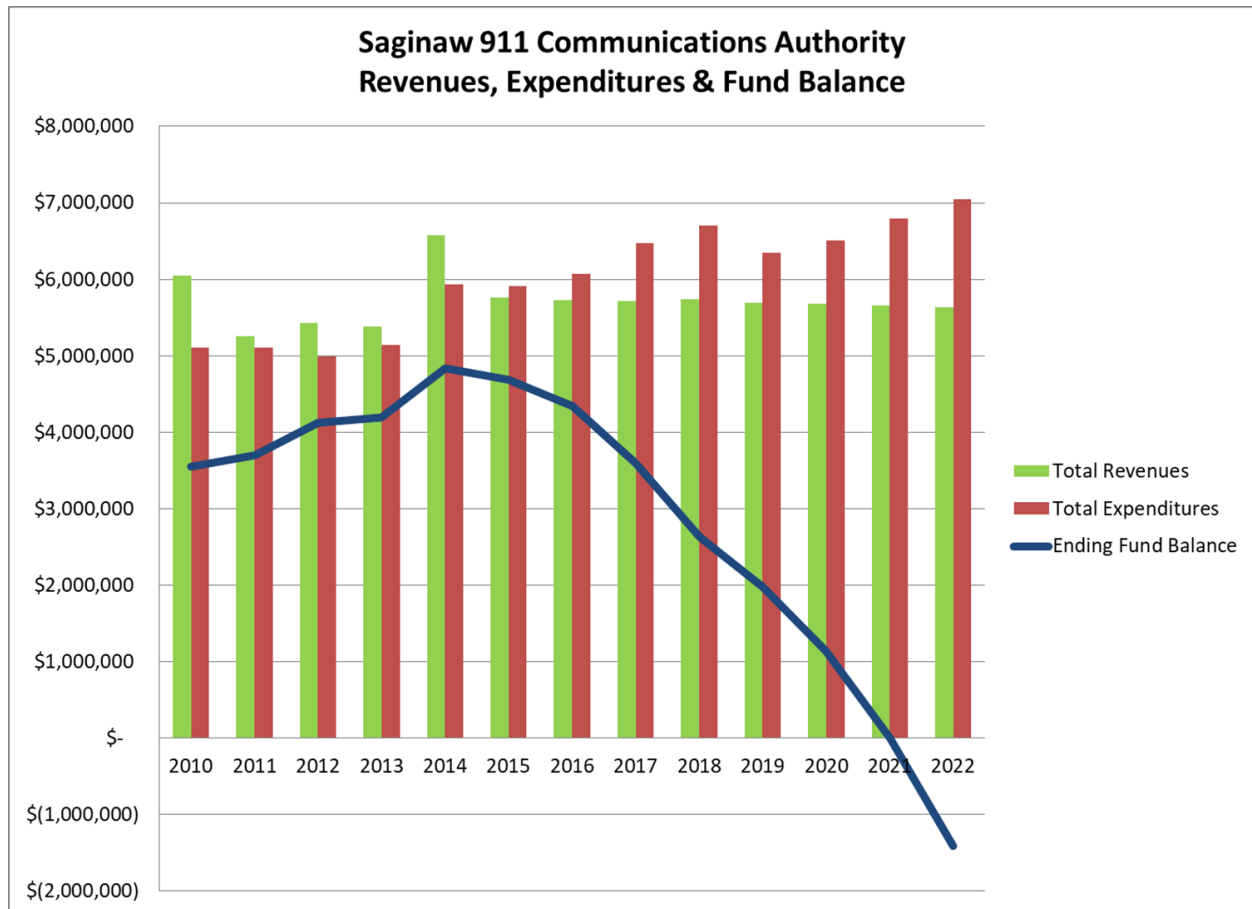
By implementing the recommendations of this study, the Authority will be in a position to ensure it has the resources and a long-range strategy to fulfill its obligations to the citizens and public safety agencies within Saginaw County.

Current Financial Forecast

Prior to undertaking this study, Municipal Analytics worked with the SC911 administration and Finance Committee to prepare a five-year financial forecast of the Authority’s budget. The results of that study clearly demonstrated that SC911 was on an unsustainable financial path, which could lead to insolvency within a few years. The financial model was once again updated as part of this

study, and includes estimated year-end expenditures for FY 16-17, as well as the recommended budget for FY 17-18.

As illustrated below, the Authority ended the prior two years with deficits of \$144,000 and \$345,000. The current year is estimated to end with a deficit close to \$730,000, and the budget for next fiscal year includes a planned deficit of nearly \$1 million.



The trend going forward for the next five years is markedly negative. Driving the persistent imbalance are a number of factors, including:

- Stagnant or declining revenues
- Increasing pension costs
- Increasing retiree healthcare (OPEB) costs
- Increasing wages and benefit costs for current employees
- Capital needs

These negative impacts easily exceed the benefit SC911 will realize after the final payment is made in FY 17-18 on the funds borrowed to finance a major capital investment in the Authority's technology and seating in 2009. Current estimates suggest the Authority will need to identify nearly \$1 million in new revenues and/or operational savings to balance the budget for the next five years.

In recognition of the significant financial challenges faced by SC911, this operational efficiency study was requested and undertaken. In the following sections, we present our findings in four primary areas:

- Financial efficiency and revenues
- Equipment and vendor contracts
- Operational efficiency and staffing
- Consolidation

Financial Efficiency and Revenues Findings

Our review of finances and revenues involved developing a deeper understanding of the SC911 budget, analyzing revenues, exploring alternative revenue options, studying purchasing practices of neighboring dispatch centers, and considering the administrative staffing needs of SC911. Our findings are summarized below:

Finding 1: Most surveyed agencies have funded radio purchases in the past. Funding for future purchases is less certain.

AGENCY	RADIO PURCHASE POLICY
Saginaw	Purchase radios. MDTs paid for out of separate fund.
Bay	Responsible for MDTs not radios. (will assist radio purchases with cost sharing)
Genesee	Purchase radios & MDTs for all police & fire agencies. Not for EMS (Private ambulance companies).
Gratiot	18 mo ago large comm project-came out of 911 budget-MDTS, record mgt, elec ticketing, mtc., also pay for all radios-may have to change
Midland	Midland 911 is responsible for radios and fire pagers only. MDT's are up to each department.
Tuscola	Purchased new radios for all agencies in 2011 when we went on the MPSCS radio system. All replacements and maintenance after warranty are the agencies responsibilities. MDT's are the agencies responsibility.
Washtenaw	Not responsible for purchasing radios or MDTs.

Unlike some areas of the state, the prevailing practice of radio purchasing in the Saginaw area has involved the dispatch agency funding the purchase. Our conversations with several agencies suggest this practice may be in jeopardy, as most agencies do not have the financial resources to continue making this significant purchase on a recurring basis.

Finding 2: SC911 will not have sufficient revenues to fund upcoming capital replacement needs.

- *Excluding* capital expenditures, SC911 is facing \$3.0M *operating deficit* over next five years
- Capital needs will be \$4.5M over ten years
 - \$3.9M within 3-5 years (including radio replacement)

It is very clear that the Authority does not have the resources to fully fund nearly \$4 million in capital in the next five years. Even with borrowing, it will not be feasible for SC911 to pay for this level of capital replacement.

Finding 3: Capital funding (\$450,000/year) could be achieved with a 0.90 mill levy or an increase in the monthly surcharge of \$0.24.

- Remaining structural imbalance in budget is nearly \$600,000 per year

The Authority will need to consider a new revenue source to pay for its capital needs. This could be accomplished through an increase in the monthly surcharge of \$0.24, or a property tax millage of 0.90 mills. Alternatively, the responsibility of radio purchases could be eliminated from SC911 and placed on local police and fire agencies. The ability of local agencies to fund such significant purchases may be too limited to make this a viable option.

Even if capital costs could be funded by local agencies or a new dedicated revenue source, the budget would still be nearly \$600,000 out of balance.

Finding 4: Increasing surcharge to maximum is not sufficient

- Raising county monthly surcharge to maximum \$3.00/device (additional 11 cents, above 24 cents increase for capital) could generate an additional \$212,000 per year
- Without some additional cost savings (over \$350,000/year), this increase would still not be enough to ensure a balanced budget

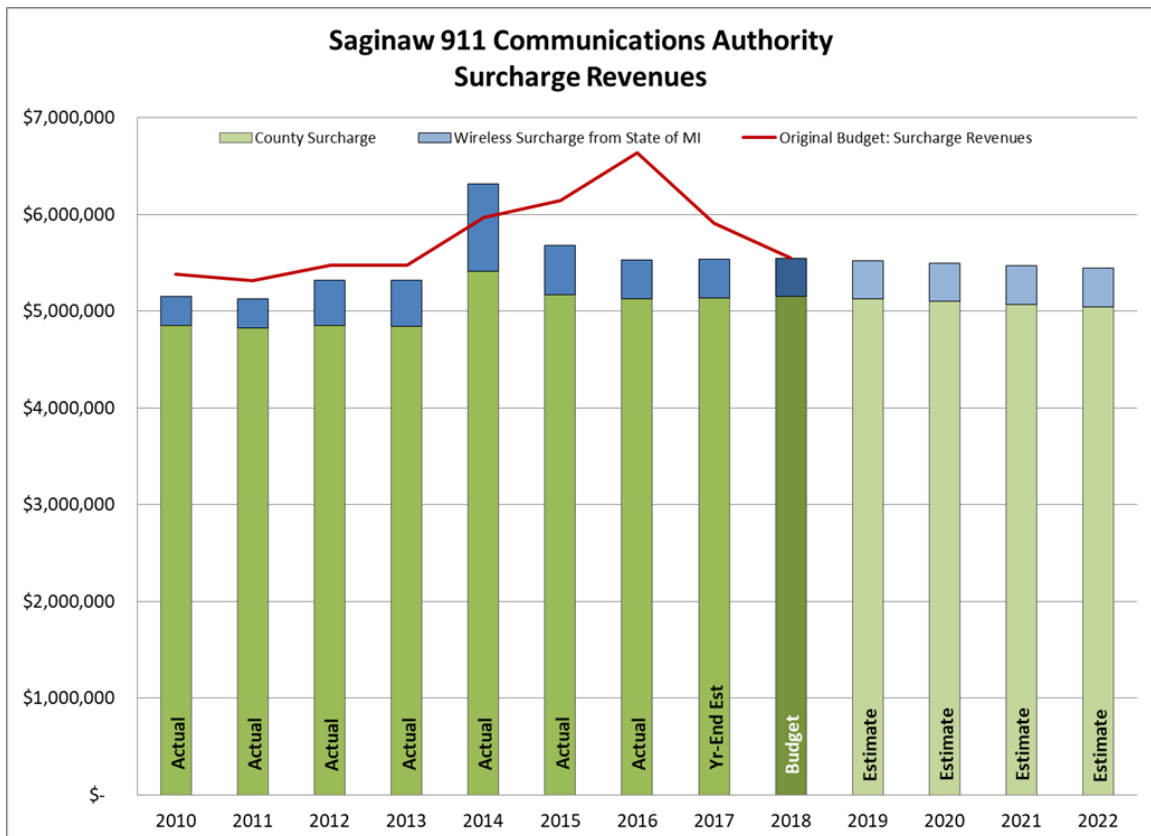
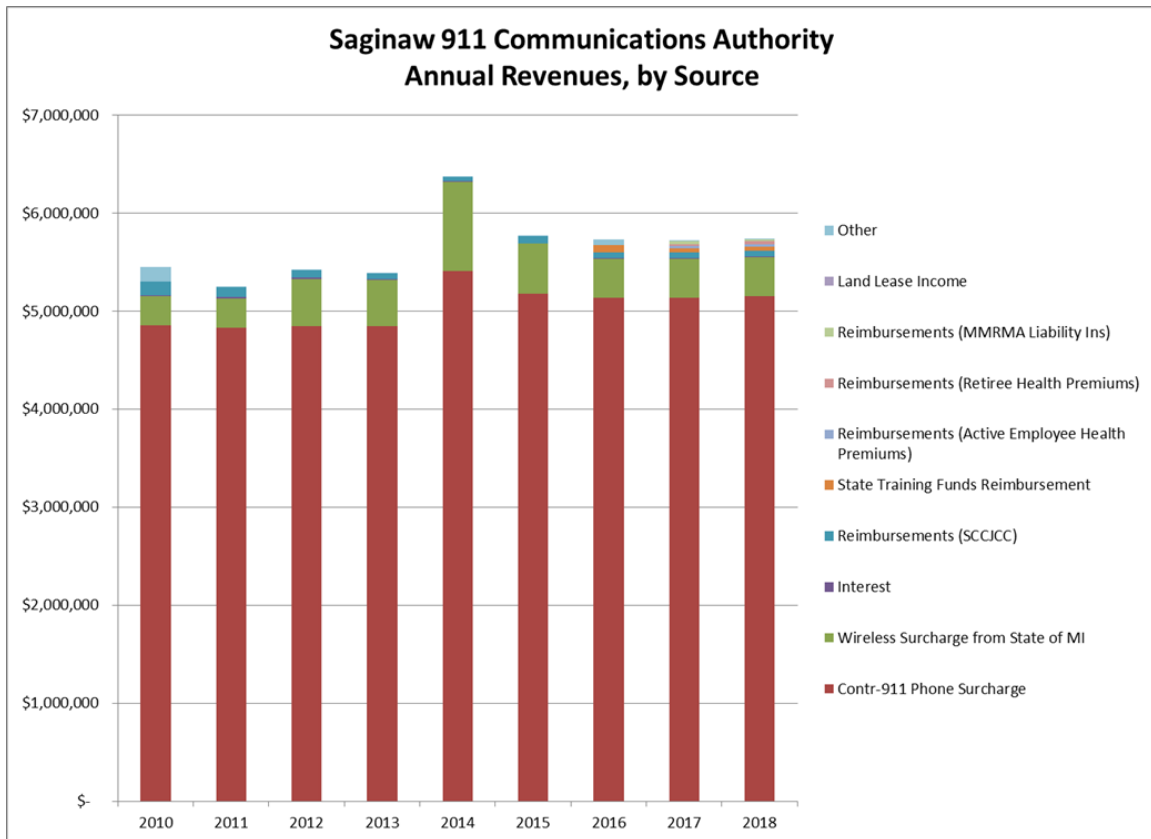
If voters were willing to allow the Authority to increase its monthly surcharge to the legal maximum of \$3.00 per device (an increase of \$0.35), the total additional revenue would be close to \$662,000 per year. With this level of funding, a deficit of almost \$350,000 would remain. As noted above, 24 cents of surcharge could be used for capital needs. The remaining 11 cents could help reduce the budget deficit, but a significant imbalance would remain.

Finding 5: SC911 relies heavily on 911 surcharge revenues.

- 90% County surcharge
- 8% State wireless surcharge

As seen in the chart below, the vast majority of revenues come from surcharges on 911-capable devices. The other sources of revenues include:

- Reimbursements
- Interest
- Land lease
- Other miscellaneous sources



Finding 6: Surcharge revenues are an unsteady revenue source.

- Surcharge revenues have been declining
- No way to enforce compliance with surcharge law

The above chart illustrates how much surcharge revenues have changed historically, as well as our best estimate of future trends. Also illustrated is the fact that budgeted revenues have exceeded actual revenues in all years since 2010, except one year in which SC911 received a reimbursement from the State as part of a lawsuit settlement.

Finding 7: The 911 surcharge is set to expire in 2021.

- In 2012, the legislature set a sunset date of 12-31-2021 for the entire E-911 Services Enabling Act
- New legislation will need to be crafted in the next 2-3 years
- Legislators need to know how the current law can be improved to ensure long-term sustainability of this vital service, especially in the area of funding 911 services

Finding 8: Revenue opportunities from other sources is limited.

- Only 2% of revenues come from non-surcharge sources
- Other sources considered, but found to be impractical:
 - Rental of tower space to cellular phone companies
 - Direct charges for services to local units for after-hours and non-emergency dispatching needs

Finding 9: Administrative staffing at SC911 is comparable to surveyed agencies; opportunities exist to streamline administrative staffing.

Saginaw	Bay	Genesee	Gratiot	Midland	Tuscola	Washtenaw
Executive Director	Director	Director	Director	Director	Director	Director (shared)
Deputy Director (acting)	Assistant Director	Deputy Director		Deputy Director		
		Operations Manager				
Executive Assistant	Admin Assistant	Office Administrator		Admin Assistant/Dispatcher (blended position)		
IT Coordinator (contracted)		Computer Technicians (3)		IT administrator		
Supervisors (5)	Supervisors (7)	Supervisors (6)	Supervisors (1)	Supervisors (4)	Supervisors (2)	Supervisors (3)
Dispatchers (30)	Dispatchers (24)	Dispatchers (54)	Dispatchers (11)	Dispatchers (12)	Dispatchers (10)	Dispatchers (29)

SC911 administrative staff has historically included a full-time Director, full-time Deputy Director, and ¾ time Executive Assistant. At present, the Deputy role is partially filled with a dispatch Supervisor, and the Authority has brought onboard a contracted IT Coordinator to address a backlog of technology issues. Based on the budget realities, we believe this level of administrative staffing is not sustainable. There are opportunities to consolidate some functions and shift the focus of the contracted IT Coordinator, to produce savings in administration costs.

Finding 10: SC911 Executive Assistant duties could be absorbed by a full-time Deputy Director position.

- SC911 is one of only 3 agencies in the survey group with a dedicated office support staff position.
- With proper delineation of duties and optimal utilization of technology, the Executive Assistant duties could be managed by the Executive Director and Deputy Director.
- *If necessary*, some duties could be assigned to a part-time administrative support position and/or a part-time or contracted bookkeeper.

Equipment and Vendor Contracts Findings

Finding 1: Existing Motorola contract contains unneeded services and excessive costs:

- Furniture/flooring inspections and recorder costs recently removed
- Excessive costs on end of life subscribers units that should be on a radio repair bank
- Console costs should be closer to \$3000/year per console

Saginaw 911 Equipment						
	Equipment	Manufacture	Serviced by	Cost Annually	Service time frame	Service Period
1	Console Radios	Motorola	Motorola Solutions	\$ 41,053.00	10/2013 - 09/2018	5 years
2	Subscribers	Motorola	Motorola Solutions	\$162,343.67	10/2013 - 09/2018	5 years
3	Recorder	Nice	Motorola Solutions	\$24,727.00	10/2013 - 09/2018	5 years
4	Furniture/Floor	Watson	Thomas Shelby	\$2,323.00	10/2013 - 09/2018	5 years

Finding 2: Contracted IT consultant has identified significant savings and undertaken many deferred maintenance issues.

- SC911 now has a more efficient IT operation, improved service contracts and lower costs
- As improvements are made, the contract for IT services could be reduced to reflect a maintenance level of service, rather than an investment level of service

Finding 3: Backup center at Saginaw Township may be an unnecessary expense

- Over \$350,000 has been spent on the back up center to date
- Best practice for a backup center is to partner with 1 to 2 nearby centers with compatible technology
- Ongoing costs of maintaining and updating dedicated, seldom-used equipment that could be deployed to SC911 center operations
- Saginaw Township location is not fully operational and wouldn't likely be used in the event of an emergency

Finding 4: SC911 towers cannot be sold or leased to private companies

- Leasing space voids State maintenance agreements
- MPSCS indicates all towers are needed for effective coverage
- VHF fire paging is being phased out

Saginaw 911 Equipment – Additional Contracts						
	Equipment	Manufacture	Serviced by	Cost Annually	Service time frame	Service Period
1	Phones	Airbus	Carousel	\$62,014.44	09/2017 - 09/2018	Annual
2	CAD/ Mobile	Premierone	Motorola Solutions	\$307,811.00	10/2015 - 09/2020	5 years
3	Sirens	Federal Signal	Anderson Radio	\$13,860.00	2016-2019	4 years
4	VHF Fire Paging	Kenwood	Chrouch Comm.	\$9,250.00	Ongoing	Annual
5	Tower Sites	MPSCS Sites	MPSCS	\$45,000.00	Ongoing	Annual
6	Station #2	Saginaw Twp		\$10,000.00	12/2014 - 12/2023	10 years

Operational Efficiency and Staffing Findings

Finding 1: SC911 Cost-per-911 call is increasing.

The cost-per-911 call has increased over the past three years. The increase in 2016 over 2015 was almost six percent. The rate of increase expected in 2017 is only half this amount at three percent. This suggests improvements are being made in operational efficiency.

	2015	2016	2017 (est.)
Budget*	\$4,974,935	\$5,138,035	\$5,352,511
911 Call volume	232,601	227,359	229,980
Cost-per-call	\$21.39	\$22.60	\$23.27

Finding 2: SC911 cost-per-911 call remains below average when compared to peer PSAPs.

The cost-per-911 call for Saginaw County 911 authority is below the benchmark rate of \$25.00 per call. Both Washtenaw and Genesee 911 are larger centers and benefit from the economy of scale inherent in dispatch operations. Additionally, Washtenaw 911 is operated out of the Sheriff department, so a lot of administration and overhead costs are absorbed by the Sheriff and not assigned fully to 911. SC911's cost per call of \$22.60 suggests that the Saginaw PSAP's financial efficiency is in line with its size.

2016	Washtenaw	Genesee	Saginaw	Midland	Bay	Gratiot	Tuscola
Operating Budget*	\$3,603,986	\$6,114,559	\$5,138,035	\$1,614,595	\$2,829,035	\$823,582	\$1,256,960
911 Call Volume	220,242	364,282	227,359	48,410	81,740	18,278	24,622
911 Cost-Per-Call	\$16.36	\$16.79	\$22.60	\$33.35	\$34.61	\$45.06	\$51.05

*Operating budgets adjusted to exclude debt service

Source: Survey of 911 dispatch centers, conducted July-August 2017

Finding 3: SC911 averages 26 911 calls per hour.

	2015	2016
Total	232,601	227,359
AVG	26.6	25.9
MIN	0	0
MAX	155	171

Finding 4: SC911's Twelve hour scheduling system adds 104 hours of structural overtime to each employee annually (based on the overtime provision in the collective bargaining agreement).

Saginaw county dispatch employees work threedays (36 hours) one week and four days (48 hours) the other week. This creates a 84 hour work-week. By contract, these employees receive four hours of overtime pay per pay period. This adds 104 hours of overtime to each full-time employee over the year. This figure does not include any additional call-in/stay-over OT, holiday pay, snow days, shift premium or longevity pay

Finding 5: SC911's current collective bargaining agreement understates annual pay.

In the POAM collective bargaining agreement, annual pay is calculated using a standard 2080 hour work-year using only straight-time pay. Under the current system, Saginaw County dispatch employees are paid based on a 2184 hour work-year with 2,080 hours of straight-time and as much as 104 hours of overtime

	Start	YR1	YR2	YR3	YR4	YR5
Contract (2080 hrs)	\$38,798	\$42,530	\$44,395	\$46,271	\$48,141	\$50,001
Contract adjusted for 4 hrs OT per pay period (2080 RT hrs + 104 OT)	\$41,701	\$45,726	\$47,716	\$49,751	\$51,741	\$53,753

Note: Adjusted annual pay is likely to be somewhat less with PTO usage. Under the current system, any PTO will reduce OT pay in a given pay period (as PTO is paid as straight time and deducted from the 84 hour work week).

Finding 6: SC911 pay is substantially higher than peer PSAPs.

When compared to comparable PSAP, employees at Saginaw County dispatch make substantially higher pay. This is especially true when pay is adjusted to include structural overtime

Saginaw County	Range	
Contract (2080 hrs)	\$38,798	\$50,001
Contract adjusted for 4 hrs OT per pay period (2080 RT hrs + 104 OT)	\$41,701	\$53,753

The 104 hours of structural overtime adds roughly \$1.00 to an employee's base pay.

	Range	
Bay adjusted for 4 hrs OT per pay period (2080 RT hrs + 104 OT)	\$35,441	\$43,222
Dearborn (2080 hrs)	\$39,557	\$48,127
Genesee (2080 hrs)	\$40,934	\$50,523
Gratiot (2080 hrs)	\$29,827	\$38,917
Midland (2080 hrs)	\$36,566	\$47,549
Tuscola (2080 hrs)	\$32,365	\$39,312
Washtenaw (2080 hrs)	\$36,713	\$58,632

Finding 7: Most peer PSAPs that use twelve- hour schedules adjust their schedule to limit total hours to 80 in a two week pay period.

Twelve-hour (Pitman) schedules are difficult to implement without overtime. They are common in police and fire department first responder schedules because a special exception (207(a)) allows for a different method of calculating a standard work-week. Courts have ruled that dispatchers are not first responders and hence, do not qualify for this exception. Where twelve-hour schedules are used in dispatch, most PSAPs modify hours to limit the standard work-week to 40 hours. This often makes for an additional short day in the schedule and makes the schedules less attractive to employees.

- Gratiot, Midland, and Genesee work twelve hour shifts but only 80 hours in a two week pay period.
- Tuscola is on ten hour shifts.
- Dearborn and Washtenaw are on eight hour shifts.
- Bay County is the exception. They pay 84 hours in the two-week pay period the same as Saginaw.

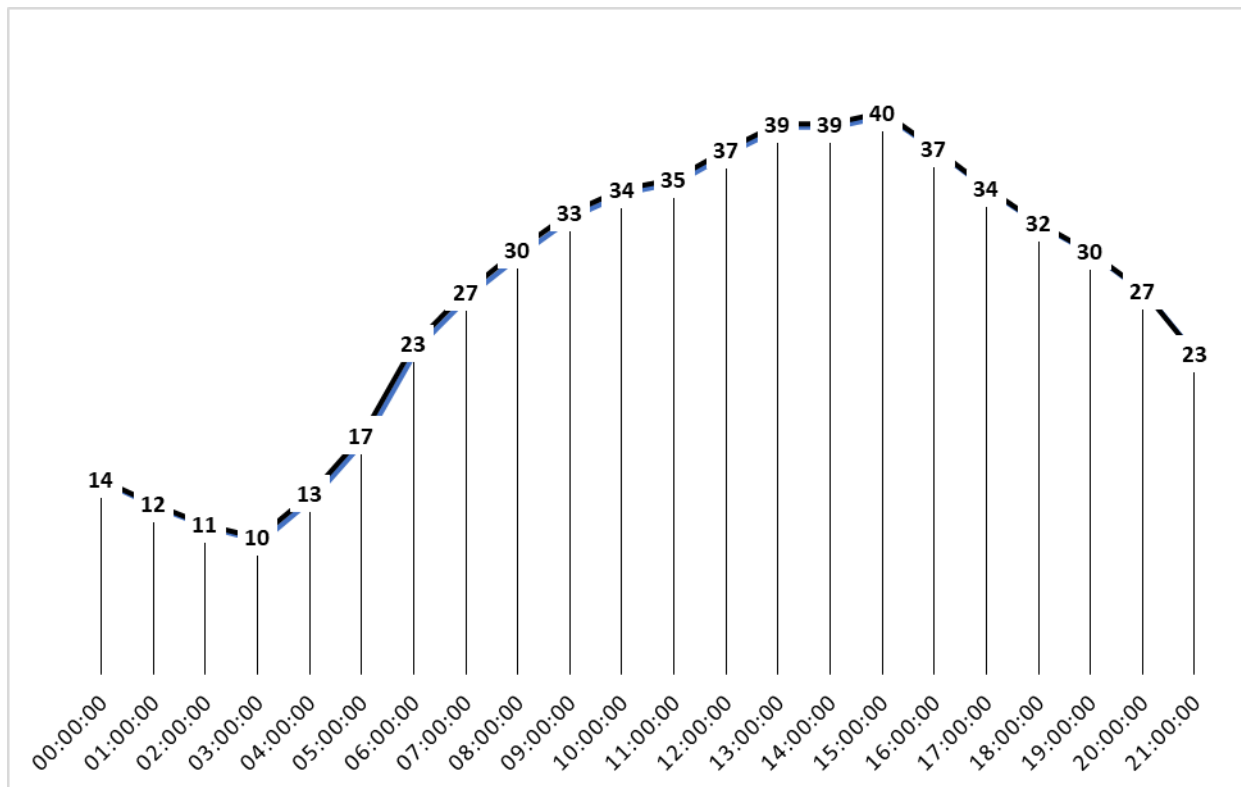
Finding 8: SC911 911 calls per dispatcher/supervisor FTE is higher than most peer PSAPs.

Once again, Saginaw county dispatch demonstrates good efficiency with calls-per-full-time-equivalent (FTE) at the high end of the range within peer PSAPs. The table below shows the range of 911 calls-per-FTE ranging from 2031 to 6883.

	Gratiot	Tuscola	Bay	Midland	Genesee	Saginaw	Washtenaw
Budgeted Dispatcher FTE	8	10	24	12	54	30	29
Budgeted Supervisor FTE	1	2	7	4	6	5	3
911 Call Volume	18,278	24,622	81,740	48,410	364,282	227,359	220,242
911 Calls per FTE	2031	2052	2637	3026	6071	6496	6883

Finding 9: SC911 average 911 call volume (2016) varies significantly by hour.

Consistent with most PSAPs, Saginaw County call volume declines dramatically during the late hours.



Finding 10: SC911 fire dispatchers also answer phones, contrary to best practice.

The majority of large PSAPs have fully separated the call-taking and dispatch (radio) functions. This is widely accepted as a best practice. A dedicated dispatcher (not answering the telephone) is less distracted and better able to attend to responder (police and fire) safety. A dedicated call-taker is better able to communicate with the public, obtain more detailed information and updates about the emergency that is relayed to responders, and provide important safety information back to the caller.

Finding 11: SC911 fire calls-for-service (CFS) volume is low.

The fire dispatchers at Saginaw county spend most of their time answering the phones. IN 2016, fire calls-for-service (CFS) averaged just 1.2 per hour. The annual fire CFS for 2015 was 9,965 for the entire county. In 2016, the number increased to 10,508.

Finding 12: County police Calls-for-service are three times the City calls-for-service.

Saginaw County dispatch maintains two police dispatcher positions. The county police dispatcher handles three times the number of call-for-service than does the city police dispatcher. In 2016, County police CFS were 144,416. During the same year, the CFS for city of Saginaw Police was 48,026.

Finding 13: SC911 requires three call-takers at peak average volume to meet the National Emergency Number Association (NENA) answering standard.

Assuming fully dedicated call-takers, Saginaw County dispatch can meet peak-hour call volume within the NENA standard of 90 percent of calls being answered within ten seconds with three call-takers.

Number of calls:	40	
Period length (p):	3600 seconds	
Average call duration (t):	95 seconds	
Number of agents (m):	3	
Arrival rate (λ):	0.01	
Traffic intensity (u):	1.055555556	
Agent occupancy:	35.19%	
Probability to wait:	10.37%	ErlangC(m,u)
Average speed of answer:	5.07	ASA(m,u,t)
Target answer time (tt):	10 seconds	
Prob. to wait less than tt:	91.55%	ErlangCsrv(m,u,t,tt)

NENA Call Answering Standard/Model Recommendation NENA 56-005.1, (June 10, 2006, Revised 8/31/2017):

3.1 Standard for answering 9-1-1 Calls. Ninety percent (90%) of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ten (10) seconds during the busy hour (the hour each day with the greatest call volume, as defined in the NENA Master Glossary). Ninety-five (95%) of all 9-1-1 calls should be answered within twenty (20) seconds.

Finding 14: To fully staff the current SC911 requires 31 dispatchers at 85% productive labor.

Saginaw County dispatch attempts to staff the center with seven dispatchers around the clock. If Saginaw County dispatch were to limit paid time off to 15 percent, it would take 31 dispatchers to staff the current model without additional (non-structural) overtime. As such, the current staffing approach requires structural overtime as well as additional overtime to staff the center.

The current staffing model is presented in the schedule below.

As Is (85%)	Night Shift						Day Shift												Night Shift					Hours per week for post	
	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00		23:00
City Police	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
County Police	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
City Fire / Call Taker	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
County Fire / Call Taker	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
LEIN 1 / Call Taker	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
LEIN 2 / Call Taker	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
Swing	1	1													1	1	1	1	1	1	1	1	1	1	84
Supervisor / Relief	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168

Total annual D/CT full-time labor hours	56784
Dispatcher/Call-taker FTE	31
Total annual Supervisor full-time labor hours	8736
Supervisor FTE	5
Total FTE	36

Finding 15: The current SC911 swing shift does not align to peak 911 call volume.

The current staffing model supplements includes a swing shift dispatcher to cover during peak demand hours. The current swing shift is 1400 to 0200 (this also incurs additional shift premium). The peak 911 call volume is 0900 to 2100.

Finding 16: SC911 employees use significant amounts of paid time off (PTO) reducing average productive labor hours to 72 percent.

Saginaw County dispatch offers generous PTO and allows employees to take overtime as PTO, The contract provides additional PTO as an incentive to maintain a bank.

In one year (August, 2016 – through July, 2017), 19 employees had more 420 hours or more of paid time off (including holidays). 420 hours is ten weeks of work. As such, about 28 percent of the paid hours are for paid-time-off. Although now where near the lowest productive labor rate we have seen, this is a low productive labor rate and contributes to Saginaw County dispatch's chronic staffing shortages and high overtime costs.

Finding 17: To fully staff the current SC911 requires 34 dispatchers at 72 percent productive labor.

At the current productive labor rate, Saginaw County dispatch would need 34 full-time dispatchers to be able to staff the current staffing model without significant overtime (above the structural overtime).

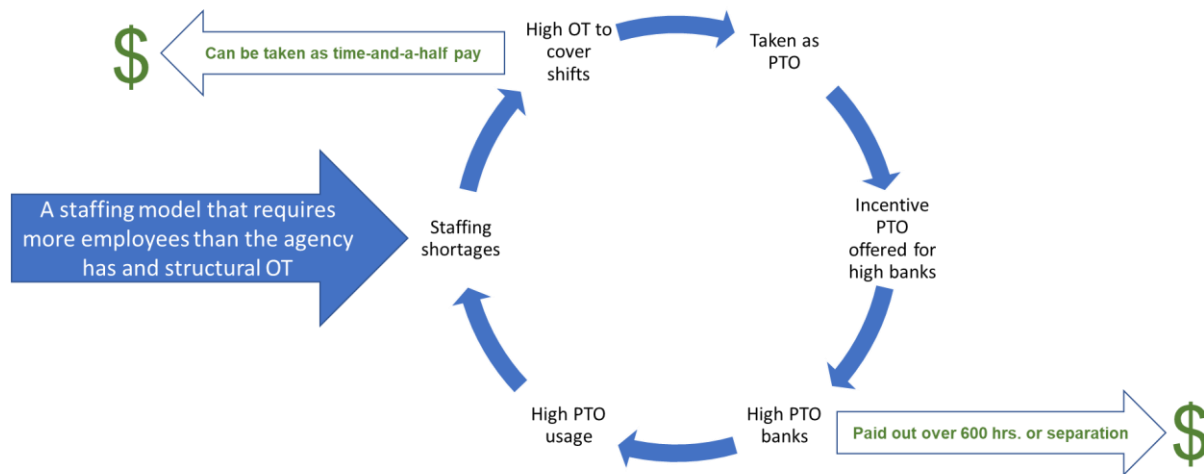
Finding 18: In 2016, SC911 paid for 9810 hours of overtime.

Saginaw County dispatch used overtime at a rate comparable to have an additional 4.7 full time dispatchers. This equates approximately to \$324,000 in overtime costs. Of the 9810 hours of overtime, 3120 hours, or about 1.5 FTE, were structural overtime hours (104 x 30). There was an additional 6681 hours of unscheduled overtime This equates to 3.2 FTE.FTE)

Conclusions:

1. The Saginaw County 911 Authority has more than enough employees to meet current demands.
2. The Saginaw County 911 Authority's current staffing model attempts to staff the PSAP at a level beyond what is needed. This requires high levels of overtime.
3. High PTO usage reduces the productive labor ratio and requires significantly more OT. Much of the overtime is taken as comp time which leads to more PTO.
4. High starting wages combined with high levels of overtime create very high payroll costs.

The illustration below provides a graphic presentation of the overtime cycle. In short, high overtime produces more overtime.



Consolidation Findings

The recommendations that follow are offered as an aggressive response to the financial reality that the agency faces. They are not driven by any gross inefficiency. The other option, is to grow the size (volume) of the PSAP. This will bring in additional from other counties and achieve greater economies of scale. PSAP consolidation offers one of the few opportunities for government to provide more effective service and a LOWER cost.

We know from experience that the barriers to consolidation are political (and they are substantial), not technical. WE caution that multi-county authorities present challenges to surcharge approvals and may have higher overhead costs. As such, we find that intergovernmental contracts for service are often a better option.

As we have said, operational efficiency is a function of scale. (*Dispatch is a volume business.*) but consolidation can improve service quality as well. Consolidation serves the national objective of interoperability and improves the coordination of response across jurisdictions when needed. Larger PSAP have more resources for formal training and quality assurance.

Perhaps most important, larger PSAPs have more trained personnel on duty. Having more resources available in the event of a significant emergency enables the PSAP to reconfigure as needed and improve communications and coordination during critical incidents.

Recommendations

Financial efficiency and revenue recommendations:

1. Consider ballot request to fund ongoing capital needs. Either \$0.24 surcharge increase or levy of 0.90 mills.
2. Begin discussions now with local units about capital funding options if voters reject ballot question.
3. Consider increasing surcharge by additional \$0.11 (to \$3.00), to help offset operating costs (not capital).
4. Through attrition, consolidate Deputy Director & Executive Assistant duties in single position.
5. Increase engagement with legislators & State 911 Committee to improve funding legislation.

Equipment and vendor contracts recommendations:

1. Use Motorola repair bank for subscribers for \$25,000/yr.
2. Measure and evaluate contracted IT service. Reduce contract to maintenance level for ongoing support.
3. Vacate back up center and reallocate equipment.
4. Switch to a time and materials contract for 911 phone system maintenance

5. Renegotiate Motorola training/users' conference contract

Operational Efficiency and staffing recommendations:

1. Fully separate the call-taker and dispatcher roles.
2. Negotiate a cap on PTO usage.
3. Negotiate to reduce or eliminate comp time for OT and an end of PTO incentive.
4. Develop a staffing model better aligned to demand and that significantly reduces the need for OT.
5. Implement part-time call takers during swing shift.

Proposed (80%) (With part-time)	Night Shift						Day Shift														Night Shift						Hours per week for post
	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0		
City Police / Fire	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	168
County Police	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	168
LEIN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	168
Call Taker – Part-time									1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	112
Call Taker	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
Call Taker	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168
Supervisor / Relief	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	168

Total annual D/CT full-time labor hours	48048
Dispatcher/Call-taker FTE	25
Part-time call-taker hours	5824
Total annual Supervisor full-time labor hours	8736
Supervisor FTE	5
Total Full-time FTE	30

With part-time call-takers, NENA call answering standard met in all hours.

Time	Calls	Intensity	Agents	Occup.	Prob wait	ASA	Wait < tt
0:00	19	0.5	2	25%	10%	6	91%
1:00	16	0.4	2	21%	7%	4	94%
2:00	14	0.4	2	18%	6%	3	95%
3:00	12	0.3	2	16%	4%	2	96%
4:00	11	0.3	2	15%	4%	2	97%
5:00	10	0.3	2	13%	3%	2	97%
6:00	13	0.3	2	17%	5%	3	96%
7:00	17	0.4	2	22%	8%	5	93%
8:00	23	0.6	3	20%	3%	1	98%
9:00	27	0.7	3	24%	4%	2	97%
10:00	30	0.8	3	26%	5%	2	96%
11:00	33	0.9	3	29%	6%	3	95%
12:00	34	0.9	3	30%	7%	3	94%
13:00	35	0.9	3	31%	7%	3	94%
14:00	37	1.0	3	33%	9%	4	93%
15:00	39	1.0	3	34%	10%	5	92%
16:00	39	1.0	3	34%	10%	5	92%
17:00	40	1.1	3	35%	10%	5	92%
18:00	37	1.0	3	33%	9%	4	93%
19:00	34	0.9	3	30%	7%	3	94%
20:00	32	0.8	3	28%	6%	3	95%
21:00	30	0.8	3	26%	5%	2	96%
22:00	27	0.7	3	24%	4%	2	97%
23:00	23	0.6	3	20%	3%	1	98%

- Implementing this staffing model (@ 80% productive labor) will save \$275,000 annually.
- Reducing structural OT from 5 vacated positions will save \$16,000/year.
- Capping PTO and reducing OT could result in additional savings of up to \$80,000 (actual savings could vary substantially, depending on PTO and OT strategies adopted).
- These recommendations are aggressive. They are necessitated by financial conditions.

Changing the staffing model and reducing PTO are critical. Staffing reductions can occur gradually through attrition (no layoffs). Consolidation recommendations:

Open discussions with neighboring counties about possible consolidation

Conclusion

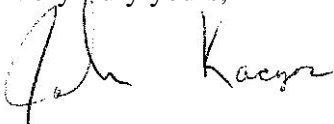
- Significant budget imbalance will require potentially aggressive changes to operations
- A new funding strategy to pay for radios will need to be explored
- Improved contract terms can save money – no service impacts
- Largest operating budget savings must come from personnel costs
- Layoffs can be avoided with improved staffing model, reduced PTO, reduced OT, utilization of part-time call-takers during swing shift
- Consolidation may be an option to operate more efficiently

* * * * *

It has been a pleasure to work with you and the staff of SC911 throughout the course of this study. We sincerely hope the results of this study will help the Authority as it seeks a path to long-term sustainability and improved operations.

Should you have questions or require additional information related to this report, please feel free to contact me at 734-277-4454 or johnk@municipalanalytics.com.

Very truly yours,



John Kaczor
Principal

